

Tracking Authorship and Creativity in Orchestral Performance

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Thesis submitted for the degree of Doctor of Philosophy

ABSTRACT

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This thesis takes as its starting point the observation that the authorship of the creative product of orchestral performances has been, and continues to be, over-attributed to the conductor. This is reflected both in popular perceptions and in the scholarly attention given to the conductor's leadership role, as well as in orchestral practices which privilege the conductor's artistically superior position within the orchestra through rehearsal and performance rituals and in remuneration and marketing. Although existing research has challenged the perception that the authority of the conductor is absolute, none has offered alternative explanations for how best to attribute the authorship of orchestral performances. Through a three-phased mixed-methods empirical study including an online questionnaire, in-depth interviews, and a newly developed method of data collection utilising an online variation of video-stimulated recall to capture musician experiences in real-life rehearsal and performance settings, this research contributes to an understanding of the social psychology of orchestral performance by identifying what prompts musicians' decision-making regarding how and when to play their parts. The analysis of the data has resulted in the development of a theoretical Framework of Influence and Action in Orchestral Performance that offers a new way of conceptualising authorship in performance through a 'theory of influence'. It concludes with an exploration of the implications of this revised view of authorship for existing orchestral practices, group creativity research, and our understanding of how the relationships enacted in the micro-socialities of orchestral performance reflect larger social formations.

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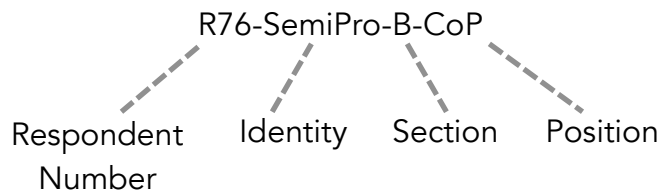
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GLOSSARY

Questionnaire demographic abbreviations



Am	Amateur
B	Brass
CoP	Co-principal
FLProf	Freelance professional
FTProf	Professional in a full-time orchestra
P	Principal
S	Section member
SemiPro	Semi-professional
Str	Strings
W	Wind

Theoretical framework acronyms

FIAOP	Framework of Influence and Action in Orchestral Performance
MoA	Modes of Action
PD	Prime Directive
SoI	Systems of Influence
ToF	Topics of Focus

MERID

MERID Media Enabled Research Interface and Database

MERID comments are identified by instrument and position. For string players, the number following their instrument refers to the desk they were sitting at, and the letters A and B denote whether they were the outside or inside player.

Example:

ViolinI-2B = participant playing on the inside of the second desk in the first violin section

1.0

INTRODUCTION

The misconception here is the belief that coaches are somehow akin to orchestral conductors. Standing in front of the team waving a baton while conducting every decision, action and associated nuance.

- *The Times*, 2 October 2015

As the above quote illustrates, the image of the omnipotent maestro is firmly fixed in the public imagination. This is not surprising, as the rituals that surround orchestral performance do nothing to contradict this perception. From the arrangement of bodies on the concert platform, to the apparent causal relationship between the conductor's gestures and the sound that the orchestra makes, the conductor's authority appears absolute and there is nothing in the poker faces of orchestral musicians to suggest anything to the contrary. The media has also played its role. As Botstein observes, 'the glorification of the conductor flourished coincidentally with the first truly successful commercial recordings' which, he argues, led to the anointment of the conductor in the public imagination as 'the overriding source of a great performance' (Botstein 2003:287).

While the totalitarian control attributed to conductors has been critiqued and challenged (e.g. Adorno 1989, Faulkner 1973, Lebrecht 1991) and the extent of their influence brought into question by recent studies which have highlighted the inherently distributed nature of orchestral performance (e.g. Dobson & Gaunt 2015, Lewis 2012), none have offered an alternative explanatory model for understanding how to attribute the creative authorship

of orchestral performance. Attributing authorship is crucial in an arts economy that privileges, through remuneration and prestige, those individuals who are perceived to be most responsible for the artistic profile of a performance. While there are other commercial forces at work that determine artists' compensation, even these market drivers can be seen to be connected to the popular perceptions surrounding artistic authorship.

While financial concerns have serious implications for the working orchestral musician, there are other issues at stake as well. The orchestra is often taken as a model for Western society, or at least in its practices, as modelling the values of society through its performance of relationships (e.g. Faulkner 1973, Small 1987, Ramnarine 2011, see esp. Baker 2014 for a critique of Venezuela's *El Sistema*). The relationships are alternately characterised in terms of collaboration and cooperation—'exemplary process of collective action' (Faulkner 1973:147)—or of domination and submission in which orchestral musicians are 'recalcitrant' (Adorno 1989:111). And although there are aspects of orchestral practice for which the existence of these relationships appear to be self-evident, there has yet to be research which actually explores the relationships that are enacted by orchestral musicians during the flow of performance. Understanding the nature of relationships in orchestral practice is important for attributing the authorship of the creative product of orchestral performance, as it is intertwined with the way in which agency is expressed and negotiated within the performance setting. It is precisely this connection and the assumption of conductors' total control that has caused the conductor to be considered the primary author of the creative profile of a performance.

This thesis aims to contribute to a better understanding of the creative authorship of orchestral performance through an empirical investigation of musicians' beliefs and actions regarding the distribution of artistic contributions in rehearsal and performance across a wide variety of orchestral contexts. In essence, it explores what causes musicians to determine how and when to play their parts.¹

Recent scholarship has noted a turn in musicology toward the study of performance, and in particular, creativity in performance (Clarke 2012, Cook 2015). Clarke notes the difficulty in researching creativity in performance and acknowledges the need to continue to develop both quantitative and qualitative methods that do justice to this complex phenomenon (Clarke 2012:27). The research underpinning this thesis is primarily qualitative, but takes a mixed-methods approach utilising research techniques from social psychology including a nationwide questionnaire, in-depth interviews, and a newly developed method that uses an online form of video-stimulated recall to facilitate the collection of musicians' experiences in real-world orchestral settings. As will be discussed in more detail in Section 1.1, previous orchestral research has tended to rely on small data sets that do not represent the breadth of orchestral practices. While still limited in scope, this research has attempted to address this issue by collecting data from musicians in a wide variety of orchestral contexts. Although the three studies were conducted independently over the course of three and a half years, they are, from a practical perspective, three components of a broader ethnographic study in

¹ As will be discussed in Section 1.1, while musical notation appears to provide detailed information about pitch, rhythms, volume, etc. the realisation of these features, including determining precisely when to place one's notes is not fully defined by the score.

which it is relevant to consider my role as a 'native anthropologist' in the realm of orchestral music.

I am a professionally trained conductor and percussionist with post-graduate degrees in performance in both of these areas. I worked professionally as a conductor (and on occasion as a percussionist) for ten years before commencing my doctoral research, during which I continued my professional performance activities. I have conducted and performed with many student, amateur and professional ensembles over those years, and it is through these experiences that I came to recognise both the very *partial* nature of my own authorship of performance as a conductor and the incredible diversity of orchestral performance settings.

While rigorously trying to maintain a distinction between my own experiences and those of my informants for the purposes of this study, I also relied on my own expertise in this area to help me understand and interpret musicians' experiences, and on my professional network to gain trust and access to ensembles and informants in order to conduct my research.² In the third phase of the research I used one of my own ensembles as one of several case studies and took part in the video-stimulated recall myself, which, as I discuss later in the thesis, was critical in gaining an insight into the ability of the research method to elicit information that was meaningful for the research questions.³

² See Cottrell 2004:15-25 for a detailed discussion of the issues facing a 'native anthropologist' in the classical music profession.

³ See Sections 2.0 and 2.3 for further discussion about my place within the field of ethnographic enquiry.

The other way in which my own experience has shaped this study is in the inclusion of amateur perspectives, the ‘hidden musicians’ of the orchestral world (Finnegan 1989), with whom I work on a regular basis. Research into orchestras has tended to privilege the voices of professional orchestral musicians whose experiences can be seen to be significantly influenced by the challenges of playing in orchestras *as a profession*, rather than orchestral performance as an activity in and of itself. While the life of an orchestral musician has been shown to be stressful, difficult, exhausting, painful, boring, and in particular a compromise of individuals’ artistic integrity (e.g. Parasurman & Purohit 2000, Brodsky 2006), playing in an orchestra independent of the profession appears to be very rewarding for large numbers of people as the extraordinary number of amateur orchestras in this country, but also throughout the US and in Europe, attests. Indeed, the focus on orchestral music-making as a profession rather than a practice has posed a barrier to a richer understanding of orchestral music-making as an *activity*. Therefore throughout the three phases of this study perspectives from both amateurs and professionals have been obtained and where relevant, comparisons have been made.

This thesis is organised in four parts: Part 1 includes this introduction and a literature review that explores issues related to defining creativity and authorship in orchestra performance as well as a review of previous orchestral studies relevant to this research. Part 2 details the methodology for the three phases of the research and presents the findings of the questionnaire and the in-depth interviews as well as describing the development of MERID, a new method for collecting the performance experiences of orchestral

musicians. It also includes a description of the analysis of the MERID data, the findings of which are presented in the following section. Part 3 proposes a Framework of Influence and Action in Orchestral Performance as a way of explaining what prompts musicians' decision-making with regard to how and when to play their parts and details the basis for the Framework components through the MERID and interview data. Finally Part 4 summarises the findings and explores the implications of the Framework for a revised understanding of the authorship of orchestral performance.

1.1

LITERATURE REVIEW: Defining Creativity and Authorship in Orchestral Performance

1.1.0

INTRODUCTION

This literature review explores theoretical perspectives on creativity including collaborative and group creativity, creativity in music performance, studies of ensemble performance, and studies of orchestras, orchestral musicians and conductors. Perspectives on the creativity of action are discussed alongside definitions that emphasise creativity as a social attribution, while group creativity and theories that place the fundamental nature of creativity in the space between self and other are explored. In doing so, this literature review exposes the need for a better understanding of interaction in real-world orchestral practices in order to challenge received notions about the authorship of creativity in orchestral performance as well as assumptions about the social relationships that are enacted by orchestral musicians during rehearsals and performances.

1.1.1

THE CREATIVITY OF ACTION

Although there are many perspectives on creativity, I draw on two broad theoretical categories: On one hand, there is an argument for the inherent creativity of *all* action (Dalton 2004; Hallam & Ingold 2007), and on the other, the classification of only *some* ideas, people, products and processes as creative (Kaufman & Sternberg 2010; Boden 2004; Csikszentmihályi 1996; Sawyer 2012). Both are concerned with ‘newness’ but the latter is also concerned with the social judgments made by individuals that classify some things as creative. I propose that both perspectives are essential when trying to establish what constitutes creative contributions in an orchestral environment.

Both Dalton and Hallam & Ingold argue for a theory of action that places subjects’ creativity at the center of the concern with continuity versus change—or the phenomenon of ‘newness’. Dalton draws on Joas’ (1996) theory of creative action, grounded in Mead’s philosophies of ‘emergence’ in which ‘the present is always in some sense novel, abrupt, something which is not completely determined by the past out of which it arose’ (Mead 1932:xvii).

Dalton proposes that:

Since all action is by definition creative by virtue of unique conditions that can never be anticipated fully or routinized, the production of innovations that results from the negotiation between habitual accomplishment of general intentions and the specificity of precise context is a central component of action in which all situated agents participate and serves as an ever-present source of creative production for social change. (Dalton 2004:219).

This view resonates with those expressed by Hallam & Ingold who present a

model of action based on improvisation. They draw on Bruner's (1993) concept of improvisation as 'a cultural imperative' and assert that 'there is no script for social and cultural life [...] people have to work it out as they go along [...] [and] in this process they are compelled to improvise, not because they are operating *on the inside* of an established body of convention, but because no system of codes, rules and norms can anticipate every possible circumstance' (Hallam & Ingold 2007:1-2, emphases in original). For Ingold, 'to improvise is to follow the ways of the world, as they unfold, rather than to connect up, in reverse, a series of points already traversed' (Ingold 2008:17), or in other words: to read things 'forward' rather than 'backward'. In proposing such an approach Ingold reverses the tendency 'to read creativity 'backwards', starting from an outcome in the form of a novel object and tracing it, through a sequence of antecedent conditions, to an unprecedented idea in the mind of an agent', a process he describes as equivalent to what 'Alfred Gell has called the *abduction of agency*' (Ingold 2008:16-17, emphasis in original).

It is precisely this articulation between the theories of creativity that attribute the authorship of creative acts (i.e. the identification of the agency behind them) through a process which takes place *ex post facto* versus one that recognises the inherent creativity in the unfolding of action in the world that speaks to the condition of creativity in orchestral performance. Rather than acknowledge the production of a unique outcome as the property of the group, it is this tendency to read the authorship of performance outcomes 'backward' through the lens of the explicit orchestral hierarchy that has led to the narrow attribution of the creativity of orchestral performances. Other

stumbling blocks for the attribution of creativity to orchestral performers that these theorists address is the tendency to privilege 'designs' over 'copies' and the lack of individual agency in the process of 'copying' or 'imitation'.

Dalton and Hallam & Ingold maintain that the reproduction of traditions is an inherently creative process, a sentiment echoed in Campbell's statement that 'qualities such as creativity and autonomy are intrinsic to the faculty of agency' and that 'individuals may well need to be autonomous and creative in order to be able to conform' (Campbell 2009:416). In a statement of particular relevance to the conventions of Western art music performance, Hallam & Ingold highlight the creative process in the maintenance of traditions:

Copying or imitation, we argue, is not the simple, mechanical process of replication that it is often taken to be, of running off duplicates from a template, but entails a complex and ongoing alignment of observation of the model with action in the world. In this alignment lies the work of improvisation. The formal resemblance between the copy and the model is an outcome of this process, not given in advance. It is a horizon of attainment, to be judged in retrospect. Indeed the more strictly standards are observed, the greater are the improvisational demands placed on performers to 'get it right'. Precision [...] demands a heightened responsiveness, which, for practitioners who are truly skilled, can be truly liberating. That is why there is creativity even and especially in the maintenance of an established tradition. (Hallam & Ingold 2007:5)

Hallam & Ingold also recognise the tendency to privilege designs over copies with regard to the attribution of creativity. The designs, architects and builders in the example given below could easily be replaced with scores, composers and performers:

A famous modern architect designs a building, the like of which the world has never seen before. He is celebrated for his creativity. Yet his design will get no further than the drawing board or portfolio until the builders step in to implement it. Building is not straightforward. It takes time, during which the world will not stop still: when the work is complete the building will stand in an environment that could not have been envisioned when it started. It takes

materials, which have properties of their own and are not predisposed to fall into the shapes and configurations required of them, let alone to stay in them indefinitely. And it takes people, who have to make the most of their own skill and experience in order to cajole the materials into doing what the architect wants. In order to accommodate the inflexible design to the realities of a fickle and inconstant world, builders have to improvise all the way. (Hallam & Ingold 2007:3-4)

While such perspectives make compelling arguments for the inherent creativity of everyday action, in everyday life, however, a definite distinction is made between creative and non-creative products, ideas, processes, etc. In a cultural, social and financial economy that thrives on recognising what and who it considers to be creative, these definitions and the attribution of authorship to that creativity, are non-trivial. Classifying creativity is a social practice, mediated and maintained by individuals enmeshed in social and material environments. As Frith states: 'Creativity [is] a social fact, a way of thinking about what people do such that certain kinds of activity give people a particular social status. Such a way of thinking is the effect of social institutions' (Frith 2012:62).

1.1.2

SOCIAL DEFINITIONS OF CREATIVITY

Kaufman & Sternberg provide a synthetic definition of creativity based on their reading of generally accepted approaches: 'a creative response is novel, good and relevant' (Kaufman & Sternberg 2010:xiii). Indeed the emphasis on newness (novelty) and judgment (good and relevant) can be seen in the following collection of definitions: 'creativity is the ability to come up with ideas or artefacts that are *new, surprising, and valuable*' (Boden 2004:1; emphasis in original); 'creativity is the generation of a product that is judged to be novel and also to be appropriate, useful, or valuable by a suitably knowledgeable social group' (Sawyer 2012:8); and 'creativity is any act, idea or product that changes an existing domain or transforms an existing domain to a new one [...] and the definition of a creative person is: someone whose thoughts or actions change a domain or establish a new domain' as recognised by 'a field of experts who can determine the legitimacy of such claims' (Csikszentmihályi 1996:28-29). Endorsing Csikszentmihályi's 'systems model' of creativity, Sawyer lays out how creative products come to be acknowledged:

The systems model contains three components: the person, the domain, and the field. The person is the source of innovation; a person begins the process by developing a created product. But that alone can't be called creative, because the product might not be novel, and it might not be appropriate. Novelty and appropriateness are judged by people who are experts in the domain: the field. If the field decides that the product meets these criteria, the product enters the domain, where it's preserved and disseminated to other members of the field. Works that are rejected by the field don't enter the domain, and are often forgotten and destroyed.' (Sawyer 2012:214)

Recognising that the relevant 'field' may actually encompass different spheres of humanity depending on their social contexts, theorists have sought to

distinguish levels of creativity such as Boden's theories of P (personal) and H (historical) creativity and Kaufman and Beghetto's Four-C model of creativity. In the Four-C model, little-c describes everyday creativity (e.g. adding an inspired extra spice to a familiar dish), mini-c allows for creativity inherent in the learning process, Pro-c recognizes the efforts of professionals who work in creative domains (while perhaps not being historically creative), while Big-C is reserved for eminent creativity (domain changing at a global level) (Kaufman & Beghetto 2009).

At the same time the limited awareness of any individual or institution should not be underestimated: there is no global *panopticon* for any field. So despite the functionality of the 'systems model' (and varieties of 'c') in explicating how things become classified as creative, it lacks an acknowledgement of the role of power in such classification: access to knowledge, networks and social positioning mediate individuals' ability to create, express and classify creative things. I argue that such power relations are fundamental to the attribution of creativity in Western art music performance where visible hierarchical structures have the potential to mask on-the-ground power relationships. The issue of power will be discussed later in Section 1.1.6, but related to these concerns are the theories that argue for the socially distributed nature of creativity which move away from the individual as the source of creative agency and toward processes that exist *between* self and others.

1.1.3

LOCATING CREATIVITY

Understanding the creative process as one that is embedded and inextricable from the social is now firmly established in the literature on creativity (Becker 1982; Csikzentmihályi 1988; John-Steiner 2000; Toynbee 2003; Born 2005; Sawyer 2003, 2006, 2012 Sawyer & DeZutter 2009; Frith 2012; Glaveanu 2010, 2011). From this perspective, and from the micro-social to the macro-social, the generation of creative outcomes depends on inter- and co-subjectivity. Glaveanu asserts that this is represented by two major 'revolutions': 'the shift from the concept of the solitary genius (the 'He-paradigm') to that of the solitary normal and creative individual (the 'I-paradigm') and, further along, to the idea of ordinary individuals being creative only in their relation to one another (the 'We-paradigm')' (Glaveanu 2010:148). Glaveanu describes this as a newly emerged discipline, the 'cultural-psychology of creativity', and he notes the work of Hennessey (2003a) and Amabile (1996) whose theories have put the social back into the psychological study of creativity, but remains critical of the continued focus on the individual as the unit of study (Glaveanu 2010:150).

Drawing on the work of Vygotsky, Glaveanu argues that creativity is something that emerges in the space 'between' self and others; that there is a 'co-construction of knowledge and self through social interaction' (Glaveanu 2011:476-480), a perspective that resonates with Ahearn's observation that language, culture, and agency is located at the 'interstices between people, rather than within individuals themselves' (Ahearn 2001:129). Similarly, John-

Steiner establishes the basis of her work on creative collaboration on the Vygotskian perspective that 'creative activities are social, that thinking is not confined to the individual brain/mind, and that construction of knowledge is embedded in the cultural and historical milieu in which it arises' (John-Steiner 2000:5).

The understanding of cognition as both embodied and embedded has become established in the field of cognitive science—that 'cognition depends not just on the brain but also on the body' and that 'cognitive activity routinely exploits structure in the natural and social environment' (Robbins & Aydede 2009:3). Going beyond the embodied and embedded paradigms Clark offers a theory of extended mind, arguing that the boundary between mind and environment is not clear cut, stating that 'much of what we commonly identify as our mental capacities may likewise [...] turn out to be properties of the wider, environmentally extended systems of which human brains are just one (important) part' (Clark 2001:214). Specifically, the line between person and tool is difficult to draw: 'Some birds swallow small stones to aid digestion—are the stones tools, or once ingested, simply parts of the bird? Is a tree, once climbed to escape a predator, a tool? What about a spider's web? Public language and the props of text and symbolic notation are, I suggest, not unlike the stones swallowed by birds.' (Clark 2001:214).

Proponents of extended mind are not without their critics and as Robbins & Aydede point out, 'it is one thing to say that cognitive activity involves systematic causal interaction with things outside the head, and it is quite another to say that those things instantiate cognitive properties or undergo

cognitive processes' (Robbins & Aydede 2009:9). What Clark's work does highlight, however, is the dialogic nature of cognition, where 'the human organism is linked with an external entity in a two-way interaction, creating a *coupled system* that can be seen as a cognitive system in its own right' (Clark 2008:222, emphasis in original). As Wertsch *et al.* suggest, 'it is not individuals, but individuals-operating-with-mediational-means, who define the basic unit of agency' (Wertsch *et al.* 1993:352).

Hutchins (1995) broadens the unit of analysis, proposing a theory of distributed cognition, or 'cognition in the wild', in which cognitive processes may be distributed across the members of a social group embedded in material, social and historical environs. While the focus of this research is not to theorise or map the distribution of orchestral 'cognition' as such, Lewis has drawn on models of socially-distributed cognition to argue for the acknowledgement of the inherently distributed nature of interpretation in orchestral performance (Lewis 2012:70). She refers to distributed systems as defined by Gureckis & Goldstone in that 'each person [unit] has their own set of perceptions, goals, and desires which can operate independently of the group', 'the units are loosely coupled and can thus influence one another', and 'the pattern of connectivity between units is dynamic' (Lewis 2012:70).

I am aware that the previous passages somewhat conflate theories of creativity with those of agency and cognition. However, in the process of defining creativity and seeking to locate its sources, the line of questioning necessarily traverses those concerned with defining the bounds of the individual—intersecting with theories of distributed cognition and individual

agency. While these concerns problematise the attribution of creative authorship on a micro-social level, scholars have also theorised the role of the social in broader terms and the implications for understanding how creativity is additionally distributed across larger socialities, as well as space and time.

1.1.4

GROUP CREATIVITY

As a subset of creativity studies, 'group creativity' theories hinge on whether creativity is a property of individuals or a fundamentally social phenomenon. Glaveanu (2011) offers an overview of what he sees as the two camps of group creativity:¹ the 'sociocognitive' approach and the 'sociocultural' approach. In his view they are divided along the lines of whether creativity is located within the individual and the social environment then facilitates or constrains individual expression (the sociocognitive approach), or whether creativity is something that emerges in the space 'between self and others' (the sociocultural approach), (Glaveanu 2011:476-480). From the sociocultural perspective Sawyer & DeZutter draw on theories of distributed cognition, and use the term 'distributed creativity' 'to refer to situations where collaborating groups of individuals collectively generate a shared creative product' (Sawyer & DeZutter 2009:82). Additionally, when groups are 'relatively unconstrained, such that unexpected creativity could result', they support 'collaborative emergence' (Sawyer 2003), specifically in contrast to groups who 'engage in creative activities that are relatively predictable—for example, a symphony orchestra' which 'performs from a score and is guided by a conductor' (Sawyer & DeZutter 2009:82). 'Collaborative emergence', they propose, is more likely to be found in groups where: 1) 'the activity has an unpredictable outcome, rather than a scripted, known endpoint'; 2) 'there is moment-to-moment contingency: each person's action depends on the one just before'; 3) 'the interactional effect of any given action can be changed by

¹ For studies of group creativity see Sawyer 2003, 2006, 2012 Sawyer & DeZutter 2009; Glaveanu 2010, 2011; Paulus & Nijstad 2003.

the subsequent actions of other participants'; and 4) 'the process is collaborative, with each participant contributing equally' (Sawyer & DeZutter 2009:82).

Collaborative emergence as a concept certainly resonates with the processes observed and experienced during group musical performances (improvised or otherwise), but Sawyer & DeZutter's failure to understand how it manifests in 'scripted' environments is a significant oversight and stems from problems with their definition. The first issue is one of 'scale' and the level at which meaning-making resides: they refer to 'endpoints' and 'scripts' suggesting creativity resides in the novelty of the end product, privileging large-scale structure over other time frames and creative outcomes. Second, the emphasis on a teleological progression of events misses a more intricate development of ideas that may transcend sequential actions. And third, the idea that all members be equal contributors can only be seen to be arbitrary, as quantifying individual contributions to an end product, as well as the subjective evaluation of their relative worth, is highly problematic, and imparts a moralistic imperative that is unnecessary for emergence to take place. While the main focus of this research is not to dispute Sawyer & DeZutter's assertions, their characterisation of collaborative emergence as something which is *other than* what happens in an orchestral performance, will be addressed in the conclusions of this thesis.

Sawyer's other major contribution to group creativity research is 'group flow' or 'group genius'. Building on Csikszentmihályi's concept of 'flow' as a state of optimal experience ('an almost automatic, effortless, yet highly focused

state of consciousness' (Csikszentmihályi 1996:111), Sawyer observes that 'improvising groups attain a collective state of mind' that he describes as 'group flow'. 'Group flow is a peak experience, a group performing at its top level of ability' (Sawyer 2007). He is emphatic that not every situation is set up for enabling group flow but rather that:

Group flow happens when many tensions are in perfect balance: the tension between convention and novelty; between structure and improvisation; between the critical, analytic mind and the freewheeling, outside-the-box mind; between listening to the rest of the group and speaking out in individual voices. (Sawyer 2007)

In both Csikszentmihályi's and Sawyer's accounts, flow is described as the state in which creative products are likely to emerge. There are a few researchers who have sought to explore this phenomenon in chamber and orchestral environments (Seddon & Biasutti 2009; Boerner & Streit 2006; Burzik 2002, and Marotto, *et al.* 2007). Their findings suggest that group flow states may occur in large ensembles and may even be an intrinsic motivator for participants. An additional significance of flow for a consideration of creativity in musical performance also resides in the mental states that are implicated in flow experiences. For example, the expression of embodied knowledge that does not necessarily linger as reflective thought in the flow of musical performance is reminiscent of such 'automatic and effortless' processes. As will be discussed later, this raises questions as to what constitutes intention in musical performance, and, subsequently, the attribution of responsibility and authorship.

1.1.5

THE MACRO-SOCIAL AND CREATIVITY

From a macro-social perspective, authors have argued for recognition of the inherently socially distributed nature of artistic production (Becker 1982; Frith 2012; Born 2005, Hennion 2003; Toynebee, 2003). Becker's sociological theory of 'Art as Collective Action' (1989) emphasises the distributed character of artistic production across both physical and temporal space. Within his concept of 'art worlds' he not only recognises the large collective necessary to produce artworks and events, he also acknowledges the social infrastructure of conventions and assessment in which the activity is embedded and by which it is mediated and shaped. Similarly, from the perspective of economics, Krätke argues that 'creativity depends on human actors and their interlinking (yielding knowledge networks of industrial innovation and project-based networks of artistic production), which creates a "collective" innovative capacity within particular regional and urban settings' (Krätke 2011:4). Csikzentmihályi made similar observations on the conditions of fifteenth-century Florence or nineteenth-century Paris with regard to the apparent surge of artistic creativity in those areas (Csikzentmihályi 1988).

Concerned with aesthetic and social practices rather than the distribution of artistic practice specifically, Born identifies four distinct but interconnected planes of music's social mediation which are in dialogic relationship with one another: 'performance socialities, imagined communities, social identity formations and institutions' (Born 2011:266). She notes that previous research has tended to focus on one or another sociality, but that such an approach

fails to recognise the integral influence of the other planes in the way that social identity formations such as ‘class, race or ethnicity, gender or sexuality, nationality or locality’ is reflected in performance socialities as well as imagined communities and institutions, for example. Certainly orchestral music-making, with its particularly privileged position within Western art music, demands interrogation in this regard. However, problematically, there is little research into the nature of the performance socialities of orchestras—the ‘intimate microsocialities of musical performance and practice’—on which to base a meaningful critique. I propose that tracking the authorship of performance in orchestral practice opens a window into the nature of Born’s first plane of sociality by exploring the relationships that are enacted in the performance of orchestral music.

When considering creativity in orchestral performance these macro-social theoretical perspectives emphasise the inextricable interconnectedness of the social and historical in their shaping and reception of artistic practices. In particular they make a strong call for the recognition of how individuals, as well as the musics that they engage with, are embedded in a complex web of influences that shape artistic outcomes.

1.1.6

OWNERSHIP AND AUTHORSHIP

While creativity may be seen to be communal, distributed and emergent from a theoretical perspective, the emphasis on the individual in Western culture results in a desire to attribute creative authorship to a single person, and a concomitant tendency to overlook the role of more distributed creative processes. John-Steiner challenges the 'current cultural and professional socialization in which the emphasis on individuation and autonomy prevails' and insists that 'it is important to go beyond the popular narratives of individualism when studying human activity' (John-Steiner 2000:6). This individualist disposition is well embedded in our social fabric and as Frith has noted, 'musical activity, which is by its nature social and collaborative, is thus redefined as something driven by individual expressive needs' (Frith 2012:70).

However, not all cultures share similar concepts of creativity, individuality and authorship. Juniper Hill, for example, states that notions of musical creativity and their origins, 'be it in in flashes of inspiration from God, from the subconscious, from animal spirits' villages, [or] from visions', vary widely from culture to culture (Hill 2012:101). She also observes that there are some music cultures which 'de-emphasize the individual and value music-making as a means for group solidarity and communal social cohesion' emphasising the cultural value that 'collective solidarity is far more important than individual recognition' (Hill 2012:100). Similarly, Frith argues that 'creative freedom is not something that people naturally aspire to, as part of their

humanity', but 'is only possible in cultures in which there is a particular sense of selfhood and the valorization of the new' (Frith 2012:70). In a globalized economic and cultural market, such value differences and attributions of authorship can play out in meaningful ways, impacting livelihoods and careers.

In Western society, there is also a cultural bias toward material products, and individuals must have the capacity to commodify their creative 'outputs'. Ephemeral 'outputs' need to be captured: ideas must be captured as texts, and performances captured in media or documented with words in order to become a part of the historical narrative—to be bought and sold and become candidates for the classification of 'creative'. The author(s) must have the ability (the power) and the knowledge of process to express them in a persistent media in order to assert ownership, disadvantaging oral and performance traditions and cultures. Perspectives from ethnomusicology have been increasingly critical of these issues with regard to globalization and the appropriation of musical materials where individuals from more privileged socio-economic backgrounds capitalize on the creative products of less powerful individuals and groups (see Born & Hesmondhalgh 2000; Feld 2000; Stokes 2004; and Hesmondhalgh 2006).

But in an economy of innovation mediated by the distribution of patents and publications, only those who possess the means to obtain these are able to assert their ownership and authorship of creative products. In fact, intellectual property rights can be obtained by an institution from its employees even before ideas or products have been generated. The

institutional mediation of not only ownership, but authorship as well, has been observed in the music industry. In the 1960s there was a shift in the attribution of creative authorship in the recording studio as it moved from an institutional culture that viewed session musicians as uncreative and malleable voices to which producers, writers, arrangers, and engineers gave shape and texture, to one which reversed this hierarchy, and re-situated the source of creativity to the performers themselves (Frith 2012:65). Frith's observation is that this was 'a matter of changing institutional status rather than the development of a coherent new aesthetic understanding of the actual sources of new musical sounds and ideas' (*ibid*). It is not irrelevant to note that orchestral musicians are rarely listed on the liner notes of their own recordings, a move that has no doubt been influential in the social confirmation of the more significant artistic roles of the composer and the conductor. As with session musicians, this is an example of an institutional construction and management of authorship rather than representing the actual sources of 'new musical sounds and ideas'.

1.1.7

CREATIVITY IN MUSIC PERFORMANCE

Historically, creativity in music has been associated with composition and improvisation, and to a lesser extent with performers and performances.

There has been very little research that has focused on the creativity of large ensembles, and on that of orchestras in particular. This may in part be due to prevailing popular mythologies surrounding the artistic responsibilities in orchestral practices, where the creativity in such ensembles has been assumed to reside 'in large part, in the creativity of the composer and the conductor' (Sawyer & DeZutter 2009:91). Hence, natural locations for exploring creativity in musical performance have been in improvisation (Johnson-Laird 2002; Monson 1996; Doffman 2011; Sawyer 1992, 2003, 2006; Berkowitz 2010), and at the interface of the composer/performer relationship (Clarke, *et al.* 2005; Fitch & Heyde 2007; Hayden & Windsor 2007; Bayley 2011; Clarke, *et al.* 2013).

Improvisation studies have sought to analyse the creative process involved in the generation of ideas (Johnson-Laird 2002), but also the interactional dynamics of groups (Sawyer 2006) involving communication and collaborative creativity (Doffman 2011; Sawyer 1992, 2003, 2006; Seddon 2005). Studies of composer-performer partnerships have illuminated the significant creative role of performers in these collaborations, as well as bringing to light historical evidence that composers have been working with performers in a dialogic manner for centuries, disrupting the image of the nineteenth-century solitary genius (Fitch & Heyde 2007:72). Fitch and Heyde note that such enquiries raise the important questions regarding the attribution of the authorship of music, including the role of social power

relations which stem from long standing cultural practices, such as composer authority (Fitch & Heyde 2007:73).

In addition to recognising the collaborative nature of composition, there is a growing acknowledgement of the creativity inherent in performance and in performing from notated scores (Cook 2004). Clarke (2012) observes the social importance of individual creativity in Western art music in the way in which the music industry emphasises individual interpretations. Particularly in orchestral repertoire, where canonic repertoire is relatively small, the differentiation between two performances of the same work is attributed to the 'interpretive' choices made by the performer(s) (usually the conductor and/or soloist). In this way, and perhaps somewhat ironically in view of the fetishisation of the composer's intentions, the interest is shifted toward performers' creative contributions.

The idea that musical notation leaves 'space' for the performer's contributions, has been well argued. Cottrell has noted that musical texts 'contain detailed instructions relating to pitch and rhythm, and less specific information about speed, volume and so on [but] beyond allocating particular musical lines to specific instruments, they reveal very little about the quality of sound expected from groups or individuals at any given time' (Cottrell 2004:45). Cook takes it a step further and argues that performers do change pitches and durations: 'the whole process of rehearsal is one of negotiating ways to change them' (Cook 2004:332). Indeed his assertion that 'small doesn't mean unimportant' (Cook 2004:336), echoes Clarke's observation that 'small differences in the precise implementation and relative balance of even a

small number of expressive principles will result in potentially distinct characterisations of a piece' (Clarke 2002:65). He goes on to propose that 'when a performer "characterises" a piece in performance, he or she is constructing meaning through expression' (Clarke 2002:68). Such observations are far from irrelevant when one considers how a slight temporal delay or well-placed vibrato may transform the banal into the sublime (or vice-versa) in a musical performance.

Hence, the 'creative' component of performing music from notated scores is often perceived to lie at the level of an individual's decision-making process that determines what is commonly referred to as the 'interpretation' or the 'expressive' profile of a performance. Despite their everyday usage these terms are not clearly defined. Dreyfus notes that an 'interpretation takes a considered view of a masterpiece, and offers a personal "reading" which lends itself to a characterisation in words' (Dreyfus 2007:153). However, in common parlance, we often refer to the way someone plays a piece of music as their 'interpretation', whether or not such performance represents a 'considered view' with a goal of explicating the composer's text or intentions. For example, Reid puts expression to the service of interpretation in a manner that is consistent with more informal usage:

Musical interpretations are communicated through the expressive parameters of timing, dynamics, articulation and timbre, among others. A score might contain a variety of expressive indications to aid the performer's interpretative choices, but [...] expressive notation lacks precision. (Reid 2002:106)

Expression in music is particularly difficult to define. In contrast to historic definitions such as that proposed by Seashore, that 'the artistic expression of feeling in music consists in esthetic deviation from the regular—from pure

tone, true pitch, even dynamics, metronomic time, rigid rhythms, etc.’

(Seashore 1938 quoted in Leech-Wilkinson 2009a, 8.1, paragraph 15), Leech-Wilkinson argues that:

‘Deviation’ from the score is normal, in fact definitive of a musical performance, and it’s not the fact that notes are not strictly as notated that generates expressivity. Rather it’s how much they differ from their surroundings and from what we’ve come to accept over the last few moments of listening is the (local) norm. Difference from the score is not what’s expressive; change is. (Leech-Wilkinson 2009a, 8.1, paragraph 15)

Leech-Wilkinson defines an expressive gesture as ‘an irregularity in one or more of the principal acoustic dimensions (pitch, amplitude, duration), introduced in order to give emphasis to a note or chord—usually the start of a note or chord’, and that they ‘involve sounding notes for longer or shorter, or louder or softer, or in some other way different compared to the local average’ (Leech-Wilkinson 2009a, 8.1, paragraph 15). But ‘expression’, argues Juslin ‘does not reside solely in the acoustic properties of the music (different listeners *may* perceive the expression differently), nor does it reside solely in the mind of the listener (different listeners *usually* agree about the general nature of the expression in a performance) [but] expression depends on *both* of these factors’ (Juslin 2003:276, emphases in original). Consequently I propose that, regardless of the irregularity of the acoustic phenomena, the ‘characteristics’ of the acoustic properties of musical materials as they are performed offer a set of affordances with which listeners engage as they construct individual understandings of the expression and meaning of a musical performance.²

² See Clarke 2005:36-47 for a discussion of Gibson’s concept of ‘affordance’ and its relevance to music perception.

However, such an evaluative process does not take place in a social and historical vacuum. As Clarke notes, a listener's perception of the 'expression, emotion, style and ideology in performance requires the listener to identify properties of the performance which stand out against an implicit background of neutrality—a kind of theoretical "norm" in relation to which expression, emotion, style and ideology are marked', as such 'performance is heard against the backdrop of previous performances and recordings' (Clarke 2002:193-194). In that sense Leech-Wilkinson's 'local' variation accrues meaning as it is invariably embedded in larger socio-historical trajectories in which performers and listeners are enmeshed. Expression, therefore, is fundamentally 'relational'.

While it may be uncontentious to suggest that performers make many decisions with regard to the 'expressive' details of their performance from notated scores and it is these details which shape the unique profile of those performances, the question remains whether or not all such decisions constitute creative contributions. One particular issue is the role of intentionality. On the one hand Clarke notes that most definitions of creativity avoid describing phenomena that are either accidental or completely determined, thus offering a distinction between expressive elements that might be a result of 'underlying cognitive processes' and those that are the result of 'deliberate interpretive choices' (Clarke 2012:19). However, he refers to a study (Clarke 1995) in which a pianist was asked to play a piece six times without any instruction to attempt deliberately different interpretations. The analysis of the performances 'demonstrated significant differences between them, amounting to distinct interpretations of the music

that appear to prioritize different aspects of the music's structure' (Clarke 2012:19). In the study there was no evidence to suggest that the performer was deliberately attempting to communicate different interpretations, yet it was clear that the distinctions between performances did 'constitute a creative use of expression' (Clarke 2012:19). In putting these findings together with previous research in other disciplines, Clarke observes that there is evidence for 'the fluid relationship between creativity and conscious awareness, which demonstrates that creative solutions may often be the result of an unconscious process' (Clarke 2012:19).

Along similar lines Dalton suggests that creative action can even become habitual (pre-reflective), in that it simply becomes the way of working when striving to improve or perfect a routine (Dalton 2004:610). From a cognitive perspective, Shaffer defines an intention as 'a representation that contains the same information about response output whether it originates as an imitation or an invention' and is not associated with certain states of awareness or attention (Shaffer 1976:376); and from an embodied knowledge perspective McCaleb argues for the interconnectedness of 'conscious' and 'unconscious' elements in musical intentions. Yet the issue of 'conscious' intentionality remains problematic when seeking to attribute responsibility and authorship to performance outcomes. As Frith observes:

Our culture makes an important distinction between voluntary and involuntary behaviour and also between outcomes that are intended and those that are not intended. We are not usually held responsible for acts that were involuntary or outcomes that were unintended. Free will and responsibility are closely related and many legal systems require that we can only be held fully responsible for those actions we have freely chosen. [...] The attribution of responsibility has an important function in society and has a major impact on our lives. (Frith 2013:138)

Whether or not individuals are engaged in intentional or unintentional processes, performance from notated scores is characterised by performers in ways that afford differences in meaning-making, interpretation and expressive possibilities. Such characterisation takes place through the physical actions of the musicians themselves, through the production of sound. As Crutchfield so eloquently stated: 'The author of a performance—of a bow stroke, a crescendo, an impulse, a radiant act of absorption—is the performer' (Crutchfield 1988:25).

That the human body is integral to musical experience, whether listening or performing, has been recognised for centuries (Davidson 2009:268), but more recently, it has become a growing field of research (see Moran 2011; Clarke 2002; Goodman 2002; Clarke & Davidson 1998; Davidson 2005, 2009; McCaleb 2014). Of particular relevance are Dobson & Gaunt's observation that 'ensemble practices rely on collaborative and communicative skills, many of which are tacit and embodied' (Dobson & Gaunt 2015:4) and Koivunen & Wennes (2011) observation of the role of kinesthetic empathy in conductor-orchestra communication. In his phenomenological account of learning to play jazz piano, Sudnow (1978/2001) brings to the foreground the role of the body in the improvisational process; ultimately, it is the *fingers* that 'go for the jazz'. His observation highlights the body's potential to engage intuitively in creative musical performance, and it is worth considering how much this same phenomenon might be a key feature for the seemingly unconscious nuances of interpretation that manifest in solo and ensemble performances from notated scores. But while the body has been recognised as conspicuous in co-ordination within musical ensembles (Goodman 2002:), connected to the

perception of musical expression, and implicated in our ecological experience of sound (Clarke 2005), within the realms of creativity research, the embodied process has been less explored.

1.1.8

THE PROBLEM OF THE COMPOSER'S INTENTIONS

In notated music there is a conundrum, however, which is that the dominant philosophy that guides contemporary Western art music performance is that performing the 'composer's intentions' is the holy grail of musical achievement—a philosophy seemingly directly at odds with the arguments that there is 'space' for an individual's own contributions. While such an attitude seems overly pedantic, it is a well-ingrained mantra for many performers. Referring to a 2006 interview in the *Guardian*, Dreyfus quotes Royal Philharmonic Orchestra conductor Owain Arwel Hughes, saying that the conductor's job is 'to make music, to interpret and follow the wishes of the composer, which are paramount. It's a joy to get as near as possible to the composer's intentions and communicate them to an audience' (Dreyfus 2007:254). Similarly, Reid cautions that 'performers must tread the difficult path between the need to respect the score, which represents the composer's intentions, and the desire to exercise their own creative insights' (Reid 2002:106). And the composer-conductor, Gunther Schuller, criticises many world-famous conductors for their lack of fidelity to the composer's intentions in his book *The Compleat Conductor*. In an interview with Tom Service in 2010 he said:

The book is more than a decade old and I'm still waiting for someone to prove me wrong. As someone said to me, it's because what I did was foolproof. I have the score, which doesn't lie, and recordings, which don't lie. So Karajan, Bernstein, or Boulez – they're just wrong! (*The Guardian* 12 August 2010)

Expressing similar devotion to the intentions of composers, conductor Eric Leinsdorf states that decades of interpretations which have misunderstood

the composer's intentions need to be replaced by a reading of the score with 'knowledge and *imagination*' (Leinsdorf 1981:viii, emphasis added) in order to best represent the composer's wishes:

Today special courage and energy may be required to sweep away the detritus of misinterpretation and reveal a composer's work as he first constructed it. Ironically, faithful interpretation of a great master's wishes often seems not conservative but radical. But to discover the composer's grand design for each work is both the conductor's mission and his reward. (Leinsdorf 1981:62-63)

There are certainly plenty of explanations for the deification of the composer of Western art music, but on a practical level such adherence may serve several functions for the conductor of an orchestra: imbuing her with the authority of the composer, while simultaneously deflecting responsibility, and projecting humility by acting as a servant to a higher power. But the privileged positioning of the composer's intentions has also led to the perception among many instrumentalists that there is no 'creativity' in performing from notated scores.

While there remains an underlying tension between the creative role of the performer and their perceived social responsibility to be a transparent medium through which the composer's intentions are communicated to listeners, it is clear that the authorship of the artistic decision-making process which leads to the characterisation of performances in an orchestral setting is overwhelmingly attributed to the conductor. As mentioned earlier, this is notably expressed through the way in which performances are marketed and how individuals are remunerated, but also through the social conventions and rituals that structure rehearsals and performances.

In particular, the explicit hierarchical structure of the orchestra leads observers to infer that information flows 'down' from conductor to section principals and then to players. And while there may be some truth to this, the reality is of course much more complex and is intertwined with the mechanics of how large groups of musicians coordinate their actions as well as numerous other factors which this thesis will explore. Although there has been much interest shown in conductors and conducting, there has been less attention given to the mechanisms orchestral musicians employ in order to perform cohesively with one another. Studies of smaller ensembles have helped to shed some light on this issue, however.

1.1.9

ENSEMBLE PERFORMANCE

Research into ensemble performance has primarily taken the small chamber group as the focus of study (Murnighan & Conlon 1991; Bayley 2011; Davidson & Good 2002; King 2006; Davidson 1997; Seddon 2005; Seddon & Biasutti 2009; McCaleb 2014). Such studies have sought to investigate the range of verbal and non-verbal communication deployed in coordinated execution and collaborative interpretation, as well as issues of leadership and ensemble dynamics. For example, Goodman's observations of coordination in ensemble performance highlight the dual roles of aural and visual cues between players, and draws attention to the integration of these elements in players' anticipations of each others' actions (Goodman 2002), a responsiveness that McCaleb attributes to players' embodied knowledge gained from their own musical practice (McCaleb 2014). In a rare study of orchestral coordination, Clayton found that orchestral musicians prioritise auditory cues over visual cues for determining precisely when to play (Clayton 1985:170).

Goodman also draws attention to how individuals in small ensembles bring their own 'character' to the group's performance, while also needing to blend with colleagues, underlining the need to negotiate a variety of roles within the group. This last point is also highlighted in Dobson & Gaunt's orchestral study where 'the ability to "fit in" to the ensemble, while simultaneously retaining and (when appropriate) asserting one's identity' was an important

factor in successfully maintaining a place in a professional orchestra (Dobson & Gaunt 2015:34).

Particularly relevant to a study of creativity in ensemble performance, Seddon & Biasutti's comparative analysis of a string quartet with a jazz ensemble revealed a common set of six modes of musical communication (verbal and non-verbal; instruction, cooperation, collaboration) that facilitated both musical coordination and rehearsal strategies as well as 'empathetic creativity'. Drawing on a theoretical framework of empathetic intelligence (Arnold 2004), Seddon proposes that 'empathetic attunement' is a prerequisite for the emergence of 'spontaneous musical utterances' that may be regarded as examples of empathetic creativity, where empathetic attunement can be equated to Sawyer's concept of group flow (Seddon & Biasutti 2009:398). The researchers believe that the results they obtained through their systematic coding of modes of communication, and subsequent 'member checks' with the participants to establish agreement on their observations, revealed that the classical musicians in the string quartet study were able to 'collectively create "spontaneous musical variations" while empathetically attuned during the concert performance' (Seddon & Biasutti 2009:411). While they acknowledge the link between empathetic attunement and group flow, their characterisation of 'empathetic creativity' and 'spontaneous musical variation' is in accordance with Sawyer's theory of 'collaborative emergence' (Sawyer 2003, 2006, 2010, 2012, Sawyer & DeZutter 2009).

Existing research on understanding ensemble coordination, and the ways in which creativity in musical practices can emerge between individuals in rehearsal and performance, even in small and improvisatory environments, offers important insights into how larger ensembles might function (see Cottrell 2007:85). However, while there are certainly issues of hierarchy and leadership within a string quartet or jazz ensemble, these aspects are particularly complex in orchestral settings and how they manifest in the artistic decision-making process has yet to be fully explored. In particular, the assumption that the conductor is the primary, if not sole, source of artistic decision-making in orchestras has meant that orchestral studies have largely focused on this role over a more critical approach to understanding the distribution of creative contributions in orchestral environments.

1.1.10

STUDIES OF ORCHESTRAS, ORCHESTRAL MUSICIANS AND CONDUCTORS

While there has been much interest shown in the stressful work environment of professional orchestral musicians (Allmendinger, *et al.* 1996; Atik 1994; Brodsky 2006; Olbertz 2006; Parasurman & Purohit 2000; Piperek 1981; Kenny & Ackermann 2015; Kenny *et al.* 2012), as well as in the dynamics of artistic leadership (Faulkner 1973a/1989; Atik 1994; Boerner, *et al.* 2004; Hunt, *et al.* 2004; Boerner & Streit 2005; 2007; Couch 1989; Khodyakov 2007; Koivunen 2003; Logie 2012; Lewis 2012;), only a few studies have sought to explore phenomena specifically related to the creativity and accomplishment of artistic decision-making in the process of rehearsal and performance in orchestral environments (Langer *et al.* 2008; Khodyakov 2007; Lewis 2012; Clarke, *et al.* 2013). While there is research that suggests that professional orchestral musicians feel a great deal of compromise in their artistic decision-making capacities on account of having to conform to the artistic vision of the conductor (Levine & Levine 1996; Khodyakov 2007; Gillinson & Vaughan 2003; Brodsky 2006), and that there is a discrepancy between the individualistic artistic skills developed in conservatoire training and the collaborative skills necessary for a successful career in a professional orchestra (Cottrell 2004; Davis 2004; Hager & Johnsson 2009), at the same time research also exists that highlights the dynamic relationship between orchestral musicians and conductors, suggesting that it is a highly interactive artistic process in which musical authority is negotiated (Atik 1994; Koivunen 2003; Biasutti 2012; Faulkner 1973/1989; Logie 2012; Lewis 2012).

The overwhelming majority of the literature on orchestras has tended to focus on conductors, their gestures and their leadership styles, the latter particularly from the perspective of management studies. Such research generally attempts to define the type or types of leadership that various conductors exhibit (Atik 1994, Johannsen & Nakra 2010; Boerner *et al.* 2004; Koivunen & Wennes 2011), or propose the *best* type of leadership and practices for a conductor to employ (Hunt *et al.* 2004; Boerner & Streit 2007; Lewis 2012). Other writings approach the conductor from a sociological perspective, exploring their role in the broader cultural milieu (Small 1987; Adorno 1989; Couch 1989; Faulkner 1973/1989; Cottrell 2007; Lambeau 2015), and often calling into question the scope, nature and source of conductor authority. With the evolution of new technologies there is also an increasing amount of research into conductor gestures utilising such tools as ‘point-light displays’, conducting ‘jackets’ (see Johannsen & Nakra 2010), and the cross-pairing of conductor performances with ensemble performances by ‘synching’ the audio from one performance with the visual materials of another in order to investigate the influence of auditory and visual information in evaluating performers and performances (Silvey 2011).

Generally speaking, however, there are a number of shortcomings in previous studies on orchestras and conductors: first, they tend to rely on relatively small numbers of interviews with orchestral musicians from limited orchestral contexts or on author observation and experience.³ Second, they

³ There are some exceptions, however. Brodsky’s multiple interviews with 54 professional musicians represents one of the larger interview-based studies while Allmendinger *et al.* (1996) and Boerner’s studies have attempted to capture a large amount of data from multiple orchestras. For example: Allmendinger *et al.* surveyed 1170 orchestral musicians from four different countries, while Boerner’s research has focused on large surveys of multiple German orchestras.

privilege the professional manifestation of orchestral practice almost exclusively without comment, conflating issues of the profession with issues of 'the orchestra' more generally. And third, (in contrast to the second), empirical studies of conducting gestures tend to utilise student or university-based conductors, rather than professionals in top-tier orchestras, again conflating a multitude of issues. These shortcomings are particularly problematic in the context of the tendency to generalise orchestral practices from a small number of perspectives, while ignoring the broad range of real-life contexts in which orchestral rehearsal and performance take place.

Furthermore, while many of the studies recognise that orchestras (again assuming professional ones) can, and will, play without the conductor or will ignore a conductor they do not like, few consider the implications of this for their theories of conductor roles (exceptions include Cottrell 2007, Logie 2012, and Lewis 2012). As both Cottrell and Lewis recognise, the mechanisms that (professional) orchestras use in order to play together cohesively problematize the notion that the conductor is there primarily in order to facilitate coordination within a large ensemble. It is this focus on what orchestras *actually* do while performing that has only just begun to be explored.

There are a few studies that have looked at complete orchestras as the unit of analysis (Koivunen 2003; Langer *et al.* 2008, Khodyakov 2007; Lewis 2012), but notable are two studies of non-conducted orchestras: the Orpheus Chamber Orchestra (Khodyakov 2007) and the Britten Sinfonia (Lewis 2012).

Khodyakov's study sought to describe the trust-control relationships that

underpin the collaborative artistic environment of this relatively large conductor-less group. He argues that it is the balance between 'control' factors such as the temporal authority of rotating concertmasters, 'core group' members, and rotating section seating, and the 'trust' between performers (competence and goodwill) that facilitates a creative, but efficient, orchestral environment. Indeed, he claims that such a collaborative model eliminates 'the biggest barrier between the audience and the music—the conductor' (Khodyakov 2007:13). Lewis's study, referred to earlier, sought to explore the role of the conductor through an analysis of conductorless orchestral practice. Drawing on research into socially-distributed cognition, Lewis suggests that 'the most efficient and "useful" groups "promote robust information transmission across people yet avoid having everybody know the same things"' and that 'conductors who manage to facilitate these sorts of conditions [...] will be better at solving problems and more likely to over-perform' (Lewis 2012:70). She theorises that a conductor's role is part of an 'assisted performance', since the reality of interpretation in orchestral performance is that it is 'emergent and socially-distributed', conductors that 'block these emerging factors will be more likely to under-perform' (Lewis 2012:70-71).

A recent study by Clarke *et al.* (2013), while not a study of a chamber or symphony orchestra, but a large conducted chamber ensemble, explored the distribution of the creative process through an ecological lens in the context of a new piece for large ensemble and conductor including improvised elements. They trace the interactions of instrumentalists, composer and conductor during rehearsals and performances observing the negotiation of

individuals' (musical) agency while players worked to find the 'appropriate' level of musical freedom in order to perform their roles. In doing so Clarke *et al.* demonstrate the distribution of the creative process across multiple intersecting social planes. They state that:

Creativity operates in a radically distributed sense across a field of action that draws in sensorimotor engagement, instrumental and social affordances, micro-social interactions within the framework of established social relations, and institutional arrangements at a variety of scales and durations. [...] It is an ecology of multiply distributed creative values, neither completely ordered nor entirely disorderly, in which composer, performer, conductor, listener, and their embedding institutions operate together as a fluctuating field of power relations. (Clarke *et al.* 2013:33)

While their study is a significant step forward in examining the creative process in large ensemble concert music, the relatively small size of the ensemble and the nature of the musical materials (explicitly improvisatory elements in a 'non-canonical' work) mean that such negotiations of individual agency have yet to be explored in a full symphony orchestras.

Some steps have been made, however. For example, a study by Langer *et al.* (2008) sought to probe the effect of what they called 'mindfulness' in orchestral performance. Two orchestras, one professional and one student, were asked to play a piece twice, the first time attempting to emulate their mental image of the best performance of the piece that they had ever heard, and the second time focusing on adding to their parts their own personal 'nuances' (in other words, performing 'mindfully'). The recordings of these performances were played back to an audience (amateur choristers) who were asked to rate which performance they preferred. The audiences preferred those recordings in which the orchestral players had added their own personal nuances and the players overall reported more enjoyment

playing in these performances as well. This raises an important question about how much scope there is for individuals within an orchestra to express their own ideas without damaging, but rather enhancing, player and audience experiences.

In a study that is particularly pertinent to this thesis, Dobson & Gaunt (2015) sought to gain insight into the skills needed for successful orchestral instrumentalists and interviewed 20 musicians from a prominent London orchestra. Respondents reported that communication, and in particular finely tuned 'radar', was essential if a musician was to make it past the 'trial' period (effectively an extended audition within the orchestra). They found that this 'radar' was essential to creating an atmosphere where players could 'take risks' knowing that their colleagues were listening and supporting them, 'acting as a mechanism for facilitating spontaneity of musical expression at a collective level' (Dobson & Gaunt 2015:10), but also that this 'radar' was not necessarily a function of skill: some players might have outstanding instrumental prowess but lack the attunement necessary to be a successful orchestral player (Dobson & Gaunt 2015:9). The respondents commented that events unfold very rapidly when playing and there is little rehearsal time allocated in the British orchestral culture, so players must be able to adapt quickly. Dobson & Gaunt also acknowledged the dynamic and relative nature of hierarchies within the performance context: 'Individual parts may, on a momentary basis, fluctuate in their influence on the group's overall cohesion; while, on a more permanent basis, some individuals inherently retain greater authority and prominence than others' (Dobson & Gaunt 2015:13). Perhaps most significantly their research points to the importance of understanding

co-performer communication in an orchestral context, something that has been routinely overshadowed by conductor-performer dynamics:

[O]ur findings indicate more complex levels of negotiation and communication within the ensemble than can be represented by a single uni-directional flow of communication from conductor to orchestra: the participants devoted greater attention to outlining the complex skills required for communicating and interacting with colleagues than to those required for following the directions of the conductor.' (Dobson & Gaunt 2015:15)

Paired with Biasutti's study of orchestral musicians and conductors which revealed a possible gap between participants' opinions and what may really happen during orchestra rehearsals (Biasutti 2012:70), Dobson & Gaunt's work highlights the need to obtain perspectives from orchestral members and 'the value of gaining insight about performers *intentions* in addition to recording and analysing their musical *actions*' (Dobson & Gaunt 2015:14, emphases in original).

The studies that have focused on musicians' perspectives have tended to highlight the contingent nature of conductor authority. In particular Faulkner (1973, reprinted in 1989) made some very astute observations in this regard, noting the social construction of authority within orchestras:

The system of authority in the orchestra [...] is more than a pattern of static roles and statuses. It is a network of interacting human beings, each transmitting information to the other, sifting their transactions through an evaluative screen of beliefs and standards, and appraising the meaning and credibility of conductor directives. The orchestra, as the most complex musical instrument, is composed of performers who communicate with one another, establish definitions of the situation under successive maestros, and thereby affect each others' tacit and explicit understandings about music and music-making under various conductors. (Faulkner 1989:290)

Similarly, by taking a social constructivist approach, Koivunen (2003) and Koivunen & Wennes (2011) sought to understand the discursive and aesthetic practices of orchestra members in constructing leadership. They found

leadership in orchestras to be 'a relational process between the leader and the follower [...] not a possession held by someone' (Koivunen & Wennes 2011:66). Although their concluding remarks describe a rather idealised picture of the dynamics of orchestral interactions, their work highlights the relational and embodied aspects of orchestral leadership and illuminates the need for a more nuanced understanding of how leading and following work in orchestral environments.

The contingent nature of conductor authority should not be underestimated, and while Faulkner's interviewees claim that they can size up a conductor in just a few minutes (echoing many similar anecdotal remarks), the extent to which all musicians in an orchestra share such evaluations is not clear, however. Moreover, it is questionable whether or not such a rapid and conclusive acceptance or rejection of a conductor's authority actually takes place, or whether a more complex negotiation unfolds over time. Much more empirical research is still needed in this area, which continues to be surrounded in mystique.

1.1

SECTION SUMMARY

As this literature review has sought to demonstrate, the question of how to attribute creative authorship in orchestral performance is intertwined as much with concerns regarding the bounds of individual cognition and the nature of human agency, as it is concerned with definitions of musical creativity and the nature of power and authority in orchestral hierarchies. This thesis takes as its theoretical framework a sociocultural theoretical perspective on creativity in which creativity emerges in the space between self and other (Ahearn 2001, Glaveanu 2011); that the unfolding present is inherently creative and thus actions cannot be routinized but are a constant source of newness even in the maintenance of traditions and in the implementation of designs (Mead 1932, Dalton 2004, Hallam & Ingold 2007); and that cognition extends ‘beyond the skin’ and is a property of cognitive systems: individuals—and groups of individuals—‘operating-with-mediational-means’ (Vygotsky 1978, Bateson 1972, Wertsch *et al.* 1993). From these perspectives creativity is ubiquitous and the attribution of creative authorship necessarily hangs in the interstices between people, artifacts and representational means: *in interaction*.

However, this thesis also recognises that in Western society cultural practices involve the classification of some products as ‘creative’ and not others in that they are deemed to be ‘new, valuable and relevant’; that the attribution of the authorship of creative ideas to individuals is a cornerstone of our social, cultural and capitalist economy; and that the recognition of authorship is

mediated by individuals and institutions embedded in broader cultural power relations. Additionally, creativity in musical performance faces its own set of challenges with regard to the prevailing definitions of creativity, but for the purposes here I propose that notated scores are characterised by performers in ways that afford differences in meaning-making, interpretation, expression and the classification as creative.

From these theoretical perspectives orchestral performances may be seen as inherently creative, but judgments about their 'creativity' are based on their performance 'characteristics', and attributed to individuals based on the perception of the authorship of those defining 'characteristics'. I propose (as have others) that the over-attribution of creative authorship in orchestral performance to the conductor is a result of social and institutional practices rather than a reflection of on-the-ground realities of orchestral interaction. While bearing in mind Ingold's caution against reading creativity 'backward', in order to redress the dominant perception of creative authorship in orchestral performance, the underlying influences which shape how individuals determine how and when to play their parts need to be connected with their human, social, historical and environmental origins.

This research project has aimed to achieve this through the collection and analysis of empirical data collected in three phases from performers across a wide range of skill levels and in a variety of rehearsal and performance contexts. In addition to facilitating the development of a Framework of Influence and Action in Orchestral Performance, which aims to illustrate the connection between influences, actions and the musical parameters which

characterise unique performances, the findings of this research call into question some of the assumptions made about the relationships which are enacted in the process of orchestral performance and the way that they reflect (or might not reflect) the larger socialities in which they are embedded.

2.0

THE STUDIES: Capturing the Experiences of Orchestral Musicians

2.0.0

OVERVIEW

Researching orchestral performance presents a variety of methodological challenges. First, orchestras are internally heterogeneous groups of individuals, whose beliefs, attitudes and experiences are not necessarily congruent, meaning that group perspectives cannot be accurately extrapolated from a small subset of the group. But gaining permission to conduct research with an entire orchestra is difficult, as it still requires gaining consent from *all* members of a diverse group of people. Second, no two orchestral contexts are the same, as repertoire, performance venues, and personnel may change from concert to concert even for the same ensemble, and differences between groups in terms of skill, social organisation and roles within their communities may result in different group objectives. Hence, findings from one orchestral context or one subset of the orchestral field (such as professional or student ensembles) cannot be generalised to orchestral practice as a whole. Third, and most problematically, musicians are engaged in sustained physical and mental activity while playing, making the collection of performance experiences reliant on after-the-fact self-reports. Data collection techniques such as the Experience Sampling Method, which prompts musicians to report what they were doing at a particular moment,

would disrupt the very experience that the researcher was trying to capture. In previous research, many of these self-reports involve musicians describing their practice more generally, rather than reflecting on specific musical situations. In one such study Brodsky pondered whether 'orchestra musicians act on the demand characteristics of orchestra surveys and interviews' (in his case, regarding stress-related information), leading him to question the reliability and honesty of orchestral musicians' reports (Brodsky 2006:676). He noted that participant-researcher trust was crucial in obtaining honest responses.

What Brodsky highlights is important: it is not unreasonable to suspect that orchestra musicians' responses to research enquiries may be affected by received narratives or political agendas. Orchestral politics can be very sensitive and it was clear from the interviews in this study that musicians needed to feel extremely confident about the anonymity of their responses and have trust in the integrity of the researcher. There is a real need to find ways of obtaining information about orchestral performance that does not rely on musicians' own analysis of their behaviour. Problematically, musicians' experiences and interactions while playing are not necessarily observable as the primary mode of communication is sound, and consequently, self-reporting is difficult to avoid.

In response to the above methodological concerns, I developed a mixed-method three-phase research project that took place over 36 months, designed to obtain a wide variety of data from hundreds of orchestral musicians situated in different orchestral contexts. The first phase involved a nationwide

(UK) online questionnaire that captured a blend of quantitative and qualitative data from 187 respondents in order to obtain musicians' perceptions of individual artistic contributions across a range of orchestral contexts. General disadvantages of online questionnaires include the inability to follow up or clarify responses, and the inability to reach individuals who do not use, or do not regularly use, computers. The second phase consisted of 15 semi-structured interviews with both amateur and professional musicians to gain in-depth information about notions of creativity and how they conceptualise their individual contributions. Both the questionnaire responses and the interviews reinforced how orchestral practices and experiences are extremely diverse, both on an individual level and between orchestral contexts. While necessary to provide a context for the final data collection phase, the questionnaire responses and interviews carry the risk of reproducing engrained tropes rather than revealing on-the-ground experiences. To address this, the third phase of this research explored a new data collection method to capture orchestral musicians' performance experiences. Utilising a new online platform, video-stimulated recall was employed to obtain multiple performer experiences on specific rehearsal and performance events in six different orchestras and across 42 different playing situations.

In order to obtain experiences about specific music-making events from musicians who are physically and mentally engaged in musical performance, I have effectively developed a variation on 'talking analysis'. As described by Clarke in *Empirical Methods in the Study of Performance* (2004), talking analysis 'is aimed at discovering the intentions, motivations and evaluations of one or

more performers in relation to their own (or another's) performance' (Clarke 2004:91). Rather than utilising a sound recording of a musician's performance to prompt verbal commentary from the musician about their own practice, in collaboration with a team of computer scientists at Cornell University, I developed an online platform for using video-stimulated recall to capture written commentary from all the musicians in an orchestra simultaneously in response to videos of their own rehearsals and performances. The development and description of this new computer program along with the advantages and disadvantages of this new data collection method will be discussed in more detail in Section 2.3.

Although this study is not an ethnography *per se*, the data collection and analysis methods as well as the resulting text are ethnographic in nature, and therefore, as indicated in the introduction, it is necessary to articulate my position within the field of orchestral music-making and more specifically, with the participants in this study, as there is an element of this research which is very much about doing anthropology 'at home' (Jackson 1987).

Firstly, it was my awareness that, despite my decades of experience performing with orchestras, my own perspective was necessarily extremely partial and could not account for the diversity of experiences that undoubtedly exist among orchestral musicians across the wide range of skill levels. While I may have some insight into the experiences of percussionists and conductors generally, and to this extent I'm an 'insider', I have little actual knowledge of what it feels like to be a timpanist with a first-tier London orchestra, let alone a second oboist or a leader, and so simultaneously

I'm also an 'outsider' (I have both 'emic' and 'etic' perspectives). This is similar to Cottrell's own experience conducting ethnographic research with professional orchestral musicians, since, as a professional classical saxophone player, he was simultaneously an 'insider' and 'outsider' to this field (Cottrell 2004:22). Orchestras aside, Narayan proposes that focussing on insider/outsider dualisms is unhelpful—that there is not a fixed 'distinction between "native" and "non-native" anthropologists' (Narayan 1993: 671). She notes that:

[...] the loci along which we are aligned with or set apart from those whom we study are multiple and in flux. Factors such as education, gender, sexual orientation, class, race or sheer duration of contacts may, at different times, outweigh the cultural identity we associate with insider or outsider status. (Narayan 1993:671-2)

Yet it was precisely my perceived status as an 'insider' in the orchestral world that enabled me to gain access to participants and ensembles as well as obtain their trust. It was clear that musicians needed to feel that their views would be understood, so for them it was important that I wasn't an 'outsider' come to find out about the 'exotic' experience of being an orchestral musician. However, this caused somewhat of a conundrum in that there was clearly a sense from some participants that if I was genuinely an 'insider' I would already know the answers to the questions that I was asking. Another issue, when dealing with professional musicians who had not worked with me in a professional context, was the fact that as I was presenting myself as a researcher, which inherently undermined my claim to professional musician status. Establishing credibility with my participants on account of my identity was an on-going dance.

Secondly, I heavily relied on my network of colleagues and my professional connections to gain access to individuals for interviews and to ensembles for the MERID studies. This resulted in an opportunity sample that is unlikely to be wholly representative of the larger field, and meant that I had pre-existing relationships with many of the interviewees and MERID participants. Those relationships also existed within hierarchical structures, as around 50% of the interviewees and 40% of MERID participants had played in orchestras that I had conducted or was currently conducting (see Section 2.3.4 for a discussion of case study No. 2 and my role as the conductor of that ensemble). Although it is difficult to quantify the effect that this may have had on participants' responses, it was something I bore in mind during my interactions with musicians during data collection and in interpreting their commentary. Ultimately, I felt that the advantage of gaining access to and the trust of many participants outweighed the disadvantages inherent in such an opportunity sample.

Thirdly, and again recognising my own partial view, it was important to me that I develop a research approach that de-emphasised, as much as possible, my own views, and prioritised those of my participants. My solution was to collect perspectives from hundreds of orchestral musicians in a wide variety of contexts, take an inductive approach to analysis, and intentionally keep my text data-heavy to help reduce the misrepresentation and amalgamation of others' ideas while at the same time drawing out the similarities and differences between them. Indeed, I have sought rigorously to honour the diversity of individuals' perceptions of their own experiences rather than undermine them by privileging my own experiences or those of more 'expert'

performers. While my expertise in the field of orchestral performance was essential for being able to understand musicians' descriptions of their processes, nevertheless it is unavoidable that my own perceptions and experiences will have had an influence in shaping how I have interpreted others' expressions of their own experiences.

With that caveat acknowledged, the following pages detail the methods and findings of the three studies. Section 2.1 will describe the development and findings of the nationwide questionnaire, Section 2.2 will provide an analysis of the in-depth interviews, and Section 2.3 will describe the development, collection and analysis method for phase three, with the findings from phase three fully expressed in Part 3 of this thesis.

2.1

QUESTIONNAIRE: Performer Perceptions of Creative Decision Making in Symphony Orchestras

2.1.0

INTRODUCTION

The questionnaire, 'Performer Perceptions of Creative Decision Making in Symphony Orchestras' was designed to obtain information from respondents across three main themes: attitudes about creativity with regard to orchestral performance; how their own artistic agency might be expressed within rehearsals and performances; and where they direct their attention for information about precisely how and when to play. The questionnaire was aimed at players and did not include questions relevant to conductors' perspectives.

2.1.0.1

Development

As there have not been previously published studies exploring these issues through the use of questionnaires, original questions were developed in response to attitudes and perceptions suggested in the aforementioned interview-based orchestra studies, and also to my own experiences and discussions with colleagues. This initial draft was revised through two pilot studies completed by both amateur and professional musicians. Feedback about the appropriateness of the questions and the multiple-choice answers

was obtained from respondents via interviews or email correspondence.

The pilot studies demonstrated that it was difficult to construct a questionnaire with questions and answers that were deemed appropriate or relevant to a wide range of performer skill levels. For example, questions that appeared naïve from a professional player's perspective may have seemed esoteric or irrelevant from an amateur or student perspective. Although the questions were as carefully crafted as possible so as to avoid either of these pitfalls, the information page preceding the questionnaire informed respondents that not all of the questions might seem relevant, and respondents were encouraged to use the text boxes in these instances.

Feedback from the pilot studies indicated that definitions of the words 'creativity' and 'interpretation' might help clarify the intentions of the survey. The following definitional advice was offered at the start of the questionnaire:

'CREATIVE is used throughout this survey. Defining creativity is difficult, particularly in music performance. Please respond to the questions using **YOUR reaction** to the use of the word in context.'

'INTERPRETATION is used here to refer to the artistic decision-making process involved in performing music from a written score.'

Additionally, pilot study respondents noted that many people (including themselves) play in multiple orchestras and that the answers to these questions would vary depending on the orchestra and their position within each ensemble. Since it was not the focus of the questionnaire to attempt a comparative analysis along these lines, respondents were asked to respond to questions based on their position in the orchestra in which they play most

frequently. While this was not an ideal solution, it appeared to help focus answers and respondents occasionally used the comment boxes to clarify that their answers would have been very different had they been responding from their perspective in another orchestra.

2.1.0.2

The structure of the questionnaire

The final questionnaire consisted of 24 items using either four-point Likert scales or multiple choice/multiple answer response options. Each question was followed by a text box for comments to be used if respondents felt that none of the options adequately expressed their perspective or that the question did not seem relevant to them. The final item was an open-ended text box for additional comments.

A consent form served as the first page of the questionnaire and described the purpose of the survey. It stated that taking the survey constituted agreeing to participate, that participants needed to be 18 years old and be active instrumentalists in at least one UK-based orchestra, that there were no foreseeable risks or benefits associated with participating in this research, that all responses would be anonymous and confidential (a link to a webpage with more information about how this was achieved was provided), that participation was voluntary, and that they could skip questions or exit the survey at any time. The consent form provided researcher contact information as well as information on how to make a formal complaint.

In order to maintain anonymity the personal/demographic information

solicited through the questionnaire was minimal and restricted to instrument section, position, how the player identified themselves (e.g. professional, amateur, etc.) and what type of orchestra they played in (e.g. professional, amateur, etc.). There were no questions or combinations of questions in the survey that would identify a particular individual and the software used to collect the responses did not collect IP addresses. The questionnaire and distribution process were approved by the Social Sciences & Humanities Inter-Divisional Research Ethics Committee at the University of Oxford.

2.1.0.3

Distribution and collection

Responses were solicited via orchestra administrators who were contacted and asked if they would forward the online questionnaire URL link to the musicians in their ensembles. Professional ensembles were identified via the listing of professional orchestras in the UK on the Associated Board of Orchestras website; amateur orchestras were identified through listings on amateurorchestras.org (nearly 900 amateur orchestras and bands in the UK are listed on this site); and student ensembles were contacted through university music societies. The questionnaire was only distributed to active orchestral musicians within the UK.

Survey Monkey was used as the online collection platform. Survey Monkey complies with the Data Protection Act 1998 and is recognised as a trusted

provider of survey services by the UK Office for National Statistics.¹ Survey Monkey's IP address collector was disabled for this questionnaire.

58 orchestras were contacted via email or phone over the course of one month. 18 orchestras (31%) agreed to participate in addition to individuals who received the questionnaire link via friends or colleagues. Of the 18 orchestras, seven were professional, eight were amateur and three were university. 206 responses were collected over a period of two months (February-March 2013) of which 187 complete responses were used as the basis for analysis, excluding 19 incomplete questionnaires. 384 individual comments were left in the comment boxes, which added nuance and depth to the quantitative analysis. JMP and NVivo were used to explore and analyse the data.

While it would have been possible to conduct a statistical analysis for some of the items on the questionnaire, it was not designed with this objective in mind. The analysis has focused on exploring distribution trends across all respondents and between demographic groups rather than identifying significant differences.

2.1.0.4

Content of the questionnaire²

As mentioned earlier, the aim was to collect data across three themes:

¹ Accessed 4 January 2013 <http://www.ons.gov.uk/ons/about-ons/what-we-do/programmes---projects/beyond-2011/survey-monkey-statement.html>

² Please see the Appendix for a copy of the full questionnaire.

attitudes about creativity with regard to orchestral performance; how musicians' own artistic agency might or *should* be expressed within rehearsals and performances; and where they direct their attention for information about how and when to play. The following sections will explore the questionnaire findings in each of these areas with a focus on overall responses and how responses were comparable across respondents' Identity (e.g. professional, amateur, etc.), Section and Position.

2.1.1 DEMOGRAPHIC INFORMATION

Figure 2.1.1-1 shows the distribution of the 187 respondents across the demographic categories of Identity (Student, Amateur, Semi-Professional, Freelance Professional, and Professional in a Full-time orchestra), Section (String, Wind, Brass, Percussion and Other) and Position (Principal, Co-principal, and Section member) is illustrated in *Figure 2.1.1-1*. The distribution of the respondents across instrumental section and position represented approximately three full symphony orchestras, (see *Figure 2.1.1-2* and *Figure 2.1.1-3* for bar graph comparison). As *Figures 2.1.1-2* and *2.1.1-3* illustrate, String Section members were slightly under-represented while String Principals, Winds, Wind Principals, Brass, and Brass Principals were slightly over-represented.

As anticipated, many musicians reported playing in multiple orchestras simultaneously (48% reported playing in only one orchestra, 34% in 2-3 orchestras and 17% in 4+ orchestras) and were directed to pick one that they would use as the basis of their responses to the questionnaire. Information was collected about the number of conductors the orchestra normally works with in a season (Q3), and how individuals perceive their skill level in relation to the rest of the orchestra (Q6). There was a strong correlation between the number of conductors a respondent's orchestra regularly works with and their Identity (Freelance Professionals consistently worked with more conductors than their Fulltime Professional counterparts, for example). On account of this, data comparisons based on responses to Q3 provided no

additional insights over the comparison of responses by Identity. Responses to the skill level question were more mixed, however. While professional musicians tended to rate themselves as average, one commenting that as a professional there was an expected standard, some amateur musicians rated themselves as below average or even in the lowest 10%. There was a tendency for these individuals to indicate that their level of engagement was influenced by the perception that others were more qualified to make artistic decisions.

The demographic factors of Identity, Section and Position have been primarily used throughout this analysis to explore whether reported attitudes and experiences of artistic decision-making in rehearsal and performance appear more frequently within certain demographic groups, for example Amateur String Section members (Am-Str-S)³ versus Freelance Professional String Section members (FLProf-Str-S). Although it was tempting to look for variations in responses between very specific demographic groups such as Freelance Professional Brass Principals (FLProf-Br-P) and Full-time Professional Brass Principals (FTProf-Br-P), generally speaking the small number of respondents in these categories discouraged meaningful comparison.

³ Please refer to the Glossary on page ix for an index of abbreviations used throughout Section 2.0.

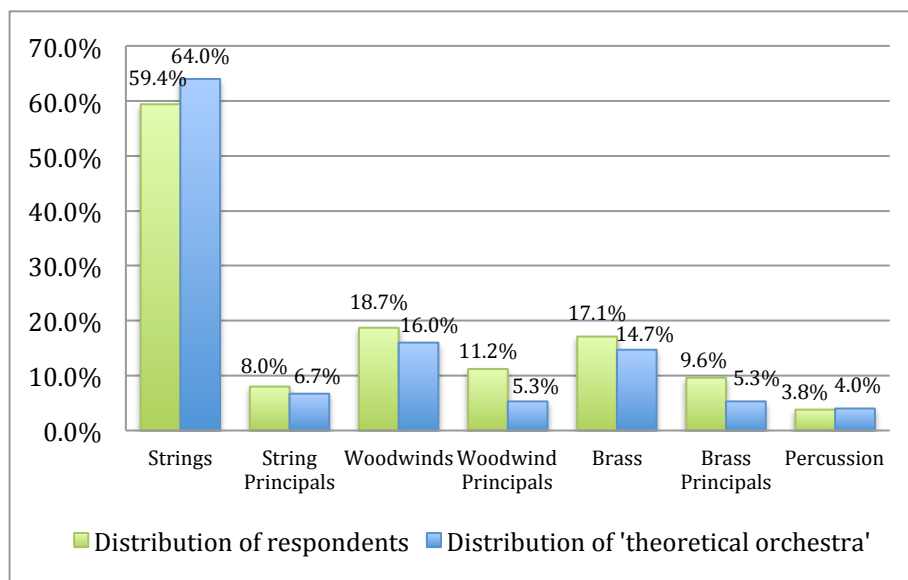
Figure 2.1.1-1 - Distribution of respondents based on Identity, Section and Position

	Student	Amateur	Semi-pro	Prof F-T	Prof F-L	N/A		
String								
Principal	0	8	2	2	2	1	15	
Co-Principal	2	5	2	1	2	0	12	
Section	3	50	7	16	6	1	83	
N/A	0	0	1	0	0	0	1	
Total	5	63	12	19	10	2	111	111
Woodwind								
Principal	2	7	3	3	6		21	
Co-Principal	2	1	1	0	1		5	
Section	2	4	1	1	1		9	
Total	6	12	5	4	8		35	35
Brass								
Principal	2	3	1	7	5		18	
Co-Principal	0	3	1	1	0		5	
Section	1	6	1	1	0		9	
Total	3	12	3	9	5		32	32
Percussion								
Principal	1	2	0	1	0		4	
Co-Principal	1	1	0	0	0		2	
Section	0	0	0	0	1		1	
Total	2	3	0	1	1		7	7
Other								
Principal	0	0	0	0	1		1	
Co-Principal	0	0	0	0	0		0	
Section	0	0	0	0	0		0	
N/A	0	0	1	0	0		1	
Total	0	0	1	0	1		2	2
							TOTAL	187

Figure 2.1.1-2 - Distribution of respondents across sections and positions compared to a 'theoretical orchestra'

Section	Position	# of resp.	As a % of all resp.	# in theoretical orchestra	As a % in a theoretical orchestra	Difference in %
Strings	Principal	15	8.0%	5	6.7%	1.3%
	Co-principal	12	6.4%	5	6.7%	-0.3%
	Section member	83	44.4%	38	50.7%	-6.3%
	N/A	1	0.5%			
	Total	111	59.4%	48	64%	-4.6%
Woodwind	Principal	21	11.2%	4	5.3%	5.9%
	Co-principal	5	2.7%	4	5.3%	-2.6%
	Section member	9	4.8%	4	5.3%	-0.5%
	Total	35	18.7%	12	16%	2.7%
Brass	Principal	18	9.6%	4	5.3%	4.3%
	Co-principal	5	2.7%	3	4%	-1.3%
	Section member	9	4.8%	4	5.3%	-0.5%
	Total	32	17.1%	11	14.7%	2.4%
Percussion	Principal	4	2.1%	1	1.3%	0.8%
	Co-principal	2	1.1%	1	1.3%	-0.2%
	Section member	1	0.5%	1	1.3%	-0.8%
	Total	7	3.7%	3	4.0%	-0.3%
Timpani	Principal	1	0.5%	1	1.3%	-0.8%
Other	N/A	2	1.1%			
	Overall Totals	187	100%	75	100%	

Figure 2.1.1-3 - Graphical representation of Figure 2.1.1-2



2.1.2

ATTITUDES TOWARDS CREATIVITY WITH REGARD TO ORCHESTRAL PERFORMANCE

Previous studies and 'common knowledge' suggest players feel that that performing in orchestras is inherently *uncreative*. Questions sought to draw out how respondents characterised orchestral playing by asking them to rank their experience as Creative, Expressive, Interpretive, and/or a Skill/craft (Q7).⁴ During questionnaire development it was suggested that different repertoire might afford more or less creative engagement, so respondents were asked to rate how creatively they felt they could engage with music of different eras such as Baroque, Classical, Romantic, 20th-century, and Contemporary (Q8). The questionnaire explored how much players perceive social factors, such as Accepted performance conventions, Fidelity to the composer's intentions, the Expectations of the audience, and Historical precedent (recordings) (Q22) to limit their ability to engage creatively with orchestral repertoire. It also enquired what brought the most personal satisfaction and enjoyment to musicians when performing in orchestras by asking respondents to rate the importance of the following performance characteristics: Precision/technical accuracy, Expressive performance, Emotionally charged performance, Unique performance/interpretation, Historical accuracy/true to the composer's intentions, and Standard reading/interpretation (Q23).

⁴ On the basis of previous reports from orchestral musicians it is clear that some characterise their work as a skill or craft rather than an art, so this option was included to allow respondents to compare these terms with the others.

Musicians' responses to these four questions emphasised the importance of 'expressiveness' in orchestral performance both in that it is perceived to be an essential factor in affecting personal satisfaction and enjoyment while playing, but also that they are able to engage 'more creatively' with repertoire that conventionally allows for more expressive performance (Romantic). It appears this expressive engagement may be connected to feeling creatively engaged, as one respondent defined 'creativity as a means of expressing yourself' (R31-FTProf-Str-S). But respondents expressed differing views on whether or not there is creativity in orchestral performance. Some were emphatic that orchestral performance is a creative process for themselves as individual performers since there is creativity to be found in interpretation and expression, while others suggested that it is creative for some individuals such as the conductor and the composer, but not for performers whose job it is to 'express someone else's creativity' (R140-Semi-Pro-Str-P). There were also some respondents who expressed the view that creativity in music is found in composition and improvisation but not performance. Indeed the 'composer's intentions' were ranked as the number one factor in limiting performers' creative engagement, although there was variation here on an individual level—one respondent commented that they feel they can 'still be creative and be faithful to the composer' (R85-FLProf-Str-CoP). The distribution of responses to the questions regarding attitudes of performers about creativity in orchestral performance are illustrated and discussed further in the following section.

As is illustrated by *Figure 2.1.2-1*, the majority of respondents across all Identity categories indicated their preference for the description Skill/craft

over the other three terms, with the exception of Amateurs whose responses indicated they believe that Expressive ($M=1.82$) is a marginally better description than Skill/craft ($M=1.90$). Overall 57% of respondents rated Skill/craft as 'best describes' orchestral performance, which included 63% of Students, 41% of Amateurs, 75% of Semi-Professionals, 65% of FTProfessionals and 87% of FLProfessionals. While respondents were generally agreed across all demographic categories that Skill/craft and Expressive were the best descriptors, they were very much divided on the terms Creative and Interpretive. As *Figure 2.1.2-2* illustrates, this division of perceptions persisted across Section and Position categories. Rather than indicating ambivalence about these terms, musicians expressed decisive views about whether or not creativity and interpretation are part of their role in their commentaries:

It is the most fulfilling job in these terms, especially with the quick turnover of repertoire and conductors. The interpretation is very much left to us as a three-hour rehearsal leaves no time for a conductor to give his/her penny's worth. (R6-FTProf-W-P)

It is all of these things. The four choices are interchangeable. (R206-FTProf-Br-P)

It is hard to be creative when the music and expression is supplied to you in the form of a score. In addition the conductor is leading you as an orchestra, with his/her interpretation of the music. (R177-Semi-Pro-Str-S)

Creation, expression and interpretation are the role of the conductor and composer. My task is to enable that vision. (R147-Am-Br-CoP)

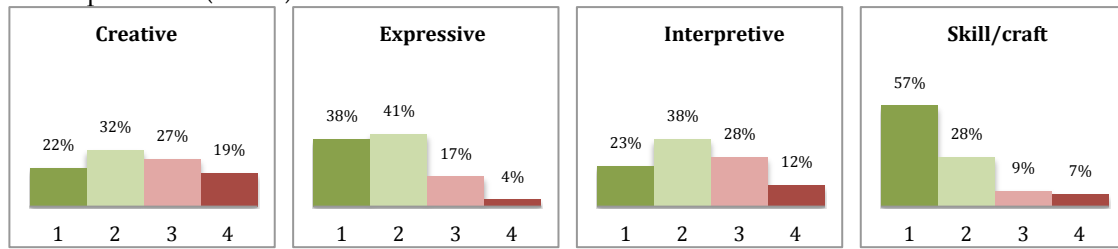
Others expressed the commonly held view that creativity in music is in the area of composition:

It is possible to consider expression and interpretation as creative, since these are often entirely up to the performer. However, I have given a lower score for creativity due to the fact that as orchestral musicians, we don't write or choose the music, we simply play what's on the stand. (R88-FTProf-Br-P)

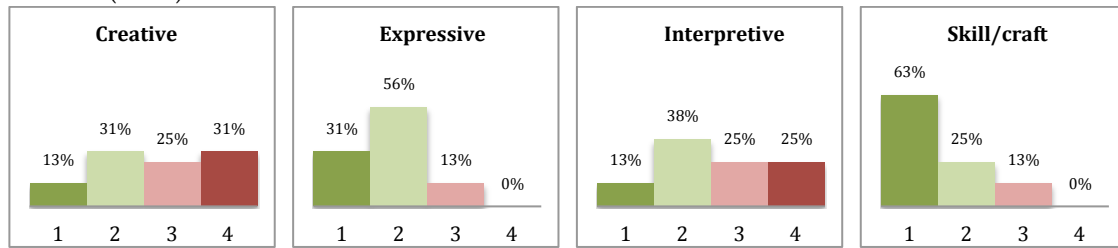
Figure 2.1.2-1 - Responses to Q7 by all respondents and by Identity

Q7: 'Please rank how well these phrase describe your experience of performing orchestral music.' 1=best describes to 4=least describes

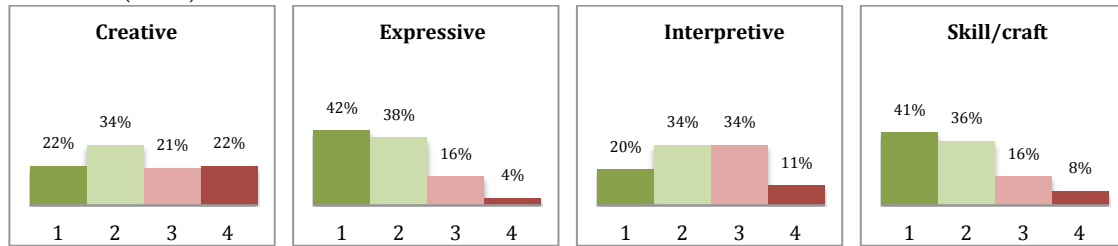
All respondents (n=187)



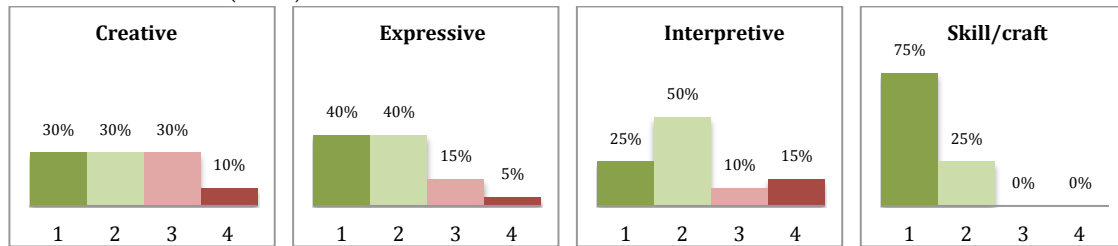
Student (n=16)



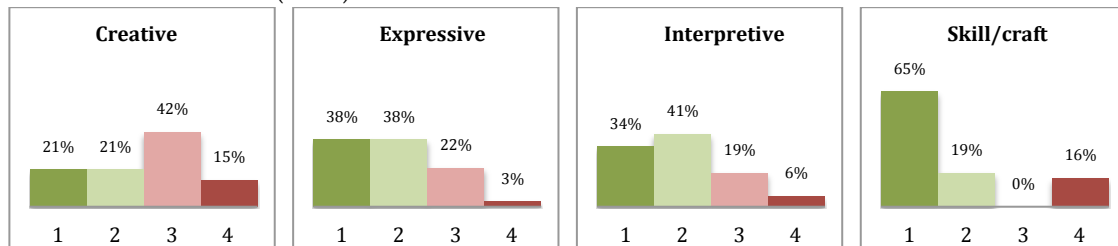
Amateur (n=90)



Semi-Professional (n=20)



Full-time Professional (n=33)



Freelance Professional (n=25)

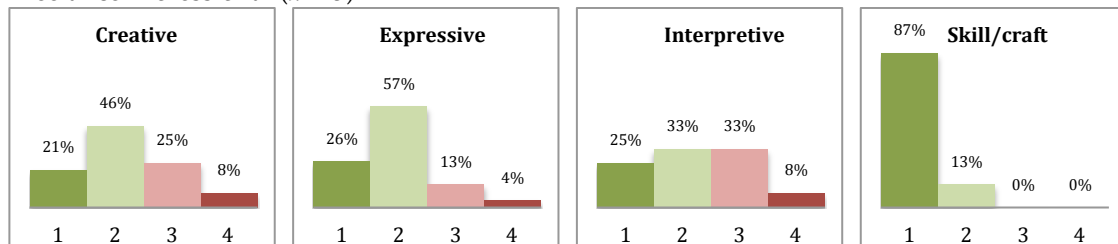
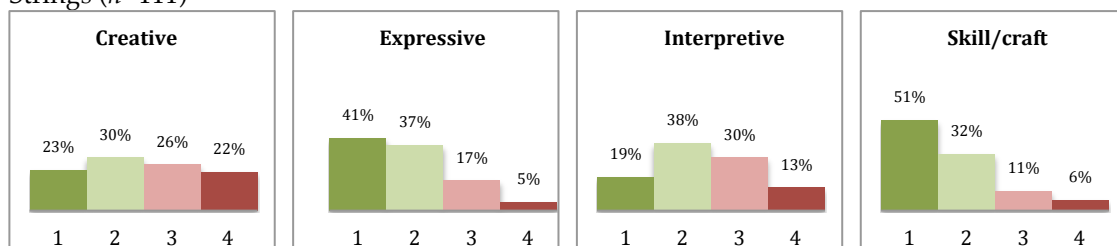


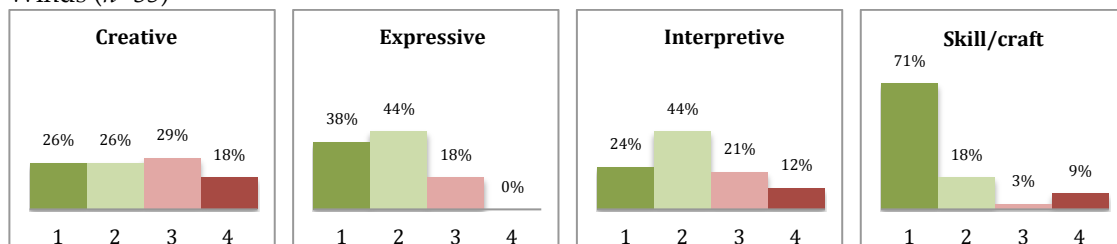
Figure 2.1.2-2 - Responses to Q7 by Section and Position

Q7: 'Please rank how well these phrase describe your experience of performing orchestral music.' 1=best describes to 4=least describes

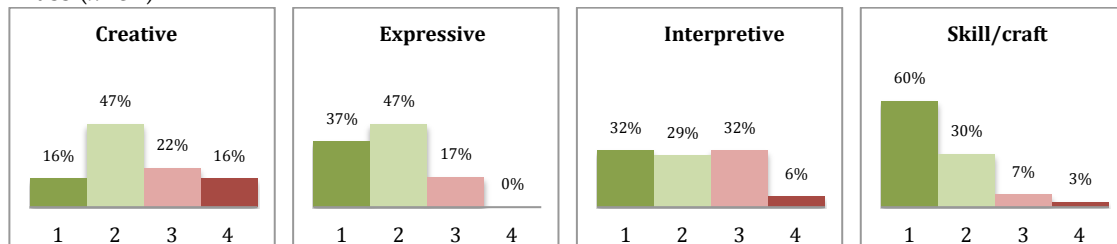
Strings ($n=111$)



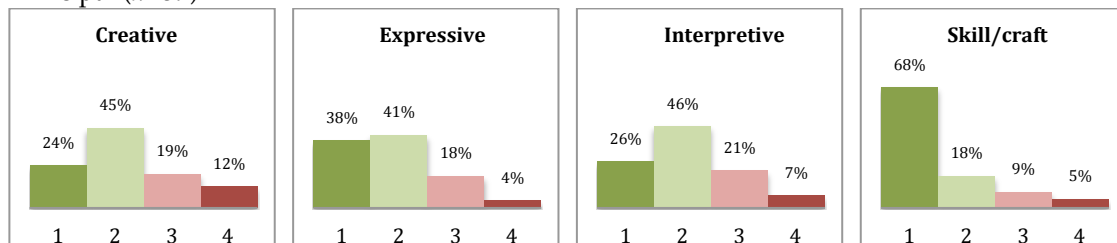
Winds ($n=35$)



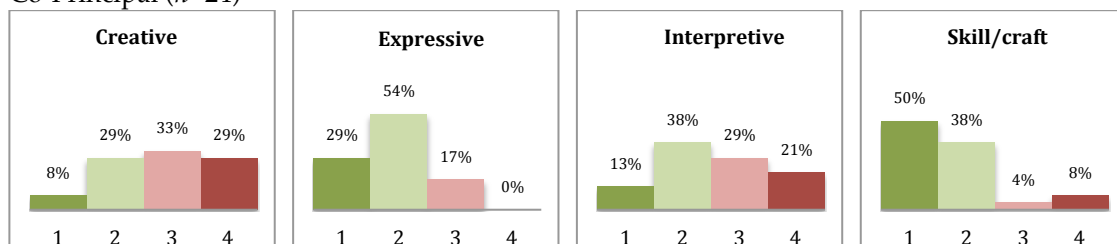
Brass ($n=32$)



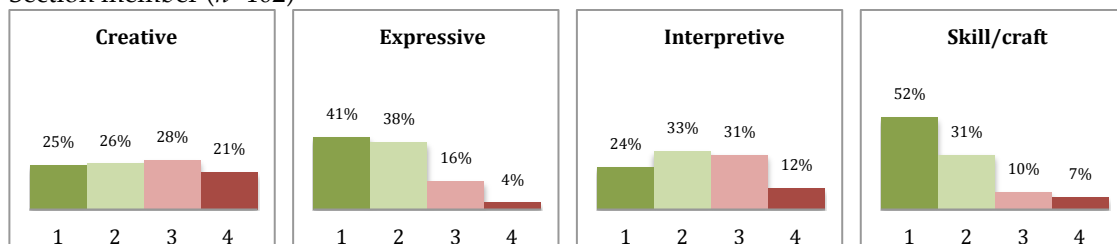
Principal ($n=59$)



Co-Principal ($n=24$)



Section member ($n=102$)



Despite the mixed reaction to Q7 about the appropriateness of 'creative' as a descriptor of performing orchestral music, as *Figure 2.1.2-3* shows, musicians were willing to report that they feel they are able to engage quite creatively with much of the orchestral repertoire, with the majority of respondents (62%-84%) indicating that they could engage creatively 'A fair amount' to 'A lot' across all repertoires with the exception of Contemporary (39%). Responses were more mixed for Baroque, Classical, 20th-century and Contemporary, while respondents were generally more agreed on the greater possibilities for creative engagement when playing Romantic repertoire and the lack of opportunities for creative engagement when performing Contemporary pieces, although there are some differences in this latter category along Identity lines. For both Baroque and Contemporary repertoire, Amateurs and Students were more likely to select 'Some' or 'Not at all' compared to their Semi-Professional, FLProfessional and FTProfessional counterparts who overall indicated that they feel they can engage fairly creatively with Baroque repertoire, but were distinctly divided on Contemporary music (see *Figure 2.1.2-4*).

Figure 2.1.2-3 - Distribution of responses for Q8 for all respondents as a percentage of all responses

Q8: 'How creatively do you feel you can engage with the following orchestral repertoire?'

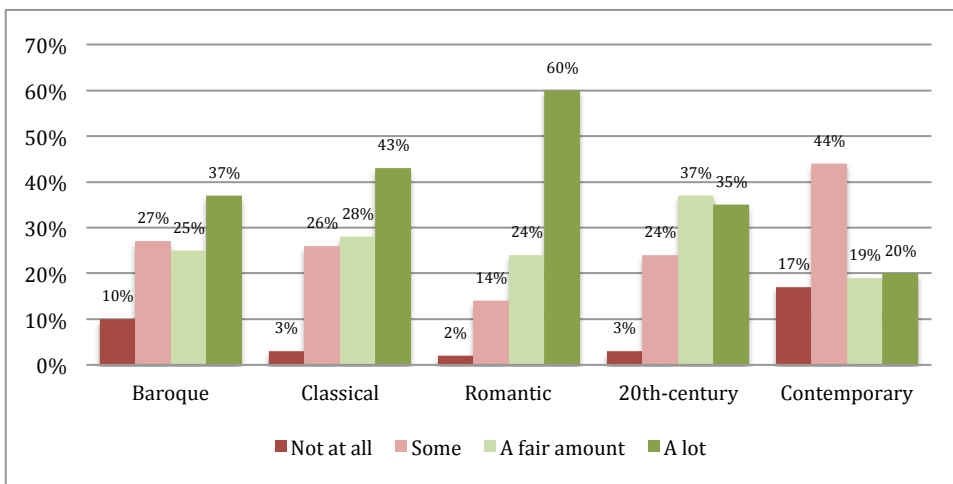
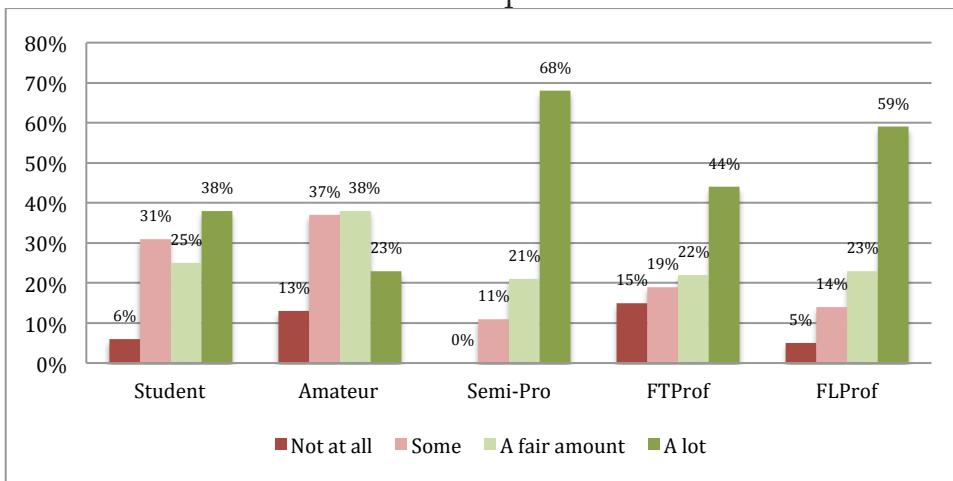
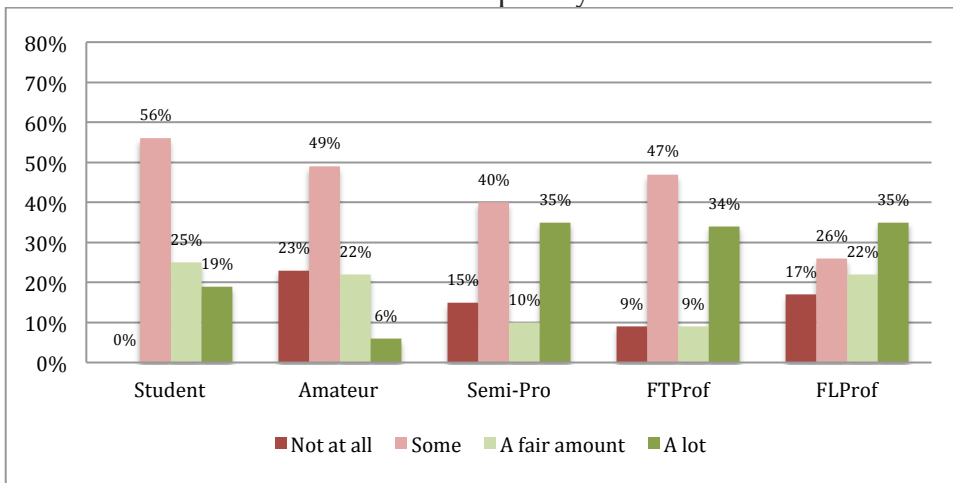


Figure 2.1.2-4 - Responses to Q8 for Baroque and Contemporary by Identity

Baroque



Contemporary



The commentary offered some insights into these views:

The newest music (excluding aleatoric and improvised scores) is often so specific in its notation that it is like a totalitarian regime with composer as dictator. It's as if the composer doesn't trust the musicians to do what he wants, so nothing is left up to them. (R88-FTProf-Br-P)

With older music there is perhaps more free reign—fewer performance directions. The music is often easier so more time can be devoted to interpretive [*sic*] creativity. (R37-Stu-Str-S)

In Baroque and Classical it's possible for me to ornament and embellish which I find creative, whereas in the other forms you are bound to play what's on the page with less room for adding creatively, I find. (R76-SemiPro-B-CoP)

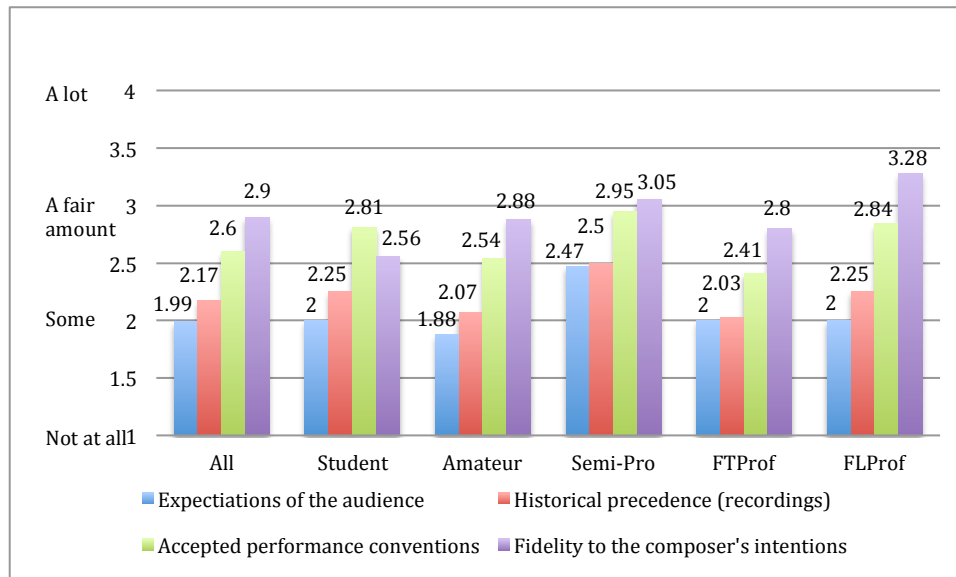
There were no striking differences based on instrumental section or position, although for some (such as clarinets) it was noted that some of the repertoire (Baroque) was not applicable.

In addition to repertoire, the questionnaire explored the degree to which other factors such as Accepted performance conventions, Fidelity to the composer's intentions, Audience expectations, and Historical precedence (recordings), affected musicians' ability to engage creatively with orchestral music (see *Figure 2.1.2-5*).

The pressures of adhering to accepted performance conventions and maintaining fidelity to the composer's intentions appeared to be the primary concerns. These responses support the views expressed in the literature review about the primacy of the composer's intentions as a guiding influence in the performance of Western art music. Musicians appeared to be somewhat bound by Accepted performance conventions, but not by Historical precedents in terms of previously recorded performances, which seems somewhat contradictory. Two comments offer some insight on this:

Figure 2.1.2-5 - Mean responses to Q22 by all respondents and by Identity

Q22: 'How much do the following factors affect your ability to engage creatively with orchestral music?'



I will be aware of historical performances and conventions but would only hope that the influence is a background flavour rather than intention to replicate. (R129-FTPProf-Str-P)

I try not to be influenced by other performances, but I am influenced especially by other performances I HAVE PLAYED IN, which had different interpretations (this is not listed above but is important). (R138-Am-Str-S)

The Expectations of the audience was rated consistently as the least likely to affect musicians' ability to engage creatively with orchestral music, with the average for the majority of Identity groups hovering just below Some ($M=1.88-2.00$). It is notable that Semi-Professionals indicated that Audience expectations were slightly more influential than other Identity groups, with their average rating just between Some and A fair amount ($M=2.47$) (see *Figure 2.1.2-5*). In the commentary, however, one respondent commented, 'none of these are as significant as the conductor's approach' (R96-Am-Str-S).

Q23 sought to explore what was most important to musicians in the performance of orchestral music, and in particular if this had to do with *how* they played, or the *product* that they were producing. It asked, 'With regard to your satisfaction and enjoyment in performing orchestral music, please rank the importance of the following performance characteristics:

Precision/technical accuracy, Expressive performance, Emotionally charged performance, Unique performance, Historical accuracy/true to the composer's intentions, and Standard reading/interpretation'. As *Figure 2.1.2-6* illustrates, players indicated that they are much more invested in the 'quality' of the experience, as expressive or emotional, as well as the technical precision of the performance, than they are with details of historical accuracy or whether the performance represented a standard or unique interpretation.

Musicians' responses to Q23 suggest that they are fairly agreed on the importance of expressive performance, while more divided on the issue of whether or not precision in performance is more important than if a performance is emotionally charged. Opinions were even more divided on the importance of unique performance, historical accuracy and standard reading (see distribution in *Figure 2.1.2-7*). The divergent opinions with regard to the importance of Historical accuracy/fidelity to the composer's intentions in combination with the responses to Q7 and Q22 suggest that while the composer's intentions may be a limiting factor in terms of the creative freedom available to individuals, it is not necessarily the primary goal of performance (at least with regard to personal satisfaction).

Figure 2.1.2-6 - Means of responses for Q23 by all respondents and by Identity
 Q23: 'With regard to your satisfaction and enjoyment performing orchestral music, please rank the importance of the following performance characteristics.'

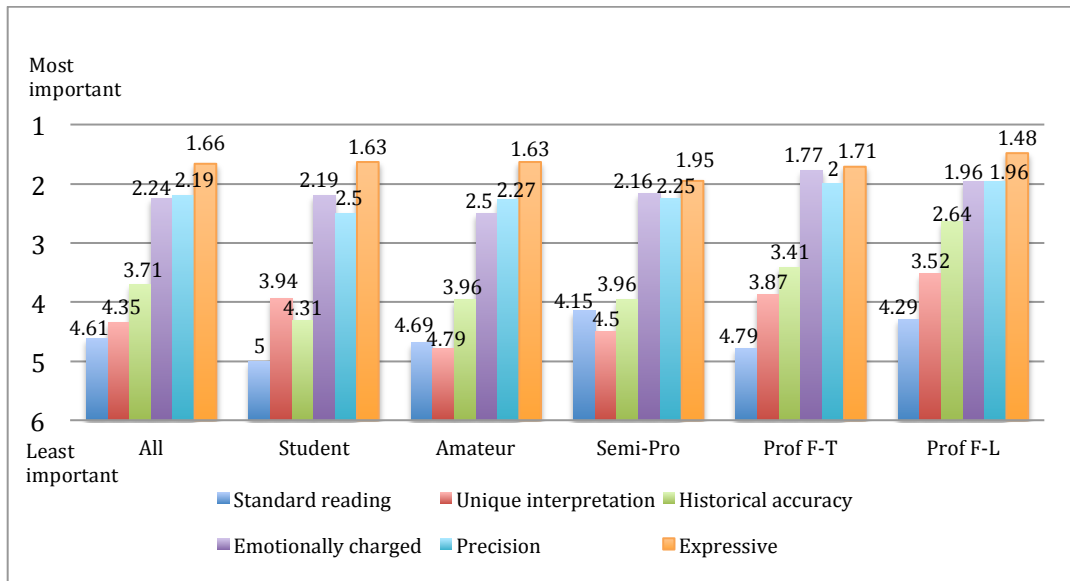


Figure 2.1.2-7 Distribution of responses to Q23 for all respondents by performance characteristic

1=Most important to 6=Least important



2.1.2

SECTION SUMMARY

Musicians expressed differing views on what it means to be creative in an orchestral context. While some equated creativity with the production of musical materials, other equated it with the interpretive and expressive components of performance. In this latter category, individuals were divided as to whether there is a creative process involved in interpreting their part as individual players or whether creative interpretation is in the hands of the conductor. These views will be explored in more depth in the following section with regard to how individuals prepare their own parts and negotiate interpretive ideas in the rehearsal and performance setting. There appears to be a tension between the desire to engage in expressive performance and yet remain true to the composer's intentions, something of a paradox for performers and one discussed earlier in the literature review. The clear preference for Romantic music as a part of the repertoire that enables more creative engagement is notable in the way that it suggests a strong connection between musicians' experience of expressivity and creativity in performance, giving rise to a potential question about the enduring preference for Romantic repertoire in the orchestral canon.

2.1.3

EXPRESSION OF ARTISTIC IDEAS IN REHEARSAL AND PERFORMANCE

This section of the questionnaire explored how musicians perceive their own artistic agency to be expressed within rehearsals and performances both through their playing and via vocal suggestions. Respondents were asked: 1) How much room they feel they have for artistic decision-making about their own part across a range of musical parameters (Overall, Tempo, Articulation, Nuances of phrasing, Tone/timbre and Technical issues) and how much they perceive that the conductor relies on their musical judgment across these same parameters (Q9-10); 2) Whether they develop their own interpretations outside of the rehearsal process (and if it was there responsibility to do so) and if so how much they feel they have to change them during rehearsals/performances (Q11-13); 3) Whether they respond to musical ideas by offering opinions during rehearsals or breaks by expressing them verbally (and to whom) or playing them, as well as their perceptions about the appropriateness of these different behaviors (Q14-17); and 4) How much they feel their active engagement with the rehearsal process has to do with their own or the conductor's personality (Q18-19). Each of these four groups will be discussed in order in the sections that follow.

2.1.3.1

Room for decision-making

In response to questions 9 and 10, all respondents (with the exception of Students) consistently reported that they have, Overall, marginally more room for artistic decision-making about their own part than they feel the

conductor relies on their artistic judgment for (see *Figure 2.1.3.1-1*). The majority of respondents indicated that they have more room for artistic decision-making over the parameters of Articulation, Nuances of phrasing and Tone/timbre as well as Technical issues than they believe they do Overall (see *Figures 2.1.3.1-2*). The balance of these responses was also reflected in how much they believe the conductor relies on them for artistic decision-making about these same parameters (see 2.1.3.1-3).

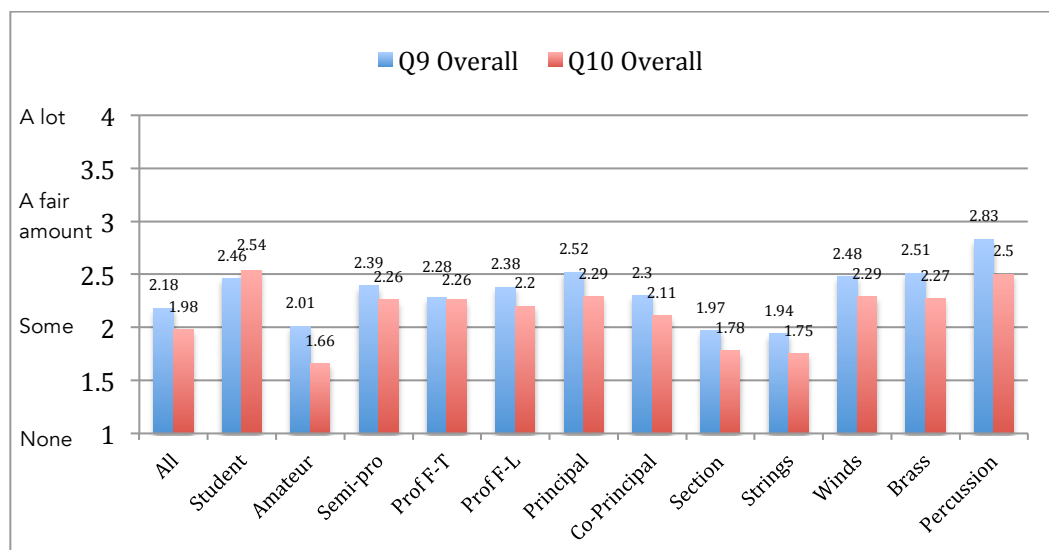
Figure 2.1.3.1-1 - Comparison of means for Q9 and Q10 'Overall' by all respondents and by Identity, Section and Position

Q9: 'How much decision-making do you have over your own part?'

Across the following parameters: Overall, Tempo, Articulation, Tone/timbre, Nuances of phrasing, and Technical Issues

Q10: 'How much do you think the conductor relies on you for your musical judgement?'

Across the following parameters: Overall, Tempo, Articulation, Tone/timbre, Nuances of phrasing, and Technical Issues



What *Figure 2.1.3.1-2* illustrates is that although some groups reported that they feel they have more room to make artistic decisions about their parts than others across all parameters (with the exception of slight variations in brass and percussion) all groups rated the parameters similarly in relation to one another: the room for making decisions about Tone / timbre was consistently rated higher than the room to make decisions about the Nuances of phrasing which in turn was consistently rated higher than Articulation. The average responses for All respondents suggest that on the whole, musicians feel they have slightly less than A fair amount of control over their Tone / timbre ($M=2.82$), between Some and A fair amount of control over Nuances of phrasing ($M=2.46$), and Articulation ($M=2.3$), but very little influence with regard to Tempo ($M=1.3$), with only percussionists ($M=2.29$) reporting that they have much control over this parameter.

Figure 2.1.3.1-2 - Means of responses for Q9 by all respondents and by Identity, Section and Position

Q9: 'How much decision-making do you have over your own part?'

Overall Tempo Articulation Nuances of phrasing Tone/timbre Technical

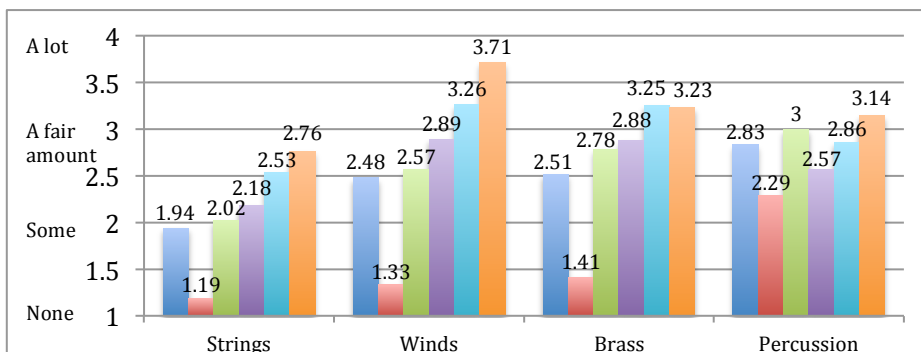
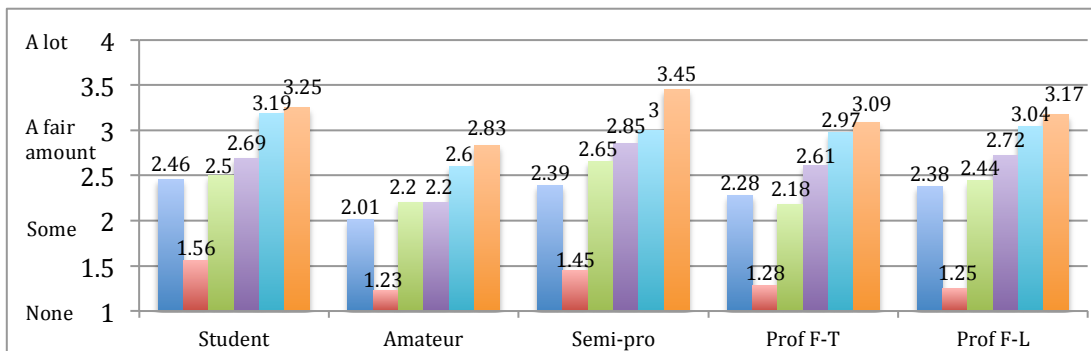
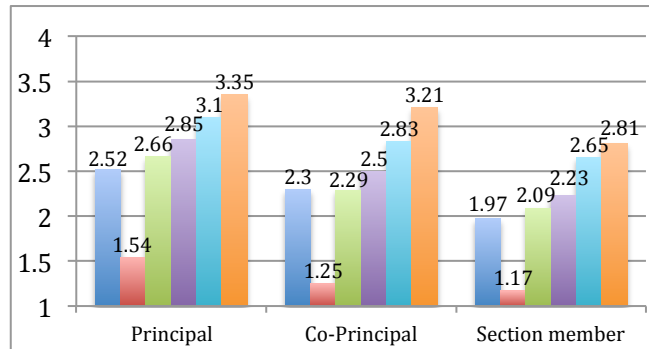
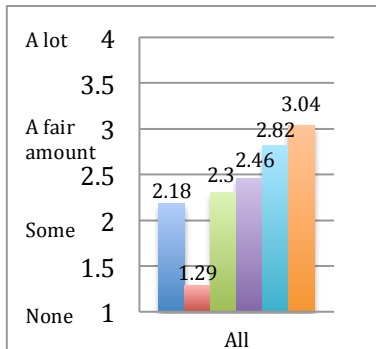
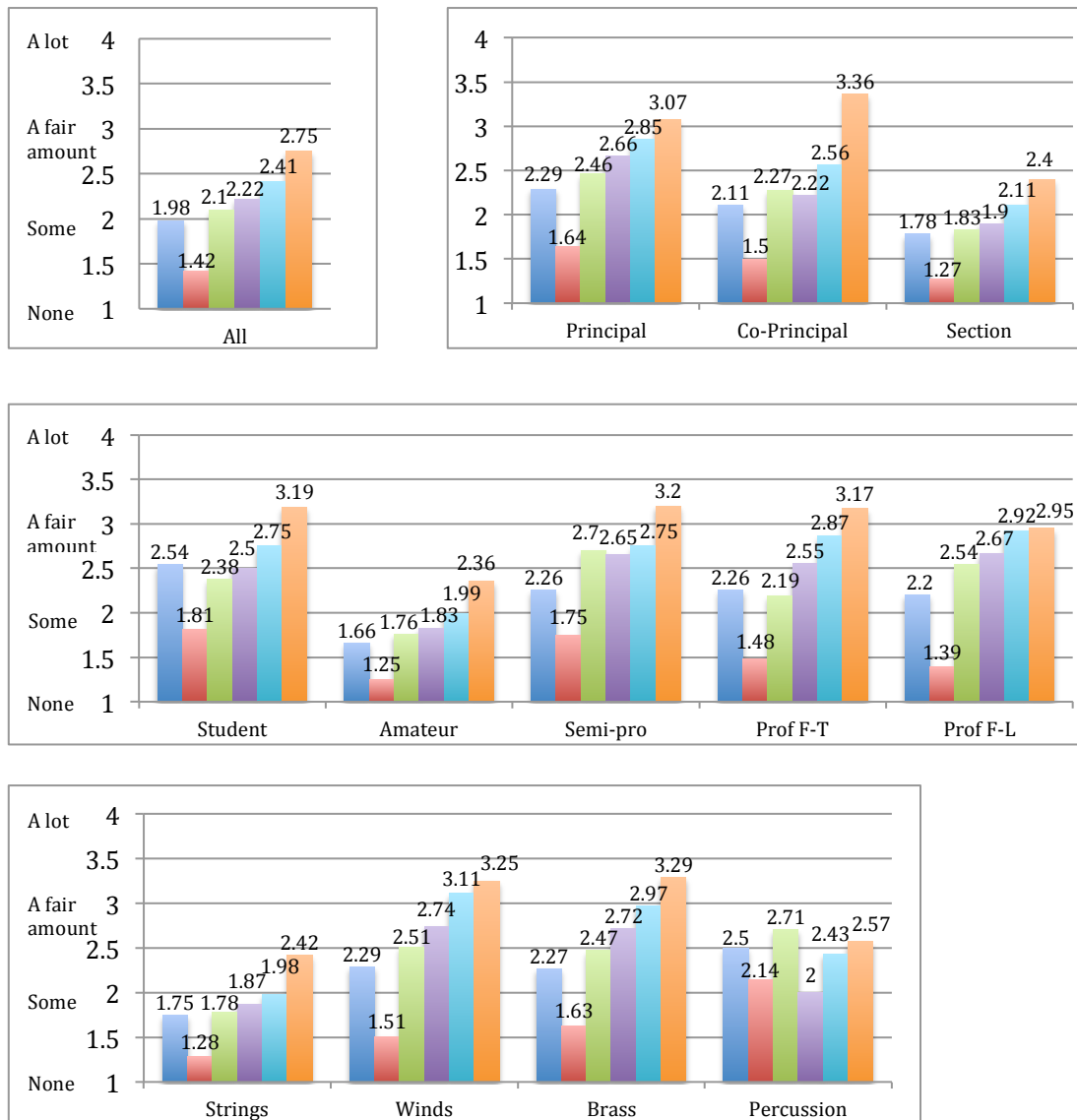


Figure 2.1.3.1-3 - Means of responses for Q10 by All respondents and by Identity, Section and Position

Q10: 'How much do you think the conductor relies on you for your musical judgement?'

Overall Tempo Articulation Nuances of phrasing Tone/timbre Technical



The common perception that principal players, as well as wind and brass players, have more artistic control over their own parts than their string, or section member counterparts was clearly reflected in the responses. In terms of Identity comparisons, Amateurs as a group reported less room for artistic decision-making than other Identity groups, but this turned out to be a reflection of the large number of Am-Str-S respondents who reported the

lowest scores of any of the demographic groups. In *Figure 2.1.3.1-4* Am-Str-S responses have been disaggregated from other Str-S and Str-P responses as well as from Am-W and Am-B responses,⁵ illustrating that Am-Str-S gave slightly lower ratings (e.g. Overall $M=1.75$) than their non-Amateur counterparts (Overall $M=1.97$), and definitely lower ratings than String Principals (Overall $M=2.33$), suggesting an Identity and Position effect within String players. However, Am-W and Am-B players had responses (e.g. Overall $M=2.45$ and $M=2.42$, respectively) that more closely reflected the ratings by all Winds (Overall $M=2.48$) and all Brass ($M=2.51$) rather than the Amateur rating (Overall $M=2.01$). These differences suggest the primacy of Section over Identity in determining how much room individuals feel they have for decision-making. As far as the effect of Positions is concerned, noticeably, Str-P ratings were consistently lower than the Principals' average, suggesting they feel that they have less scope for artistic decision-making than other Principal players, while for Winds and Brass there was very little difference between Section members and Co-principals and their Principals (see *Figure 1.1.3.1-4*), again emphasising the effect of Section over Position.

With regard to how much musicians believe the conductor relies on their artistic decision-making, it was not surprising that Str-S indicated that they believe they are relied on less than Str-P. However, Am-Str-S had substantially lower ratings than their non-Am-Str-S counterparts (see *Figure 1.1.3-5*). 30% of Am-Str-S rated their skill level below average in comparison

⁵ On account of the large number of Am-Str-S respondents (Am-Str-S represent 57% of the Amateur respondents, 50% of Section members and 46% of Strings), here and elsewhere the responses of this group have been disaggregated from their associated groups of Amateurs, Strings or Section members as necessary to account for the effect of that particular cohort.

to the rest of the orchestra and noted that they are either unqualified to make decisions, or are happy to be led by others with more experience.

Figure 2.1.3.1-4 - Means of responses for Q9 by select Identity-Section-Position categories

Q9: 'How much decision-making do you have over your own part?'

Overall Tempo Articulation Nuances of phrasing Tone/timbre Technical

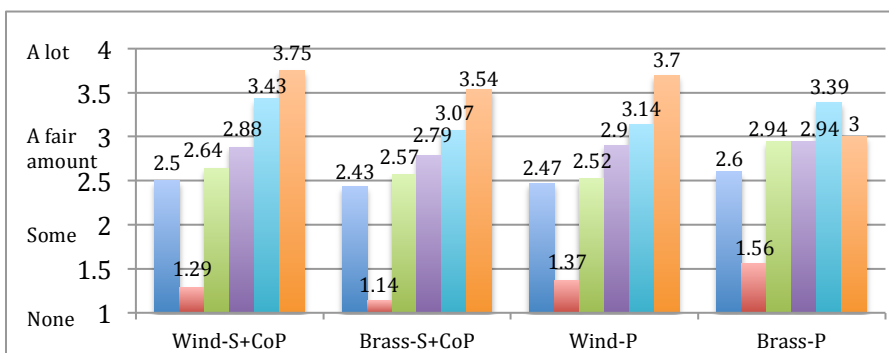
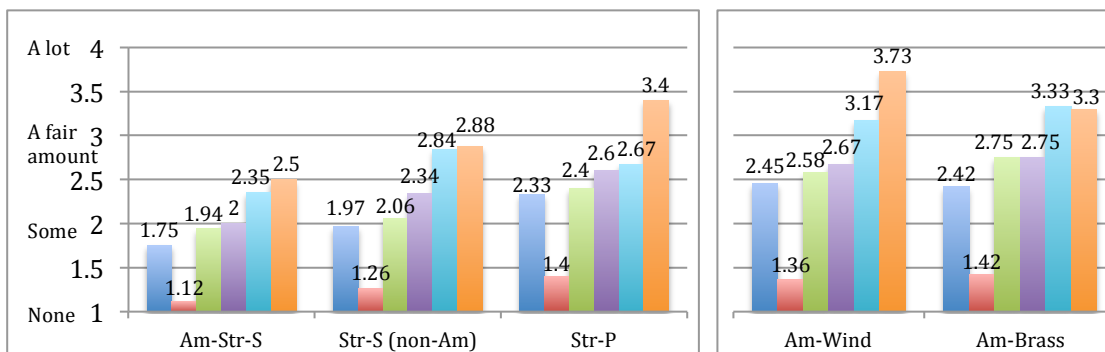
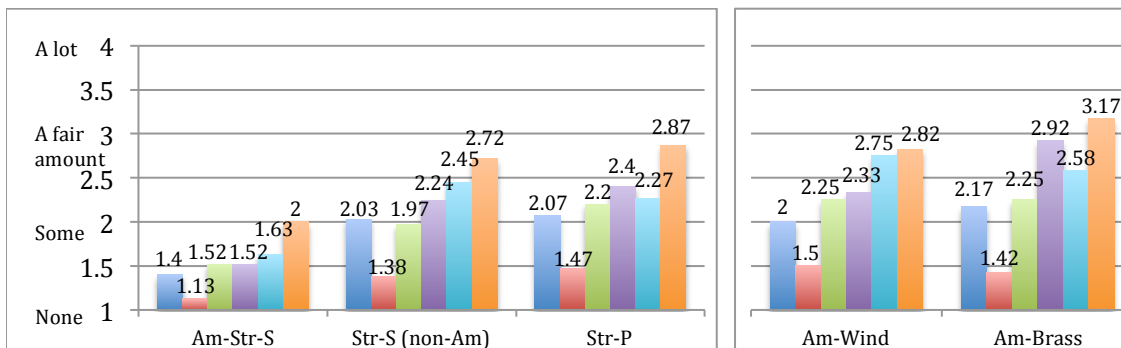


Figure 2.1.3.1-5 - Means of responses for Q10 by select Identity-Section-Position categories

Q10: 'How much do you think the conductor relies on you for your musical judgement?'

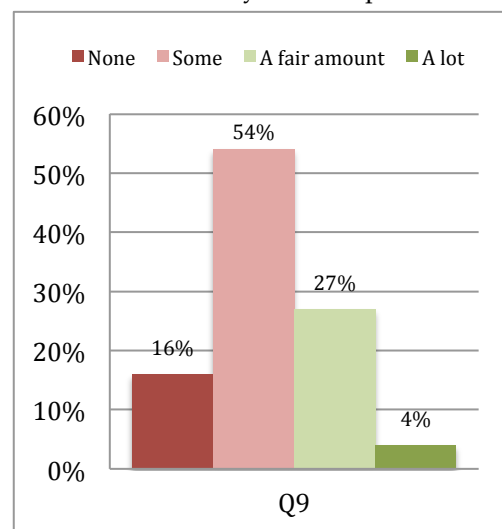
Overall Tempo Articulation Nuances of phrasing Tone/timbre Technical



Although the mean values given in *Figures 2.1.3-1* through *2.1.3-5* illustrate the overall differences and similarities between Identities, Sections and Positions, there was notable variation at the individual level as well (see *Figure 2.1.3.1-6* for Q9 Overall distributions). For example, as might be expected, of the 4% of respondents who felt they had A lot of room for artistic decision-making about their own part Overall, all 6 were professionals, the majority of which were principals and non-string players, and those that felt that they had absolutely no room for decision-making about their own part (16% of respondents) were almost exclusively Str-S or Str-CoP with the exception of one FTProf-Br-P and one Am-Str-P. However, those that felt they had A fair amount of room for artistic decision-making comprised over a quarter (27%) of all respondents and included 19 Principals, 8 Co-Principals and 17 Section members (10 of which were Str-S).

Figure 2.1.3.1-6 - Responses to Q9 Overall

Q9: 'How much decision-making do you have over your own part?'



2.1.3.2

Bringing interpretations and modifying interpretations

This part of the questionnaire sought to explore individuals' beliefs about whether they come to rehearsals with interpretations in mind, if this is essential to fulfil their responsibility to the orchestra and how much they have to modify their interpretations if they do. As can be seen in *Figures 2.1.3.2-1*

and 2.1.3.2-2, overall respondents were very divided on whether or not it was 'essential' to develop interpretations (Q13.1), but the majority indicated that they do so even if they have to modify them later (Q13.2). At the same time, the majority of respondents also indicated that they do not regularly come to rehearsal with an interpretation in mind (Q11) and that they don't feel that they have to modify their ideas very much (Q12). Most respondents did not report that they feel it is necessary to develop multiple interpretations, although 15% did and were emphatic about this in their comments (Q13.3). And although a majority did not report feeling that developing interpretations was irrelevant because they 'play what's on the page' (Q13.4), 31% indicated there was some truth to this. However as one respondent commented, it is irrelevant in that 'ultimately it's the conductor's interpretation' (R111-Am-Str-S).

Figure 2.1.3.2-1 - Responses by percentage for Q11 & Q12 for all respondents

Q11: 'Do you come to rehearsal with an interpretation of your part in mind?'

Q12: 'On average, how much do you feel you must modify your interpretive ideas in rehearsal/performance?'

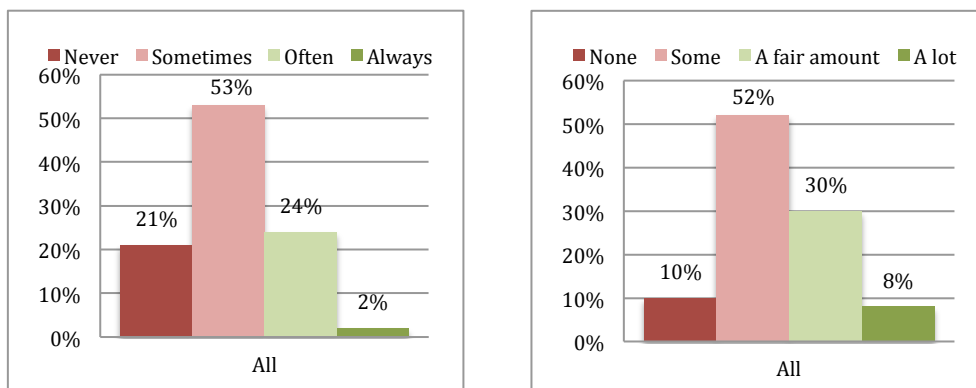


Figure 2.1.3.2-2 - Responses by percentage for Q13 for all respondents

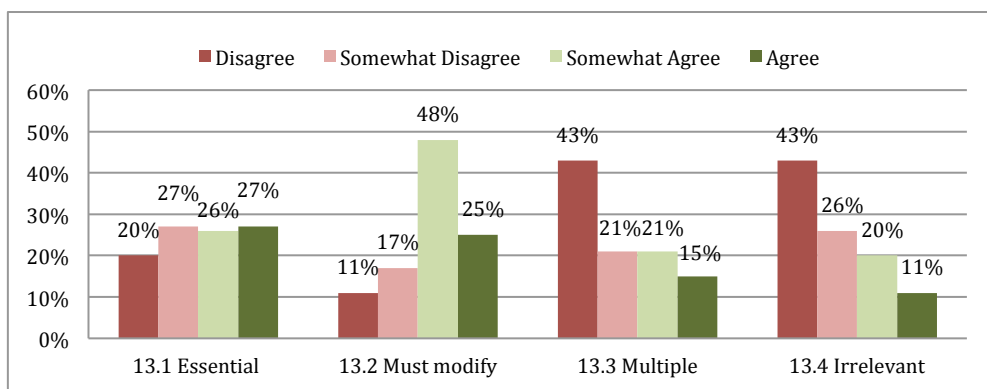
'How much do you agree or disagree with the following statements?'

13.1: It is **essential** that I develop nuanced interpretations in order to fulfil my responsibility to the orchestra.

13.2: I develop personal, nuanced interpretations of my parts even if I **must modify** them later.

13.3: I sometimes develop **multiple** interpretations to be prepared for decision made in rehearsal/performance.

13.4: Developing **interpretations** is irrelevant since I play what is on the page.'



The responses to these three questions (Q11, Q12, and Q13) appeared somewhat contradictory, in that players who did not report coming to rehearsals with interpretations also reported that they have to modify their ideas in rehearsal, while those that indicated developing interpretations was essential, reported not coming to rehearsals with interpretations in mind (see

Figures 2.1.3.2-3 and 2.1.3.2-4). For example, of the 25% that Agree in Q13.2 that they develop nuanced interpretations even if they have to modify them later, 45% responded in Q11 that they only Sometimes or Never come to rehearsal with an interpretation in mind. Similarly, of the 8% of respondents who indicated they have to modify their ideas A lot in Q12, 78% of those indicated only Sometimes or Never coming to rehearsal with an interpretation in mind (Q11), and even of the 30% that reported that they have to modify their ideas A fair amount (Q12), 28% reported Often, 63% only Sometimes and 9% Never coming to rehearsal with an interpretation in mind (Q11). However, at the other end of the spectrum responses appeared to be less contradictory in that of the 10% of respondents who indicated that they do not have to modify their ideas (Q12: None), 83% of those also reported that they Never come to rehearsals with interpretations in mind. Those in this last category are primarily amateur string section members who believe they have little to no room for artistic decision-making about their own part (Q9).

Responses to Q11 and Q13.1 and 13.2 also appeared contradictory: In response to Q13.1, 27% Agreed that it was 'essential' that they develop nuanced interpretations in order to fulfil their responsibility to the orchestra, while an additional 26% Somewhat agreed. This is compared to Q11 where only 2% of respondents reported that they Always come to rehearsal with an interpretation in mind and only 24% Often come to rehearsal with an interpretation in mind.

Despite these apparent contradictions between questions, responses to individual questions did indicate trends across Section and Position lines (see

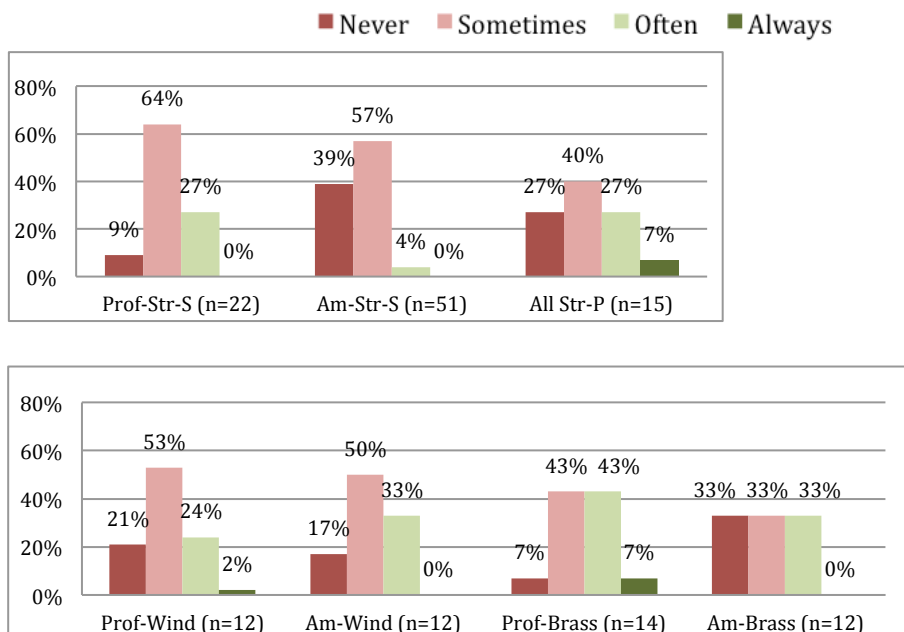
distributions in *Figure 2.1.3.2-4*), with Winds and Brass as well as Principals more likely to come to rehearsals with an interpretation in mind than their String and Section member counterparts. The effect of Identity was more pronounced for String Section members and Brass players than for Winds (see *Figure 2.1.3.2-5*). Like Q9, Am-Str-S responses affected String, Amateur and Section member ratings, as Am-Str-S were the least likely to come to rehearsal with an interpretation in mind.

Figure 2.1.3.2-4 - Responses to Q11 by Identity, Section and Position
Q11: 'Do you come to rehearsal with an interpretation of your part in mind?'



Figure 2.1.3.2-5 - Responses to Q11 by select Identity-Section-Position

Q11: 'Do you come to rehearsal with an interpretation of your part in mind?'

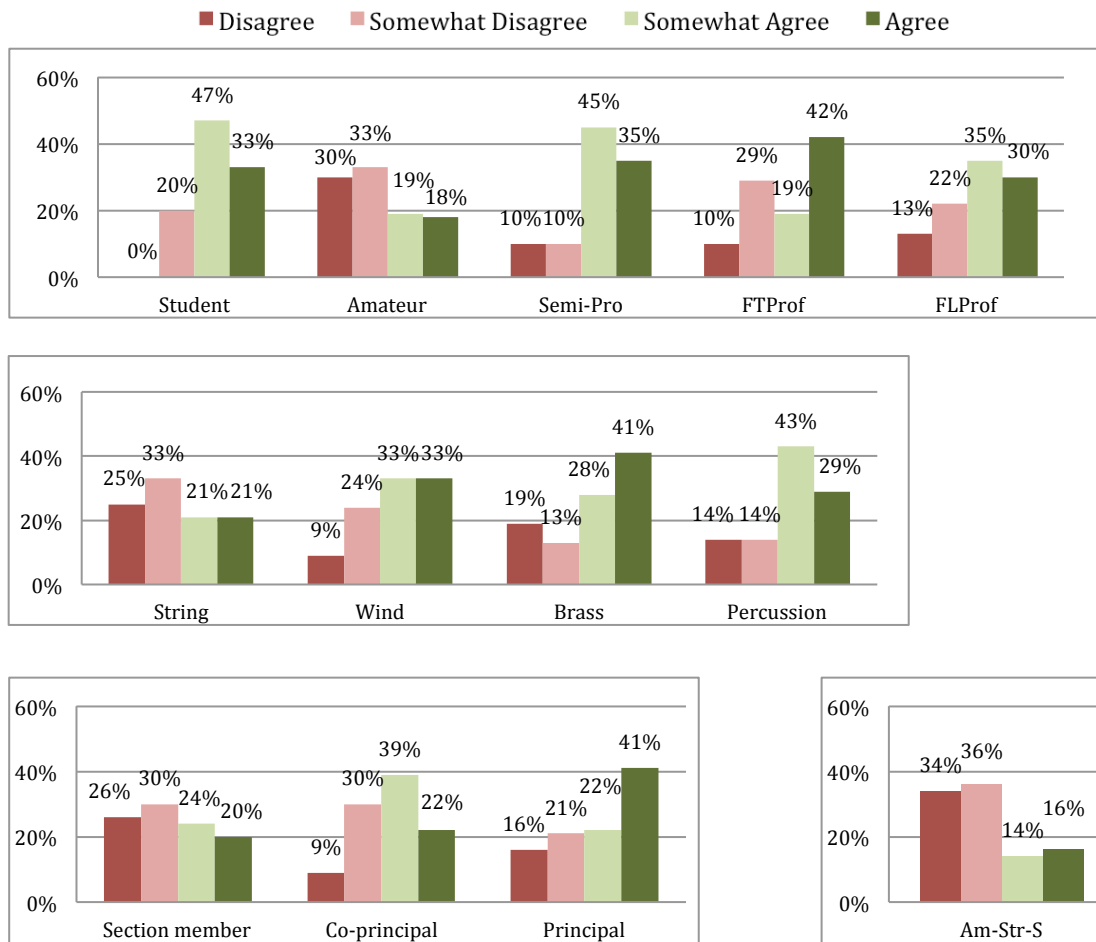


While the responses to Q13.2-13.4 indicate general trends in attitudes about these questions, the responses to Q13.1 illustrate that individuals were divided as to whether or not developing interpretations is 'essential' for fulfilling their responsibility to the orchestra (see *Figure 2.1.3.2-2*). With the exception of Students and Semi-Professionals who were in more agreement that developing interpretations is 'essential' (see *Figure 2.1.3.2-6*), responses were more divided within all other demographic categories including Am-Str-S, with Strings and Section members displaying the most divergent opinions. On average, Position does appear to play something of a role, in that Principals were twice as likely (41%) as Section members (20%) to Agree that developing interpretations is 'essential' to fulfil their responsibility to the orchestra.

Figure 2.1.3.2-6 - Distribution of responses to Q13.1 across Identity, Section and Position

'How much do you agree or disagree with the following statement?

13.1: It is essential that I develop nuanced interpretations in order to fulfil my responsibility to the orchestra.'



While responses to Q11 indicate a somewhat passive attitude toward bringing one's own interpretation to rehearsal, the responses to Q13.1 and Q13.2 seem to contradict this. Possible explanations for this might include that musicians may not equate deliberately preparing an interpretation to having interpretive ideas, or that familiarity with a particular work or compositional genre constitutes a stock of knowledge, such that interpretations are not necessarily prepared in advance. However there is another possibility, which is that some musicians do not find that the word 'modify' accurately characterises the development of their ideas during the rehearsal process.

This is illustrated by the comments which help explain why 62% of respondents indicated that they only had to modify their own interpretive ideas Some or None (Q12).

Only because my ideas about the music develop as I hear other people's interpretations, not because I feel my ideas have to change. (R5-FLProf-Str-S)

It's more that ideas 'develop' rather than they 'are modified'. (R71-Am-Str-P)

Sometimes a colleague's idea will be better or take the phrase on a different journey. That's the beauty of it. (R6-FTProf-W-P)

I don't really have to modify them as I rehearse open to the conductor's interpretation. (R28-SemiPro-Str)

That's what makes music. (R83-FLProf-W-P)

In terms of the variation in responses to Q13.3 regarding the development of multiple interpretations musicians offered several different perspectives:

I often listen to several recordings [and] use orchestral excerpt books and online videos to get ideas and opinions of other musicians. (R186-Am-W-P)

You must be prepared for every eventuality, so you must develop a sense of what you feel is correct, and if a conductor or a musical director disagrees then you must change in order to accommodate their wills. (R19-SemiPro-Br-P)

I think it is imperative for the orchestral musician to have either a toolbox of interpretations at the ready, or a finely tuned skill of adaptability prior to winning any position in the orchestra. A musician never knows what the performance will be like until after it's happened. (R88-FTProf-Br-P)

You have to be prepared for anything, including incompetence. (R95-FTProf-Str-S)

But equally, some amateurs and students felt that it was a waste of time to develop interpretations:

There's no point wasting valuable practice time creating nuanced interpretations that may be at odds with the rest of the orchestra. It's best to be able to play the notes when you come to rehearsal and create an interpretation collaboratively, though invariably innate musicality will mean that you create some kind of interpretation as you learn the notes. (R37-Str-Str-S)

The nuances need to be developed per section...thus there is no point me wasting my time developing my own...I develop them as the section is instructed. (R63-Am-Str-S)

And although the following individual reported Often coming to rehearsals with interpretations of their part in mind, this professional wind player flags up that they don't always know what they will be playing when they arrive at work, so sometimes preparation is not an option:

Often I don't know what will be on the stand if the music was not available or it's a session. So you rely on wits. (R6-FTProf-W-P)

Both amateurs and professionals voiced the opinion that the interpretation was really up to the conductor, but a professional string principal comments how this is something of a two-way street:

Hopefully what you provide in the first run-through will influence the conductor, even if subliminally. (R129-FTProf-Str-P)

In fact, many people took the opportunity in this question's comment box to emphasise the importance of the collaborative group process in performing orchestral music:

The preparation of music for performance is a collaborative process, any professional musician must have the skills to develop and adapt interpretation as part of a team, as it were. (R7-FLProf-Str-S)

I would need to make my interpretation in conjunction with the rest of the section, not just me on my own. (R79-Am-Br-S)

Always teamwork with other wind players and with other players too when appropriate. (R197-Am-W-P)

I try to play my part as musically as I can. I do try and play what's on the page as it's what the composer wanted and it therefore fits with what everyone else is trying to do as well—orchestral music is about the whole effect not necessarily about my own part in isolation. (R169-Am-Str-P)

Orchestral interpretation is a joint effort, you shouldn't expect your personal interpretation to reign supreme. (R37-Stu-Str-S)

2.1.3.3

Vocalising and playing ideas in rehearsal and performance

Through a series of multiple-choice questions that allowed respondents to select answers that best reflected their opinions, the next section of the questionnaire explored beliefs and actions regarding the expression of individual opinions within the rehearsal and performance context both verbally and when playing their instrument. This included collecting responses about musicians' actions regarding when and to whom they make suggestions during rehearsals (or if they speak at all), and about whether or not they express interpretive ideas through their playing and the appropriateness of these actions.

Overall, the questionnaire responses showed that the extent to which musicians verbalise opinions has a great deal to do with their position in the orchestra, in that section members might talk with section principals and principals to the conductor; this confirms both observed behaviour and the popular understanding of communication in orchestras. There appeared to be some exceptions to this pattern of communication, however, with musicians suggesting that the social dynamics, size of the ensemble and the degree to which they felt strongly about a particular issue affected whether or not they would choose to engage verbally during the rehearsal process. Musicians reported that expressing ideas through their *playing* is generally appropriate, some indicating that it is essential, while most indicated that it either needs to be kept in line with the conductor's interpretation, or is more appropriate in some roles than others. In particular, a large majority reported being willing

to incorporate others' 'good' musical ideas into their playing without waiting for such ideas to be recognised by those in positions of authority.

Offering verbal suggestions

In terms of verbal engagement, Q15 asked respondents to tick the actions they would take if they believed something could be played differently or better. Of the 6% of respondents who indicated they would say something to the entire orchestra, most also reported that they would say something to the conductor during rehearsal (16% of respondents) (see *Figure 2.1.3.3-1*). These individuals were almost exclusively Principals—the six non-Principal players in this group were Amateurs or Students. This last point is interesting because (with the exception of FLProfessional respondents, 56% of which are Principals) there appears to be little variation in behaviour between Identity groups as a whole (see *Figure 2.1.3.3-3*), and possibly suggests that non-Professionals may not feel as restricted by the orchestral hierarchy as other Identity groups in terms of verbal communication. Several Amateurs and Students commented that they spoke up when they felt strongly about things:

Only when I have strong views on a particular phrase. (R80-Am-Str-S)

Depending on how strongly I feel! (R37-Stu-Str-S)

In contrast a Professional String Section member was emphatic about their non-speaking role in the ensemble:

Saying nothing is part of being a professional tutti player! Otherwise chaos would result! (R202-FTProf-Str-S)

Figure 2.1.3.3-1 - Responses to Q15

Q15: 'If you believe a passage could be played differently or better, do you...?'

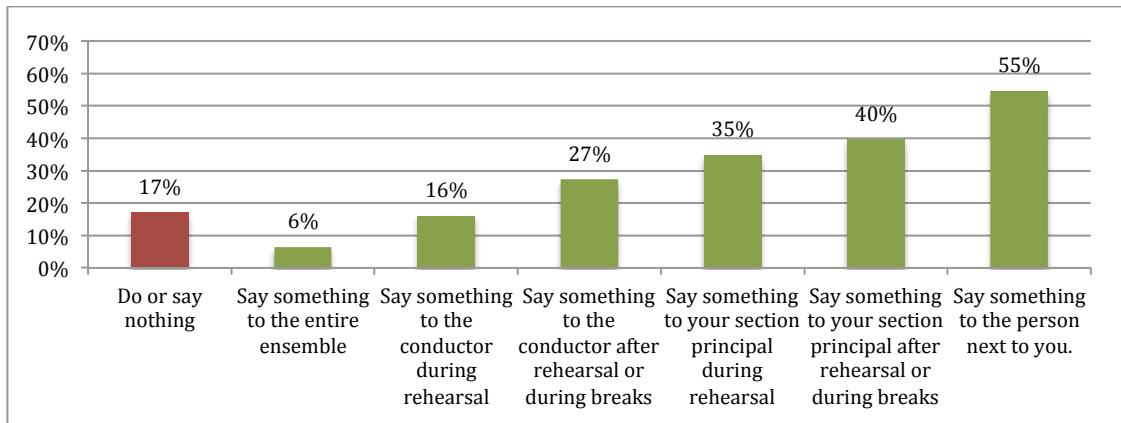


Figure 2.1.3.3-2 - Responses to Q15 by Position

■ Section member ■ Co-Principal ■ Principal

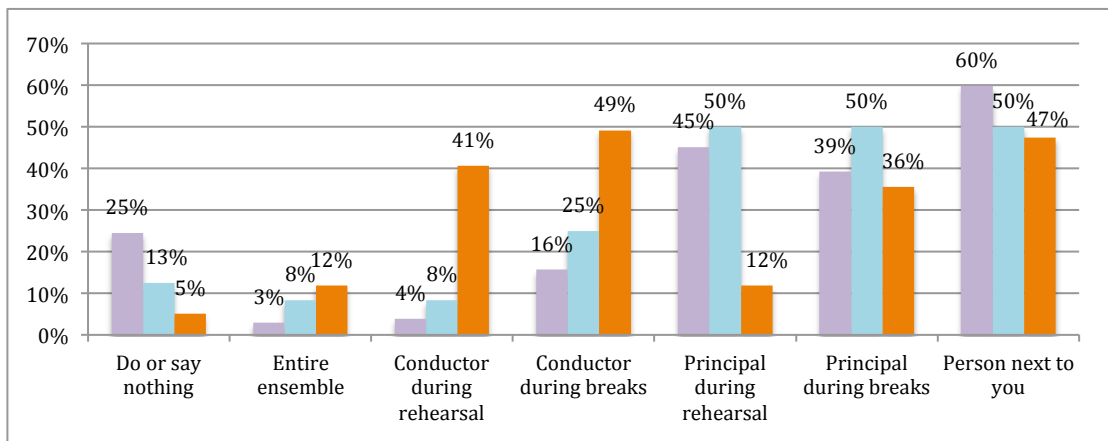
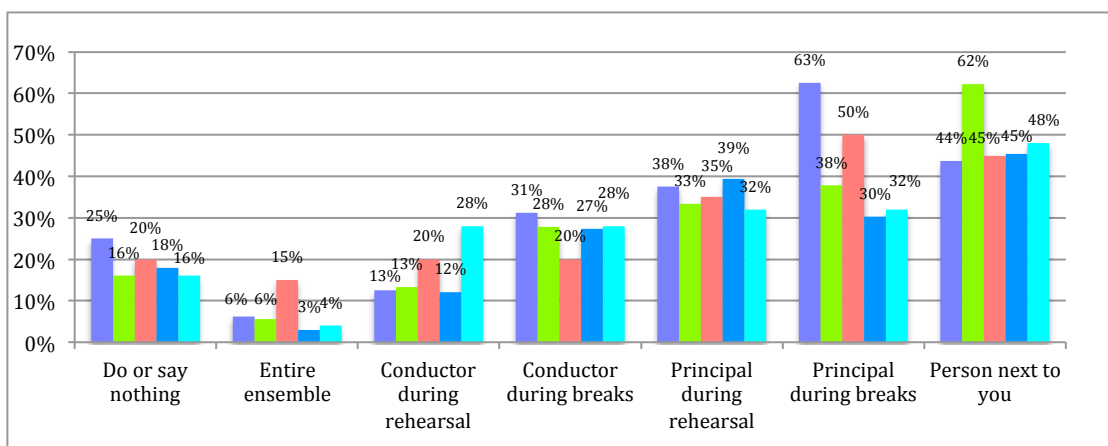


Figure 2.1.3.3-3 - Responses to Q15 by Identity

■ Student ■ Amateur ■ Semi-Pro ■ FTProf ■ FLProf



Compared to voicing concerns during rehearsal to the conductor, more musicians (27% of all respondents) reported that they would speak to the conductor *after* the rehearsal or during breaks. As one player noted:

I don't think it's for players to question or contradict the conductor during a rehearsal, however I may talk to him/her in a break. (R99-Am-Br-CoP)

This figure included 49% of all principals, 25% of all Co-principals, and 16% of all Section members (see *Figure 2.1.3.3-2*). All together, 35% of all respondents reported that they would speak to the conductor either during rehearsal or once rehearsal had stopped. While Position was a strong indicator, Identity did not appear to be a major factor in whether or not individuals engaged with the conductor after rehearsal or during breaks as these respondents represented 31% of all Students, 27% of all Amateurs, 20% of all Semi-Professionals, 27% of all FTProfessionals, and 28% of all FLProfessionals (see *Figure 2.1.3.3-3*).

The percentage of Section members that would say something to their Principals was comparable to the percentages of Principals that would speak to the conductor both during rehearsals and in breaks (Principals to Conductor 41% during and 49% after, and Section members to Principals 45% during and 39% after). Overall, 35% of respondents indicated they would say something to Principals during rehearsal and 40% would do so after rehearsal (with some overlap), and 26% of All respondents indicated they would say something to their section leader *only after* rehearsal but not during rehearsal. These combined numbers indicate that 61% of all respondents would be inclined to say something to Principals either during rehearsal or when rehearsal had paused or stopped. It is noticeable that many individuals who

identified as Principals also responded positively to the questions about speaking to Principals. It is likely that these individuals are speaking to *other* Principals since only 7% indicated that they did so during rehearsal while 21% indicated that they did so after / during breaks.

Reinforcing the importance of Position with regard to verbal engagement, the responses to Q17 illustrate that the majority of Principals (63%) feel that it is part of their role to make suggestions. Interestingly, 25% of Section members and 38% of Co-principals also reported that they make suggestions because it is their role. And while 46% of Section members indicated that they do not make suggestions because it is not part of their role, nevertheless a quarter of individuals in non-Principal roles maintained that they make suggestions regardless of whether or not it is part of their role because they are concerned about the quality of the music.

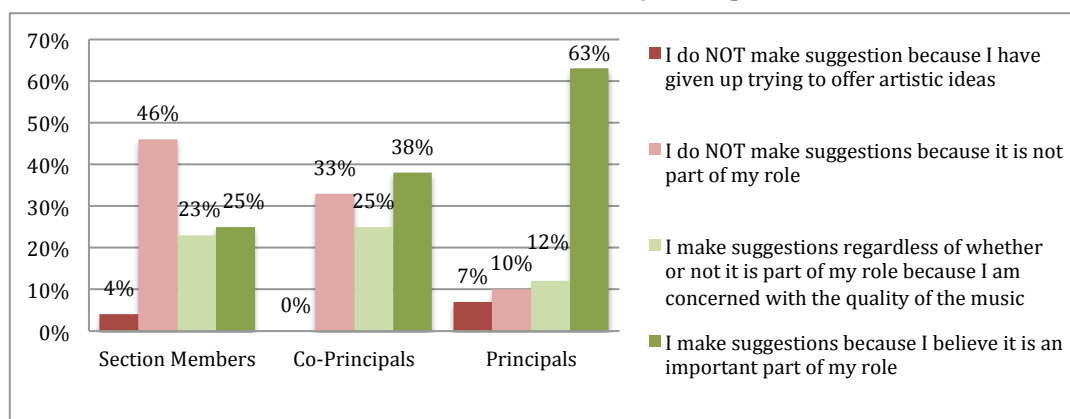
Within Section members, only Semi-Professionals (67% of all Semi-Pro-S) and Freelance Professionals (50% of all FLProf-S) were more inclined to believe that it is part of their role to make suggestions. Amateurs, Full-time Professionals and Students had identical response rates of 17% of the Section members in their identity Categories. Among Principals, however, only Amateurs and Semi-Professionals indicated that they do not make suggestions because it is not part of their role, whereas only Professionals (both Freelance and Full-time) said that they have given up trying to make suggestions.

Again, as with the previous section, some responses to different, but related questions, appear contradictory. For example in Q15, where only 25% of Section members indicated they would Do or say nothing if they thought something could be done differently or better, in Q17, 46% indicated that they do not make suggestions because it is not part of their role (see *Figure 2.1.3.3-4*).

This trend persists across Co-principals and Principals as well. These inconsistencies may point to a lack of congruence between stated beliefs about what one *should* do and actual behaviour.

Figure 2.1.3.3-4 - Responses to Q17 by Position

Q17: 'Which statements reflect your experience?'



In addition to individuals' perception of their role within the ensemble, musicians described other factors that shape how, and if, they engage verbally during rehearsal. For some Amateur players it has to do with their skill relative to others in the orchestra, but for Amateurs and Professionals alike, the receptiveness of the conductor and their colleagues also play a role:

I do not [make suggestions] because I'm surrounded by better musicians!
And because the conductor is not very receptive. (R111-Am-Str-S)

Making suggestions is so dependent on circumstances. Some conductors and colleagues feel undermined and others welcome suggestions. (R70-FLProf-Str-S)

A trade off between the last 2 [make suggestions regardless and have given up making suggestions] - depends on the people around me and how responsive they are. (R45-FTProf-W-P)

Whether or not I make suggestions depends on my assessment of whether the conductor is willing to, or capable of, understanding them. (R3-FTProf-Perc-P)

But one Professional player explained that speaking at all could be counterproductive:

I feel quite strongly that talking ruins spontaneity. Musicians are fragile really and approval or disapproval can add pressure. I normally play what I feel is the best or most beautiful approach. I rarely say anything at all. I don't like to transfer doubt or stress to a colleague. If I feel my 2nd player is doing something I don't like, I see if it happens 2/3 times then I say something quietly. I rarely, if ever, talk to conductors. [I am] happy to be told or to be talked to [and] usually I am pretty prepared for work to avoid any 'chats'. (R6-FTProf-W-P)

The following player notes that although leadership roles matter with regard to speaking up, sometimes it is the musical context (the leading voice) that determines if one has authority to make suggestions:

It really depends on the context. If the passage is creating a huge problem for me and I am leading the section at that point, be that musically or as First chair player (for my section the 3rd player can be the leading voice at times i.e. in Brahms, etc.), I have to speak out. If what I am doing can be fixed in the break with a private discussion with the Conductor or other leading voice players or accompanying voices then I will go that route it has to be a judgement call based on the circumstances. (R76-SemiPro-Br-CoP)

Playing ideas

In addition to asking questions about making verbal suggestions, the questionnaire explored the extent to which musicians believe they should express individual interpretive ideas in their playing; if, when they thought something could be done differently or better, they expressed that through

their playing; and whether or not they modify their own playing to incorporate colleagues' ideas.

Musicians were asked if expressing individual interpretive ideas by playing them in rehearsal and/or performance is: a) not appropriate in an orchestral setting; b) an essential aspect of performing orchestral music; c) appropriate, but must be kept within the interpretation of the conductor; d) more appropriate in some roles (e.g. principal players) than in others. 17% of respondents indicated that expressing individual interpretive ideas by playing them is an *essential* aspect of performing orchestral music. These respondents represented 9% of all Strings (all of whom were Section members) 26% of Winds, 28% of Brass, and 43% Percussion, across all Identity groups, but with a substantially lower response rate for Amateurs (see *Figure 2.1.3.3-6*).

The majority of respondents indicated that expressing individual interpretive ideas through their playing is only appropriate if the ideas remained within the conductor's interpretation (73%) and even then it is more appropriate in some roles than others (74%). While this is not entirely surprising, what is notable is that 22% of all respondent indicated that it is appropriate to express individual interpretive ideas but did not tick the box stating that the ideas needed to be kept within the conductor's interpretation. Additionally, 48 individuals (26% of all respondents) did not select 'is more appropriate in some roles than others'. However, reinforcing the importance of Position with regard to expressing interpretive ideas through their playing, one respondent commented:

It is essential, but not for rank and file string players (R96-Am-Str-S)

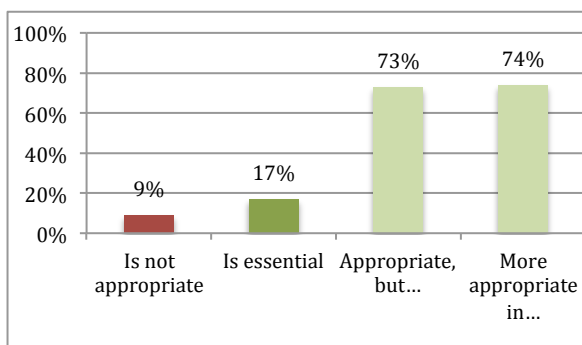
In Q16, musicians were asked whether, if when they heard a good musical idea arising spontaneously from the orchestra rather than from the directions of the conductor, they would adjust their playing to incorporate or respond to the idea, or wait for the idea to be recognised by the conductor or section leader. A large majority of respondents (75%) indicated that they would respond to a good musical idea arising from the orchestra by incorporating it into their playing. 19% of musicians would not respond with playing, but wait for others to approve it first. A large majority of these were Amateurs, representing 33% of all Amateur respondents.

Perhaps what is mildly surprising is the contrast between the number of individuals (36% of all respondents) who indicated they would 'play what they feel is best or correct' when they believed that something could be done better or differently (Q15.5) (see *Figure 2.1.3.3-8*), and the much greater number who would respond to a 'good idea spontaneously arising from the group' by incorporating that idea into their own playing (75% of all respondents) (Q16.1) (see *Figure 2.1.3.3-7*). This discrepancy suggests that while musicians are generally less inclined to put forward their own musical ideas through their playing, they are more inclined to take on others' musical ideas without the need for a conductor's approval. In response to whether or not musicians incorporated others' musical ideas into their playing, one Professional String Section member noted:

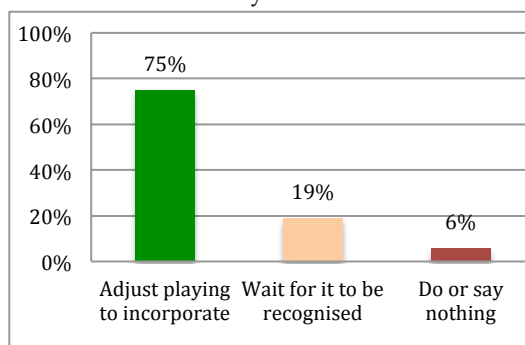
If I didn't, it would fall apart. (R95-FTProf-Str-S)

Figure 2.1.3.3-5 - Responses to Q14

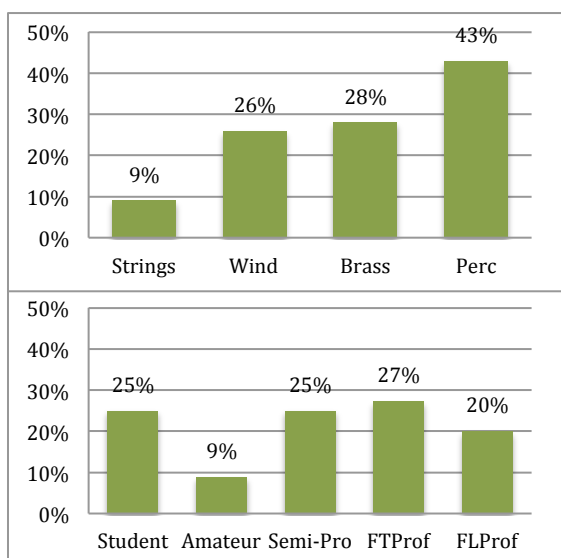
Q14: 'Expressing individual interpretive ideas by playing them in rehearsal and/or performance...'

**Figure 2.1.3.3-7 - Responses to Q16**

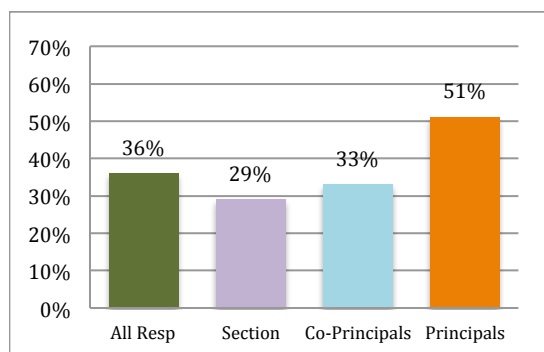
Q16: 'When responding to a good musical idea arising spontaneously from the orchestra rather than from the conductor do you...'

**Figure 2.1.3.3-6 - Responses to Q14 by Section and Identity**

Q14: 'Expressing individual interpretive ideas by playing them in rehearsal and/or performance...' Answer: '...is essential'

**Figure 2.1.3.3-8 - Responses to Q15.5 by All and by Position**

Q15: If you believe that a passage could be played differently or better, do you...
15.5: 'Play what you feel to be best/correct'



Interestingly, and in a comment that again highlights how general trends may not always reflect individual actions and attitudes, an Amateur String Section member describes how they often offer and modify musical ideas in the rehearsal process:

Often I use interpretive ideas in the rehearsal and see how well they go down - if others like them they'll copy...but then if the Conductor says 'no I don't like that' I revert to what he/she wants instead. (R63-Am-Str-S)

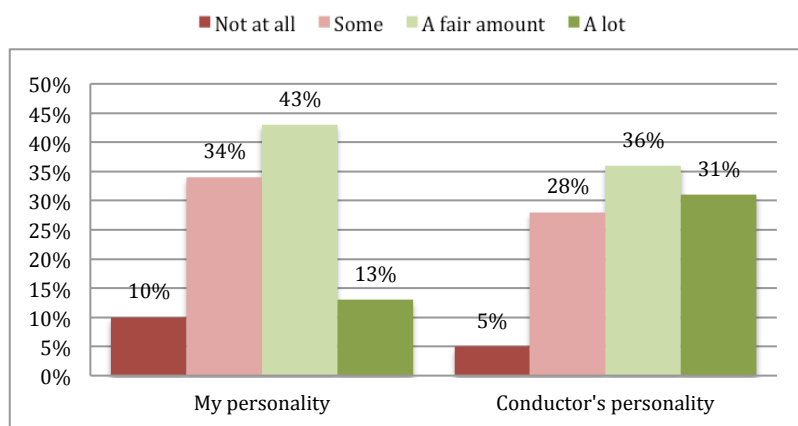
The effect of personality

The last pair of questions in this section (Q18 & Q19) asked respondents how much they feel their engagement with the rehearsal process has to do with their own personality or the personality of the conductor. While opinions were very much divided, as *Figure 2.1.3.3-9* shows, the respondents as a whole were slightly more inclined to believe that their engagement with the rehearsal process is more influenced by the conductor's personality than their own (56% of respondents reporting that it had A fair amount to A lot to do with their own personality and 67% reporting that it had A fair amount to A lot to do with the conductor's personality). Either way, it is clear that personalities do play a role, and taken in consideration with some of the other commentary, it suggests that social environments and the interpersonal relationships between individuals can have an effect on the degree to which individuals engage in the rehearsal process through verbal and musical contributions and suggestions.

Figure 2.1.3.3-9 - Responses to Q18 &19

Q18: 'How much do you feel your active engagement in the rehearsal process has to do with *your* personality?'

Q19: 'How much do you feel your active engagement in the rehearsal process has to do with the *conductor's* personality?'



2.1.3

SECTION SUMMARY

Overall what the respondents' answers and commentaries suggest is that some individuals feel it is essential to develop interpretations and many do so even if they have to modify them later. However, these interpretations are not necessarily developed 'prior' to the rehearsal process or particularly deliberately, but may be the result of previous experiences or on account of influences within the rehearsal setting. Some of the musicians' commentary indicated that they do not feel that the modification or development of their own ideas is an infringement, but rather part of the process of playing orchestral music. There was a sense from some respondents that interpretation is a collaborative process with colleagues, while for others interpretive direction clearly comes from the conductor. Although the majority of respondents indicated that there is some line of verbal communication available to them with regard to expressing concerns or articulating opinions, some were clear that this is only to clarify technical issues rather than make suggestions. What was perhaps most surprising was how relatively few musicians indicated that they express what they believed to be correct/best through their playing (Q15.5) compared to how much they are willing to incorporate others' ideas in their own playing (Q16.1). This suggests that while musicians are happy to have colleagues express interpretive ideas through their playing, they are less inclined to do so themselves.

Very few individuals expressed the wholly negative attitudes typically associated with orchestral players, particularly orchestral String Section members. This cross-section of the demographic varied greatly in their attitudes, and although Amateur String Section members indicated that they were less engaged with bringing ideas into the rehearsal process, the commentary suggested that as a whole they were comfortable with their roles and amateur section members were happy to be led by more experienced musicians (section principals) or the conductor.

2.1.4

SOURCES OF INFORMATION

Two questions were asked in order to obtain information about where players direct their attention for information about how and when to play across a variety of musical parameters. The first asked musicians when they believed they were working with a competent conductor, how often they looked to the conductor for information about Precisely when to play, Tempo, Metre/place in the bar, Dynamics, Articulation, Timbre/tone and Expression (Q20). The second asked them to imagine a scenario where there was no conductor and to report where they would direct their attention for information about the same musical parameters (Q21). While this second question is slightly awkward because symphony orchestras do not typically play without a conductor, I was interested in identifying where players direct their attention when the conductor is either incompetent/ineffectual or irrelevant. Indeed the mention of conductor competence in Q20 elicited frustrated comments from several Professional respondents:

This is so dependent on the conductor and so many are not competent! (R126-FLProf-Str-S)

If only they were competent!! (R100-FTProf-Str-S)

Whether or not this pair of questions taken together entirely achieves the above objectives, the combination of responses to Q20 and Q21 does suggest that musicians do not necessarily rely on even 'competent' conductors for information about how and when to play their parts, but obtain information from colleagues in the form of section Principals or on account of their role within the musical texture.

2.1.4.1

How much do players look to the conductor?

Figure 2.1.3.4-1 illustrates the responses for Q20, first in percentages of all respondents for each performance parameter, followed by individual graphs illustrating the distribution of responses for each performance parameter broken down by Position and Identity, the percentages representing the proportion of all respondents in each one of those demographic categories. What the graphs illustrate is that musicians report looking to the conductor relatively frequently for temporal information, and less so for information about sound quality. In this latter category there was a striking amount of agreement of the grouping of Dynamics and Expression, and Articulation and Timbre with regard to how much musicians looked to the conductor for information about these performance parameters. The figures also illustrate that overall there was less variation in responses between Positions than there was between Identity groups.

With the exception of FTProfessionals, the majority reported always looking to the conductor for Tempo, indeed around 90% of all identity groups looked to the conductor for tempo either Always or Most of the time. Musicians were more divided when it came to Precisely when to play. Although Full-time Professionals and Amateurs were more agreed that they looked to the conductor Most of the time for when to play, around 70% of all Identity categories were divided between Always and Most of the time, with the exception of Students, of whom 38% reported that they only Sometimes looked to the conductor for Precisely when to play. Musicians were even more divided about how often they looked to the conductor for the

Metre/ place in the bar (19% Always, 38% Most of the time, 41% Sometimes and 2% Never). One amateur respondent noted this had much to do with how well the ensemble knew the piece:

This does rather depend on the work and how well-rehearsed we are. For works with less rehearsal time I will naturally look to maestro for tempo, metre etc. more than a work that we know well with good ensemble. (R55-Am-Str-S)

While some Professional musicians expressed a more cynical view, as heard in the following comment:

You usually know the points when you particularly need a conductor's help. (R85-FLProf-Str-CoP)

Musicians' responses to Dynamics and Expression were divided between Sometimes and Most of the time for 83-87% for All Respondents, with only 11-15% Always looking to the conductor for this information. Articulation and Timbre/ tone stood out noticeably among the performance parameters as facets of performance that musicians rarely look to the conductor for information about. 56-59% of all respondents reported only Sometimes looking to the conductor for this information and 20-21% reported that they Never look to the conductor for information about Articulation and Timbre/ tone. As one respondent observed:

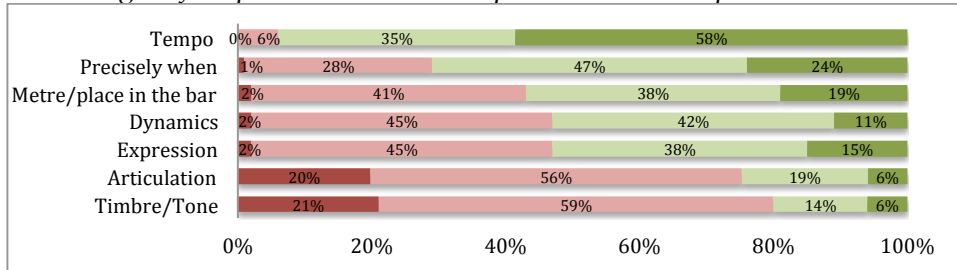
Hmmm....things covered in a rehearsal like timbre and tone, I'm not sure if I'd recognise any matching gesture from a conductor (R179-FTProf-W-S)

Figure 2.1.3.4-1 - Responses to Q20

Q20: 'Assuming conductor competence, please rate how frequently you rely on/look to the conductor for...'

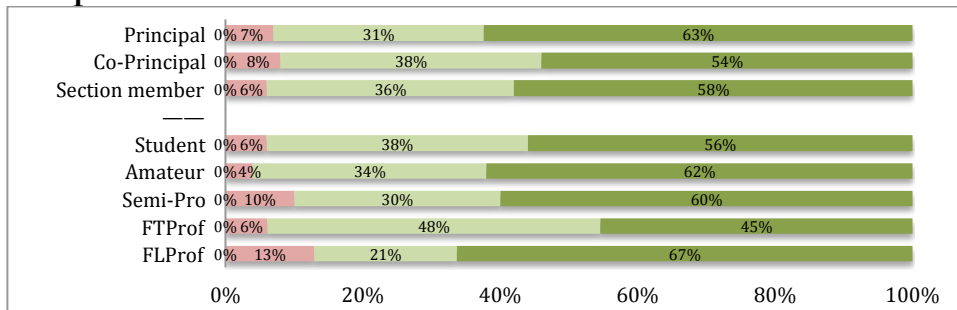
■ Never ■ Sometimes ■ Most of the time ■ Always

Percentages of responses across all respondents and all parameters

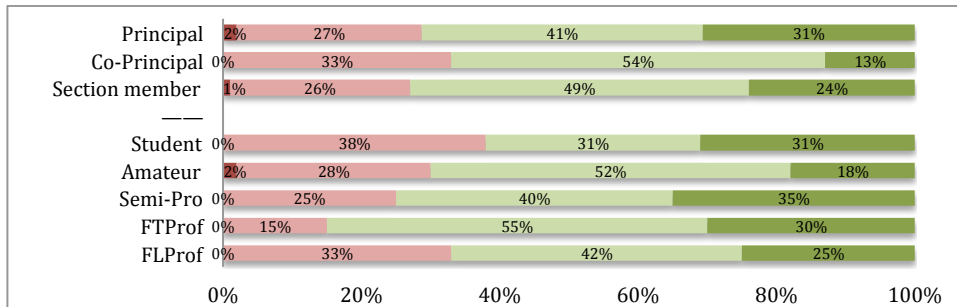


By parameter represented in percentages in each demographic category

Tempo



Precisely when to play



Metre/place in the bar

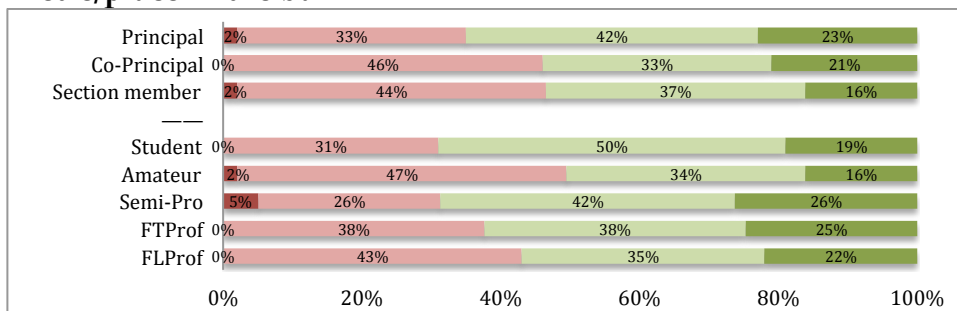
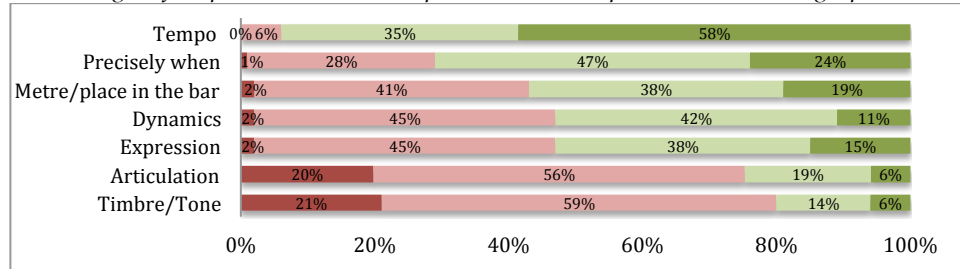


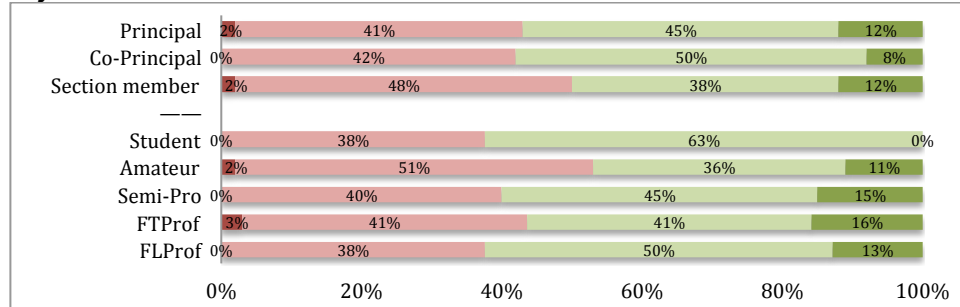
Figure 2.1.3.4-1 cont'd

Never Sometimes Most of the time Always

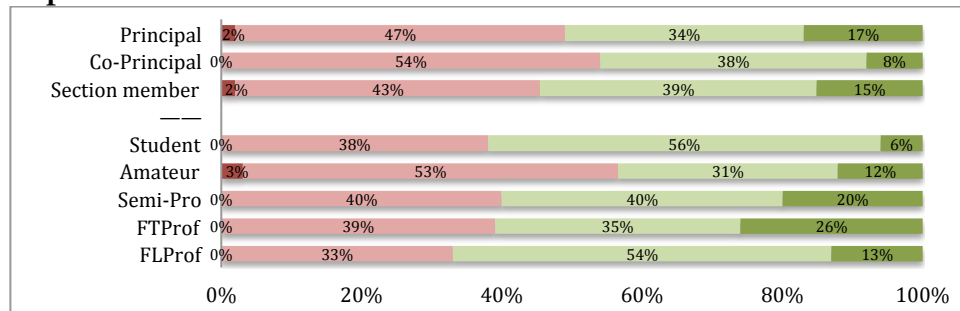
(Percentages of responses across all respondents and all parameters – same graph as above)



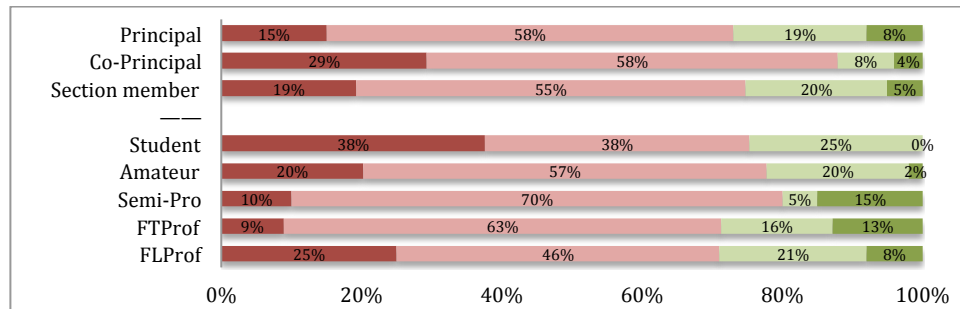
Dynamics



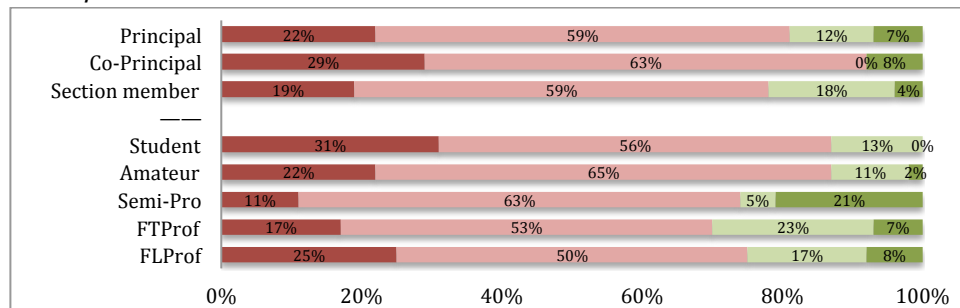
Expression



Articulation



Tone/Timbre



The underlying question here is how much musicians obtain information from the conductor for information about the performance parameters that define the character or unique profile of a musical performance. While it is arguable that tempo is a very important element in the characterisation of a performance of a work, it would be difficult to argue that it is *the* defining feature and these responses raise some questions about what influences musicians to make decisions about how and when to play their parts. Indeed, in the following comment a musician pinpoints an issue relevant to the findings of Q21 and which will be discussed at much greater length in the sections to come:

You look a lot (most of the time?); and listen even more. (R195-SemiPro-Br-S)

2.1.4.2

When there is no conductor, where do orchestral musicians obtain information about how and when to play?

Musicians claim that they often have conductors who are un-watchable, or who they must ignore them all together. Rather than asking what you do when faced with an 'incompetent' conductor, Q21 asked where individuals look for information when there is no conductor. While this is not technically the same question, it was important to avoid the confusion of what it means to have an incompetent conductor, as they may be competent in some areas and not in others, etc. I propose that it is reasonable to see the responses to Q21 as where people turn their attention to when they are not getting the information from the conductor as in Q20.

What the responses to Q21 illuminated is that the Leader effectively became a surrogate for the conductor with regard to Tempo (61% of all respondents including 69% of Principals, and 57% of Section members), while musicians alternately looked to the to the Leader and or their Section Principals with regard to Precisely when to play and the Metre / place in the bar (see *Figures 2.1.4.2-1, 2.1.4.2-2 and 2.1.4.2-3*). However, both Principals and Section members also relied on Players with relevant musical parts for ensemble coordinating information, including 44% of Principals and 35% of Section members for Precisely when to play. For quality of sound, Principals primarily relied on Players with relevant musical parts (56% Dynamics, 51% Expression, 42% Articulation and 39% Timbre / Tone) and increasingly their own judgement or No one (e.g. 17% Articulation and 25% Timbre / tone), while Section members continued to privilege their Principals over Players with relevant musical parts particularly with regard to Articulation (67% / 27%) and Timbre / tone (52% / 26%). Section members, too, indicated more self-reliance regarding issues of Metre (13%), Dynamics (10%), Expression (14%) and Timbre / tone (18%).

Figure 2.1.4.2-1 - Responses to Q21 by all respondents

Q21: 'In the absence of a conductor, who would you look to/listen to, for...'

- Leader
- Section principals
- Person next to you
- Players with relevant musical parts
- No one
- Other

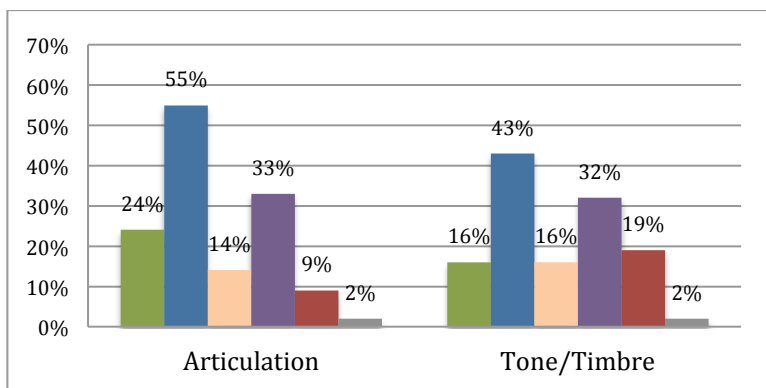
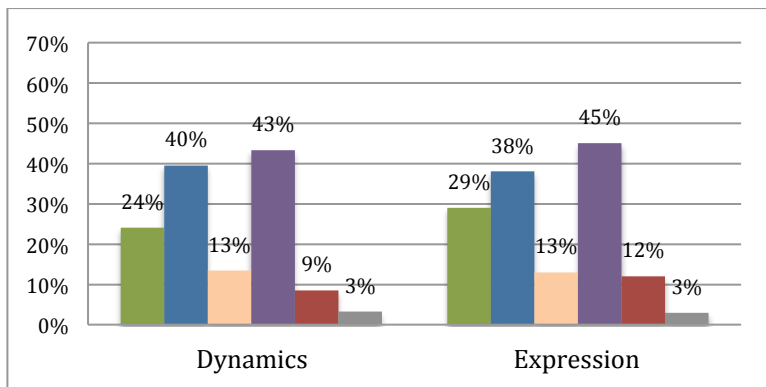
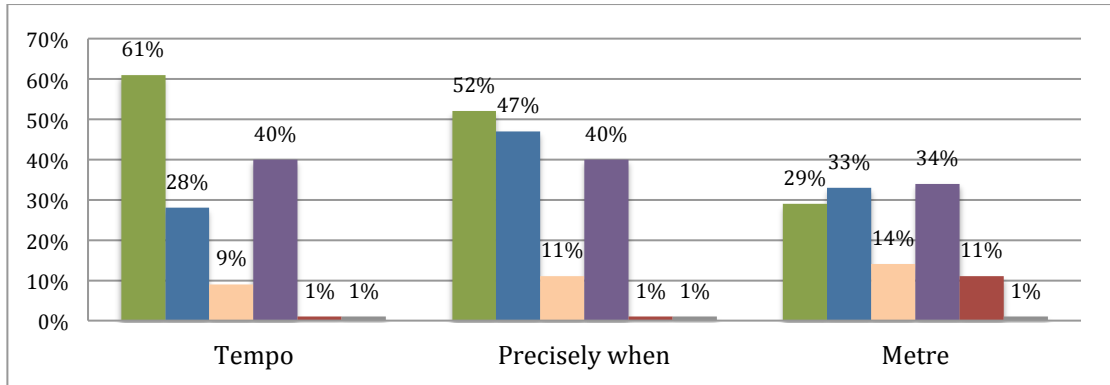


Figure 2.1.4.2-2 - Responses to Q21 by Section members

Q21: 'In the absence of a conductor, who would you look to/listen to, for...'

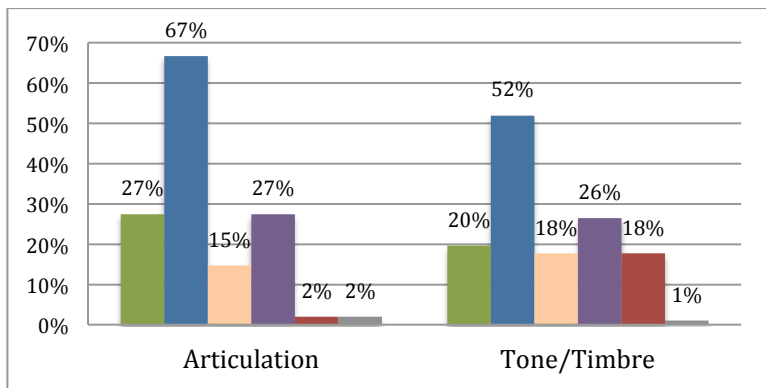
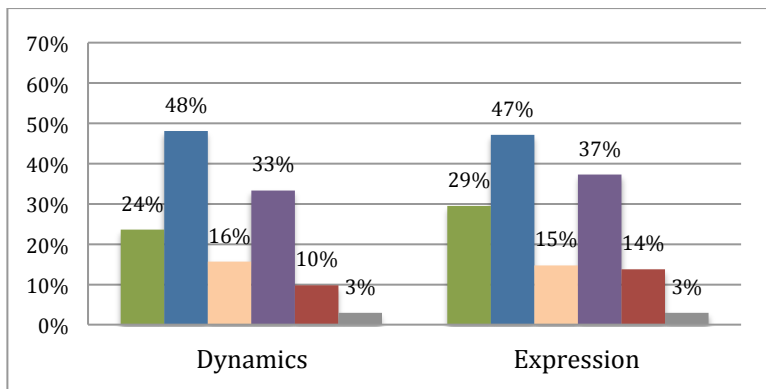
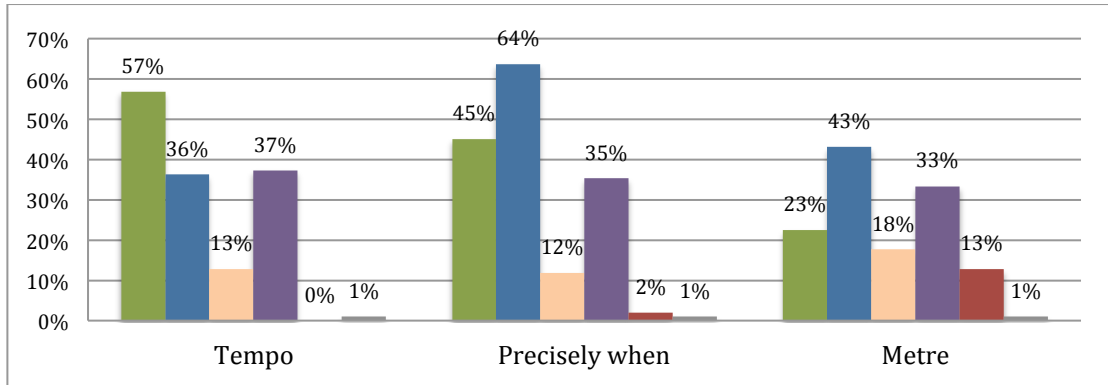
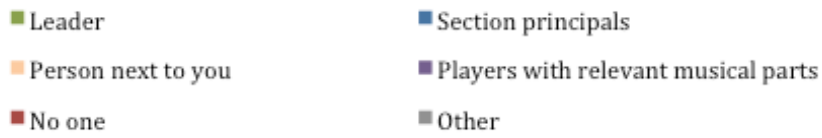
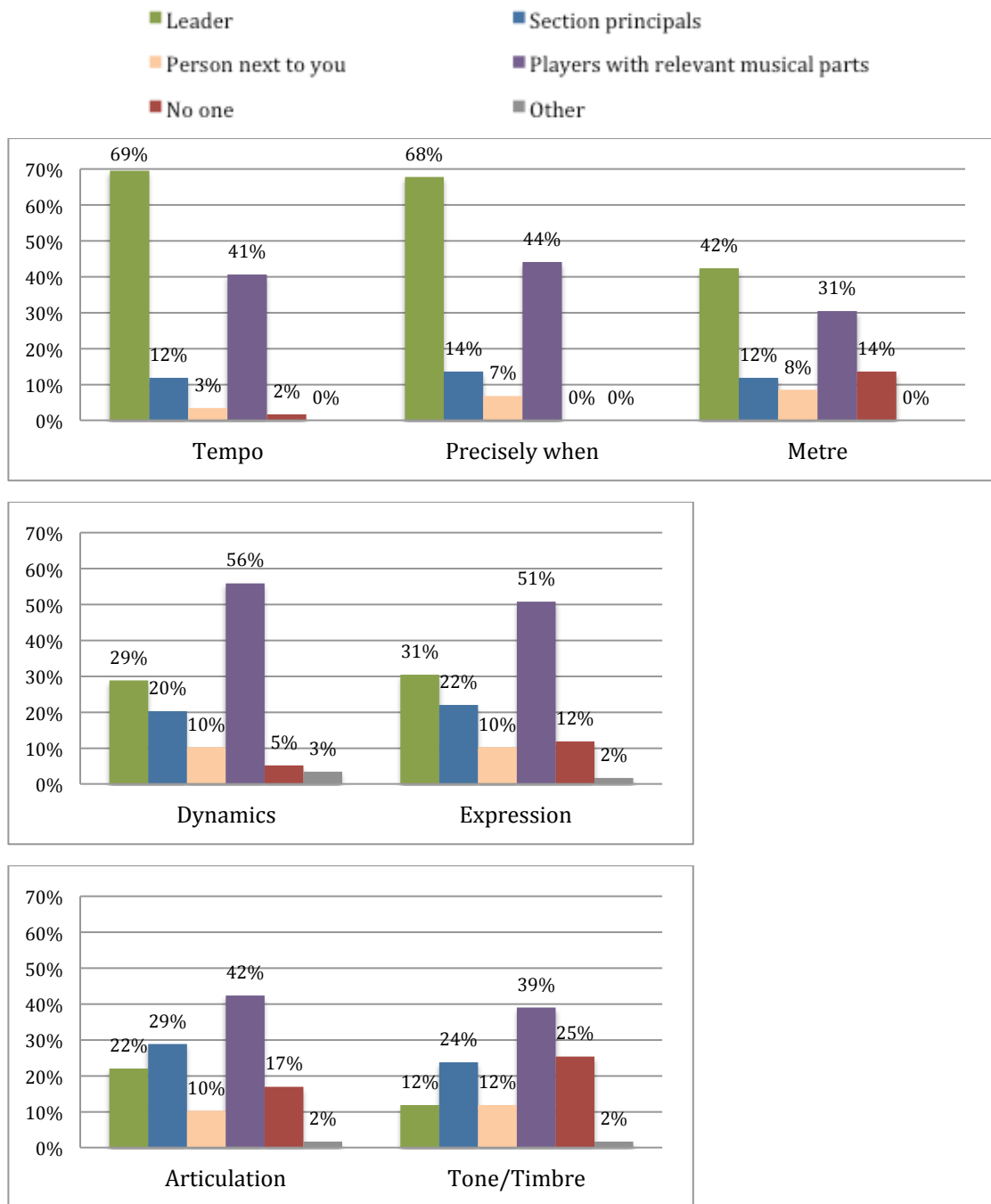


Figure 2.1.4.2-3 - Responses to Q21 by Principals

Q21: 'In the absence of a conductor, who would you look to/listen to, for...'



One respondent made an important observation about sightlines that frustrates received notions about String Section members following every move of their Section Principals, an issue that will be explored further in the interviews and the MERID study:

It is hard to see / hear the section principal when I am at the back, so I suppose I listen mainly to the orchestra as a whole. (R138-Am-Str-S)

Others mentioned that their behaviours would be different in a rehearsal setting than a performance setting where Players with relevant musical parts take precedence:

This is based on a performance. In rehearsal I would be looking for guidance, inspiration and suggestions on all the above. In the concert often they will be the one with the relevant musical parts (R129-FTProf-Str-P)

And as before, it depends on the actual people in the orchestra and their abilities:

In a different orchestra I would look to the leader for all of the above. (R126-FLProf-Str-S)

2.1.4

SECTION SUMMARY

What the combination of responses to Q20 & Q21 suggests is that musicians regularly attend to a variety of different sources for information within rehearsal and performance situations about how and when to play their parts. There is some concordance here with responses to Q9, in that players indicated they have much more room for making decisions about their own parts with regard to Articulation, Nuances of Phrasing and Timbre/Tone, which appeared to be reflected in how much individuals indicated they do not look to the conductor for information about aspects of Expression, Dynamics, Articulation and Timbre/Tone. While players were clear that information about Tempo primarily (although importantly, not exclusively) came from 'the leader', whether that was the conductor or the Leader of the orchestra, responses show that both the section principals and Players with relevant musical parts (the musical context) were key sources of information. In addition to the comments that demonstrate players' frustration with the lack of conductor competence, it appears that even in situations where the conductor is perceived to be competent musicians do not always attend to them for the information that they need for how and when to play. As mentioned earlier, although tempo may be an important component of what constitutes an interpretation, the data from these questions illustrate that there is a substantial gap between the information players perceive that they receive from the conductor and the number of decisions which need to be made in order to characterise a piece of music in performance.

2.1

SECTION SUMMARY

Contrary to a rather generic, but ingrained, characterisation of artistic decision-making in orchestral rehearsal and performance such that interpretive information either travels from the conductor to the leader, to principal players and then to the rest of the orchestra, or alternatively that the conductor is engaged with each and every player individually, providing all of the information about how and when to play their parts, this questionnaire shows that while for portions of the population artistic decisions are limited by their 'role' within the ensemble, there is a wide variety of perspectives and attitudes which resist such tidy classification.

The findings from this questionnaire show that while in some cases musicians' 'average' attitudes reflect the anecdotal accounts of orchestral musicians' involvement (or lack of involvement) in the artistic decision-making process and whether or not performing orchestral music should be considered a creative activity, there are plenty of exceptions to this rule: rank-and-file players offer ideas through sound, section principals do not feel it is their role to bring interpretations of their parts to rehearsals, and large proportions of musicians only *sometimes* look to the conductor for information about expression, dynamics, timbre/tone, and articulation, even when they perceive the conductor to be doing their job. Moreover, while most individuals did not take their cases to the conductor or speak out to the ensemble during rehearsals, they did report having channels of communication to section principals. Nevertheless, it was clear that the

generally accepted tacit protocol discouraging verbalisation in orchestra rehearsals was fairly well adhered to, even if expressing and exchanging ideas through musical performance was more generally accepted and even expected for some roles.

More than anything, however, although many musicians felt that their experience of performing orchestral music was better described as expressive or indeed that it was better characterised as a skill/craft, remarkably few were prepared to say that it was wholly uncreative. Expressivity was clearly an important aspect of orchestral performance for most players and it is interesting to observe that the parameters of performance which typically constitute expression, such as nuances of timing, dynamics and articulation were not primarily in the hands of the conductor.

Throughout the questionnaire and particularly in the open comment box at the end of the questionnaire, musicians summed up their attitudes about performing orchestral music. Generally speaking, these attitudes conformed to many of the assumptions and generic characterisations of orchestral musicians. However, several respondents offered useful and articulate insights in to their practice, such as this one by a professional player who highlights the artistic paradox of playing in a string section:

It's a rather complicated and subtle subject to discuss, especially when tackling the meaning of the word 'creative'. I, (rather negatively perhaps), as a string player in a classical symphony orchestra would say that the job has very little if no real creative element at all. I think of it more like a craft, but a craft for which you need to call upon your talent and skill to carry out. We generally strive for some sort of unity but of course realistically we all play things a little differently, the occasionally depressing fact is that the audience will not hear YOU, in fact your desk partner will scarcely appreciate your 'interpretation'. Having made that bleak observation however, I think that overall, an orchestra made up of people all contributing vivid and musical

playing is what makes the greatest orchestras sound great, even if individually they are relatively anonymous. (R180-FTProf-Str-S)

The following two comments, one from a professional wind player who identifies the need to embrace three very different expressions of individual agency, and one from an amateur player who suggests that their motivation for playing in orchestras comes from being part of a collaborative activity:

Playing principal flute in a symphony orchestra is an absolute privilege. It for me is the total musical experience wrapped into one. It is at once, solo, communal and servile. All elements of human nature are catered for. It is as rewarding as it is exhausting. (R6-FTProf-W-P)

Orchestral playing is a very rewarding activity - being part of something creative, inspiring, emotional, etc. which is much bigger than the sum of its parts. Hard work in rehearsal and in private practice is essential to achieve the goal of a really high standard orchestral performance and the 'high' that follows being part of a really good performance of a great piece of music is intensely satisfying. (R105-Am-W-P)

The questionnaire has highlighted some interesting and divergent attitudes with regard to creativity and decision-making in orchestral performance, however many questions still remain about the factors that shape individuals' engagement. While it is clear that the conductor is not the only decision-maker, it is also clear that individuals also do not take ownership for the artistic decisions that are made, suggesting that there are other influences at work.

So while the data from the questionnaire has provided a rich picture of diverse attitudes, drawn from a substantial sample of musicians across a spectrum of expertise and orchestral positions, the questionnaire format does not allow for the expression of detailed and nuanced attitudes. The next section of thesis therefore utilises in-depth interviews, carried out with a much smaller number of musicians, as a 'depth' complement to the 'breadth'

of the questionnaire data. The interviews continue to probe musicians' thoughts about what is 'creative' in orchestral performance and how this plays out in their own experiences. It explores in more depth what individuals feel their responsibilities are with regard to fulfilling their role in the orchestra, including how they approach interpreting their part and what influences them to play in a particular way.

2.2

INTERVIEWS: Beliefs and Experiences

2.2.0

INTRODUCTION

While the online questionnaire facilitated the collection of information from a large number of performers across a range of different performance situations, it did not allow for the in-depth enquiry or clarification that face-to-face interviews afford. Sourced from my own contacts and on recommendations from colleagues, the interviewees included eight professional and six amateur orchestral musicians in the UK (4 violinists, 2 violists, 1 double bassist, 2 bassoonists, 1 clarinettist, 1 horn player, 1 trombonist, 1 percussionist, and 1 conductor) and one retired professional flautist in the US. Of the fifteen musicians interviewed, 3 were female and 12 male.¹ With the exception of the US-based flautist, all the musicians had performed with a variety of orchestras throughout the UK, and ranged in age from mid-twenties to mid-seventies. The professional musicians had performed with top UK and Continental orchestras and the amateur musicians ranged from relatively inexperienced players to individuals with extensive musical backgrounds who pursued other careers. Participant information sheets and consent forms were emailed in advance and hard copies were signed at the interviews. The semi-structured interviews lasted

¹ The gender imbalance has been noted and was an unfortunate result of the 'opportunity sampling' method.

45-90 minutes, were collected between December 2013-December 2015, and were recorded using a digital hand-held device.

The interviews focused on obtaining insights from musicians about: 1) their perceptions of what it means to be creative in the performance of orchestral music; 2) what makes an orchestra performance unique or special; 3) how they perceive their roles and responsibilities within the ensemble particularly with regard to the artistic decision-making process; and 4) where they feel that they obtain information about how and when to play.²

Transcribed using NVivo, the interviews were coded utilising a system of overarching pre-defined coding categories that were expanded as additional themes emerged. Based on the question template used in the interviews and re-readings of the transcripts, these initial pre-defined thematic categories included: 1) views on creativity and related concepts; 2) artistic decision-making and the individual player; 3) what makes an orchestra concert unique or special; 4) sources of information within the orchestra for how and when to play; 5) roles and responsibilities; and 6) playing with, without, and around the conductor.

Post coding, the themes were organised into three broad categories that form the tripartite structure of this chapter: 1) views on creativity; 2) what makes orchestral performances special or unique; and 3) the distribution of authorship in performance. The first section explores musicians' perceptions of the idea of creativity both in the performance of notated music and within

² The questions were slightly different in the conductor interview, but still explored their role in the artistic decision-making process.

the context of orchestral performance. The second section discusses the elements that musicians expressed are central to the creation of unique or special performances, as well as some of their individual experiences. The third section explores musicians' descriptions of where they feel they have room for individual contributions, where they direct their attention for information about how and when to play, and what influences them to attend to some sources of information and not others.

The mixture of voices across a range of performing levels and ensembles is deliberate, since it is the aim of this research to represent the diverse practices of orchestral performance. As such, the intention is not to generalise the findings but to generate insights in order to highlight variations in perspectives and potential sources of influence that shape the way in which orchestral musicians make decisions about how and when to play their parts. In combination with the questionnaire responses, the findings from the interviews provide a context in which to understand the MERID data (see Section 2.3).

In order to contextualise interviewees' individual comments, here are very short descriptions of the informants' musical backgrounds along with their pseudonyms:

Jack is a professional viola player who attended a major London music college and has been playing with a major London orchestra for over 5 years. Jack sits on the top two desks of his section and occasionally serves as principal.

Oscar is an amateur violinist who studied privately as a student and has been performing regularly with amateur and student orchestras as a leader or section member for over 10 years.

James is an amateur violinist who plays regularly with two amateur orchestras in his community, leading the second violins in one and sitting in the second violin section in another.

Oliver is a freelance professional trombone player who has been performing regularly with top orchestras throughout the UK for over a decade.

Jessica is a London conservatoire-trained professional bassoonist who freelances with orchestras in the UK.

Amelia is an amateur violist and violinist who trained at a major London conservatoire and who played professionally when she was younger, but now plays in an amateur orchestra.

Leo is a professional freelance percussionist who has played regularly with the top symphony orchestras, opera orchestras and West End orchestras in London and throughout the UK for over 40 years.

Henry is a largely self-taught bassoon player who plays regularly with the stronger amateur orchestras and small ensembles in his community.

William is a professional conductor who works exclusively with his own orchestra, which he has conducted for 50 years.

Emily is an amateur clarinettist who trained at a major London music college, but chose not to pursue music performance as a profession. She now plays regularly with the amateur orchestras in her area.

Harry is a professional double bassist who served as principal bass in a top London orchestra for 30 years.

Jacob is an amateur horn player who had lessons as a student and has been playing in university and amateur orchestras for over 25 years.

Charlie is a professional violinist who sits in the first two desks of the first violin section of a major London orchestra with which he has played for over 5 years. He trained at conservatories in the US and the UK.

Thomas is a conservatoire-trained flautist who played professionally in the US under top conductors in the 60s and 70s.

Joshua is a professional violinist who is a leader of one of London's major symphony orchestras.

2.2.1

VIEWS ON CREATIVITY

Views on creativity in the performance of notated music as well as within an orchestral context varied from musician to musician in the interviews, but echoed responses to the questionnaire. Some informants expressed their belief that the term, 'creative' implies the generation of new material or completely original ideas, as might be found in composition or improvisation, and that the word is therefore not applicable to performance of the standard repertoire. However, for those individuals for whom the concept of creativity in musical performance had relevance, they noted that creativity is connected to expressivity and the freedom of individual choice. All of the informants acknowledged that there is room for 'interpretation' of their parts and for some this is an essential aspect of their practice, while for others it depends greatly on the musical materials they are playing, their instrumental role within the orchestra, or their skill level.

Like the questionnaire respondents who indicated that because they do not compose the music, performance from notated scores is not a creative process, Jacob stated that while a musician might be creating a special or unique event when performing, the process is better described as expressive. Indeed, for Jacob, if there is creativity in orchestral performance it means that something has gone wrong:

It's an interesting question, because in a sense there isn't [creativity in performing], right? In a sense I've got the dots in front of me and I would probably say there is an expressibility [*sic*] rather than a creativity. [...] On the whole I'm not being asked to *ad lib*. If there's creativity on the whole, it's gone wrong. The orchestra as a whole is creating something, but I think it is an expression of the music you're creating. You're not creating the

composition, you're creating the moment, and in that sense there is creativity, but it is quite different. (Jacob, amateur horn player)

Like Jacob, it was widely accepted among the interviewees that there is more to performing notated music than simply playing the 'notes on the page', and for Oscar, this space leaves a 'freedom' that allows for creative engagement. In line with the questionnaire findings, Oscar stated that he could engage more or less creatively with music of different 'historical eras':

[In] Romantic and Modern music it's more likely that you'll actually have to make a decision as an individual or as a section. [...] I think for me the composer who is actually for me the kind of centre of that is Elgar, because he is so picky and so precise, [but he] is wonderful [in that] there is so much freedom left over. [...] There's so much you can do with Elgar's music, even at the level of how the parts lie. You can be very creative with what you then do [with] the particular passages. (Oscar, amateur violinist)

For Leo, bringing an interpretation to his orchestral performance is crucial, not only for his enjoyment, but in order to fulfil a responsibility to his colleagues. When asked what the consequence would be of 'just playing the notes' he said:

I don't think you could. I think you would just feel sick. That goes back to what I am talking about with people just banging and crashing. Yes, you can do it, of course you can, and sadly 99% of the audience wouldn't notice. But for me, the biggest kick I get is when someone in the band says something like, 'hey that was good tonight' or something like that. [...] And when somebody says something [like that] to you, you couldn't then go in and just not be thinking about it because you wouldn't feel right with your colleagues. (Leo, professional percussionist)

Some interviewees stated that interpretation is something that is added after the notes have been learned, and in that sense it is connected to skill and ability. They felt that the first responsibility is to play what is on the page and only then does a musician have more license to interpret the music. As Oscar stated:

I'd expect a teacher to say, 'Well hang on, before we work on how we're exactly phrasing this, let's go back over the notes one more time, let's get that right.' (Oscar, amateur violinist)

But despite Oscar's belief that one should have a firm grasp of the technical aspects of performing a piece before making interpretive choices, he admitted that in reality the situation is less clear cut:

I'm not sure I'd be able to say there is a dividing line. I don't think you graduate or something like that. No, I think it's slightly subtler than that, but I'm not exactly sure I know how or why or where. And it may also be an intuition that isn't exactly backed up by anything I do when I make music. (Oscar, amateur violinist)

Unlike Jacob's reluctance to call performance creative, some informants were comfortable with the idea of creativity as a part of performing music from notated scores, but saw it as something intrinsically connected to their ability to make individual expressive choices. In an orchestral context where he was playing a solo line, James said the conductor was 'inviting me to do what I feel is right at this moment' and in doing so 'releasing the creativity of the individual'. Charlie also described the freedom to make artistic decisions when performing as something that is 'individual, creative', but noted that this freedom was not frequently found in his role as a section violinist.

These individual choices were sometimes described as part of the process of 'making it their own', which might include taking on ideas and inspiration from other performers or recordings. Oscar described this process in his development of an interpretation of a Bach violin partita, but mused about the line between what constitutes one's own interpretation versus a 'mosaic' of others':

I mean obviously a lot of the things that I think about Bach are things that I've heard from other violinists. [...] So I don't know, when does it become your

own and how far does it always remain a mosaic? [...] So I think creation is always kind of refractive process as well. But yeah, I'd say that was something where I'd feel its part of the creative aspect of making music. You know, you're trying to come up with something that is yours, in a way. (Oscar, amateur violinist)

Jacob also describes this process of 'trying to make it his own' in an orchestral context, by making decisions about phrasing, *portamento* and dynamics:

Brahms 2. I've done that first horn and that's a couple of big moments where the orchestra stops and yes, the notes are on the page, it's a famous solo, and there's only so much you can do with it, but I think you want to make it your own. And how are you doing that? You're not changing the dynamics, but you are...you want to make it your own, whether that's the way that you're phrasing something, you know, *portamento*, dynamics, whatever it is. (Jacob, amateur horn player)

But for others even the individual choices involved in deciding how to play their own parts do not amount to a creative process. For these individuals, performing music is a craft: there are accepted ways of playing things, and the conventions of musical expression are something learned through trial, error, observation and feedback.

Sitting at the back of the orchestra you really always find yourself having to do what you're told. This sounds [like it] maybe sort of degrades an art form, but I don't ever really consider it to be an art form, it's a craft. There's no difference, really, between playing an instrument and being a wood turner. You know there's a skill involved, but I don't think there is any magical art. You're interpreting what a composer's written down, and trying to make that as interesting as possible. Obviously trying to follow as many rules—I don't like to use the word rules, but there are certain accepted ways of playing a phrase that makes it sounds nice. (Oliver, professional trombonist)

I [think] I have learnt the conventions of being musical. [...] I think there is an awful lot of that—convention, what is musical, what is acceptable: not swelling on notes and not thumping *sforzandos* in Classical music whereas in Berlioz thump them as much as you like. I don't think you're born knowing that, and that's not all in the music, that's a convention that as you go along people point out: 'actually no, not good'. [...] I don't think of myself as an artist. It is a craft to me I suppose rather than an art. (Emily, amateur clarinettist)

Despite his comment above, Oliver suggested that there *is* such a thing as artistry in performance, but that in order for something to be artistic, it needs somehow to be spontaneous:

The performance that stands out is perhaps the one that did have the most colour and texture and interesting bits in it, but I suppose they've already been rehearsed, which perhaps makes them slightly less artistic. (Oliver, professional trombonist)

Lastly, Amelia articulated an experience of creativity that was very personal, but had less to do with making conscious individual choices than being in tune with the creativity of the composer:

Creativity is inside yourself. I mean you are inspired by things outside, but actually where it happens is within you. [...] When it came to the concert, every note just seem to come naturally. I seemed to be connected to Dvorak's creativity. I simply loved playing it. (Amelia, amateur violist)

2.2.1

SECTION SUMMARY

Interviewees expressed varying perspectives on the notion of creativity as a meaningful concept in the context of performing music from notated scores in both solo and orchestral contexts. While some interviewees' statements reflected definitions of creativity that privilege the creation of 'new' musical materials, others found that adding individual expressive details to their performance constituted creative contributions. Freedom of individual choice in this regard was essential, and the ability of some repertoire to afford more expressive possibilities than others was noted. Although no one stated that expressive contributions needed to be 'novel' in order to be creative, at least one individual recognised interpretation as a 'refractive' process, noting the influence of previous performances to which they had been exposed. Those who felt performance from notated scores and/or in an orchestral context was not a creative process cited the role of performance conventions in shaping their artistic decisions. However, whether players felt that individual contributions were better described as expressive, interpretive, or simply adhering to a set of rules or conventions, all musicians acknowledged the important role of bringing more to the music than is specified in the notation. Musicians' perceptions of the process by which these 'artistic' decisions are made in an orchestral rehearsal or performance context will be explored in Section 2.2.3.

2.2.2

WHAT MAKES ORCHESTRAL PERFORMANCES SPECIAL OR UNIQUE?

2.2.2.0

Introduction

Interviewees were prompted to talk about what made orchestral concerts special, different, unique, or even creative either from a playing or listening perspective—what differentiated one performance of a work from another. For most interviewees, this was a very challenging question; they grappled with the inexplicable nature of the experiences they were trying to describe, and one suggested that the process of trying to put the experience into words had the potential to ‘break the spell’ (William, professional conductor). In the end, however, many of the musicians described variations of the same idea: what set one performance apart from the next was the quality of the relationships between the individuals on the stage, and, in particular, how this connection between musicians facilitated a sense of cohesiveness, responsiveness, flexibility and spontaneity. Some felt that such cohesion emanated from within the ranks of the orchestra itself, whereas others felt that the conductor played a crucial role in creating the atmosphere necessary to foster such engagement, sometimes acting as a conduit to effect spontaneity among a large number of musicians during the flow of performance.

In addition to this sense of cohesion, musicians noted other factors that contributed to making an orchestral concert stand out or feel special or unique. For some, special performances were created when conductors,

through their deliberate pacing of energy to achieve musical climaxes, were able to convey the expressive effect of large-scale structure; others noted it had a lot to do with an individual musician's own disposition at the time, the response of the audience, the acoustics of the space and the repertoire that was being played. Some felt that all of these things needed to come together to make a performance truly special. While there might be differences in interpretation such as tempo choice, those elements were not considered to be the crucial features that set one performance apart from another, and interviewees often identified individual moments rather than entire performances as special. However, for several musicians, it was the quality of the sound that the orchestra makes, both the technical quality (e.g. precision or intonation) and the timbral quality, that sets one orchestra—and hence its performances—apart from another.

2.2.2.1

Cohesion and spontaneity

Interviewees frequently described what amounted to a 'special' connection that emerged between performers—a sense of group cohesion—that was intrinsically rewarding in itself, but also facilitated the ability to be spontaneous in the moment. It was described as involving heightened communication between performers through listening, watching and responding to their colleagues and the conductor or as a melding of individuals into a greater whole.

So it's very, very, very spontaneous. [...] Everybody is in the same place voluntarily, [...], nobody has decided anything, and yet here we are in this one place all together at exactly the same moment, which has never happened before in a rehearsal. (William, professional conductor)

Not *one* note goes by without thinking, where's it going? Where's it coming [from] with the rest of the band? [...] It's the spontaneousness [*sic*] of any particular note. [...] And I'm sure that my colleagues are doing the same. And it's when you get all those people at once where you think, 'Wow that was great!' You just feel everybody's in time, they're playing good melody, in tune, everything. But also there's that element of excitement. (Leo, professional percussionist)

Sometimes there is a tone in an orchestra—it's just coming together and it's just the voice of the orchestra. [That is when] you step out of this world of what each individual is doing and I think that's when you know you've got something special going on. [...] Sometimes you're really conscious of it—the orchestra suddenly starts to sing. Yeah, I can't put words on it. (Jacob, amateur horn player)

When things are going well, you definitely feel that there is a thing called the wind section which is playing together which is a thing which has its own life where somehow you know that that is the moment to tongue that note and everyone's together. [...] When I feel it all going swimmingly, I'm thinking about the whole. I'm listening to everybody else and I'm looking at the conductor and I'm enjoying the music and I've forgotten that I am playing a G#. [...] I have no memory of playing those last eight bars. I presumably did, I'm sure I did, but what I'm thinking about is the orchestra—the sound, the music, the whole. And that's when it is really, really good. (Emily, amateur clarinettist)

When one musician was asked if it required everyone in the orchestra to be on the same page for a special concert experience to happen, he said:

It's a bit like a swing state in an election. You know it will be a very small group of people who suddenly will push it so that it is X and not Y. And it doesn't actually have to be that many, but it just has to be that kind of critical mass. [...] And I don't think it's a thing that would necessarily come from front desks either. You know, people think of themselves as, 'I'm a rank and file violinist'—no, no, no! It's kind of your responsibility as well to make moments like that happen and you can. And then if we all decide to do it together... (Oscar, amateur violinist)

While the above comments emphasise the feeling of group cohesiveness, musicians also noted that special moments could be instigated by an individual whose playing inspires others to respond to their musical ideas.

Say there's a flute solo at some point. I always feel you can tell if the soloist suddenly starts and somehow has done something different that works better or somehow has just had that moment of inspiration and you can feel the texture change, you can suddenly feel people—because they're listening and because sometimes they're even responding then to what this soloist is doing. Those can be really magical moments. (Oscar, amateur violinist)

I think the musical integrity [...] of all the musicians that I know and work with on a regular basis is such that they won't let it be just *another* performance, and they bring in their own interpretation. It can just be a slight hold on a quaver or a crotchet, you know what I mean, and that just 'Oh, wow! That sounds nice', you know. It makes it exciting, and fresh. (Leo, professional percussionist)

For some musicians the quality of the connections that could be established had everything to do with the individuals that constituted the group.

It massively depends who's there. There are some players with whom you can instantly create rapport and actually playing second to people like that is a joy, because you are their partner in the music and they appreciate your role and you appreciate their role and you work together and it's joyful. But that's quite rare. [...] It's great to play with players who are equally expressive and want to engage in that way. [...] There are all sorts of different types of players. Some people play very musically but they might make the odd mistake and what you learn from that is that is not ideal, and so you get another group of players who *never* make a mistake, but it's all a bit dull and they're kind of not entirely present, but they never make a mistake, and [there is] everything in between. Playing an instrument is just a manifestation of the person behind the instrument. So you play in the way that you live your life. You're engaging with the whole person. (Jessica, professional bassoonist)

You see what I always say is what makes this orchestra wonderful, are not the musicians in it, but the people in it. There are millions of good musicians, but there are *not* millions of people who are *that* good who will put all their musicianship and their humanity and their knowledge at the service of this unquantifiable thing that is going to happen after the downbeat for 20 minutes. (William, professional conductor)

In many of the comments offered above there is a sense of the 'we-ness' that Schutz (Schutz 1964:173) describes: the 'sharing of the other's flux of experiences in inner time, this living through a vivid present in common, constitutes what we call [...] the mutual tuning-in relationship, the experience of the "We," which is at the foundation of all possible communication'. Schutz goes on to describe the process of anticipating others' musical intentions (and the 'Other's anticipations of his own execution') through a sharing of the 'vivid present' and the 'Other's stream of consciousness in immediacy' (*ibid.*:176). He maintains this is possible 'because making music together occurs in a true face-to-face relationship—inasmuch as the participants are

sharing not only a section of time but also a sector of space' (*ibid.*:176). He argues, however, that this mutual tuning-in between co-performers is not possible in an orchestral context because the conductor's 'evocative gestures [...] replace for each performer the immediate grasping of the expressive activities of all his co-performers' (*ibid.*:176-177).

According to Cook, Schutz's claim that 'there is, in principle, no difference between the performance of a modern orchestra or chorus and people sitting around a campfire and singing to the strumming of a guitar' is an attempt to salvage the orchestra as a site of social interaction through the conductor's 'establishing a relationship in inner time with every rank and file player' (Cook 2004:338). But Cook offers an alternative perspective, suggesting that it 'might be that the experience of music-making in a face-to-face situation is prototypical and that its values are thus generalized to orchestral performance, so that we hear the music of large groups as embodying social interaction even when that is not literally the case; music, in short, symbolizes social interaction even when it doesn't actually present it' (Cook 2004:338).

However, the interviewees' testimonies challenge both Schutz's and Cook's assertions, and suggest that co-performer social interactions are actually at the core of successful (that is to say satisfying, rewarding, or enjoyable) orchestral experiences (see also Malhorta 1981). Although the musicians quoted so far have emphasised player-to-player interactions, for many the conductor plays an important role in fostering an environment in which such relationships between the players can emerge.

2.2.2.2

Contributions of the conductor

For some, the conductor's contributions were crucial in creating special moments in performance. In particular, musicians cited their ability to bring a unified vision to the performance, act as an instigator of spontaneity, or manage the flow of energy to bring about intense climaxes so as to articulate the large-scale structure of a work, highlighting the ability of the conductor to effect spontaneous group change in performance through non-verbal communication.

I'm thinking of the final chord of the Young—that moment where it was just held a little more and then [there was] a soft gesture [from the conductor] and this wonderful warm chord just spread out. That [was] this wonderful magical moment just because it was held a bit and delayed a bit and was slightly different to how we'd ever done it before. (Oscar, amateur violinist)

I think [...] one is engaged in a creative process wherein the concert should be different from the last rehearsal. And the conductor may well say, don't worry about it now, we'll just join the dots now, but we'll leave it for this evening. The leaving it for this evening bit is where it all happens. And that's because the conductor is at her most alert and attentive and is most highly attuned to what she wants. And we are all on the edge of our seats. (James, amateur violinist)

The conductor interviewed for this project described his approach to rehearsal as intentionally refraining from defining the specific direction a performance might go in by comparing it to a racecar driver's 'practice lap'. For him, conducting is not about delivering his own artistic vision, but creating an environment where the players can 'make it happen' in the moment:

We don't practice the performance, we practice the piece. Like a racing track on the practice lap. So you have a conductor who's driving the car, which is the orchestra, and what they are doing is negotiating the track, which is the piece of music. They can't practice the race because there are no other drivers, they are just simply: 'this gear here, this speed there'. And then all of the little cogs which are the players are thinking: 'well I'd better listen to him for this

corner and I'd better get in gear with this guy for this corner'. That's got nothing to do with the performance. It is simply a credit in your bank of knowledge. So when the performance comes nothing will faze you. So if it goes [in one direction], then you're cool; if it goes in another direction, you're cool. (William, professional conductor)

In addition to relatively small gestures of phrasing, like the slight and spontaneous lengthening of a note described by Oscar earlier, one musician cited the potential for conductors to make sudden and dramatic changes during the flow of performance in a manner that a group on its own would be incapable of doing. Jack described a recent experience with a highly skilled conductorless orchestra where the artistic decision-making process was 'completely democratic'. They had asked a specialist in the repertoire they were performing to coach the ensemble; when he asked if he could conduct them, many were uncomfortable with the idea, but conceded. In the following extended excerpt, Jack details the orchestra musicians' visceral reaction to this conductor's gestures and the transformational effect that they had on the group's performance:

The end of the first movement [in Schumann 4] has this brilliant coda which kind of speeds up, it has to, there's no way it can't, and it ends with a few chords: tonic, dominant, tonic, dominant, and all that, and then tonic, dominant, tonic in major and then there is a double bar and then it says *attacca*. It's meant to be in time really. And when we played it we would do this pull up and make these chords grander and bigger and then finish the last movement. Then there would be a preparation, but still trying to feel a tension to the next movement, and then they would play the next chord. [...] And when he conducted, [it was] the most extraordinary thing. He just charged through those last chords with more and more energy [...] and then the last chord there is this great big hacking *sforzando* complete in time and then almost early he started the next movement—this minor chord suddenly sort of came out of nowhere. [...] I remember the gesture he gave for that minor chord. He was very vertical with all this, these chords at the end, and then this minor chord came and he just went like that [flings his arms wide] and the look on his face and he just sort of blew out, [peckew!], like that, it was incredible and [the wind players] just went [whwww!] you know, really blew hard, without tonguing it, [...] it was incredible. [...] The conductor made something amazing happen when the orchestra was convinced that the conductor couldn't do that. [...] That's an amazing thing and that's what amazing concerts are for me is when conductors do that. [...] That was something that I'll never forget as a special performance. (Jack, professional violist)

In addition to bringing about moments of spontaneity, and in contrast to William's point of view expressed earlier, conductors were valued for their ability to bring a cohesive 'point of view' to a performance. Thomas describes an experience listening to the St Paul Chamber Orchestra play a Handel *concerto grosso* without a conductor:

They were very good, they had an excellent concertmaster and it sounded fine, but it had no profile. It had everything you would want in a performance except a point of view. I mean it is hard and maybe even a fool's errand to try to do or say something different with music that is played so much, but this conductor will favour a rather brisk tempo and be effective and another will favour some other aspect and there will be a 'point of view'. This was just a bunch of very good string players who had played this piece before under various conductors and knew how it went. (Thomas, professional flautist)

Similarly for Jack it is critical that a conductor delivers a unified vision, yet it is important to him that the contributions of the orchestra provide the basis for that vision. Rather than desiring a director, he wants a 'guide':

[It is] the vision of one person which is what provides, or ideally would provide a kind of very focused idea and interpretation which should hopefully run through the whole piece and make sense. [...] That should be the ideal, that you have one person who's guiding this. I say guiding rather than directing because I think ideally a conductor takes what he has in front of him and the style that he's given and works with that rather than forcing something on an orchestra. Otherwise there's no point in conductors going around guest conducting if they're just trying to get different orchestras to sound the same. (Jack, professional violist)

This notion of 'guiding' came across in two other professional players' descriptions of what effective conductors can do to make a performance special. They described the capacity of some conductors to indicate to players (by gesture) the relevance of their individual parts in order to create a cohesive and meaningful overall performance, or their ability to pace the energy of a performance in profound ways in order to put across large-scale structure and exciting climaxes.

I think just navigating everybody through, then at the show bringing out the bits that the conductor can bring out special. That does happen a lot. And that, hopefully, is where you get your magical performances from. From somebody out front telling you—without speaking—telling you, this is what it is. This is the bit that matters now, and this maybe you can keep out of the way. (Leo, professional percussionist)

Maazel's ability to pace [Mahler 2] and manage the climaxes is pretty extraordinary. [...] There was something very compelling about that performance. Over 90 minutes [and] when the climax came and you saw this short little guy really get into it and you could just feel everyone sit up a little straighter and just give that extra 10% towards the final climax, that was just incredible and the audience could obviously sense that too. It's just come out on CD actually and I haven't heard it yet, but I'm going to have to have a listen for that, see how it comes across—whether it was able to be captured. But definitely, the conductor does make a difference and when someone just throws themselves into it at the end, it can really just pull the orchestra up. (Charlie, professional violinist)

Jack agrees that the management of the 'big architecture' can make a performance extra special, and something that only a conductor can achieve.

[There is] one particular thing for something magical to happen. There are some conductors who have great vision of sort of the big architecture of the piece like our principal conductor at the moment, he's amazing. [...] I was in tears every night we played Tristan at the end, because the Tristan chord comes right at the end and it is the only time it really resolves. [...] And he just had a way of pacing it so the final [...] chord changes that lead to the resolution were just perfectly placed. (Jack, professional violist)

Other musicians (all amateurs in this case) noted the capacity of the conductor to deliver exceptional performances by bringing the best out of the orchestra:

The concert that [one of our guest conductors] gave was absolutely stunning. [...] And it was with all the same players that we would normally have, but he just got them to play above themselves. (Henry, amateur bassoonist)

So if you watch and if the conductor's doing his job and watching us, then I think something a little bit more interesting happens. [...] I think you can be brought by the conductor to play in the concert better than you've played before. [...] You know it is like God and Adam on the Sistine Chapel ceiling: the two fingers are...and sometimes the electricity isn't there and sometimes it is. (Oscar, amateur violinist)

Sometimes it is just a spark, isn't there. [...] Sometimes there is just extra excitement, an extra feeling of being on the ball a bit more. And whether it's the conductor going a notch faster because of adrenaline or not, I don't know, but it does happen. (Emily, amateur clarinettist)

2.2.2.3

Group flow

The types of experiences described by the musicians in the interviews, particularly those dealing with losing the sense of the individual within the flow of performance, are consistent with some research findings from studies that investigated the connection between flow states and orchestral musician satisfaction and peak performance (Burzik 2000, Boerner & Streit 2006, Marotto *et al.* 2007). In particular Boerner & Streit (2006) sought to identify the factors that contributed to a cooperative climate, or 'team spirit', in the orchestra, which in turn facilitated the experience of flow states and better quality performances (Boerner & Streit 2006:257). They found that neither the intrinsic motivation of the orchestra nor the transformational leadership of the conductor was enough on its own to support the cooperative climate necessary for peak performance and group flow, but that both of these ingredients were necessary. Moreover they noted that orchestras are very heterogeneous, which can make achieving a cooperative climate difficult. This suggests—as the musicians in this study have indicated—that such experiences are not necessarily a regular part of everyday orchestral performance, and therefore when such experiences occur, they feel more special.

My own interviewees are not the only orchestral musicians to report on such exceptional experiences. In Gabrielsson's (2011) book, *Strong Experiences With Music*, an orchestral musician describes, 'slipping into a trance-like semi-euphoric state' which 'disconnects all consciousness about motor activity and all irrelevant information' so that he is able to 'concentrate 100% without

making an effort'. Gabrielsson's musician noticed that more and more of the musicians in the orchestra seemed to share this feeling and he reported confirming this with his colleagues after the concert. He wrote that 'when the orchestral *tutti* finally came, it was like a steam roller—a will, an idea multiplied 80 times!' and that during the coda he realised that 'this was actually the same feeling that I had had earlier when I'd played in rock and jazz with musicians where we've been on the same wavelength, namely a feeling of total shared concentration; but only so much stronger' (Gabrielsson 2011:224-225). Gabrielsson describes this exceptional music-making episode as a 'flow' experience. He summarises his respondents' group music-making experiences as 'magical' occasions when everything works perfectly, when one surpasses oneself, when it feels as if one is being played by somebody else, one is in a euphoric, trance-like state' (Gabrielsson 2011:248).

Gabrielsson noted that in group performance in any genre, what characterised the 'strong experience' in group music-making involved a 'special contact' with their fellow players in which 'in some remarkable way, everybody agrees with each other about timing, form, and expression, everybody 'knows' what is going to happen next, one doesn't have to think, one just has to go on, it can't go wrong' (*ibid.*:248). However, as was noted earlier by Oscar and others, it may not require *everyone* in the orchestra to feel the same way in order for individuals to experience such an effect.

It is tempting to call such experiences episodes of 'group flow' (Sawyer 2007), but despite the descriptions by my orchestral players which hint at flow-like experiences, orchestral performances fail to meet the conditions so carefully

detailed by Sawyer which enable the possibility of achieving 'group flow' according to his definitions.³ Although Burzik's (2000) study was based on a very small sample size of musicians ($n=10$), he argues that an intrinsic motivation among orchestral musicians to perform is that they aspire to flow states. Through the process of describing their 'special' performances, my interviewees' responses support this notion. Sawyer has made it clear that orchestral environments do not allow for the sort of spontaneous group creativity which is at the heart of his theories of group creativity and group flow (see Sawyer & DeZutter 2009:91). The research of Gabrielsson, Burzik and Boerner & Streit, however, challenges this, and clearly suggests that musicians in large ensembles *do experience* and do seek 'group flow' music-making experiences.

³ See Sawyer's 10 Conditions for Group Flow in Sawyer 2007.

2.2.2

SECTION SUMMARY

While the interviewees sometimes found it difficult to describe exactly what made a concert unique or special, they were generally able to relate experiences that stood out from the rest. For most of these performing musicians, the difference was in the feel of the performance, rather than the profile of the musical product, in that it conveyed a novel or unique interpretation. Although the unique profile of the performance was noted too in the preference for performances which had 'a point of view' and in the instances where the processes involved in delivering that profile, such as defining the large-scale structure of a work, precipitated increased levels of group energy, excitement and awareness. Musicians described how the quality of the relationships between the players and between the players and the conductor facilitated spontaneity and responsiveness. In some cases the experiences were special moments that were shaped by individual colleagues or by the conductor, while other experiences appeared to involve a sense of 'losing oneself' either within the playing of a number of colleagues or in the 'voice of the orchestra' as a whole. These reports support other orchestral studies that have suggested that orchestral musicians strive to achieve flow states during performance, whether or not such states meet the conditions defined by Sawyer for 'group flow'.

Although descriptions of the nature of the engagement between players and between the players and the conductor were most prominent among the musicians' responses, several still noted that other factors came into play in

order to create special performances, such as the musician's own mood, the responsiveness of the audience, the music being performed, and even the acoustics of the space. Indeed for some, it required a combination of factors to come together, something that didn't happen all the time. And of course a performance may appear very different depending on the viewer's perspective; as one musician put it, 'the audience might feel it, but we never will'. What this musician highlights is crucial, in that what makes an orchestra concert special or unique is very much in the eye, ear, or indeed the entire body of the listener or performer.

While the previous two sections have explored the interviewees' views on creativity in orchestral performance and what makes performances 'special', the following section focuses on what prompts musicians to make choices about how and when to play their parts.

2.2.3

THE DISTRIBUTION OF AUTHORSHIP IN PERFORMANCE

2.2.3.0

Introduction

The remaining part of the interviews focused on musicians' perceptions of their own roles in the orchestra; what they are responsible for; and where they look for information about how and when to play, including what they feel they get from the conductor, and how their individual ideas might be mediated. The discussions explored the perceptual environment in which musicians sit within the orchestra and how this influences their musical decision-making process; how the musicians develop concepts of their own sound, and whether or not they feel that their sound represents a unique artistic signature (see Cottrell 2004).

All of the musicians interviewed felt that there is a place for individual contributions, but that these are highly mediated by a range of factors. In addition to the conductor's prerogative to make interpretive choices, these included their position and instrumental role, but also professional and personal roles, individual personalities, particular orchestral cultures, the value of cohesive ensemble playing, and time and money. Taken together, interviewees' responses construct an image of orchestral authorship in which numerous factors shape how much or how little individuals feel they are engaged with contributing to the artistic values of a given performance.

2.2.3.1

Individual artistic decision-making and roles

When individuals were asked to talk about how they view their role within the orchestra and whether they believe it is their responsibility to bring interpretive ideas to rehearsals and performances, some were clear that they assert expressive or interpretive ideas in their playing, while at the same time being prepared for the conductor to ask them to do something differently. Others suggested that it is not primarily their role to bring ideas to the table, but to 'do as they are told' or 'as the conductor requires'. However, there were inconsistencies here, as players spent more time describing how information is often *not* forthcoming from the conductor and how they are often attuned to colleagues for musical ideas or information about how and when to play. Some cited the leadership approach of the conductor (giving more or less freedom to the orchestra), the amount of rehearsal time available, and the conductor's ability to communicate non-verbally as also being significant factors in how much players feel the conductor is in control of the musical interpretation. For some players the limitation on bringing their own ideas to their playing has less to do with the conductor than the needs of their section, or the overall need to maintain cohesiveness within the orchestra as a whole. And for many players the room for expressive engagement has everything to do with the role of their musical part, which in some cases is directly connected to their position within the orchestra.

Influence of the musical context

Some musicians described that the amount of individual expressive choice had depended on the role that their particular part was playing in the overall musical context.

There are times when you are occasionally a soloist even if it's only for 8 bars or whatever, so I suppose then perhaps you can be a little bit more artistic, but as a general rule it is just going with the flow. (Oliver, professional trombone player)

If you have a huge 16 bar solo, then your role is to carry the moment. In which case, yeah, give it some welly a bit of *rubato*, maybe a bit louder than the *mp* it says, that's fine, but that is, I feel, within my role at that point, that's what's desired of me. But I do feel that there is difference between when that spotlight is on the first clarinet and when it's not and I think I play very differently accordingly. [...] That if I play it in time, in tune, with a modicum of musicality, but probably not too much because it is not required of me, then that will be fine. (Emily, amateur clarinettist)

Essentially, as Oliver succinctly states: 'If you're not interesting, stay out of the way'. While Jacob also described having more interpretive opportunities when playing solo lines, he sees all of the parts as needing some amount of interpretation, and that it is a dialogic process within the section. These interpretations are then offered up to the conductor either as individual ideas in terms of the solo line, or as a section.

So in that sense everyone is soloistic, because the 4th has got their own territory, the third will often be a soloistic part, the second will often have solos with the first, the bumper just does what they're told basically.⁴ But what's nice about it is that everyone has a distinct role. And so the leadership should come from the first, but everyone's got a voice. Everyone can speak back to each other. [...] So if I'm playing 4th horn, there is interpretation going on, we've got to interpret what we're meaning by *mp*, *mf*, and all that sort of stuff, and to an extent we'll do that with the conductor and to an extent we'll do that as a section and get corrected, but that is very much working along the line. [...] With the solo lines I am trying to interpret and I might get told otherwise. I might get told I got it wrong, that's fine, I don't have the ultimate say on that, but what I want to do is put forward an interpretation and then give the conductor something to respond to. (Jacob, amateur horn player)

⁴ The bumper horn is the 'assistant' to the first horn, and is responsible for covering as much of the tutti parts as possible in order to take some of the playing load off the first horn, so that they can be better prepared and rested to play exposed solo lines.

Of course not everyone is as content with supporting roles. Jessica expressed a great deal of frustration on account of the musical materials she has to work as a second bassoonist:

Obviously, if I am playing first than I can play a solo how *I* want to play it, within certain [limits] so yeah, then that's better. But my continual frustration is that in the orchestra [where I play second bassoon] I may as well go home most of the time. *Really*, I may as well not be there. It's the nature of the instrument and the nature of the parts that are written for the instrument. [...] I'm not expressing myself through my instrument; I'm providing a bass note. Well, it doesn't do it for me, I'm sorry. (Jessica, professional bassoon player)

Delivering the conductor's interpretation

While they emphasised it less than the influence of the musical context, interviewees also expressed that it is their responsibility to deliver the conductor's interpretation, as did many of the questionnaire respondents. In Jacob's earlier description he portrayed this as a dialogic process, which is in contrast to Oliver's experience where communication appears to be more unidirectional: 'Sitting at the back of the orchestra you really always find yourself having to do what you're told'. Similar to Oliver, James described his responsibility as being to deliver the conductor's interpretation:

My role is obviously to provide for the orchestra and the conductor, to contribute to the interpretation which has been rehearsed and which the conductor requires of us on the day. It may be a bit different in the concert, of course he might go a bit faster or a bit slower or pull things about more and so it behoves one to have one's eye on the beat. To have attended the rehearsals so that you know what direction he's taking, and then be alert at the concert to make sure that one does what is wanted. (James, amateur violinist)

Perhaps unsurprisingly, James does not report developing 'interpretations' of his part prior to rehearsals. However, he does prepare for rehearsals by getting a feel for a range of performance conventions through listening to recordings, and becoming familiar with the part through his own practice.

Interestingly he feels additionally compelled to do this on account of his 'social' role within his ensembles.

I think I just want to know roughly what is going to happen when, and the style of performance. [...] Simple, rudimentary elementary: How fast is this meant to go? How fast has it been taken in the fastest recording I can find? Then I've got a scale here to get ready for a concert in eight weeks' time. [...] [Most of the people] who play in the second violins, they're working people aren't they? They probably haven't practiced and they may not know what the hell they're doing. [...] I am in a privileged position, I am retired [and] I have time to practice. So I think my responsibility whether I am leading the seconds or sitting on the second desk or sitting in the back I feel I'm in a fortunate position and I can give time to get to know it, so I try to make sure that even if I can't play it I know how I'm *trying* to finger it, and know what it is meant to sound like. (James, amateur violinist)

In contrast to James' awareness about potential interpretive choices, and Jacob's experience of offering interpretations to the conductor, Henry's perception is that amateurs in general do not think about interpretation until the conductor requests it. Henry sees this attitude as distinctly different from professional orchestral musicians, whom he assumes automatically bring much more musicality to their playing:

I suspect amateur orchestras on the whole don't think about interpretation until the conductor gets them to. Whereas, you would hope, wouldn't you, that there isn't a phrase that a professional musician plays that isn't phrased and beautiful and in context because they've been to music college and they quote, 'know how to do it'. (Henry, amateur bassoon player)

Henry's perception that professional musicians have gained their ability to shape phrases and play beautifully from their training at music college echoes the attitudes expressed by Emily and Oliver in Section 2.2.1, about how one 'learns' the conventions of musical phrasing.

Does the conductor deliver an interpretation?

However, James also conceded that interpretive ideas do not necessarily come from the conductor in all the orchestras in which he plays and this is on account of the skill level of the orchestra and the individual personalities involved:

[In orchestra A] [the conductor] does tell us what sort of bow stroke he wants and if he wants it played high on the G string then he'll tell us that or point out that that's what is marked and we jolly well better do it. [But in orchestra B] To be truthful it doesn't come...[the conductor] doesn't go into that much. [...] He just wants to pretty well play it and just get the obvious things right. And if we ask [the leader] to tell us how to play it he'd never stop talking, so it is a risk not worth taking. (James, amateur violinist)

Emily notes that as a wind player in amateur orchestras interpretive instructions do not often come from the conductor since the conductor's attention is primarily on the generally 'weaker' string sections, and there is not enough time for the conductor to address musical issues with the winds.

I mean they're chalk and cheese aren't they, conductor and conductor? Some tell you how to do everything, some tell you how to do nothing. In fact most tell you nothing. It seems to me that conductors are two-thirds or three-quarters of the time completely obsessed with the strings. And often you'll play a passage eight times because the strings need to practice it and the conductor says nothing to the wind or brass at all, ever. [...] No, I think very rarely is it mostly the conductor. Occasionally if you've got a big solo you get to play it. If the conductor doesn't like it he'll say something to you. If he can live with it or there are other pressing things that he has to sort out before he gets to you, its sort of acceptable, it's good enough and there isn't time to say anything. (Emily, amateur clarinettist)

While conductors may need to balance priorities in an amateur context in a way that reduces the time available for giving instructions to the wind and brass, this seems like it would be less of an issue in a professional setting where playing abilities are generally on par with one another. In response to whether or not Oliver feels conductors give him enough information to know how he should play his part, he said:

I don't think they necessarily have to. Perhaps if it was a youth orchestra they would, but when you play with people who are all sort of singing from the same hymn sheet then you all just tend to have the instinct to do the same thing. (Oliver, professional trombonist)

Here, Oliver is not necessarily suggesting that the conductor doesn't have any influence, but simply that he does not really look to the conductor for information about how to play his part. Oliver derives this information from performance conventions and a shared stock of knowledge about 'how it should go' between himself and his professional colleagues.

Although Oliver is referring to group awareness with regard to interpretation, interviewees also emphasised that ensemble cohesion was critical and that this may be prioritised over conductor directives. From his perspective playing in amateur orchestras, James noted that:

If the orchestra and the conductor get adrift, what do you do? Play with the conductor or play with the orchestra? I believe you're meant to play with the orchestra, and so be very conscious of what is going on around you. (James, amateur violinist)

Charlie's experience is that this value of cohesion, or 'team spirit' is particularly strong in his orchestra:

I think there's such an overwhelmingly strong team spirit in this orchestra that is really throughout the sections and across the sections as a whole. People really do...it is about just playing together. Stick with your buddy. Whether it is intonation or ensemble, people really do make an effort for that. (Charlie, professional violinist)

But despite the 'team spirit', Charlie feels like he is just a 'cog in a well-oiled in a machine'—a 'highly functioning, well-oiled cog', but a cog nevertheless, and one which is expected to follow the directives of the leader and not stick out. In order to satisfy his personal musical needs, Charlie also spends time

playing in a quartet. In fact, he claims that the majority of his friends in the orchestra also have outside interests and due to this remain engaged musicians:

[Their interests are] wide ranging, and often they're very accomplished in other musical areas of their life. Whether it's conducting or string quartet or composition. [...] And for me that is a great feature of this band. I think it is full of people who are idealistic and don't just want to be cogs.

He even related an anecdote about a devoted audience member who told him that what makes his particular orchestra special is the artistry of the individual players:

She said 'I'll never forget what my mother used to say to me, "The difference with [this orchestra] is that every single person in it is an artist"'. [...] I'll never forget that. I think it is true. There is something about the orchestra. People are artists for the most part, they care; they really do care. Maybe that's part of what that sound is. [...] Everybody being present and caring passionately about what they do. (Charlie, professional violinist)

There is an obvious tension between these two perspectives. On the one hand he describes his and his colleagues' passive role in the orchestra as cogs in a machine, and on the other, notes that the 'sound' the orchestra makes is the result of the artistry of every individual, and the care they put into the performance. Crucially, however, not all musicians who play orchestral music experience this tension. There are those who do not wish to have the responsibility of making artistic decisions and derive great satisfaction from playing supporting roles. It is not, however, necessarily an either/or situation: the responses indicated that some players find opportunities for expression and interpretation in supporting roles while others only find it in soloistic passages.

2.2.3.1

Section Summary

What the musicians' responses convey is that orchestral music-making can, and often does, involve a mixture of individual artistic contributions from musicians in diverse positions throughout the orchestra as well as a significant amount of more anonymous teamwork. The value of group cohesion had a significant influence on musicians and will be explored more in the following sections. While some reports expressed that there was a unidirectional flow of information from conductors to musicians, others described it as a dialogic processes of offering interpretive ideas and seeing if they were accepted, a process constrained by limited rehearsal time.

Although some musicians reported that very little interpretive information was forthcoming from the conductor, others observed it was not necessary, as there was shared understanding between musicians about what needed to be done. In this way, and on an individual level as seen in Section 2.1, performance conventions are an important shaper of artistic decision-making, with knowledge of these being gained through training and experience.

Charlie's statement below sheds light on possible reasons for variation and even contradiction between some of the interviewees' remarks:

I'm sure you'd get different answers not only obviously from different people, but you might even get different answers from me on a different day. I think that people go through phases of how they're feeling in their roles and their jobs. Depending on what's happening in their lives, professionally and personally. [...] I am sure a brass player would feel differently on some of these questions than a string player would. (Charlie, professional violinist)

Even among string players, different roles can mean very different experiences and responsibilities, as a player's physical location in the section

can have a significant impact on what they can see and hear, and what is expected of them. The string players offered some insights into these different roles, which will be explored in the following section.

2.2.3.2

Negotiating Physical Space: A Chain of Command?

Taking the violinists' commentaries as a whole, violin sections emerge as a very complex sub-organisation of the orchestra. An individual's position within the section has a significant effect on the scope for individual musical freedom as well as defining roles and responsibilities. While pressure to maintain section cohesion is strong, the material realities of the performance setting, such as the orchestra's layout and the space acoustics, mean that it is not always easy to achieve. Interviewees emphasised the important role of section principals, and the leader in particular, as a 'conduit' of information from the conductor. Even some of the winds and brass maintained that they privileged information coming from the leader over that of the conductor in order to know how and when to play.

Achieving unanimity

In modern-day orchestral performance it is generally assumed that all string players in a section should play in exactly the same way and at the same time as the principal, so they sound like one violin.

There's a well-known sort of desperate cry of conductors [...]: 'First violins, you've got to be soloists here!' And I always think that's a really weird thing to say because that's really not what you mean. I know what you're getting at, you know, 'This is our moment', [...] but what you want is—imagine if you took Itzak Perlman and rigged up a series of rods by which his arms and fingers were connected to 15 other violinists, and he's kind of actually

controlling it, but we're all moving at the same time. (Oscar, amateur violinist)

Naturally, this is not physically achievable and the violinists interviewed here emphasised how, depending on where they are seated in the section, they may have more or less ability to hear and see what is going on up front, making the task of achieving unanimity extremely challenging the further back they sit. While the players at the back of the section can often (although not always) see what is happening at the front of the section, and more so those directly in front of them, they are not really able to *hear* what is happening on the front desks. This is in contrast to those at the front who can hear what is coming from behind them, but cannot see bows and fingers.⁵

You hear very little from what's going on in front of you because of the way violins work: The holes are going outwards sort of obliquely across the body of the person in front. When I am sitting at the back I watch other violinists very carefully and I even look at their fingers and if I'm not sure where I am, I get much more from watching their fingers and watching their bow than I do from what I can hear. (Oscar, amateur violinist)

You're relying mostly on visuals, kind of, and the people immediately around you. It is very hard. Especially in certain acoustics and certain repertoire it's the musical equivalent of charging into battle, I imagine. Everything's just shifting around you and you have to keep your head together and stay on your job, basically. (Charlie, professional violinist)

According to Charlie, this means that the violinists in the middle of the section must ensure that they are a conduit for information from the front to the back of the section. In describing his place on the inside of the second desk of the first violins, he notes that this position requires the ability to wear different 'hats', such as stepping up to lead, as the need arises depending on the distribution of musical materials, for example. Generally, however, he

⁵ For cellists, who have difficulty seeing the fingers and bows of those in front, sitting at the back can be particularly challenging.

feels caught between the leader at the front and those with more freedom at the back, in what he describes as the 'worst of all worlds'.

Basically, I'm supposed to be a conduit for the leader's intentions. I'm supposed to be a pillar of strength and quality, [...] and I'm supposed to be able to step up and lead things when required. So it is a little bit about wearing a lot of hats in a way, which is less like that if you are just the leader, where your role is incredibly challenging, but is a little bit more defined. I would say my role is more similar to being a second violin in a quartet, again where there's this business of hat switching. Sometimes it's about blend, sometimes it's about jumping out [...] it just depends. So you need to be able to deal with that and be able to adjust your playing to be able to suit that situation. [...] I think people at the back in some ways have more freedom, a little bit more. Because when you are near the front but not leading, you're always kind of trying to fit yourself into the leader, really. And I think it's a very difficult place in a way. In some ways it's the worst of all worlds. (Charlie, professional violinist)

That extra 'freedom' Charlie says exists at the back of the section is perceived by Oscar as a responsibility to be proactive. Because players cannot hear and see what is happening up front, in order to support the section Oscar maintains that there is an additional responsibility to ensure that one's sound is felt up front and on time. On account of this he doesn't see the string section as a 'chain of command' that comes down the line from the front.

If I'm at the back I always feel even more deeply my responsibility to actually count properly, and then you have to be the one who goes 'bang'. You can watch people, if they miss it, and if you've come in very strongly, that's when you see the frenzied activity. But if you haven't, and if you don't, then the whole section just sort of drifts in gradually and that's when you get that kind of fade-in effect. But if you get the person at the back to go 'And "bang"' there's a much more kind of automated sound then, and that I think in a weird sort of way where the auditory cue comes from. [...] I think in an ideal world what would happen is the signals from the leader would be going straight to the back desk who would then make the sound that goes forward again, so it would be this kind of circle, but of course it's not really an iterative process like that. [...] It doesn't end up being a chain of command—it's much more of a circle in a way. (Oscar, amateur violinist)

Consequently, when he plays at the back, Oscar feels he can really affect those in front:

You can actually affect how other people are playing quite a lot. [...] I would never say no to sitting in the back of a section, and you enjoy the music a lot more, actually, in a weird sort of way. (Oscar, amateur violinist)

Despite the extra freedom available to players at the back of the section, according to Charlie, the section that he plays in now operates very differently from what Oscar describes above. In Charlie's section there is a 'top-down style of leadership' from the front of the section, which means that in addition to watching fingers and bows, everyone further back *waits* to play: they 'listen and imitate'. When asked if waiting to hear first and then respond made people late, he said:

It's true, that's a big problem and I think it's a big problem in my section generally in that we kind of are a little bit at the back of the back in terms of the beat. I mean sometimes people from other sections say 'why can't you guys just play a little more on the beat' and it's a tough question made more complicated by a style of leadership where—quite a top-down style of leadership, I should put it—which is very much a kind of 'follow the leader' mentality. And that does create delay, literally delay. And it can also create a slight lack of...musical enfranchisement, let's say. A little bit like sheep mode. [...] I do think it is a little bit a function of this particular section in this particular orchestra and also a function of who is sitting in the first chair on a given day. [...] It's a fine dance for sure. I think it does really vary from leader to leader and section to section even within an orchestra and then across to different orchestras.⁶ (Charlie, professional violinist)

This intense allegiance to the leader seemed to leave no room for a conductor to influence any of the section players. Charlie confirmed that as section players they must wait to see how the leader interprets the conductor's gestures before making a sound themselves, leaving section players negotiating potentially conflicting information and contributing to the overall delay.

⁶ His section's way of playing behind the leader happened to be at odds with a conductor they were working with at the time of the interview who wanted the sound to come from the 'back' of the section.

Although all the violinists emphasised unanimity, Oscar is divided on the question of whether all the violinists in a section need to completely conform with one another. There are many cases in which specific fingerings are not dictated to the rank-and-file strings in the way that bowings typically are.

It would be very difficult to say whether or not people should all do the same thing. Yet, it would in theory affect the sound. So in theory this is something where we *should* strive for uniformity, and I always feel a bit of a buzz if I notice that I am using the same finger as the person in front because I think 'well, that's kind of nice', we've had the same idea and that's good, we're going to sound quite nice and uniform, but I know the people behind me probably won't be. So that I think is the case where also in some ways there's to a certain extent *license* to be creative there. Whether there *should* be is an interesting question. Should we be trying to be just the one violinist? But then by the other side of the coin that will impose constraints upon some of the things we can do. (Oscar, amateur violinist)

However, there are clearly places for Oscar where an individual's creative choice in this regard is superseded by the prerogative of the leader.

The violin entry in the Tchaikovsky first piano concerto; there it does actually matter. There I would turn around and say, 'let's not play that F natural on the E string because it's so harsh', you need the warmth that comes from playing it on the A string. So there's this sort of constant tension I think in a weird sort of way. There are bits where you can be creative [and] there are bits where you mustn't be. (Oscar, amateur violinist)

The leader

The interviewees expressed that the influence of the leader varied greatly depending on the personality, skills and leadership approach of the individual in the leader's seat. The influence of the leader also depended on whether or not other instrumentalists viewed the position as a source of information about how and when to play. For example, Emily doesn't think the winds pay much attention to the strings in her orchestras:

We don't really listen to them. [...] If you listen to the strings and then you play, you're late. So, no, you don't rely on them. Sometimes you can't hear them because of the acoustic. [...] Certainly as a wind player it never, ever,

ever occurs to me to watch the leader of the orchestra. (Emily, amateur clarinettist)

Henry, on the other hand, describes how he watches the leader frequently, but notes that the amount changes depending on the size of the orchestra and the distribution of musical material. In situations where the first violin parts tend to dominate the texture, such as in Classical repertoire, he ventures to say that the leader will convey as much (if not more) information about style and tempo than the conductor.

In a chamber orchestra you should be keeping your eyes on the leader as much as on the conductor. [...] In a symphony orchestra it is much more important to match whichever section you happen to be playing with, and that may or may not be the first violins. If it is a chamber orchestra, the leader will probably be playing all the time and be as important for you knowing the style and the speeds as the conductor is, if not more. (Henry, amateur bassoonist)

For Oliver, attention to the leader is important even in a symphony orchestra situation. He feels that there is so much nuanced information conveyed by the arm motions of the lead violinist that he knows exactly what they want to hear.

Certainly if I am playing principal trombone, I'll always make sure that I've got eye contact at least with the leader so I can see what he or she are doing and so you can actually tell - you can't obviously hear one individual person, even if they are the leader, but you can see what they're doing. The violins are fabulous. It's a very visual thing, isn't it? So you can see how they are phrasing something just by watching them. I've just done this big patch with the SCO. [...] They got Lorenza Borrani in who leads the Chamber Orchestra of Europe and she is possibly one of the best leaders there is, because everything is so totally transparent. You know exactly what you're doing and exactly what she wants to hear. She communicates to her section but it also sort of filters down to everybody else. [...] Some leaders they just sit there with the blinkers on and they only care about the eight people that are behind them, but good leaders will have a connection with everybody in the orchestra. (Oliver, professional trombonist)

Charlie notes that the leader's presence is relatively consistent compared to the number of guest conductors his orchestra sees, making the leader a go-to point for the orchestra as a whole:

The leader is there the vast majority of the time and the conductor changes from week to week or day-to-day, so the leader is the go-to point for the orchestra. That is a vital role. It really is, and the leader is the conduit, really. Many times it's the leader who interprets the beat and then gives a direction for the rest of the orchestra to follow. Like a lightning rod really, in a way. Very important. (Charlie, professional violinist)

But large professional orchestras typically have more than one leader and Joshua observes that the orchestra can change dramatically depending on who is leading. He suggested that even qualities such as the orchestra's ability to play 'crispily' may be a feature of a particular leader's style, or skills. He noted that reviews often attribute characteristics of the orchestra to the conductor—characteristics which he believes actually originate with the leader.

Certainly if you read reviews for instance, you will see a lot of comments: 'X conductor drew fantastically precise playing from X orchestra' and that may be the case, but having worked with some conductors of whom that is said, you know that to a certain extent that the orchestra will be ensuring its own crispness. [...] Many orchestras have two leaders at least [...] and I mean, to what extent is it the same orchestra if X is leading rather than Y? For instance if there is guest principal second or guest no. 2 or whatever, the feeling within the orchestra is absolutely chalk and cheese depending on who is leading. (Joshua, professional violinist)

In contrast to Emily's statement earlier, Oscar also noted that in an amateur context the leader could be a focal point for the orchestra as a whole, particularly when the conductor's gestures were not clear:

You are a focal point for more than your own section. In some ways you have responsibility for your section, but it goes slightly beyond that because lots of other people are looking at you as well, or should be. I remember a concert where we were doing the Mendelssohn violin concerto with a slightly incompetent conductor and I realised suddenly [...] gosh, the oboes and bassoons [...] are staring right at me. If I actually start leading this, actually

leading, it'll be together. And so the next time we had the big chord I made a massive gesture and it was spot on all together [...] and it made such a difference. (Oscar, amateur violinist)

Joshua also noted the time-keeping role he is called on to play, 'even showing beats' when the conductor 'isn't so great'. But he felt he had an additional role as a sort of quality monitor for the orchestra, noting things the conductor may have missed or chosen to ignore. To this end he expressed that he feels it is his duty to make comments to the conductor that help make the rehearsal process or end product better:

When the conductor isn't so great and I find I have to add to that an element of sort of...keeping things in time. Occasionally even showing beats. But I think that has sort of led me to move more than I perhaps should when I lead, which can be counter productive. I hope it isn't usually. That's in playing terms, otherwise as I said it's a question of hearing things the other side of the orchestra which the conductor may not have heard or has decided to ignore and I feel that it can't be left. And that can be quite tricky as well because obviously the orchestras like to think they are self-policing. But yeah, it is in those two areas, the way I move and the amount of stuff I have to say, whether it is to the strings or to the conductor saying 'no, we need to do that again' or 'you need to give them more help with that entry or whatever'. (Joshua, professional violinist)

Although he endeavours to successfully juggle all of these responsibilities, Joshua feels relieved when the orchestra has a conductor with good gestural skills, which gives him space to focus on his 'own' job.

I find it very refreshing when we do have someone on the podium with whom I feel I can actually simply do my job and not have to do anyone else's. And when that does happen I often feel I have to keep sort of telling myself to calm down a bit and back off and just enjoy it. (Joshua, professional violinist)

Although not all conductors have the same ability to communicate clearly with their hands, he feels that the majority of conductors his orchestra engages bring other skillsets to the performance even if their gestural skills are lacking. He sees his job as leader as being to make the life of the

conductor, and of the orchestra as a whole, easier. He stated that sometimes his skills in this area are overlooked and misattributed to the conductor by his colleagues, which was clearly a sore point.

Actually, there was one person in my orchestra—and we were working with somebody the other week—and this person said to me, 'I can't believe how much clearer X is than the last time he was in'. And the last time, I wasn't there. [...] I mean, generally speaking I have a huge amount of respect for virtually everybody we see working with us, because even if they are not technically great conductors, they tend to have been booked because they have particular strengths in particular areas, and so if I can make *their* life easier and ensure the orchestra plays together so that they can do what they do, then for me that's a victory. [...] But then if you hear people starting to say 'oh well so-and-so is actually quite clear, really', then... (Joshua, professional violinist)

Lastly, Joshua suggested that while it was not beyond a leader's role to comment to other members of the orchestra about their playing, this was something he chose to avoid doing. Rather, he strove to demonstrate his ideas to his colleagues through playing rather than talking.

My priority *all* the time, with whoever is on the box is to give all my colleagues as much space to play as possible and to try and play in a way that enables everyone to play as well as they possibly can and as open as they possibly can. (Joshua, professional violinist)

The power of the leader to communicate non-verbally was noted by Oliver who said that sometimes a glance from the leader would be enough to let the trombones know that their volume was too much.

A good leader will make a bit of eye contact. [...] I remember there was one occasion when I think trombones were tankin' in out a little too loud and just a look was all it needed. [laughs] Just a look from her, because the conductor was in a little world of his own. He didn't really know what was going on. (Oliver, professional trombonist)

However interviewees suggested that not all leaders were able to exercise as much influence over their orchestras or even their sections. Speaking about a different orchestral experience to the one described above, Oscar expressed

frustration at a section's lack of engagement with his coordinating efforts and hypothesised that the section simply didn't trust that the leader would be a 'port of call' for information about when to play.

And no matter what I could do—and by the end I was throwing my violin in the air and catching it to try and get their attention, but there was very little I could do to really bring them in strongly. But it always struck me...somehow they didn't trust me either. There was something about the leader, that somehow they wouldn't be a port of call. (Oscar, amateur violinist)

2.2.3.2

Section summary

While there are probably as many perspectives on this as there are string players in the world, what these musicians highlight is that playing in a string section is not a simple matter of following the conductor and doing what one is told. For orchestral practices that require unanimity among their string section the section principal may have a much stronger influence than the conductor, and section principals may have their own leadership styles. Musicians at the back of sections cannot necessarily hear what is happening at the front of sections and rely on visual and auditory cues from those immediately around them in order to determine how and when to play. For some individuals, playing at the back appears to offer a little more freedom or require a type of leadership or assertiveness of its own, and generally speaking there is a sense that individual players, wherever they are seated may use their own judgement when it comes to the fingerings that they choose. This, however, varies from section to section and from orchestra to orchestra, and directive top-down leadership styles from principal players can constrain those individual choices.

However, as the mixture of comments above demonstrates, the degree to which players watch the leader for information about when and how to play appears to differ dramatically from situation to situation. It seems that less skilled musicians may be less aware of information that might be coming from the leader, whereas for professional players, the leader is an essential source of information for being able to play together whatever the circumstances.

2.2.3.3

The Conductor

The interviewees described some conductors as being very directive, while others give players more freedom. They said that conductors' attitudes and charisma affect the degree of influence they have over the orchestra and are an important component in getting the orchestra to be engaged and perform to their best ability. They emphasised how some conductors had the capacity to show nuanced musical information through their gestures and other non-verbal communication, while others did not. Musicians noted that the combination of conductors' stick technique and limited rehearsal time had different effects on the amount of influence that conductors had over performances. Perhaps Emily's statement sums it up most succinctly: 'They're chalk and cheese aren't they, conductor and conductor? Some tell you how to do everything, some tell you how to do nothing.'

Conducting philosophies and approaches

What emerged from the discussions with these particular players was effectively three different approaches to conducting with regard to the

amount of freedom conductors leave for the players to contribute artistically, or control they try to exert, as well as the methods that they use to achieve those ends: verbally directive, gesturally directive, and non-directive. While these are only a few approaches and philosophies and there are undoubtedly many more, the musicians' descriptions offered here serve to highlight that not all conductors' goals and methods are the same; that some invite artistic contributions while others may strive to be more directive; and that the technical and non-verbal communication skills of the conductor, in addition to their philosophy on music-making, may play a role in what approach a conductor adopts.⁷

Charlie provided two examples of these different approaches. In one case he described a conductor who demands a great deal of rehearsal time and takes a very detailed approach using lots of verbal instruction, but is gesturally very unpredictable in performance and consequently, the orchestra may not pay much attention to him during the concert.

The level of detail we have rehearsed this week, for instance. I think it will actually be a very good concert, because I think people will pull it together. We had a long morning. It was tiring. It has been a tiring week, but I think people really will come together, and because there is more familiarity, I think it will go well whatever is happening on the podium. We won't pay too much attention to that because it can be a bit hit and miss, but the thoroughness of the preparation, in this case, will pay off. (Charlie, professional violinist)

He also describes the opposite scenario where a conductor prefers to rehearse as little as possible, but is capable of delivering a very clear interpretation due to his skilled and precise baton technique.

⁷ The term 'technical skills' seemed to be used by interviewees to describe a conductor's ability to use the baton to communicate coordinating and musical information.

If you want a masterclass in how a baton can be used to indicate anything and everything, you just have to watch him, its unbelievable, he's like a surgeon. [...] He doesn't get paid to rehearse, he gets paid for the gig. So that's an interesting question of authorship and rehearsal time. On the other hand the gigs are often incredibly good because everyone is on edge of their seat, following his everything. And depending on whether he can be asked or not, it can go really well if he gets really into it. The Mahler 2 we did with him two and a half years ago I will remember forever. It was fantastic. So that's an example where he retains a lot of control despite little rehearsal time. (Charlie, professional violinist)

A decidedly different approach was described by William, who specifically avoids rehearsing interpretations or giving overly prescriptive gestures in performance in order to allow musicians the space to define the specifics of the musical moment.

Much of the time I'm just giving them an indication that something is going to happen soon. Like we're going to have a slow-up—we're going to go around a corner. You see conductors who get slower and then they start subdividing and all this stuff. I don't do any of that. Usually I completely stop conducting at the corners. I give them a gesture that says, 'any minute now this is going to start slowing-up so you better get with the horse. You cut out the middleman, because the middleman is just in the way. So its not the usual way of doing this, because you know what conductors are like. [...] You should eliminate all the crap that conductors do which doesn't do anything for the players, [...] just get rid of it all. It's so insulting to the players. (William, professional conductor)

Although Cottrell observed that for professional musicians 'conductors who allow musicians to feel that they are really putting something of themselves into the performance are generally more highly regarded than those who seek only to dictate what should be done' (Cottrell 2004:108), the highly detailed dictator-like approach also appeared to be appreciated by some interviewees. However, as Charlie noted above, performances with directive conductors can be exciting, and Oscar explained how both the directive and 'partially' free approaches have their own merits.

I think the clarity of the instruction is what made it so perfect and made it so pleasant to actually feel, 'this is wonderful, we never normally sound like

this. This is great! [...] That great autonomy that you get from other conductors—well, partial autonomy maybe—is then very exciting. Certainly as leader, I found it exciting because then I do have to be more engaged—I can't just sit back. I like both. They are different experiences certainly, but I'd be hard pressed to say what I think a conductor should or shouldn't do. (Oscar, amateur violinist)

Inspiration

Several of the musicians I interviewed also emphasised the importance of the conductor's attitude and charisma in convincing the orchestra to adopt their ideas and inspiring them to play better, reflecting Faulkner's findings which locates leadership as a transaction between players and the conductor.

The attitude of the conductor is so important. So important to grab the orchestra and get them on their side and that's sometimes hard to do, it must be hard to do. (Leo, professional percussionist)

For Amelia, speaking about her professional experiences, it is important that conductors position themselves as *part* of the orchestra:

If you feel he is standing up on his pedestal, psychologically, then you're not interested—you want to sort of bat him away really. Yeah, he has got to be with you. We're all in this together. (Amelia, amateur violist)

And for Emily and Henry, in an amateur context a conductor has an important role in raising the quality of the group, by encouraging them to give their best.

I think the conductor [...] has more than their share to do with morale and making you feel that what you're doing is valuable, interesting, [and] not mundane. [That it] is worth putting the effort into make it just that smidgen better, even if the audience isn't going to notice which they probably aren't. [...] The conductor's charisma has a lot to do with that. (Emily, amateur clarinet player)

Thomas points out, however, that the influential power wielded by conductors who can hire and fire musicians is quite different from those who

must convince the orchestra of their musical authority.⁸ He also notes that the process of undermining or circumventing a conductor's authority is rarely overt.

Stokowski had control over your career at that moment, he could fire you. [...] With the guest conductors it was all over in the first 5, 10, 15 minutes. Either the musicians decided I'm going to play for this guy or they didn't. There was no open insubordination, none, but it just never got great and you could see the conductors getting more and more frustrated. And that made it worse. (Thomas, professional flautist)

Verbal and non-verbal communication

There was a clear preference for conductors who could gesture in ways that helped the orchestra coordinate their sound and who had the ability to convey their musical ideas non-verbally, rather than describing them with words.

I think you get a lot out of [conductors' gestures]. Good conductors can just start without having said anything and if you read through the first movement, by the end you do know what they want. They haven't told you what they want, so that has to be gesture and facial, and you know, what they're beaming at, what they're looking confused at, and the preciseness of their hand. Probably with a good conductor if you had a two-hour rehearsal and they had a gag on, by the end you would be a lot better. (Emily, amateur clarinettist)

But players lamented that conductors did not always have the ability to communicate non-verbally—even those conducting top London orchestras. Jack talked about how his orchestra has a culture of phrasing that they will bring to their playing regardless of whether or not the conductor is asking for it with their gestures, but he maintains this is a characteristic feature of his orchestra:

You'll listen to another orchestra and they'll just play it straight unless the conductor has asked for something or is talented enough with their hands to

⁸ Although the conductor's power to hire and fire musicians was more common in earlier decades, some orchestras still operate this way today.

indicate how to release how to phrase where to go with a phrase. And I wish all conductors were that talented. They rarely are. (Jack, professional violinist)

Joshua also noted that when conductors bring high quality non-verbal communication skills to the platform they can make an immense difference, but that this is rarely seen.

I think for sure orchestras *can*, by and large, sort of run themselves these days, but the difference that a really good conductor makes is still immense. And I mean just the things that Marin [Alsop] was showing the other day in terms of 'if you do this with your hands the sound will do this'. It is extraordinary. It is certainly something that we don't see often enough to take for granted. Because often, if I think a conductor would probably want something to be sustained I will have to sort of turn around and say 'make sure we don't let this die' or whatever because we are not getting it in the [gesture]. (Joshua, professional violinist)

When conductors *are* able to be effective gestural communicators it can be a powerful experience for the performers, as Oscar described the ability of a conductor to deliver their ideas through gestural communication so clearly and compellingly that he felt he was no longer in control of his playing. It was something he described as a positive experience despite the conflict with his own desire for autonomy.

Conductors can do extraordinary things. It can be disturbing because conductors can make you feel like you are being played and not playing. That is, things can come out of your instrument you never put in. [...] It was as though he had his fingers over a piano and went 'down'. Very odd, because you don't think of yourself like that—you don't think of yourself as a key. You think of yourself as a 'musician' you know, 'I'm an *artist*', and all that stuff. (Oscar, amateur violinist)

The number of conductors that these musicians perceive to have adequate technical skills appears to be surprisingly low. When Joshua was asked how frequently he felt he needed to 'take over' from conductors he said:

It's pretty regular. I mean the...I think...ummm...can you turn that off?' (Joshua, professional violinist).

This reticence to talk on record about these issues was a theme throughout my data collection, particularly with professional musicians. As Levine and Levine (1996) have observed, the myth of the omnipotent maestro still flourishes in contemporary orchestral practices, which require musicians to maintain an appropriate façade even in the face of extreme incompetence. For professional musicians, working relationships and even work itself can be jeopardised if criticisms reach the wrong ears. Joshua's comments suggest that even during performance discretion was necessary. It was clear that the ability to lead the orchestra discreetly from the leader's position is a skill that he consciously cultivates in his own practice to a degree, as he described earlier, that his contributions are occasionally misattributed to others.

Rehearsal time

It seems that more rehearsal time should equate to more time for a conductor to impart their vision regardless of their technical skills, and less time, less so. But the effect of rehearsal time on the distribution of artistic authorship between the orchestra and the conductor does not always appear to be as straightforward. As Charlie described earlier, for the conductor with 'surgeon'-like baton technique, short rehearsal times do not necessarily mean lack of conductor influence, rather the effect can be quite the opposite. Similarly he says, extensive rehearsal time does not guarantee that performances will go as planned:

[Our conductor this week] is a fiend for rehearsal. He demands more rehearsal. He always wants more rehearsal. The orchestra has to pay out overtime to give him more rehearsal. And yet we all kind of roll our eyes because in the gig it could just go belly up. He could whatever, lose it, drop a beat, get nervous. Tempos could be totally different. [...] More rehearsal doesn't necessarily equal greater authorship in that case from him. (Charlie, professional violinist)

But for some players, limited rehearsal time or limited time for focusing on interpretive details meant that players felt they had more room to make artistic decisions about their own parts. One questionnaire respondent stated: 'with the quick turnover of repertoire and conductors, the interpretation is very much left to us as a three-hour rehearsal leaves no time for a conductor to give his/her penny's worth'. In an amateur context where there is, relatively speaking, often a significant amount of rehearsal time, Emily has already mentioned that conductors must still prioritise their attention, while in a professional context, short rehearsal time means it is left to Leo to make decisions about timbral quality by choosing which percussion instruments to use:

It's mostly left up to us, I think. I think there's too much time needed just to do the playing through now, because rehearsal time is getting shorter and shorter as we know. (Leo, professional percussionist)

He also noted that sometimes the lack of rehearsal means that players are at their most alert in a performance:

Actually it was fantastic, because as you know, often the first performance of anything, even at the rehearsal, is possibly the best one you are going to get, you know? I think it's because everybody's, reading, absolutely reading, [and] going to make sure where we are and all that. And then when you go back over it, rehearse it too much, maybe... There's this wonderful phrase 'being over rehearsed'. (Leo, professional percussionist)

But for Jessica, the short rehearsal time for means that they must go on 'automatic'—that there's a feeling of just having to 'survive'.

I think the reality in England is that there is so little funding. We're so short of money—orchestras are so short of money—there isn't the *time* to rehearse properly. People are tired, stressed. People are unbelievably busy and they're on automatic because it is all they can do. There's a limit to what a human being can conceivably do in a day and so there's a level of survival. (Jessica, professional bassoonist)

Oliver's experience is similar and he feels that one needs enough rehearsal time with the same group and conductor in order to develop an artistic approach to a composition—to feel like one is being a 'musician'—otherwise you return to your 'default settings':

I mean [this orchestra has] been running on a shoestring for years. The [number] of things they will do on one rehearsal and a concert sadly doesn't really give you the opportunity to be a musician. [...] If you work with the same orchestra a lot and with the same conductor a lot then I think there is ample opportunity to be musical. [...] I suppose there's a dividing line between getting the job done and trying to be artistic about it. If you've got enough time then there is [time to be artistic] and if you haven't got enough time then you just sort of go back to default settings. (Oliver, professional trombonist)

Jack refers to these 'default settings' as 'auto pilot':

Sadly, it's like a safety auto pilot which sounds great. So the audience may feel it, but we never will. We know how we make our sounds. Our wonderful string sound. We know how we do that and we don't let ourselves get away from that, because we want to do our jobs well. (Jack, professional violinist)

2.2.3.3

Section Summary

For these musicians, the influence of the conductor on the authorship of a performance appeared to depend greatly on the conductor's approach to musical leadership, their ability to persuade the orchestra to take their lead or inspire them to play beyond their best, their ability and desire to convey detailed musical information through their technical skills and non-verbal communication, and the amount of rehearsal time that they have with the orchestra to prepare the performance. Although these were the items focused on here, there are of course other means through which conductors might influence the artistic decision-making of the group. For example, as Thomas noted, conductors can exert influence through providing a set of marked

parts, which may include all manner of information such as note lengths, phrasing indications, breath marks, bowings, dynamics, or even additional or modified parts.

The references to conductors' varying ability to communicate non-verbally in combination with the limited amount of time, raises some important questions about the authorship of individuals' and orchestras' 'default settings'. The following section explores interviewees' perceptions of the influences that shape the unique sounds of individuals, sections and orchestras.

2.2.3.4

Local conventions and the authorship of 'sound'

The quality of sound that individuals, their sections and their orchestras produced, was important to musicians, and they described the ways in which such sounds were shaped by individuals (such as conductors and section principals), instruments, and musical cultures, such as schools of playing, and local and national traditions. Such influences shaped the 'default settings' for orchestras, section-specific practices such as timbre and attack, as well as the sounds that individuals cultivated and brought to their orchestral roles.

Orchestral traditions

Interviewees described how regularly performing orchestras which have full-time or long-term music directors may develop their 'default settings' on account of music directors' aesthetic preferences. Both Oliver and Thomas gave specific examples of this:

Mark Elder has been [the Hallé's] music director for a number of years and he's signed a contract for the next 10 years or something like that. So that orchestra will play in exactly the way that he wants them to play. But another conductor might come in and they'll just play Mark Elder's way. (Oliver, professional trombonist)

We had a series of guest conductors [...] [and] some of them like Zubin Mehta and others have become famous. And if they were of the precision school, they were very frustrated because we were trained to not play together. Now I don't mean we didn't play *together*, what I mean is that if [Stokowski] was doing a Haydn Symphony, he would have us play together and he would give the kind of beat that makes you play together, but if you played too much together he would say that sounds like a group of school children. Don't be so literal. [...] So we were trained to play that way. And I remember Zubin Mehta in particular just going out of his mind. He wanted it to go [gestures a precise downward motion] and that's not how we played. (Thomas, professional flautist)

But some of an orchestra's 'default settings' have more history than the influence of a current music director; perhaps maintaining a tradition for many decades despite changes in the conductor (see also Tolanski 2003:126). Thomas traced the skill of a present-day conductor's knowledge of how to get an orchestra to play quietly to that conductor's time spent with another orchestra:

He was conductor of the Cleveland Orchestra and [they] know how to play quietly. [...] I talked to the musicians and they are aware that they are almost the only American orchestra that still plays the way they were trained under George Szell in the 50s. (Thomas, professional flautist)

And Charlie attributed his orchestra's tradition of playing behind the beat to its Germanic heritage:

Certain orchestras play more or less behind the beat. Apparently German orchestras are even more behind the beat. And maybe the fact that this orchestra is like that is a sort of a relic of its German roots. This orchestra has a long history of German players and German conductors going back to its founding in the 40s. (Charlie, professional violinist)

Additionally for Charlie, a unique feature of his violin section is their particular sound quality. Again, this is a tradition which he believes also goes back to the founding of the orchestra decades earlier.

I think there's a quality of sound [in our violin section] that is probably quite unique actually, and people comment on it frequently. It is a sort of lustre and a cushioned approach to the sound production that I think is quite special. [...] Things as obtuse as fingerings [or the] choice of string that you would play something on in this orchestra and a different way in another orchestra. [...] It is definitely partially to do with the use of bow. Maybe the way we do our bowings is designed for maximum legato and cantabile, I guess you could say, [and] vibrato, in general, a good quantity of it. [...] And I don't know exactly where all of that performance practice comes from. I assume some of it goes back to the very founding of the orchestra, which is in [relatively] recent memory. It's only about three generations ago, really, four. So that quality of sound is unique. (Charlie, professional violinist)

While Charlie is clear about the unique sound of his section and less clear about its precise origins, Harry describes his own enduring contributions to a bass section—and by extension to the overall sound of the orchestra—of which he was the principal for several decades. He doesn't take credit for 'inventing' the playing style, but rather that he curated a sound by choosing people whose stylistic tendencies were sympathetic, and would follow his leadership.

It's a section I built. It is a section I helped develop. [...] I haven't been there for 15 years and I go there and they're still playing my way. [They play with] very focused and clean notes without over reverberating [and] a really good compact sound that is not woolly and over vibrating. You can ruin an orchestra with a bass very easily, simply by having very long fast bows. A really good bass note whether it is with a bow or pizzicato, should sound like pizzicato. It should have a real impact: the character could be 'boom, but not bwaaa'. As soon as you do that you haven't made yourself felt at the beginning of the note and you have completely ruined the orchestral texture after that. [...] And so you've got to play in such a way that you are immediately felt and there is a certain way of playing to do that. [...] Everybody that plays with me knows that's how I play, so I tend to choose people with that sort of playing or mentality. [...] I didn't invent it. I learned it at [music college]. (Harry, professional double bassist)

Oliver also notes the influence of individuals as well as schools of playing and institutional tuition on musicians' 'sound' concepts. He describes how, for most trombonists in the UK at any rate, there is an accepted style of playing and quality of sound that can be traced back to the 1950s and a particular teacher and model of instrument:

Every trombone player who is working in the business now in the UK and in quite a lot of other countries has either been taught by Denis Wicke or been taught by somebody who has been taught by Denis. So it's a real sort of family tree that comes down. Everybody plays in a sort of accepted way of [...] [and] it even comes down to the sound you make. [...] After WWII there were import restrictions [and] musicians could only buy instruments that were made in the UK. Come the 1950s there were American instruments starting to filter in [...] and Denis was one of the first people to play on a Conn, which I play on now. And so all of a sudden, people said, 'Hey, wow, can you get me one of those?' And this sort of British style of playing came through playing the way that *Denis* plays on *that* trombone. [...] 95% of tenor trombonists in this country all play the same instrument. I mean, fine, each individual player will have a different sound, but it is always slightly shades of the same thing. And it's not because we don't sort of have any imagination, but certainly as a freelancer you need to just go and slot in and fit in and sound like the guy that you're covering for. (Oliver, professional trombonist)

Unanimity within the instrumental sections of an orchestra was highly valued by interviewees. Harry spoke about how the modern audition process has changed the unified performance practices that orchestras used to have. He notes that in the past when auditions were not 'fair', string players might have all been brought in from the same school of playing, and as they had been taught in the same way they would automatically play together in a particular style. Now that auditions are screened, this no longer happens and he feels that such unanimity of sound and style is being lost.

The orchestra auditions weren't fair in those days, in so far as, people who had gone through Curtis, tended to get into the orchestra. What did it mean? There is only one orchestra now that I feel has that kind of direction, where everyone has the same idea of phrasing, everyone has the same concept. That's the Russian National Orchestra. They are unbelievable, that is fantastic. [...] As soon as the orchestra auditions became fair, in inverted commas, the orchestra went straight down because you had all these different ideas coming in instead of unanimity of phrase. We learnt phrasing. I studied phrasing—how to phrase. So did everybody else. So you walk in there and you're all singing from the same hymn sheet. (Harry, professional double bassist)

Contrary to Harry's comments about the audition process and the increased difficulty of curating homogeneous sounding orchestras, Jack described how British orchestras still have the ability to choose the 'right' people through a trial period. When musicians win an audition, they are put on trial for a

period of time, which can be up to three years or more and if they are not the right 'fit', then they don't remain with the orchestra. In discussing how the strings in his orchestra are able to play with a unified and unique approach to phrasing, he said:

They choose the right people. I mean, there are people we would just not consider in my section that have got jobs in the LSO and vice versa. There are people in our section that have been on trial there who have just been sort of laughed out of the room, you know, had short trials where they just think 'no, they're not good enough', but we also feel the same thing, that this person is not good enough. They're just looking for very different people, and so—and that's not to say that people don't move orchestras, often that will happen, because the *person* feels more comfortable in a different orchestra, if the orchestra will have them. [...] My orchestra plays with a much sort of lighter sound. To me, a much more beautiful kind of sound. It's like a culture in the orchestra. And when you join the orchestra, you will have learnt the way to play like that with them by the time you get the job, otherwise you wouldn't get the job. (Jack, professional violinist)

Individuals' sounds

What these discussions point to is that individual musicians also have a distinct playing style or sound profile, which may more or less fit with an orchestra's aesthetic, and for professionals, those that are able to adapt to local cultures are more likely to be successful in their trials (see Cottrell 2004:47-49). As described by Oliver and Harry, individuals' sounds may be shaped by institutional training, such as schools of playing, and local as well as more widely accepted conventions. While Oliver noted the significance of the make and model of instrument for trombone players, Harry maintained that an individual's sound is more distinctive than the characteristics of instruments—an individual will sound like themselves no matter what instrument they play.

Most of the great players that I know and work with get the same sound from whatever you put in their hands. [...] A good instrumentalist will take what you give him and get what he wants. (Harry, professional double bassist)

Although several of the amateur musicians (notably wind and brass players) also believed that they have their own 'sound', and agree with Harry that individuals maintain a certain quality of sound no matter what they play on, they also recognised, as with Oliver, that the make and model of the instruments they play are inevitably part of their personal sound profile.

People have said to me: 'You've got a wonderful sound'. I do play on English clarinets and not French clarinets, and I think that makes it slightly different. Everyone, *everyone*, plays on Buffets and I don't, and I think that gives you a slightly different sound, but I think that's a tiny percentage of it. I think that's your sound. (Emily, amateur clarinettist)

Jacob described models of horn and the different qualities of sound that they afford their players. He described how horn sections strive for blend, noting that the instrument choice of the first horn can change what those 'down the line' are trying to do with their sound.

We all like to downplay hardware, and just say it's all here [gestures to mouth and stomach]. In reality, there are differences. So I play a German horn, and quite a lot of people play German horns [...], which [have] a more mellow sound, [whereas] a Yamaha or a Conn, [will have a] much brasher sound—particularly if it is silver lacquer. [...] Certainly if you are in a section and someone turns up with a silver Yamaha on first [...][with] a big, loud brash sound then suddenly everything changes. So we try to make out that hardware doesn't make a difference, but the size of the bore does make quite a big difference. (Jacob, amateur horn player)

Unlike Harry and Oliver, who felt that their individual approach was informed by their training, both Emily and Jacob expressed that in large measure their sound has developed from playing with others whose sounds and styles of playing they admired and which they have tried to emulate.

2.2.3.4

Section Summary

What the musicians' commentary has highlighted here is that there are influences beyond the immediate rehearsal process that shape the 'default setting' for an orchestra's style and sound. From orchestral traditions, through specific section practices and down to an individuals' playing, sounds were influenced by accepted performance practices, schools of playing, instrumental properties, inspiration from colleagues, and individual aesthetic preferences, such as long-term music directors. These sound ideals could at times be in conflict with guest conductor preferences, or mean that individual musicians were a better fit with one orchestra rather than another. The historical character of these influences is significant and situates musicians' decision-making in a much deeper temporal landscape than a rehearsal process or performance. It is also notable that some of these influences are, in a sense, lateral, in that they come from instrumental colleagues, rather than conductor directives. While such exchanges of ideas happen between players over long periods of time, and may be passed down from generation to generation, the importance of dialogue between players while playing was deeply emphasised by all of the interviewees across the different orchestral contexts, supporting and building on the findings of Dobson & Gaunt (2015). The interviewees' descriptions of the variety of places that they look for information about how and when to play their parts will be explored in the following section.

2.2.3.5

Sources of Information

The interviewees described how they relied on multiple sources of information within the playing situation in order to know precisely how and when to play, independent of the quality of leadership from the conductor. Musicians took inspiration from their colleagues' playing to shape the way that they engaged with their own parts, while listening to and watching one another in order to facilitate coordination, some likening orchestral playing to playing chamber music. While musicians acknowledged the range of skills that conductors brought to the podium, as discussed above, most were clear that conductors rarely have the refined gestural language to communicate everything that they need to know about how and when to play their parts. Even when conductors are skilled in this area, players described how other sources of information might be preferable either because they contain *more* information about what is needed in the moment or possibly because of their desire to play with their colleagues—the need to maintain ensemble cohesion—outweighs staying with the conductor.

Although the leader has been identified as an important source of information, players described how their ability to play regardless of what a conductor is doing is not only affected by their engagement with the leader, but also with the orchestra as a whole. The communication with one's colleagues was sometimes described as resembling a chamber music setting, where players 'sense' and 'find' each other.

They say the LSO can play with anybody. They will come out with a good concert with anybody, which is true. But it is all because the orchestra can sense each other, are used to really playing well together. It is all about

chamber music and it is all about feeling each other. [...] You've got to be flexible. You've got to find each other. Perhaps the violin is leading or the first bass is leading in the case of a section, you know, and that's great. (Harry, professional double bassist)

Players commonly described how they listen to their colleagues in order to get ideas about how and when to play. For Jacob, playing horn in an orchestra can be likened to playing in chamber groups, the instrumentation of which shifts over the course of the piece:

In an orchestra you're often either [playing] in a wind quintet or a brass quintet, effectively. And I think that as a horn you're linking together the woodwind and the brass quite a lot of the time [and] playing with the cellos quite a bit. But I think wind quintet playing feels more akin to an orchestra because with the brass stuff, fine, it's there, it's loud, but actually when you are trying to dovetail in with the woodwind I think that's much more delicate, and soloistic. (Jacob, amateur horn player)

Not everyone agreed that playing in orchestras has much in common with playing chamber music. For Charlie, playing in a string section requires a different set of skills:

Some years ago [...] I did a fellowship at the Academy and one of my fellowship goals was to help the younger students to find ways of approaching orchestral playing that were more like chamber music. [...] Looking back now maybe I was a bit sort of naive and idealistic that you could so easily switch between the two. I thought they should just be one and the same. And it is a different thing. The expectations put upon you as a player are different. The roles are different. (Charlie, professional violin player)

But whether or not they likened orchestral playing to playing chamber music, all of the musicians expressed that they tuned into their colleagues for musical and coordinating information. Emily, for example, described listening for her wind colleagues' shaping of lines in order to get musical ideas, emulate phrases, and in response offering alternatives, creating a musical dialogue:

If the first flute has done the same eight-bar phrase you could try and mirror them. But again try and push them. Often if someone does a phrase and I think, 'Ooh you could do a bit more than that', you do a bit more and then next time around, they'll do a bit more as well. [...] And in amateur orchestras you play with the same people again and again and again. And you get to know the ones who are red hot and to listen to. (Emily, amateur clarinettist)

James related a specific experience where a colleague, through her position as principal viola and on account of the role of her musical part at the time, shaped the transition from one section of a symphony into another in a way that had an effect on the orchestra as a whole.

There's a little viola motif which takes us from the minor of the previous section into the major of the new one, and [Meredith], who leads the violas, because she's such a powerful player and because she's surrounded by rabbits, just coloured it beautifully and just slowed it down and single-handedly established the feeling of what followed. (James, amateur violinist)

And as mentioned earlier, Oliver described obtaining information about the timing and quality of the sounds he needs to make through watching the arm movements of the string players. In relating a specific musical example, he described how the temporal information coming from the conductor is often at odds with the sound that the orchestra is making, so if he follows the conductor, his sound will be early:

Somebody can just do that [gestures] and give a down bow. You know exactly where that down bow is and you know how loud it is going to be, how quiet it is going to be. [For example] the euphonium part in Mars about half way down the first page and you've got all the strings doing down bows [sings: bum, bum, bum, bum, bum] and you know exactly where [sings: dun, dun, dun, dudela, dudela, daa] you know exactly where it's going to be. The amount of conductors that will try and push it on there... But if you end up following the conductor there you're going to be early. So it's just a visual thing. Just seeing a bank of strings all doing down bows, you know exactly where to place a note and exactly what to do. Yes, you definitely get a lot more from a leader than you do from a conductor. (Oliver, professional trombonist)

Even in his amateur orchestra, Henry observes that if everyone is trying to watch the conductor and interpret their beat individually, the ensemble will not be together. For ensemble purposes, he elects to watch the body movements of those he is playing with, but notes that he looks to the conductor for information about the quality of sound he should produce. This response is at odds with the questionnaire findings, which indicated that musicians rarely look to the conductor for information about timbre.

If you try to do it by hearing you are going to be late, so you can't do it that way. If you look at the body movements of the [principal] cello you have a much better chance of playing with them. Now the conductor is there as well and the conductor may or may not be doing something to help. He might be and you might say that the conductor is leading the cellos and the bassoons together in which case you might say that we really should be following the conductor. But actually what is important is for the cellos and bassoons to play together, not that we each individually try to follow the conductor. We could be going in different directions if we try to follow him. [...] I don't think I'd get type of sound by watching a cellist, but one should be able to get type of sound from watching a conductor in the right context if they are doing what they're [supposed to be] doing. (Henry, amateur bassoonist)

Leo highlighted the same issue, that everyone will interpret the conductor's gesture differently:

One of the best lines from a conductor can be, if its not fitting, whatever it is, maybe even just a chord not fitting, 'Just follow me!' Ah, yes... it is a tricky one. Worth remembering never to say that, because it always gets a laugh. (Leo, professional percussionist)

Rather he observes that a conductor might give a gesture, but that 'the actual sounds are coming from the first clarinet or the first flute', so his attention is really on his colleagues:

I mean as the conductor you can't actually physically make that person do what you want. You can show them what you want and hopefully they go with that, and usually it works. [...] So of course that's why everyone is so reliant on the individual players. [...] But of course it comes from each individual when you're getting to a corner, you've got to wait for the oboe or wait for whoever to come out with the next crotchet or else, where are you? (Leo, professional percussionist)

Thomas noted that sometimes conductors' gestures are directed at only one part of the orchestra. He related an experience where the conductor was shaping a melodic line with the strings, and leaving those playing the accompanimental parts in the wind section to work out how to fit in. He described the process as negotiating different information streams; particularly what one sees from the conductor versus what one hears coming from others in the orchestra.

We had a gazillion notes and the violins had hardly any notes and he only conducted the violins. He paid no attention to us and he used an enormous amount of *rubato*, so sometimes you had played all your notes and he wasn't going on to the next beat yet, and sometimes he went to the next beat and you hadn't finished playing all your notes and you had to figure out how to do that. [...] Now there's an area where it is just like chamber music because every player has to negotiate between the sound that's coming in from everybody around them plus whatever the conductor is doing in order to play together. Right, I mean, otherwise you sound like a beginner. So it is a constant calibration of all the various [elements], whether it is the visual or the sonic. (Thomas, professional flautist)

Jack also emphasised the need to listen, but also the need to be aware of what others are listening to as well, noting that when different members of the orchestra listen to different sections, the ensemble can pull apart. He also emphasised the need for eye contact and subtle non-verbal communication between players:

Always listening to as many things as possible. The other thing is trying to work out what it is that everybody else is listening to. That's what the problem is. If people start listening to different people who are too far apart, especially if one of them has a bad habit of rushing or something and there will be two camps of who thinks who's right and who think who's wrong. That can cause problems, but I'm aware visually always of the other principal string players, except for maybe the double bass because of the sight line is too difficult. [There are] sort of silent discussion[s] while you're playing, where you just can tell if there's a slight concern in the [leader's] eyes. There seem to be conversations going on all the time in that way. (Jack, professional violist)

Prioritising Cohesion

The musicians interviewed were clear that maintaining cohesion with their colleagues and the orchestra as a whole was of primary importance and they prioritised information that helped them achieve this aim. Charlie put this very succinctly:

A good orchestra's priority is always going to be to play together as a unit, first and foremost, regardless of who's in front of them. (Charlie, professional violinist)

Sometimes this means ignoring the conductor or working around them. One interviewee described how it was jokingly referred to playing 'bingo' in that the orchestra would decide as a group to put their heads down until the end of the concert, rather than look up to the conductor. Others expressed the opinion that a lack of clear direction from the podium can create difficulties even in professional situations where orchestras should be generally capable of playing without conductors when necessary. For example, Jessica explained that not everyone agrees on when to 'go it alone' without the conductor, resulting in some players or sections attempting to follow the conductor while others are trying to ignore the direction from the podium.

It creates enormous conflict. Because some people are able and willing to pretend that [the conductor] isn't there, but we are essentially trained to believe that there is a central point of information and some people find it impossible to ignore. So there's huge conflict with the people that continually want the information from the front and the people that are continually 'I ain't getting it there, so let's do it...' And so that's when things go wrong, because you haven't got an agreed upon policy of [how to] get out. So some people are looking and some people are saying, 'Let's do this ourselves'. (Jessica, professional bassoonist)

Something to note about Jessica's description above is that the dialogue she is referring to takes place musically, rather than verbally: players express their opinions about what should be done by how they play their parts.

Jack's sense is that it is not in his orchestra's personality to want to take control when the conductor is causing problems. This means that there is a continual struggle throughout the performance and the main objective just becomes saving the performance: 'saving face' and not embarrassing themselves or the conductor.

But we're not the sort of musicians. I say we, I mean 'on average', throughout the strings. We're not the sort who even want to take control. So sometimes if the conductor is so bad that he lets it drag so much, the leader will try and do something. But even then it's very difficult to do that if the conductor is always conducting behind, which sometimes happens, would you believe? Normally if the conductor is bad they tend to be obstructive which just creates technical problems and then it becomes about saving the performance. We're just trying to keep it together. We had one the other night, which was almost a total disaster. [...] So a lot of the time we're just trying to save face. We're trying to not embarrass ourselves and the conductor. I think a lot of the time a lot of us just want to do what the conductor does and see what happens. And those concerts aren't really all that much fun. (Jack, professional violist)

Revealingly, Jack suggests just how much the influence of the value of cohesive playing (or inversely the *fear* of not playing together) can have on the perceived 'interpretation' of the musical material.

So in the last movement of Tchaikovsky's 6th Symphony, right at the beginning, there's a melody in hocket between the 1sts and the 2nds and going into the 2nd bar. [...] It's a quarter note, two eighth notes, an eighth note followed by a 16th note rest, and a 16th note upbeat to the next bar. And that 16th note upbeat comes so late and the downbeat arrives so late that it's almost an extra beat sometimes, because everyone is too scared to play. That is the reason. Some people might say, oh, no, no, no, it's just something in the character or whatever, but all that is bullshit, everyone's actually just scared. (Jack, professional violist)

Finally, Charlie noted that the unanimity expected in British orchestras is a cultural aesthetic, and not a fundamental tenet of orchestral practices:

You're expected to toe the line and not to stick out. And that is also a particularly British orchestral way of playing. The not stick-out thing. In other orchestras around the world you might go for it more and get into it and so what if you come in spare or whatever, but that's not the culture. (Charlie, professional violinist)

2.2.3.5

Section summary

Throughout the interviews, and in the descriptions of what influences them to make decisions about how and when to play their parts, musicians emphasised their attention to colleagues, not just for coordinating information, but for inspiration and an exchange of musical ideas. Musical ideas were exchanged in 'sound', and the role of listening was stressed as a mechanism for maintaining cohesion. This resonates with the findings of Dobson & Gaunt whose musicians emphasised the importance of having good 'radar'—'listening to, communicating with, and adapting to other members of the ensemble at all times during rehearsal and performance' (Dobson & Gaunt 2015:30). The descriptions given by the musicians in this study do not suggest interventions on account of the failure of conductors to provide this information, but simply as a matter of what is needed in order to facilitate a large group performance that is both temporally and musically cohesive. What emerged was that the perceived need for ensemble cohesion at all times was the primary influence for determining what streams of information would be adhered to at any given moment, whether visual or aural. The significance of this influence as well as the others that emerged over the course of the interviews will be addressed at the end of this chapter.

2.2.3

SECTION SUMMARY

This third and final section explored the distribution of authorship in orchestral performance through the ways in which musicians describe how they make decisions about how and when to play their parts. For the musicians in this study the decision-making process was mediated by a substantial number of factors beyond the conductor directives. These included: the musical materials their part is allotted at any particular time; their role within the ensemble musically and socially; the time available for rehearsals and familiarity with the repertoire; the verbal and non-verbal skills of the conductor as well as their music-making philosophies; the personalities of the individuals with whom they are playing; the leadership style of principal players; the physical arrangement of the orchestra and access to sightlines as well as aural information; instrument affordances; received notions of performance practice and conventions through schools of playing, training, and exposure to local orchestral cultures; musical inspiration from colleagues; and above all, the need to maintain cohesion within one's section and across the orchestra as a whole. Musicians emphasised the role of listening as well as maintaining visual contact with their fellow players, both for ensemble coordination, but also to exchange musical ideas. In addition, they noted the tension that could arise between information streams, requiring them to go with what they could hear over what they could see or vice versa.

2.2

SECTION SUMMARY: Towards a Theory of Influence

The musicians' descriptions of their own contributions as a combination of individual choices, responses to others, or drawing on conventional norms; the emphasis on the quality of co-performer interaction in defining what makes performances special or unique; and the accounts of the complex network of communication which facilitates cohesive performance are in stark contrast to a perspective that sees creative outcomes as the sum of individual player choices that are then constrained and modified by conductor decisions. These accounts make clear that a social-psychological approach to orchestral creativity is essential in that creativity is a property of the group, and emerges in interactions. These interactions, however, appear to be prompted by a variety of influences both within the physical and temporal present and extending beyond this into historical, social, and cultural influences. Therefore it is possible to theorise that the authorship of orchestral performance lies in the interaction of musicians' responses to a variety of influential factors. However, to understand creativity in orchestral performance as emergent is not enough, as some influential factors will have more power than others, and it remains to be seen how such influences may have an attributable effect on the musical parameters that characterise performances and on the basis of which their creativity (and their authors') are judged.

The influences that have been identified through the questionnaire and interview data provide a foundation to explore real-world interactions and

track how such influences prompt musicians' actions defining the creative profile of orchestral performance products. Tracking interaction in orchestral performances is problematic, however, and Section 2.3 discusses these issues and describes the development and utilisation of the MERID data collection system to capture musicians' performance experiences.

2.3

EXPERIENCES IN REAL-WORLD CONTEXTS: MERID Data Collection and Analysis

2.3.1

A NEW DATA COLLECTION METHOD

The third stage of data collection sought to gain perspectives from musicians in real-life situations. As the questionnaire and interview data has suggested and Dobson & Gaunt have observed:

An individual's own actions in performance may be formed as a result of adapting and synchronizing to any number of their colleagues, forming a rapid chain of action and reaction within a complex web of allegiances and hierarchies, of which the conductor's directions may only form a small part. (Dobson & Gaunt 2015:31)

In order to track these exchanges and contributions throughout an entire orchestra, it was necessary to obtain the subjective experiences of musicians in specific real-world contexts, as critical communication within an orchestra may involve a range of embodied experiences as well as visual and aural cues. A musician's attention might be highly distributed, and stimuli which influence musicians' actions may not be visible to an external observer, even using sophisticated gaze analysis methods, as such information may originate from multiple auditory sources or from an individual's own thoughts, habits, or imagination. Holmes & Holmes argue for the necessity of performance studies to embrace 'phenomenological' investigation, as the 'subjective experience of individuals at particular points in space and time is a crucial and irreducible element of music performance' (Holmes & Holmes 2013:75).

Whilst Holmes & Holmes argue for in-depth research into small sample sizes (even $n=1$), significantly for this research, individual reports do not describe the whole picture. Rather it is necessary to triangulate musician perspectives in order to develop a multi-faceted yet cohesive picture of orchestral musicians' experiences. This requires obtaining reports from all members of an orchestra about their subjective experiences of the same music-making episodes.

Obtaining insights from an entire orchestra of musicians about a specific episode of music-making during rehearsal or performance has methodological challenges. It is important that thoughts, feelings, and experiences be captured as soon as possible after the specified event. Given this, the problems in conducting this research cohere around a set of issues dealing with time and consciousness.

One such practical temporal concern is that orchestral rehearsal time is both precious and/or expensive: it should not be disrupted. It would be difficult to persuade an orchestra to participate in a study that requires musicians to respond in some way during the rehearsal process (by writing, for example) unless that extra working time for all the musicians was independently paid for (in the case of a professional orchestra) or compensated for in some other way (in the case of an amateur orchestra). Post-rehearsal or post-concert collection of experiences is the next viable option, but it is logistically impossible to interview every musician as they walk off the stage or require that each person fill out a response sheet just after a rehearsal or performance prior to doing anything else. Such information requests are unlikely to

generate enough positive responses to obtain a representative sample of an orchestra's experience. Moreover, neither method would obtain perspectives on the same part of the rehearsal or performance from all musicians.

Another barrier to capturing subjective experiences in instrumental performance has to do with the potential 'types' of consciousness that performers enter into while playing. Being 'in the moment', for example, or achieving states of 'flow' may limit the ability to reflect on these events in much detail after the fact.¹

Additionally, orchestral musicians are at times reluctant to share experiences, as these may either be quite personal, or contain sensitive information that could compromise their relationships within the group. In the case of professional musicians, this can be an issue of livelihood, and confidentiality and trust are paramount if honest responses are to be obtained.

In order to construct a study that limited the impact on orchestral rehearsal time, took as little individual participant time as possible and could be completed at participants' convenience, focused participant attention on short segments of rehearsal or performance, provided confidential reporting, facilitated triangulation of perspectives, and enabled the capturing of reflections and experiences as soon as possible after the event, in collaboration with members of the Computer Science Department at Cornell University I

¹ This concern was expressed to me in casual conversation by a number of performers prior to beginning data collection. It was confirmed when at times, even with the video as an aide-memoire, participants simply could not recall what had been happening at that particular point in the music. On two occasions musicians said that they would need to have their part in front of them in order to recall their subjective experiences at that particular time.

developed a web-based computer program designed to facilitate the collection of experiences from all the members of an orchestra at once. Orchestras were video recorded during rehearsals and performances. Short segments of these video recordings (1'30"– 4') were posted on a purpose-built online interface, MERID (Media Enabled Research Interface and Database), and all members of the orchestra, including the conductor, were invited to log on, view the video, and leave confidential, timestamped comments about their own experience during each video clip. This data collection process is described in more detail in the following section.

2.3.2

STUDY DESIGN: Theoretical Perspectives and Software Development

2.3.2.1

Web-based video-stimulated recall

Video-stimulated recall has been used since the early 80s in education research, sports research and decision-making research, in order to study cognitive processes in naturalistic environments (Lyle 2003). The primary theoretical issue with video-stimulated recall is whether 'retrospective reports accurately represent access to direct, unordered accounts of previous thought processes without any intermediate ordering of reflections on reasoning' (Lyle 2003:865). The inherently retrospective nature of video-stimulated recall opens a window of opportunity for participants to reflect on and analyse their experiences, potentially developing thoughts and feelings that did not exist in the moment, or offering a critical analysis of what they view in the video. Additionally, cognitive processes and embodied responses/ actions may be non-linguistic in nature. When asking participants to report on these processes, they necessarily have to articulate them in linguistic terms. In a spoken context, this might reflect a 'stream of consciousness' narrative, but when written responses are requested, editing for meaning and correct grammar add an additional layer of mediation. With these caveats acknowledged, video-stimulated recall has been employed because it is, to date, the most practical and viable method of obtaining reports of individual experiences from musicians actively engaged in performing orchestral music.

In music, video recordings have been used primarily as a data source from

which to analyse performer movement and ensemble interactions (social, visual, aural, gestural, etc.) from the perspective of the researcher (Davidson & Good 2002, Seddon & Biasutti 2009, McCaleb 2014, and Clarke, Doffman & Lim 2013). James, Wise & Rink (2010), however, used video-recall to explore creative practice in one-to-one conservatoire music lessons in a participant-guided approach, which allowed participants to review and identify parts of the video recording that they felt were examples of creative learning. More recently, and concurrent with this research, a study by Nicholas Donin *et al.* at IRCAM has utilised video-stimulated recall together with in-depth interviews to probe individual conductor and composer experiences. These experiences may not be at the forefront of participants' 'reflective' consciousness, but rather constitute 'pre-reflective' thought processes integral to the creative process which the researchers have sought bring to the surface through interview-assisted video-stimulated recall. Although this research engaged conductors, the researchers acknowledge it is limited in an orchestral setting, as it does not capture the experiences of the other musicians in the orchestra (Donin 2015). It is also relevant to note that Seddon & Biasutti's (2009) study involved participant checks utilising the video recording as a point of stimulated-recall for the musicians in order to confirm or inform researcher findings.

Video-stimulated recall for an entire orchestra necessitates capturing the perspectives of many different participants at once so that it can serve as an effective *aide-mémoire* for all the individuals involved. While it might appear that having cameras and microphones mounted on each person's head would be best to facilitate a participant-specific perspective, an exploratory attempt

at utilising Google Glass technology to capture the experience of orchestral musicians in the Kansas City Symphony² resulted in video footage and sound quality that was not an accurate representation of player experiences. The indiscriminate capture of audio and visual information from the glasses brought aspects of the environment which are not likely to be the primary focuses of musicians' attention, such as the scroll of a violin or the contact sound with the string, to the fore. Moreover, such data capture would be invasive and potentially disruptive to the rehearsal process, limiting the scenarios in which the study could be practically carried out (see also Bayley 2011). Lastly, the need to process the videos quickly and make them available online as soon as possible after the event, made it time-prohibitive to utilise a large number of cameras.

For the MERID Studies two Sony HD cameras were used to video record the orchestras from different angles, capturing a 'forward-looking' perspective for most players in the group. Every player was in at least one of the two video recordings and most were in both. Participants were able to choose which perspective they wanted to view and were even able to toggle between the two while viewing them on the MERID interface.

2.3.2.2

MERID development and description

I collaborated with Graeme Bailey, Professor of Computer Science at Cornell University, and his team of undergraduate and graduate computer science

² <http://www.engagemobile.com/engage-mobile-google-glass-technology-provide-groundbreaking-glimpse-inside-kansas-city-symphony/>
accessed 27 April 2015

students to develop MERID. While I provided guidance on the specific needs of the program for my research purposes, the students were actively engaged in developing the user interface as well as attending to ethical concerns and thinking creatively about future data exportation needs. The process was iterative, and I was in constant dialogue with programmers as solutions to various problems were explored, tested, and then revised. The program continued to be developed throughout the research process, addressing technical issues and adding functionality to the user interface. The main interface for viewing the video and collecting comments from participants did not change over the course of the study, however.

A pilot study of the research interface was conducted with a university orchestra followed by an online questionnaire asking for feedback about the experience of taking part in the research project and using the system. These responses were used to revise the online program as well as the approach to obtaining consent and presenting the research project to orchestral musicians. Similarly, an online questionnaire was conducted after the second MERID case study in order to review the data collection method and its impact on the rehearsal and performance process.

2.3.2.3

MERID program details

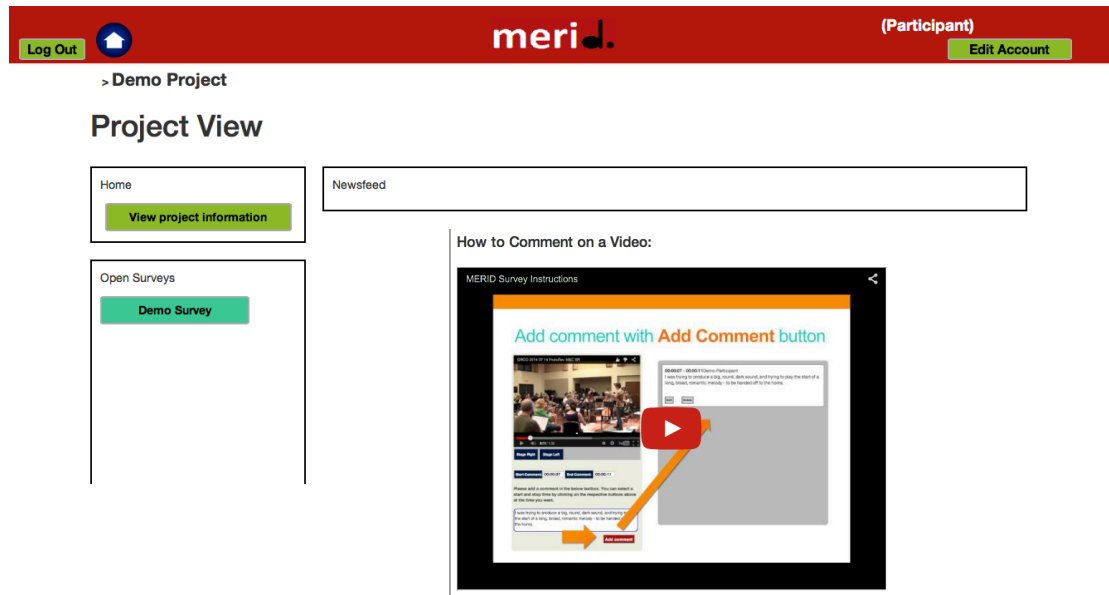
A great deal of attention was paid to the user interface in order to provide security, confidentiality, and ease of use. Attention was also paid to the needs of the researcher, particularly in terms of data viewing and exportation, and these needs defined certain protocols. As this is a new method of data

collection, space has been given here to describing the program in some detail in order to illustrate the participant interface and the manner in which data was collected.

User accounts

User accounts for each participant were created using email addresses furnished by participants through the consent process. User information included: participant name, email address, instrument and position (e.g., ViolinI-3A or Bassoon-3). Participants were invited to MERID via a system-generated email and asked to create a password for their user account. Within MERID each rehearsal-performance cycle (in most cases this was the entire research project for the orchestra) is called a 'project'. As an additional layer of consent, participants are asked to 'accept' the project (agree to participate) through the online interface, prior to proceeding to their individual homepage. Each video clip was embedded in a 'survey' within a project. When participants logged on to their account they saw a list of the surveys that they had been invited to take as well as the list of surveys that they had already completed. Once a survey had been taken (comments made on a video and submitted), it could not be viewed again. A 30-second tutorial video on how to leave comments on the video clips was placed on the home page. *Figure 2.3.2.1* shows a user's home page view.

Figure 2.3.2-1 - User Homepage



User IDs and Timestamping Comments

In order to understand experiences from the specific seats of the participants within the orchestra, user IDs were created from participant positions so that comments left on the system were identified by their positions rather than by personal names. For example, ViolinI-3B was used to identify the player sitting on the inside of the third desk of first violins. Additionally, this method of comment tagging facilitated comparisons between orchestras for musicians in the same and similar positions within the orchestra when exported to NVivo for analysis. See *Figure 2.3.2-2* for IDs from the 'researcher's view'.

Figure 2.3.2-2 - Researcher View

<p>00:00:00 - 00:02:06 ViolinI-1A This whole section was generally feeling nice and comfortable - well sorted out and no real problems.</p> <p><input type="button" value="Comment"/></p>
<p>00:00:07 - 00:00:07 ViolinII-1A The violas have never got the start in time with the woodwind. Really annoys me.</p> <p><input type="button" value="Comment"/></p>
<p>00:00:14 - 00:00:34 Cello-1A In this second rising motive for the cellos I was thinking that after being sympathetic to the woodwind in the first such motives the cellos then had the responsibility of setting the sound of the motive for the second passage of these motives.</p> <p><input type="button" value="Comment"/></p>
<p>00:00:16 - 00:00:16 Oboe-2 So conscious of need for 2 oboes to be precise on tempo and tuning. pretty happy.</p>
<p>00:00:16 - 00:00:30 Bass-1 Trying to echo the motif from wood wind and get the intonation right.</p> <p><input type="button" value="Comment"/></p>

All comments were made confidentially and were not viewable by other musicians within the orchestra or by orchestra administrators. This latter point was of great importance to both amateurs and professionals, several of whom approached me independently in order to be absolutely certain that no one else would be able to identify their comments. Only those players actually *in* the specific video clip were invited to a particular survey via the MERID system, as not all musicians participating in a study would necessarily be playing during a specific excerpt.

Survey Interface

The example below shows the survey interface as seen by participants. In the upper grey box the video clip was identified by composition and rehearsal letter and participants were prompted to leave comments (details of how 'prompts' were designed are given in Section 2.3.3.4). In order to encourage participants to report on their own in-the-moment experiences, rather than

offering an analysis of the orchestra's performance from watching the video, example comments taken from previous studies were available to view by clicking the red button (see *Figure 2.3.2-4*). The video display function in MERID worked by streaming from an unlisted YouTube channel (see *Figure 2.3.2-3*)

Figure 2.3.2-3 - Participant Survey View

View Survey

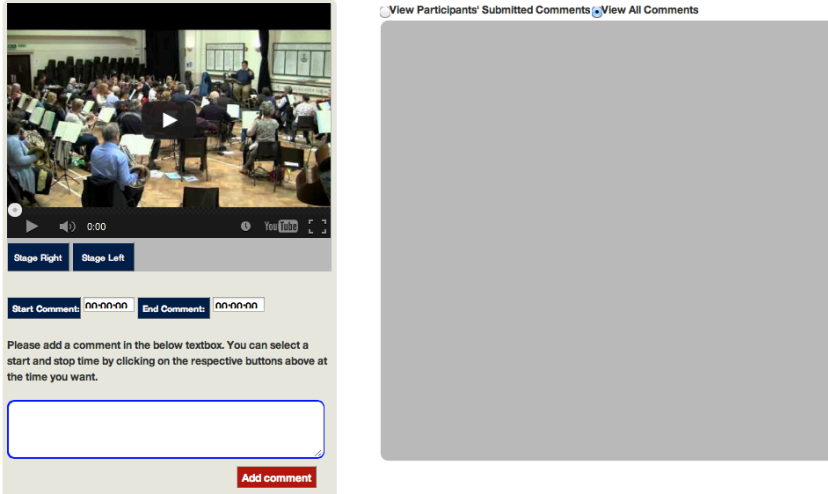
[Edit](#) [How to Use This](#)

Prompt:
 As you watch the video try to recollect this point in the rehearsal. This is a 2'45" clip of the Smetana from letter K to the end of the piece that you played just before moving on to the Dvorak.

Please describe in as much detail as possible what you can remember thinking about, experiencing, or focussing on at this point in the rehearsal. Did you see, hear or feel something that made you respond in a particular way?

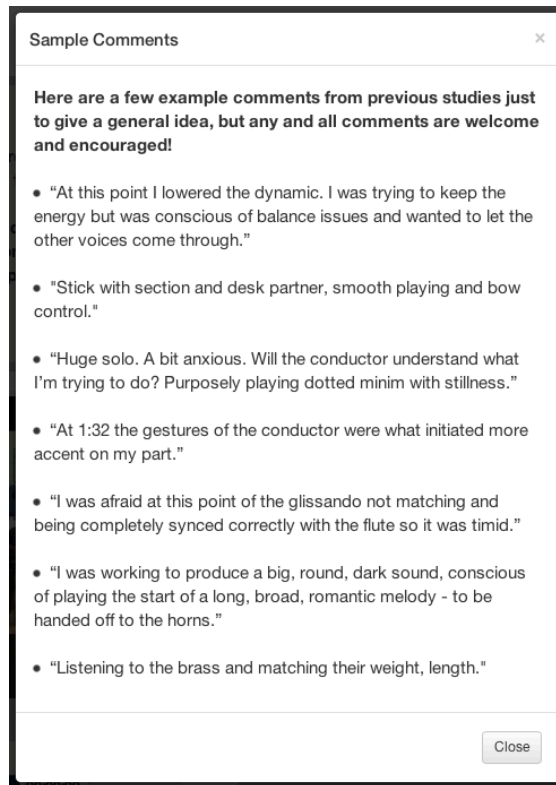
[Show sample comments](#)

View Researchers' Comments
 View Participants' Active Comments
 View Participants' Submitted Comments
 View All Comments



[Add comment](#)

Figure 2.2.3-4 - Sample Comments



Data Exportation

A crucial function of the MERID system was the ability to export the data in a format that made it possible to import into a qualitative data analysis program such as NVivo, as each orchestra study may capture hundreds of individual comments. The MERID system removes the need to transcribe any of the data and it can be reconnected to the video clip within NVivo so that comments can be analysed in the context of the original video.

2.3.3

COLLECTING THE DATA

2.3.3.1

Recruitment

Recruiting orchestras for the studies presented some challenges. As mentioned earlier, orchestral time is closely protected and many administrators simply stated that the orchestra was too busy and that they were not able to help at that time. In the instances where individual administrators or conductors were interested in the project, sometimes the process would falter at committee level. I sought to engage a range of amateur and professional orchestras and drew on my own professional network as well as strategically targeting ensembles that I wanted to work with. Over a dozen UK-based orchestras were approached by email and/or by phone between September 2015 and March 2016. Six orchestras agreed to participate and of these only one was not already known to me personally in some capacity. Three of the six orchestras I had known in a professional conducting capacity prior to asking them to participate in the project. It became clear that a substantial level of trust in me as an individual was required in order for orchestras to be willing to participate, despite clear documentation of institutional support and affiliation. In one study, I was also the conductor of the orchestra and this particular situation warrants some discussion.

Participant-researcher-conductor

Orchestra Study 2 was carried out with an orchestra that I founded in 2005 of

which I am the music director and conductor. There are some natural advantages and drawbacks in being a participant-researcher-conductor. First and foremost, there is the concern that players would not be willing to leave honest comments knowing that the conductor would be reading them. This said, the culture of this orchestra is perhaps more open than some other orchestral environments and in several instances players felt able to be openly critical of my conducting.

Second, my attention during rehearsals was very much on the task of rehearsing and performing, rather than on observing the orchestra from the outside. From a researcher's perspective this disadvantage was mitigated by being able to review the video recording, but as a result it did take somewhat longer to identify clips to use in the surveys despite having had an assistant keep detailed notes on the rehearsal process. Lastly, there was the concern that the orchestral players would feel coerced into participating in the research project. This was addressed by communicating clearly both verbally, and on the consent form, that participation was optional, and this enabled several musicians to anonymously decline to participate.

There were, however, some significant advantages. First, having been actively engaged with the music-making and in communication with the other musicians in the short video excerpts used for the surveys, I retained a holistic experience of what was happening at that time, particularly regarding the embodied knowledge that came from being physically engaged with the production of sound. Being able to compare participants' comments with my own sensory experience of the same moment opened a window of

understanding, what Bresler (2006) might call an 'empathic understanding'. Although such an immediate connection to the group experience was not available to me as an observer in the other studies, the experience of having taken part in the study in this capacity helped me gain useful insights into players' commentary throughout all the orchestra studies strengthening my 'emic'/'insider' perspective.

Second, I responded to each of the surveys as a participant prior to viewing any of the commentary from the other musicians. Through the process of making comments myself, I could observe whether I was reporting thoughts and experiences that had occurred in-the-moment or whether I was responding to what I saw happening in the video. While I permitted myself to take the surveys without attempting to monitor my responses in this regard, when I reviewed the comments later, I was able to see how my responses shifted between the two perspectives. Although it was clear that some of the comments were observations made from watching the video, other comments highlighted how complex thoughts and experiences can occur within extraordinarily short spaces of time while playing or conducting. This helped me to recognise the potential for comments left by others to represent in-the-moment experiences rather than assuming that such complex thought processes were a result of after-the-fact reflection on what they saw in the video.

Other more practical benefits included the ability to take rehearsal time to thoroughly explain the research project and how the online reporting system worked; and a relatively high response rate as many of the musicians were willing to contribute to the research.

2.3.3.2

Consent

In order to retain the anonymity of individual responses, the orchestras which agreed to participate in the study will also remain anonymous. The professional-amateur-skill level profiles of the participating orchestras are as follows: one UK-based fully professional freelance orchestra, one UK-based fully professional contract orchestra, one Southern England mixed professional and amateur orchestra (highly skilled), one Southern England amateur orchestra (less skilled), one Southern England amateur orchestra (highly skilled), and one US-based mixed professional and amateur orchestra (highly skilled).³

Once an orchestra's administrators agreed that the orchestra as an organisation would take part in the study, consent needed to be obtained from each individual. A participant information letter was circulated to all orchestral musicians via email and hard copy two to three weeks before the study was to begin and an individual in the orchestra's administration would agree to act as a liaison. Potential participants were encouraged to ask questions in advance or to voice any concerns either to the liaison or to myself directly. Where possible I visited the orchestra a week or two in advance of the first scheduled date of data collection to explain the study and be available for questions.

There were not many concerns, but where they did arise they tended to be

³ Although the US orchestra represents a cultural outlier, the benefit of obtaining data from this group was deemed to outweigh the potential cultural differences.

connected to comment confidentiality and the future use of the video recording, and were straightforward to address. The consent form enabled participants to consent to the project on two levels: first, to agree to be video recorded as part of the research; and second, to be invited to leave comments on the online system about their experiences by furnishing an email address through which they would receive an invitation to MERID and the ability to view the video recordings.

2.3.3.3

Video recording capture

Each study was carried out over the course of an entire rehearsal-performance cycle, or, if that was not possible, over several rehearsals leading up to a concert. As described above, two video cameras were placed to capture an entire view of the orchestra from different angles. In every case I attended the entirety of each rehearsal and performance and kept a log of the rehearsal process. Most importantly I kept track of the video time-code and what was being rehearsed at what time to a second's accuracy to enable quick retrieval of the sections of rehearsal that would work well for survey purposes.

The goal was to post video clips of between two and three minutes in length. Occasionally the clips were slightly shorter or longer depending on the content and a good stopping place in the music or rehearsal process. This time limit was selected because it was long enough to capture a cohesive part of the piece being rehearsed while keeping participants' attention focused on the same short excerpt. It was also important that the entire commenting process could be completed in 5-10 minutes to encourage as much active

participation as possible. Specific excerpts were selected on pragmatic grounds: maximum number of players in the orchestra involved at that moment; a cohesive 2-3 minutes of playing; or a section with short stops and starts and talking that still had at least a minute or more of playing in it. I also tried to avoid posting excerpts where obvious or particularly embarrassing mistakes were made by the players or the conductor.

After each video recording session, I processed the video as quickly as possible using iMovie and then built the surveys in MERID by linking the video from YouTube and creating a prompt. The surveys were available to view and comment on by noon the day following a rehearsal or performance. On occasion, technical issues delayed this for a few hours. Participants were notified via email as soon as the survey was available online. Not all participants were able to respond quickly to the surveys due to busy schedules (particularly the professional musicians), but most did within a week of the survey being made available.

2.3.3.4

Designing the surveys

One of the more challenging aspects of the study design was to construct prompts which assisted participants' understanding of what sort of commentary was desired without being prescriptive about the content of the comments. There is some inconsistency within the first two orchestra studies where I opted to tailor each of the prompts to the specific video clips based on my knowledge of the situation and the repertoire being performed. It was thought that this might keep participants engaged from survey to survey by

stimulating them to think about their experiences in different ways. For example, in Orchestra Study 2, participants were prompted as follows:

In watching the video now, try to recall how your part may have contributed to the character, texture or shape of this particular performance. Was there anything you saw, heard or felt that prompted you to respond in a particular way?

On reflection it was not clear if the tailoring helped facilitate the commentary to any significant degree and it became clear that changing prompts had the potential to compromise the ability to compare responses across the orchestra studies. All further surveys employed the prompt given below, which removed the language about musical character and shape and opened up the possibility for a wider range of experiences to be expressed while still encouraging players to comment about their own experiences within the context of the group's dynamics.

Please describe in as much detail as possible what you can remember thinking about, experiencing, or focussing on at this point in the rehearsal [or concert]. Did you see, hear or feel something that made you respond in a particular way?

2.3.3.5

Feedback about the research process

Directly following the second case study, an online questionnaire was circulated to all participants asking them to rate their experience with the research process and with MERID. 90% of respondents reported there was little or no impact on their focus during rehearsals due to participation in the project.

Over 60% of respondents indicated that they had learned something new about their approach to orchestral playing during the study and those respondents who did not actively take part in the research indicated that this was only due to time constraints, rather than to any objection to the research or the research process. This was reiterated to me numerous times in person over the course of these studies through repeated apologies from musicians who did not have time to take the surveys or asked specifically for extensions to the week deadline so that they could leave their comments.

2.3.3.6

Limitations of the data collection method

There are several limitations to this data collection method. First, there is no opportunity to clarify the meaning of comments left on the video recordings. Second, not everyone in the orchestra responds to the invitation to take each survey nor do they respond to the exact same place in the excerpt, limiting triangulation of perspectives to some degree. And third, the video capture system at present does not allow for a detailed view of individuals nor for a sufficiently quick turn around to allow the online surveys to be available instantaneously so as to obtain the freshest responses from participants.

It should be noted that obtaining information about the experiences of individuals while they are involved in playing in an orchestra has its challenges, and this study relied on self-reports from participants on their experiences of past events (response times varied from 12 hours after the event to several days later). It has been widely argued that musical performance involves both unconscious (embodied/intuitive) and conscious

(reflective) cognitive processes and given this, there are undoubtedly aspects of experience for the orchestral musician that are inherently un-reportable. However, the MERID data demonstrates that through video-stimulated recall participants may have a great deal of access to nuances of experience and thought processes at specific moments during a rehearsal or performance episode as the following comment illustrates:

The ascending scale which happens four times has always attracted me enormously, so I'm very much in my own world focusing on my bow control and the overtones I want to produce. The harmonic progression is delayed to the 4th beat of the bar, so I enjoy the hanging feeling tremendously as we ascend. I choose another fingering than the norm, so travel up the D-string in order to make a vibrato accent stick out on the top note. Hearing it excites me, but there's also a sentimental element to it, which I feel is enhanced when the trumpet takes over the theme. The somehow relentlessness of the cello scale is highly sensual, I feel. The following material is a build-up of drama. And it's quite a bit of chopping away, tiring stuff. 100% commitment demands a good bow technique. I also decide whether I should play the *divisi* line as double-stops. For sport and power, really. I take note of our loud unison passages with the 1st vlns so I search contact with either [associate leader] or [leader] next to me. (Cello-1B)

Some players' comments also indicated that they don't necessarily think in language, but are able to translate their thoughts into words when called upon to do so:

Listen, catch the line, our entry, at the right time...(thinking as music and not as words) (Viola-2B)

Thinking of the bright D major about to happen and how I will adjust the way I use my bow to make a bright lifted sound rather than the heavy bow of the section before. The thinking here or in any of my comments is not in words though, it is in gesture, movement and feeling and listening and responding. It is just a series of making decisions that happen in each second. (Cello-2A)

My own experience as a participant in one of the first case studies resonated with both of these participants' experiences. In some cases I was able to re-live quite vividly moments represented on the video and report in detail about what I was experiencing at that time during the rehearsal or

performance as I translated sensations and bodily movements into words. Although not all participants reported their experiences in as much detail, those that were able to articulate their embodied experiences demonstrated that such experiences are not wholly inaccessible.

2.3.4

MERID DATA ANALYSIS and FINDINGS

2.3.4.1

Analysis method

Multiple attempts at thematic coding of the commentary in NVivo illuminated that the data obtained from the MERID interface was unique and not conducive to the types of coding practices often used in qualitative data analysis. Comments left on the MERID system were often only interpretable—or only gained their full meaning—when taking into account the specific musical material being played at that moment, the precise rehearsal or performance context, and the comments made by other participants around the same time, requiring that all of these components be re-assembled in order to fully understand the significance of the commentary. For example, participants often used fragmentary and situation-specific language (e.g. ‘trying to make the A louder than the D’ Oboe-1), making it a challenge to analyse the comments outside their specific environment. In particular, it was important to retain the parameter of ‘time’, and the interactions that were illuminated through the triangulation of the temporally related commentary. Coding in NVivo effectively disassociates information from the relevant metadata and contextualising information when brought together into coding categories, and the creation of fixed diagrams (even those produced by sophisticated diagramming software like yEd, for example) lose the crucial component of time.

Without a pre-existing analysis protocol to draw on, I sought new ways of coding and visualising the data. Utilising the graphics and animation tools in PowerPoint, I was able to represent comments in temporal and spatial relationship to one another, as well as model and explore more dynamic coding categories. Through the process of coding in NVivo and the building and reviewing these dynamic maps (Action Maps), I kept returning to three key questions: What did musicians report focussing on when playing? What types of actions did musicians' comments describe or suggest? And what might have influenced or prompted them to act in a particular way? While NVivo was still useful for coding the commentary for 'content' (specifically 'what' musicians reported focussing on in their commentary) making it possible to observe the relative frequency of reports on different topic areas (such as ensemble coordination or expression), the Action Maps made it possible to map the comments' implied actions and sources of influence. The findings from the interviews were particularly instrumental in identifying potential sources of influence in the MERID data.

2.3.4.2

Development of a theoretical framework

Through a fairly lengthy process of experimentation and revision of the Action Maps, a tripartite theoretical framework began to emerge. The content of the comments, such as whether musicians were focused on issues of ensemble coordination or musical character, for example, were able to be grouped into six Topics of Focus; the types of action expressed by the participants' commentary cohered into six distinguishable categories, or Modes of Action; and drawing on the influences that were illuminated in the

analysis of the interviews, it was possible to identify a number of Systems of Influence which mediated participants' real-time, moment-to-moment actions.

Although the analysis was largely inductive, with the aim of allowing themes to surface through the reading, mapping, and re-reading of the MERID data, the overall approach was an iterative process drawing on the insights obtained from the larger pool of qualitative data collected for this research. Unlike information gathered from individual interviews or questionnaires, the MERID comments enable a view into the tacit exchanges and experiences of many orchestral musicians simultaneously during the same music-making episodes. The accumulation of these individual experiences facilitated the construction of a more objective account of the actions and interactions that take place in real-life playing situations, rather than primarily relying on musicians' individual analyses of the group experience.

The resulting Framework of Influence and Action in Orchestral Performance (FIAOP) aims to illuminate the variety of influences that shape musicians' actions during the process of rehearsal and performance and explain how these actions translate into the expressive parameters that characterise orchestral performances. Several Action Maps detailing exchanges from the case studies are available on a DVD that accompanies this thesis both in PowerPoint (.ppt) and in movie format (.mov). Stills from the PowerPoint presentations can be found in Section 3.4.

The following section of this thesis begins with an overview of the Framework and then discusses each component of the Framework and its basis for inclusion through examples from the MERID and interview data.

3.0

OVERVIEW:

Introducing a Framework of Influence and Action in Orchestral Performance

3.0.0

INTRODUCTION

The tripartite Framework of Influence and Action in Orchestral Performance (FIAOP) identifies the parameters of performance that are the focus of musicians' attention (Topics of Focus [ToF]), the types of actions in which they are engaged as they realise these parameters (Modes of Action [MoA]), and the underlying influences which shape their actions and decision-making in rehearsal and performance (Systems of Influence [SoI]).¹ The following section will offer a brief overview of the framework in order to introduce the components and explain their relationship to one another. Sections 3.1, 3.2 and 3.3 will describe in more detail each of the framework components and demonstrate how they have been identified through the data. A series of Action Maps in Section 3.4 illustrate how the components are enacted in real-world scenarios taken from the MERID case studies.

In the examples which follow, the authors of the MERID comments are identified by instrument and position; for string players, the number following their instrument refers to the desk they were sitting at, and the

¹ Please refer to the Glossary on page ix for a list of acronyms used in the discussion of the FIAOP.

letters A and B denote whether they were the outside or inside player. The examples are taken from multiple case studies and surveys, and for reasons of confidentiality the musicians' orchestras are not identified (even with pseudonyms). Unless specifically indicated, comments given in sequence should not be read as if they have come from the same performance situation. While attempts have been made to present any single comment only once, on occasion comments have been utilised more than once in order illustrate different aspects of the framework. Additionally, original spelling and grammar have been retained, except where it might impede understanding.

3.0.1

FIAOP OVERVIEW

The following overview is designed to introduce the three main components of the FIAOP and briefly illustrate their relationship to one another.

Figure 3.0.1-1 - Topics of Focus

TOPICS OF FOCUS	
Ensemble Coordination	<ul style="list-style-type: none"> • Temporal Coordination • Stylistic Coordination
Musical Character	<ul style="list-style-type: none"> • Musical Time (tempo, tempo changes, nuances of timing, note duration [articulation], and rhythmic realisation) • Volume (dynamics and balance) • Quality (articulation [attack/emphasis], pitch [intonation/vibrato], tone [timbre/blend])
Technical Issues	<ul style="list-style-type: none"> • Physical Engagement (bowing, fingering, breathing, etc.) • Instruments (idiosyncrasies, malfunctions, etc.)
Assessments and Feelings	<ul style="list-style-type: none"> • Assessment of own and others' performance • Feelings about the music or the experience of playing
Management Issues	<ul style="list-style-type: none"> • Rehearsal management • Working conditions
Miscellaneous	<ul style="list-style-type: none"> • Miscellaneous (thoughts beyond the rehearsal/performance context)

The ToF (*Figure 3.0.1-1*) represent the 'what' of a musician's focus at a particular time and have been collated from the MERID commentary.²

Although these categories are disaggregated here for the purposes of analysis, in practice they are often interdependent: participant concerns with 'when' to produce a sound might overlap with 'what sort' of sound they are trying to produce, how that sound relates to others around them, or the effect of a particular tempo on the playability of a passage. For example, a musician's report that they were 'coming in cleanly and with the rest of the orchestra'

² The obvious caveat here is that while they may not account for all possible concerns in all possible orchestras, they do represent the actual issues reported by orchestral musicians across a wide range of contexts.

while ‘trying to get correct dynamics and style’, reflects concerns with Ensemble Coordination as well as Musical Character.

Figure 3.0.1-2 - Modes of Action

MODES OF ACTION	
Leading	<ul style="list-style-type: none"> • Deliberately attempting to influence others through musical, verbal, or non-verbal communication
Asserting	<ul style="list-style-type: none"> • Playing in a particular way <i>without</i> deliberately trying to lead others and not in obvious response to a direct source of influence within the rehearsal or performance setting
Responding	<ul style="list-style-type: none"> • Choosing to play (or gesture) in a particular way on account of a direct (sounding) musical influence (also includes complementing and blending)
Matching/'Following'	<ul style="list-style-type: none"> • Attempting to play the same as others, including matching pulse (included here is the notion of 'following')
Following Directions	<ul style="list-style-type: none"> • Playing in a particular manner in an attempt to realise verbal, gestural or written instructions
[Assessing]	<ul style="list-style-type: none"> • Analysing or critiquing (either positively or negatively) actions and sounds of self and/or others with an unknown action outcome

As with the ToF, the MoA (*Figure 3.0.1-2*) have been identified from the actions expressed or implied in the MERID data, and are defined and grouped within the framework by how they exhibit differing amounts of leadership, assertion, followership, imagination and negotiation. In other words, the MoA—Leading, Asserting, Responding, Matching/'Following' and Following Directions—represent different expressions of individual agency within a group environment. Rather than mapping directly to specific roles in the ensemble, musicians throughout the orchestra may be engaged in multiple modes of action simultaneously, as it is not uncommon to be both Matching and Leading at the same time. The final MoA, [Assessing], is listed in brackets, as it is a type of 'action' that was frequently reported, but not always paired with actual sound production. By including [Assessing] as an MoA, it is possible to place each of the 1500+ comments within at least one of the action categories

Figure 3.0.1-3 - Systems of Influence

SYSTEMS OF INFLUENCE	
Prime Directive: 'thou shalt play together'	
Cultural-historical	<ul style="list-style-type: none"> • Institutional Hierarchy (nominal hierarchical structure of orchestra) • Accepted Performance Conventions (e.g. composers' intentions, conventions for realising musical notation, local conventions within an orchestra) • Training and Experience • Commercial and Economic Forces (e.g. rehearsal schedules, artists, time)
Individual(s)	<ul style="list-style-type: none"> • Musical Authority (persistent or in-the-moment) • Personal Engagement (personal ideas, feelings, impulses) • Interpersonal Relationships
'Musical'	<ul style="list-style-type: none"> • Musical Context (role of a particular part within the musical texture) • Present Soundscape (the sound being produced by the ensemble)
Material	<ul style="list-style-type: none"> • Space Acoustics • Orchestra Arrangement • Instruments • Bodies

At the core of this framework are a number of SoI (*Figure 3.0.1-3*), which, at the most fundamental level, musicians are perpetually trying to negotiate in order to accomplish the overarching shared goal of cohesion—of 'playing together'. Thus the Prime Directive (PD) governs much of the decision-making about which SoI will be adhered to in a given moment. While this may appear overly simplistic at first glance, the fact is that playing together in a large group is incredibly challenging and can be quite a complex activity depending on the musical materials (e.g. intricately interlocked rhythmic or harmonic parts). Perhaps an analogy can be made with a living organism with its differentiated but interdependent, dynamic and highly coordinated components (orchestras have frequently been described as a many headed monster!). While some music might be akin to a single-celled organism like an amoeba, other pieces might resemble something more complex like a bird or a bear. When a critical component of the organism (a contractile vacuole, wing

or jaw, for instance) fails to function cohesively with the other parts, the survival of the organism is threatened. During intense moments, such failures can cause responses like these examples from some of the case studies:

Hope everyone is watching and really listening. Dangerous. Very turbulent like hitting turbulence in an aircraft!! (ViolinII-2A)

Oh god we seem to be coming adrift in ensemble I'm just going to stick with the leader and pray!!!! (Viola-1A)

This instinct for survival—the value of cohesive playing within the orchestra—is a central motivator that tends to override other influences. Perhaps less dramatically, musicians describe this process as one of trying to be ‘right’:

Was wondering what to do here to be right. Following the conductor was only partly useful since we all react in different ways to what we see at a moment like this. Luckily for me I can see the leader so try and play with her. End result in general was quite messy. (Viola-1B)

Being ‘right’ is not easy to define, however, and not everyone in an orchestra may even share the same perspective on what constitutes achieving the PD or how it ought to be accomplished. Additionally musicians *do* have other agendas and can behave in ways that that make it difficult for others in the group to achieve or maintain of the PD. It would seem that such divergence among players should be ameliorated by the guidance and ‘singular vision’ of a conductor, but the reality is not so simple. While Institutional Hierarchy may have a significant role to play (such as in the influence of the conductor’s authority), it is only one of many competing factors that influence the decision-making and performance of individual musicians as will be demonstrated in the following pages.

The SoI that have emerged from the data cohere into four categories according to the nature of their 'source': Cultural-Historical, Individual(s), 'Musical', and Material. SoI grouped under Cultural-Historical include the Institutional Hierarchy, Accepted Performance Conventions, Training and Experience, and Commercial and Economic Forces. Individual(s) SoI are Personal Engagement, Musical Authority, and Interpersonal Relationships, all of which are operationalised by the choices of individuals in the relative 'present'. Those grouped under 'Musical' encompass the influence of the Musical Context (the role of a particular part within the overall musical texture), as well as the Present Soundscape (the sound being produced by the ensemble at that particular moment), while those categorised as Material include the Space Acoustics, Orchestra Arrangement, Instruments and the actual Bodies of the musicians themselves.

Although they each have distinct characteristics, and it is useful to disaggregate them here, the SoI are not completely separable as they shape one another over the course of time (for instance, the understanding of a musician's role in the musical texture is inherently shaped by their Training and Experiences as well as culturally Accepted Performance Conventions) and are contingent on one another (e.g. the Present Soundscape and the effects of the Space Acoustics are intertwined). It is of course arguable that musicians are subject to *all* of these influences simultaneously at any given moment. However, depending on circumstance, some become significantly more prominent than others, becoming the primary influence(s) that shape the musical product of the individual at that time.

The SoI do not represent a hierarchy or set of priorities, but are better conceptualised as schemas which mediate musicians' actions: changing contexts involving different individuals and specific musical situations will prompt musicians to engage with them in different ways. For instance, the musician quoted above, who opted to follow the leader rather than the conductor, was still engaged with the SoI of Institutional Hierarchy even if their action appears on the surface to be a subversion of the explicit chain of command.

3.0.2

TENSIONS BETWEEN THE SYSTEMS OF INFLUENCE

One of the defining characteristics of this framework is the identification of the tension inherent between the SoI. It is possible to think of this tension as the ‘animating’ impetus of the framework, compelling musicians to use particular MoA when engaged with various performance parameters. Dobson & Gaunt’s research alluded to this tension through the commentary of their participants:

...even if you’re with the conductor and with the cellos or whatever, ...even if I’m right to all intents and purposes as far as the score is concerned, [...] I’m wrong because I’m not with the first horn. [Participant 8] (Dobson & Gaunt 2015:8)

Although we do not know the instrument and position of this participant for certain, it is likely that this is a section horn player expressing how the tensions between Institutional Hierarchy and even the two different ‘Musical’ influences (both the Musical Context of their part within the score and the Present Soundscape) make their ability to achieve the Prime Directive—to be ‘right’—more difficult.

The tensions between the SoI are not the exception to the rule, but rather a fundamental condition of orchestral performance. To illustrate this it is worth imagining how it would be if the SoI were in complete accord with each other:

All musicians, including the conductor, share the same vision for the sound of the performance (there are no personal influences to be

repressed). The conductor's job is simply to 'rehearse out' the unintentional deviations from this shared vision and then affirm this vision gesturally. All musicians are able to interpret the gestures in the same way and there is no dissonance between the conductor's directions and information coming from other sources (other section principals or musical information). Everyone can hear themselves as well as the orchestra as a whole, and instruments behave as expected at all times. All training and previous experiences have developed the musicians exactly in the way needed to play in this specific manner at this specific time and everyone in the orchestra agrees that this is the most correct way the music can be played. Everything happens in performance as it did in the rehearsal and there are no unexpected events to react to.

The point of describing this clearly fictitious scenario is to highlight how unlikely it would be to find such concordance between the SoI for all the musicians in an orchestra at any one moment, let alone for an entire performance. In reality, orchestral musicians are constantly negotiating competing SoI and continually assessing what is happening around them in order to make decisions about what to do at any given moment. Significantly, however, musicians often rely on automatic and often subconscious processes to respond and engage with these different influences moment-by-moment in the flow of performance. As one player noted:

It's very hard to know what to do in the concert as you are playing about 6 notes per second so your decision time is probably a third of a second or so. (Viola-1B)

3.0.3

PUTTING THE PIECES TOGETHER

Now that the components of the framework have been introduced, here is a preliminary example of a typical performing situation in order to briefly illustrate the basic structure of the framework and how it is operationalised. The scenario given here, while not taken directly from the data set, represents a synthesis of concerns expressed by a number of clarinet players in different case studies.

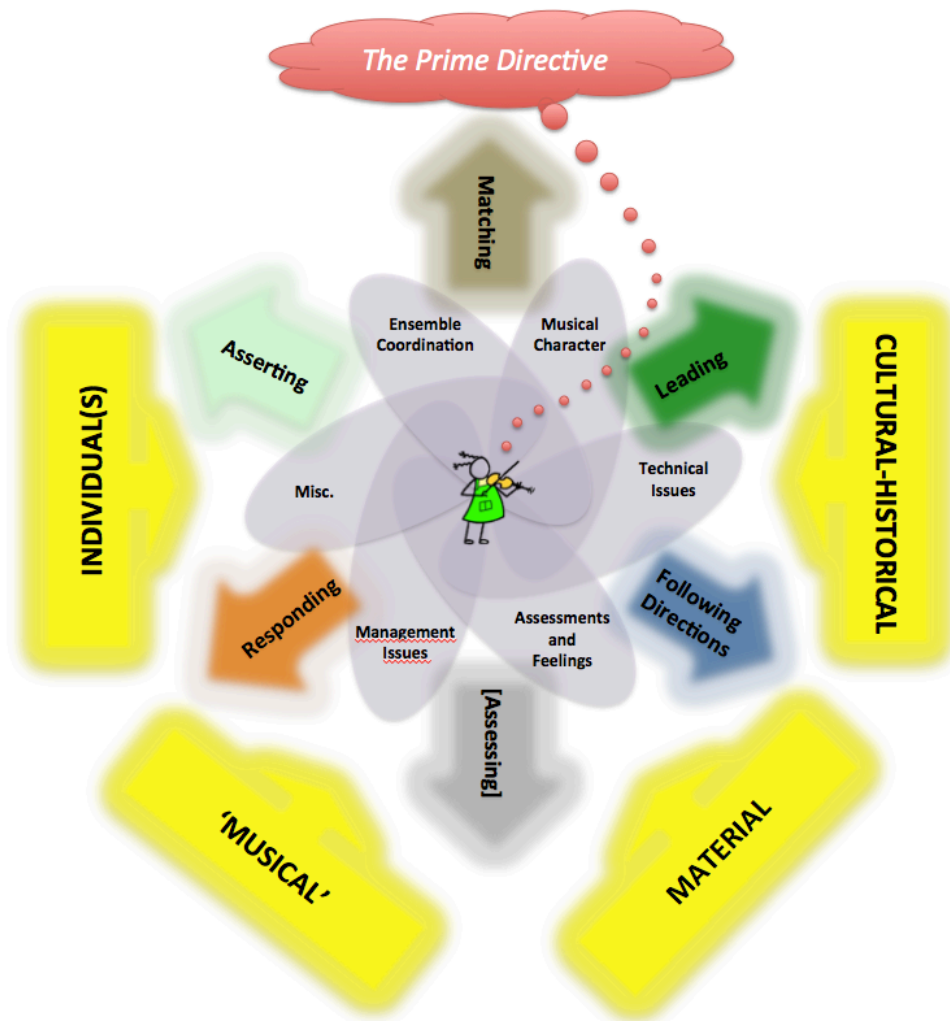
A principal clarinettist is playing a passage of repeated staccato quavers with the rest of the wind section. She is giving a lead to her 'second' player for precise timing, note duration, attack, intonation, dynamics and tone, while simultaneously negotiating the exact length of the notes and precise timing of her shared part with the other members of the woodwind section through an iterative process of playing and listening. At the same time the clarinettist is responding to the gestures of the conductor in combination with an awareness of the dynamic level of the principal musical line in the violas in order to adjust her own dynamic level to accompany the violas within the musical texture.

In this example the musician is engaged in negotiating the ToF of Ensemble Coordination (Temporal and Stylistic) as well as several aspects of Musical Character through a variety of MoA, such as Leading, Matching/'Following', and Responding, within the primary SoI of Institutional Hierarchy, Musical

Context, and the Present Soundscape. While in this generic example the course of action may seem clear, in real-world situations there may be a multitude of contingencies which complicate this scenario: the other wind players may not come to agree on note lengths, the second player may not be matching the lead of the principal clarinetist, the conductor may fail to indicate the dynamic level needed, and the acoustics might prevent the player from clearly hearing the viola line that she is working to accompany.

Another way of visualising the relationship between the three main components of the framework is offered in the diagram below (*Figure 2.0.3-1*). This shows how the overlapping ToF are expressed through the different MoA while the SoI exert influence on the individual who exhibits an underlying preoccupation with the PD.

Figure 3.0.3-1 - Framework of Influence and Action in Orchestral Performance



Within this initial overview I have proposed a taxonomy of the *what*, *how*, and *why* of decision-making in orchestral performance as well as how these components interact to form a framework for understanding influence and action in orchestral environments. As indicated in the introduction to this section, the categories for the FIAOP have not been arrived at theoretically (or indeed arbitrarily), but have been identified through the analysis of a substantial body of empirical data collected over the course of this research. The following sections are dedicated to defining each of the framework components in more detail as well as illustrating the basis for their inclusion through examples from the data.

3.1

SYSTEMS OF INFLUENCE

3.1.0

INTRODUCTION

As discussed earlier, one of the primary reasons that the authorship of orchestral performance is overly attributed to the conductor is due to the apparent power and control that that position wields over the group. Although the extent of this power has been challenged, alternative power models which take into account cultural, historical and material influences as well as interpersonal power relations have yet to be offered. While a consideration of anthropological theories of agency which grapple with questions of power is beyond the scope of this thesis (see Ortner 2006 for an overview of 'practice theories' and Hallam & Ingold 2007 for their theory of 'cultural improvisation'), in terms of orchestral practice, it is productive to consider how such power relations influence individuals' decisions about how and when to play their parts. By tracking these influences it is possible to gain a more nuanced understanding of where power resides in an orchestral setting, as well as an understanding of how the effect of such influences translates into the attribution of authorship for performance outcomes.

The SoI were identified through analysis of the questionnaire, interview and MERID data. They were further refined through dialogue with orchestral musicians, both those who had participated in the study and those who had

not. In addition to the Prime Directive, the SoI have been grouped into four over-arching categories: Cultural-Historical, Individual(s), 'Musical', and Material, and each will be discussed in turn in the following sections. As described in the overview, the SoI have been disaggregated here for the purposes of identifying them for the Framework, although in practice they are often interdependent and cannot be cleanly separated from one another. It is therefore possible that readers will identify additional and/or other influences at work in participants' commentaries than the ones I have elected to focus on.

3.1.1

PRIME DIRECTIVE

As some space has already been given in Section 3.0 to emphasising the importance of the PD, it will be touched on only briefly here. It is worth noting that Boerner *et al.* have proposed that the defining feature of quality orchestral performance is ‘the degree of synchronization between all musicians’ such that an ‘interpretation’ is perceptible (Boerner, Krause & Gebert 2004:467). Like Dobson & Gaunt’s musician quoted in the overview, who described the need to negotiate a range of influences in order to be ‘right’, it was clear from my own interviewees that this was an overriding concern. As Charlie stated earlier: ‘A good orchestra’s priority is always going to be to play together as a unit, first and foremost, regardless of who’s in front of them’ (see pg. 193 in Section 2.2). And as Jack described in his interview, the power of the PD can mean that people are ‘scared’ to be the first to play lest they disrupt the PD for the entire ensemble (see pg. 194 in Section 2.2). While maintaining the PD might be a matter of livelihood for professional ensembles, amateur musicians expressed the same concerns. For example, James stated he believed when the conductor and orchestra come ‘adrift’ the priority is to ‘play with the orchestra’ (see pg. 159 in Section 2.2).

Although details of Ensemble and Stylistic Coordination will be discussed in more detail in the section on the ToF, it should be noted here that observing the PD does not necessarily mean that there is always a slavish adherence to vertical temporal coordination across all ensembles. Indeed, the working definition of ‘playing together’ will differ from ensemble to ensemble and

situation to situation, depending on repertoire, styles and artistic choices, among other influences (as Thomas's description in the interviews of working with Stokowski illustrates [see pgs. 182 and 192 in Section 2.2]). Even the degree to which individuals understand what it means to 'play together' may vary from person to person, depending on their skill and level of awareness of what is happening around them.

This idea of being 'together' has some resonance with Keil's theory of Participatory Discrepancies, commonly referred to in the literature as 'PDs' (Keil 1987, 1994, 1995). For Keil, the productive tensions created by being 'out of time' and 'out of tune' (Keil 1987:279)—the discrepancy between temporal and textural unanimity in music-making—is what prompts participation and characterises musical genres and individuals styles. Although PDs have been primarily explored in the context of 'groove-based' musics, it may be that in orchestral performance such discrepancies are at the core of compelling and expressive performance. Similar to the orchestral musicians in this study, Keil notes that in his research with jazz drummers, bassists, keyboard players and guitarists, that 'most musicians conceptualize their work as playing "together" rather than as in consistent and deliberate tension with each other' (Keil 1995:8). The PD (Prime Directive) differs from PDs (Participatory Discrepancies) in that it is not concerned with the degree to which individuals are 'out of synch' with one another, but rather the PD is frequently the over-arching influence which prompts musicians' decision-making regardless of what performers agree (tacitly or otherwise) constitutes 'playing together' in a particular context.

While the influence of the PD is particularly strong and is a guiding principle that shapes how individuals engage with the different SoI, it can also be in tension with other influences, particularly the Institutional Hierarchy. An individual may feel the need to maintain the PD with their section principal, but doing so will mean that they are not then coordinated with other elements of the ensemble. The Institutional Hierarchy and other Cultural-Historical Influences will be discussed in the following section.

3.1.2

CULTURAL-HISTORICAL INFLUENCES

It is arguable that it is impossible to disaggregate Cultural-Historical influences from any of the other SoI. Certainly *all* actions performed by musicians in an orchestral context are fundamentally influenced by cultural conventions which are as much embedded in the embodied knowledge musicians develop through training and experience as much as they are in players' conscious understanding of how things 'ought to go'. For example, the influence of the Musical Context is significantly, if not wholly informed by conventions of which the mutual acceptance makes modern orchestral practices possible. But despite these observations, to see all actions as products of Cultural-Historical influences fails to recognise the important role of the material environment in which musicians are embedded and suggests musicians are passive receptors of cultural influences rather than actively engaged in constructing them. As Hallam and Ingold have argued, 'following a tradition [...] is a matter not of replicating a fixed pattern of behaviour, but of *carrying on* from predecessors' (Hallam & Ingold 2007:7, emphasis in original). The Cultural-Historical influences included in the Framework will be described in more detail below with illustrations from the data.

3.1.2.1

Institutional Hierarchy

The Institutional Hierarchy in an orchestra is perhaps its most defining feature with the nominal hierarchy proceeding from the conductor to the leader (or concertmaster), to the principal players and through to the section

(rank-and-file) players. There is also an additional layer in the hierarchy within each of the larger instrument families. For example, the principal flautist will be the 'nominal' leader of the wind section while the principal of the first violins will be the leader of the strings. Such a distinction is not as clear in the brass section, as an interviewee described. The first trumpet will fill this role to some degree for the 'heavy brass' while horns will be more independent. This structure is extremely important in facilitating musical coordination, but also serves as a social structure in which individuals have more or less 'authority' to give directions to others, either verbally or to lead 'musically' through their playing and gestures.

Yet the Institutional Hierarchy is *nominal* in the sense that the power structure does not always follow these channels: influences within this system may come from multiple locations at once, or 'levels' in the hierarchy might be passed over in favour of others based on the specific needs of the situation. While on the surface it appears that the orchestra is a 'flat' organisation with direct communication from conductor to players, a significant tension within Institutional Hierarchy resides in the conflict between adhering to one's section and following the lead of others further up the hierarchy, particularly the conductor.

The influence of the conductor

Since the aim of this study has been to track influence and action through the experiences reported by musicians, the influence of the conductor on the decision-making of individual musicians in specific real-world scenarios has been formed from this bottom-up perspective, and does not purport to offer a

more comprehensive view of conductors' roles. In this study, conductors' influence within the Institutional Hierarchy emerged as multi-faceted and simultaneously unconditional and contingent: While their institutionally derived authority gave them control of the rehearsal situation, in that they retained the exclusive privilege to start and stop playing during rehearsal and control what aspects of the music were rehearsed, their 'interpretive' or 'musical' influence (whether exerted verbally or gesturally) was far more contingent. Although it is frequently stated that an orchestra will assess a conductor in the first few minutes and either accept or reject their authority—what Atik identified as 'the testing phase' (Atik 1994:24, see also Dineen 2011)—what was apparent in all the MERID case studies is that this process is actually much more complex: a conductor's influence was never either absolute nor completely undermined over the course of the rehearsal and performance process. This reflected Dineen's findings, that 'power is never settled ultimately, but is instead the constant subject of negotiation' (Dineen 2011:139).

Moreover, the conductor's ability to influence musicians with words or gestures did not hinge solely on whether or not musicians made positive or negative appraisals of their skills or ideas, but such directives were weighed against other SoI, such as other sources of influence within the Institutional Hierarchy, the Present Soundscape, Musical Context, or as Faulkner described it 'information which allows them to engage in lines of concerted action' (Faulkner 1989:290). The interviewees also noted that the influence of the conductor could also be affected by their relationship to the orchestra (e.g. a long-term music director versus a guest conductor) as well as whether or

not the conductor had the ability to hire and fire individual musicians. Such influence was identified as shaping the 'default settings' of an orchestra's sounds and playing styles as well as affecting musicians' motivation for following (or in some cases ignoring) conductor directives in order to give an impression of compliance.

Although conductors were invited to participate in the MERID surveys, only three of six conductors responded, leaving just a few comments. It would have been interesting and informative to have had more data from conductors in order to better triangulate perspectives about what might have been taking place at specific moments in the video clips. Nevertheless, the commentary from players about conductors and the few comments from conductors left on the MERID interface still offers a unique perspective on conductor-performer exchanges within specific performance and rehearsal contexts.

Of all of the comments left on the MERID system by instrumentalists, around one fifth of them included references to the conductor. The commentary ranged from accounts of watching the conductor for entries (fairly frequent) and being positively influenced by their gestures to play with a particular musical character (very infrequent), to accounts of needing to ignore the conductor completely in order to maintain the PD (again, fairly frequent). References to the use of rehearsal time and to previously verbalised directions from the conductor were also fairly common among conductor-related comments. Some conductors clearly enjoyed more positive relationships with

their ensembles than others, but none of the conductors wholly escaped criticism from the players.

The conductor's influence: stopping, starting and speaking

The conductor's influence in the rehearsal setting was felt through the way that they managed rehearsal time, and thus, what aspects of the music were rehearsed, affecting musicians' knowledge of what to expect during performance:

At the start of the rehearsal I was looking forward to playing through the entire piece. The previous day's rehearsing had been very stop/start, which gets very frustrating. Some conductors really micro-manage the music instead of imparting their ideas and trusting the musicians to do their job. By the time the concert came I was wishing we'd had more time just playing the piece. I was, however, very focussed but also quite on edge as I wasn't sure how some of the sections would fit together. It felt much more stressful than it should have been. (Horn-1)

Instrumentalists connected conductors' time management to their ability to convey ideas verbally and non-verbally to the orchestra:

[The conductor] probably rehearsed this opening passage over 30 times during the two days. At no point was he able to adequately express what it was he was after either verbally or with the baton. He ended up contradicting himself, asking us to play with no accents to make diminuendo through the bar, then suggesting we should play louder—all very confusing. What is abundantly clear from the three examples in the video clip is that the end result [the concert performance] was more together (probably due to people switching off in the rehearsal in frustration) but the quality of the sound etc. was almost identical. One could perhaps suggest that the 30 times played through were a complete waste of time and contributed to the lack of rehearsal in other parts of the piece. (Flute-1)

Verbal communication from the conductor was sometimes perceived to be a substitute for conductors' lack of technical skill to express ideas non-verbally, reflecting the interviewees' sentiments and research findings which have shown that both gestural and musical communication are preferable to verbal communication in ensemble settings (see Williamon:111):

He talks SO much nobody listens anymore. If he had the technique he could SHOW all these things. (ViolinI-6A)

Conductor talks way too much! Has trouble showing what he wants with gestures so talks instead. Others start to lose attention because he rambles on and concentration wanes making rehearsal long and tedious. We can't get on with truly listening and playing together because his lack of clarity creates chaos. (ViolinI-1B)

Despite these frustrations, the players' commentaries, in keeping with the questionnaire responses, suggested that it was not generally their place to bring issues to the conductor's attention or to suggest solutions, and even when they did they were not necessarily heard:

I find the acoustic in the [concert hall] too resonant for this music especially during the rehearsal as the temptation is for everyone is to play too loud in order to hear themselves. The balance is critical and it is not being addressed. (Oboe-1)

I was aware that the string rhythm was getting behind the wind and horns. Not much you can do about that as an individual but it might be worth mentioning (it wasn't!) (Viola-1B)

Levine & Levine suggest that it is the 'myth of the omniscient maestro' that continues to rule orchestral rehearsal protocols, preventing instrumentalists from contributing ideas lest they suggest a conductor failed to notice something:

This arrangement makes matters awkward for the orchestral musician who desires to improve the quality of the orchestral product. The musician must not challenge the conductor's tempi or interpretation; he or she cannot even suggest that there might be a pitch or ensemble problem, much less how the conductor might fix it. (Levine & Levine 1996:18)

Thus for the oboist who feels the balance is not being addressed, it would not be appropriate orchestral etiquette to either suggest that the conductor does not hear this issue or to ask one's colleagues to play softer. Again, Levine & Levine offer an anecdote which illustrates the crux of the issue:

What happens when a member of the orchestra asks the conductor a question is even more revealing. (Virtually every communication from a musician to a conductor in a rehearsal is phrased as a question, even when it is really a statement of fact or belief.) One of the authors once heard the principal clarinetist of a major American orchestra ask the conductor whether he wanted the notes with dots over them “short, or like the brass were playing them?” This rather complex statement masquerading as a question conveyed both the musician’s lack of respect for the brass players in question and scorn for the conductor’s failure to notice the problem. (Levine & Levine 1996:18)

In one of the cases studies, there was an exception that seemed to prove the rule regarding the conductor’s control over verbal communication during the rehearsal:

I was particularly enjoying the rehearsal environment here. It was very comfortable that players felt they could interject, add ideas, and debate a few corners. The product was increased awareness of each other. I felt happy to let this occupy more time 'not playing' than usual, because the knock-on effect would be considerable. (Conductor)

In the above scenario it is the conductor’s prerogative to allow this conversation to take place, indicating that she still controls the flow of conversation within the group.

Although the conductor may have the authority in rehearsal to start and stop the ensemble, control the flow of verbal communication, and tell musicians how they would like them to play their parts, once in the flow of performance this verbal aspect of their influence is necessarily curbed, and their influence now resides in their ability to engage in non-verbal communication with the orchestra and the residual effects of their verbalised instructions from the rehearsal process. In the MERID commentary, some players made it explicit that they were trying to play in performance as the conductor had requested during previous rehearsals:

In this passage I was trying to make a full but rounded sound. [The conductor] doesn't want a harsh, brash forte. So I wasn't playing that loudly, but trying to play with good tone. (Trumpet-1)

Remembering conductor's comment from rehearsal to bring this descending quaver line out and to broaden towards the end. (Cello-1B)

Tough to decide exactly how long these chords should be. Spread chords in this orchestra are notoriously ambivalent. I go for length of note and not worrying too much about the lower notes of the chord. Chord playing (the instruction of which has been requested by the conductor in the past on multiple occasions in the past) should always be divided to produce a better tone and so I generally stick to that, if in doubt. (ViolinII-3A)

The conductor's influence: gesture

The musicians' commentaries left on the MERID system that indicated responses to gestural information from the conductor were most frequently about issues of tempo and coordination, and less frequently about other aspects of musical character such as dynamics and quality, reflecting musicians' responses to the questionnaire. Musicians' comments also expressed that they sometimes felt the conductor's gestures did not provide helpful coordinating information and, even more negatively, that looking at the conductor would make it difficult for them to maintain coordination with colleagues. At other times, musicians couldn't tell whether or not the orchestra was doing what the conductor was trying to indicate with their gesture. More positively, some musicians noted that sometimes a great deal of musical information was being conveyed through the conductor's gestures, but unfortunately they were too engaged with reading their parts to be able to respond to them.

So while some musicians reported looking to the conductor to know where to 'place' their notes or to pick up on a new tempo:

At the start of the movement I am focussed on the tempo set by the conductor to correctly place the crotchets. (Clarinet-2)

Watch the conductor for *accelerando*. (Flute-2)

Relying very much on [the conductor's] beat, and listening to how the strings provide a rhythmic pulse to relate to (Bass-2B)

As frequently, musicians found the conductor's gestural communication to be inadequate in terms of knowing when to play, either on account of poor skills or because everyone will interpret the gestures in a different way:

The transition to the finale the conductor is wildly gesturing but not much help in the *accelerando* so I listen and watch the leader to try and stay together. (Oboe-2)

Was wondering what to do here to be right. Following the conductor was only partly useful since we all react in different ways to what we see at a moment like this. Luckily for me I can see the leader so try and play with her. End result in general was quite messy. (Viola-1B)

Musicians also reported that sometimes the conductor's gestures could be a distraction from being able to coordinate with colleagues:

I have to ignore the conductor in this spot as it's much better for me to listen in order to balance and be together with others. If I watch, I risk being too focused on what the conductor is doing and throwing things off. (Tuba)

During this section all 4 bassoons play a syncopated rhythm and it would have been very useful to have had a clear beat. As it was it was a case of listening and NOT looking... (Bassoon-2)

For those that did report that the conductor's gestures influenced the way that they characterised their part, they noted this was connected to phrase shaping, articulation and dynamics:

This is a place where I remember responding very directly to [the conductor's] motions. The larger movements helped us come out of the box and shape more. We have so much small motor work in most of this piece that it can be hard to switch gears and play with larger gestures. (Violin-1A)

At about 1'25 [the conductor's] change from accented beats to broad swinging beat guided me to playing that way. (Cello-3A)

I was concentrating on counting rests for most of this section as I had a small solo entry coming up. The conductor's gesture made it clear that he wanted this to be heard. (Trombone-3)

At 1:00 the gestures of the conductor were what initiated more accent on my part. (Cello-1A)

I certainly took my lead directly from the conductor for this, and his eye-contact and gesture enabled me to feel the meaning of this tiny gem of a musical sigh. I felt very much supported by his directing, and was allowed to bring my own expression to the music, whilst being drawn into [the conductor's] interpretation. (Oboe-3/Cor)

It is difficult to know why more musicians did not report more frequently that they were influenced by the conductor's gestures to play with a particular musical character. It might be argued that the small number of such comments left on the videos is because such gestural influence happens beneath the level of conscious perception or is so routine or obvious as to be unmentionable. The fact that participants *did* occasionally report on their response to the conductor and were often able to report on the most basic actions or in detail about their response to complex influences in their environment weakens this argument to some degree.

However, while in the questionnaire responses a professional wind player stated that: 'Things covered in a rehearsal like timbre and tone...I'm not sure if I'd recognise any matching gesture from a conductor', in the interviews a seasoned professional orchestral player and sometimes conductor acknowledged that the simple presence of the conductor on the podium can change an orchestra's sound. This resonates with some of the findings from Koivunen and Wennes's research in which the nature of a conductor's movements is instinctively 'mimicked' by the musicians, rather than 'translated'. One of their musicians reported:

Last week we had a conductor who was a little uncomfortable with his body. He was very stiff in his movements and couldn't really help the violins. Our playing became very stiff as well, because we by instinct followed him with our bodies. (Musician, Tampere) (Koivunen & Wennes 2011:64)

This same issue was observed by a musician in my own study:

He is so tense, all the movement comes from very stiff arms and elbows - how are we supposed to breathe out, let go and make music that goes somewhere? [...] It really gets in the way for me whilst I'm playing. (ViolinI-3B)

Drawing on the work of Parvianien (2003) Koivunen & Wennes identify this as Kinaesthetic Empathy, a phenomenon which entails a re-enlivening or a placing of ourselves inside the other person's experience (Koivunen & Wennes 2011). In empathy studies, one theory is that empathy is brought about through physical mimicry at a subconscious level (Hatfield, *et al.* 2009). Although research has not been conducted in an orchestral setting, a recent study found 'statistically significant variations in singer extrinsic laryngeal muscle activity during inhalation as they observe varied conductor prep[aratory] gestures' (Manternach 2016:11-12). This raises some important questions about the influence of a conductor's body on the instinctive embodied responses of the musicians.

Another more mundane explanation for the reason why more musicians did not frequently report responding to conductors' gestures is simply that musicians' attention is directed elsewhere:

From watching the video, I realize how much music comes through in the conducting! Every nuance and expression can be seen, if only we didn't have to look at the music notes so much, [we] would could get even more from the music! (Bass-2A)

Accel. at the end was a total disaster. Lots of notes to look at and I can't always look up all the time. [The conductor] says to memorise the notes for these types of bars. Easier said than done! (ViolinII-3A)

A few of the conductors' comments indicated frustration with a lack of response from players to their gestures:

Sheesh! What more can I do? Why can people get the energy behind those loud crotchets?!! What I am doing is vulgar, but it is really just to try and get people's attention, I hope I would never have to do that in a concert... (Conductor)

Reducing the scope of my gestures in order to create pianissimo. Response was not satisfactory. Players are always told to project and they do that at the expense of playing really softly. (Conductor)

Or recognised that the lack of response is due to the ineffectiveness of their own gestures:

As brass players tend to react late to a beat, I will try to bring them in early to ensure they meet all of us at the bar line. It has not worked as well as I did not apply the technique required. I am also feeling tired at this stage of the rehearsal and making a mental note that in the concert I need to be more active to pursue my objectives. (Conductor)

However, conductors also reported on the perceived efficacy of their own non-verbal communication. The following comment details a conductor's decision-making with regard to what specific bodily motions they will employ in order to elicit particular effects from the orchestra, providing an insight into how some conductors experience their non-verbal communicative efforts during the flow of performance:

[At bar] 187 the flutes wind down before the intensity is again heightened. Here, I am thinking already ahead in order to prepare the drama of the cello entry. In order to intensify bar 188, I will anchor an upbeat before so that there is outburst on the downbeat. [...] It works, producing high voltage on the outburst. Two before Figure 7, I am conscious of the 2nd violin entry and deliberately I extend my arms to their full capacity to allow the music to expand in full. As the extension of the gestures is the furthest so far in the movement, the players' expectations are heightened. (Conductor)

But in the following comment a conductor, rather than trying to achieve a specific effect as above, deploys his gestural language as a way of

encouraging specific types of ensemble interaction in order to improve ensemble cohesion:

My thoughts here were on articulation and tuning of the canoned melodies. I was also keen to help the 2nd vln and vla syncopations by drawing attention to front desk vlas and making my gesture minimal (to force chamber ensemble and synchronised bowing). (Conductor)

This touches on a very important aspect of conductor gesture, which is that it can be used to accomplish any number of communicative goals. As one of the musicians in the LSO said to Tom Service about his experiences with Valery Gergiev: 'He is challenging to play for, because he demands that you really listen, that you really join in with creating the performance. You can never just follow him. If at times his gestures are not clear, he is doing that deliberately, to create atmosphere' (Service 2012:37). In direct contrast to Gergiev's lack of clarity, in the interviews Charlie commented on the precision of Maazel's conducting technique, but still wonders if the resulting sound is what Maazel is trying to achieve:

In general he stretches things across space-time to a degree you think, 'god this can't possibly work, how's he going to pull it off', and it's not clear whether that's how he likes it, or whether that's sort of a knock on result of his extreme micro-managing of the stick, where literally every subdivision is indicated in a beat, which is also extraordinary. It is not clear...it's sort of cart and horse, chicken and egg thing. I'm not sure. (Charlie, professional violinist)

What came out very clearly from the commentary left on the MERID system about conductors was that their influence was highly mediated by other SoI and in particular that the demands of the PD often put conductors' directions and gestures at odds with other influences. This tension, which often involved discrepancies between the visual information coming from the podium and what musicians were hearing in the Present Soundscape, will be

explored in Section 3.1.7 on the tensions between influence systems.

Dineen, in his research on the efficacy of conductors' gestures, identified a 'shadow ensemble': 'a small group of key players, often highly visible to the other members of the orchestra, who assume some of the leadership roles normally assigned exclusively to the conductor' (Dineen 2011:140) in situations where conductors did not establish authority with the group (or did not have the skills to lead the orchestra competently). Although musicians in this study did not directly refer to a group like Dineen's shadow ensemble, there was some evidence that similar structures were in play:

Watch for strong gestures needed by section principals for ensemble of upbeat each entry to be passed back through the section clearly by each member. Hope section principals are communicating visually with each other. (ViolinII-2A)

Although in the broader context in which the quote above was given it was clear that many of the musicians did not feel that coordinating information was coming from the conductor, the MERID data as a whole, as well as the information from the interviews, suggest that the system described in the previous comment for communicating information about when to play was not only relied on in situations where conductors failed to provide coordinating information, but in other scenarios as well. Rather, information from colleagues about precisely when to play tended to be privileged over information coming from conductor gestures.

Leaders and section principals

With regard to decision-making authority in the Institutional Hierarchy, players reported that during performance the choices made by section

principals could override those of the conductor. For example, here a player indicates that regardless of what the conductor said in rehearsal, they will follow the leader with regard to the specifics of note duration during the flow of performance:

At the beginning of this clip, I had one eye on the music and one on the players around me so as to keep in close touch in the passagework, matching note-lengths as well as keeping together. We had been asked at the rehearsal to play the quavers longer, but it's still the leader's call as to how long and we must copy as closely as we can, in the moment. (ViolinI-3A)

Although the quote above is from a first violinist, it is relevant to recall the 'special role' of the leader for some of the interviewees. Professional musicians in particular were clear that the leader's authority could trump the conductor's authority, particularly with regard to 'when to play'.

This prioritisation of playing with one's section was expressed by other section members as well:

At this spot I remember feeling that what I was hearing in the tempo of the music was slightly behind what I was seeing on the podium. As a section player I feel my job is to stick with the section. I recall that I felt uncomfortable with how the orchestra was not responding to the conductor. (Cello-1B)

As the second player in the section, I am always attempting to match and thus balance the articulation [and] dynamic, as well as the phrasing that the principal trombone is using. (Trombone-2)

I have been focusing hard on matching the principal bassoon in every way as I play an octave below him. (Bassoon-2)

Some suggested that it was only when the channels of information from the leader or section principal were disrupted that they turned to the conductor for information about when to play:

At the opening I was concerned about playing exactly in time with the leader. Being on the last desk and facing inwards it was very difficult to see so I just had to respond to the conductor and what I was hearing. [...] (ViolinI-7A)

Watch [the leader's] bow...cannot see so well, look at her partner's, then [the principal viola] then [the conductor]. (Viola-2B)

In other cases, however, this priority structure appeared to be reversed, with the section principal acting as a surrogate source of information which had been initially sought from the conductor:

Harmonic changes need to be emphasised [...] so trying to be absolutely sure I am putting the 'leans' in the right place—difficult with [the conductor] facing the other way, so relying on [the principal bass] a lot here as he can see. (Bass-2B)

Musicians also described other reasons as to why the influence of the Institutional Hierarchy may not always flow from the conductor down through section principals to section members. For example, sometimes a player in a principal position might not be particularly skilled or successful at leading, or there may be distrust in their abilities in this regard, prompting section members to use alternative sources of information within the Institutional Hierarchy or turn to other SoI to accomplish the task at hand.

As Keller has observed, 'even under such established hierarchies, the assignment of leader–follower roles may be dictated by the nature of the part being played by each instrument in a particular piece' such that that 'leader–follower relations depending on the nature of the music's compositional structure' (Keller 2014:266). Very generally speaking, orchestral music has historically utilised upper voices for 'melodic' purposes and the lower voices for 'accompanying', giving the upper voices a stronger influence on how the music might be shaped. Similarly, wind and brass principal players will

generally perform the melodic material with their section members providing the harmonic support and in this way section hierarchy is derived from musical context. Murnighan & Conlon observed in their study of string quartets that a 'popular strategy to resolve musical disputes gave precedence to the person playing the tune' reinforcing the philosophy that 'first violinists were also the groups' leaders: as the primary tune-players, they then controlled most of the authority for musical decisions' (Murnighan & Conlon 1991:177).

In this way the Institutional Hierarchy (with the exception of the conductor) maps to the distribution of musical material—the Musical Context, or perhaps vice-versa. Since the orchestra has developed in dialogue with the 'practical' demands of performance situations (volume) as well as the artistic agendas of composers (see Spitzer & Zaslaw 2004), the persistent power relationships which emerge between players and can be seen to correspond to the relationship between their musical materials (such as between the first flute and the second flute) have become relatively standardised.

Importantly, however, the influence of the Musical Context may be derived from features of the musical texture other than the melody and from locations within the ensemble other than principal players or first violins, so while there is a connection between the Institutional Hierarchy and the distribution of musical materials, they are not one and the same. While the significant influence of the Institutional Hierarchy cannot be ignored, it is only one of many influences and is often in tension with others that shape how and when musicians play their parts.

3.1.2.2

Accepted Performance Conventions

Underlying orchestral practices are socially accepted conventions that facilitate large ensemble performance from notated scores. These conventions guide the translation of musical notation into sound, are understood to differ according to the time, place and author of the notation, and include traditions for specific works, and cultural values such as ‘authenticity’ and the ‘composer’s intentions’—both inextricably linked to historical narratives and biography. Such notions powerfully shape individuals’ perception of ‘correctness’ in performance, and it has been argued that such conventions constitute ideological contracts that constrain the freedom of individual performers to explore more radically novel ways of engaging with notated scores while not alienating themselves from the musical establishment (Doğantan-Dack 2014:10-12). The aesthetic details of these conventions are continually shifting and as research into historical recordings has shown, performance conventions which were fashionable 90 years ago might now leave listeners ‘cold, or incredulous, or amused’ (Day 2000:140).

For example, the Historically Informed Performance movement has given rise to an all but codified set of practices for the interpretation of music from specific time-periods and locations—practices which have successfully seeped into ‘mainstream’ performances even when such performances make no claim to ‘historical authenticity’. For today’s professional (and even amateur) musicians, familiarity with these conventions and others allows them to quickly and efficiently perform with other orchestral musicians in different scenarios.

In situations where time is at a premium, a shared understanding of conventions is essential if performers are to achieve some measure of cohesion, as this player's comment reflects:

As a whole, the orchestral players understood what "Prokofiev" and "Montagues & Capulets" mean, and were able to instantly whip up a batch of the appropriate Soviet gangster style, reflected in bow attack, brass attack, stroke length, breath shape, and overall balance. (Viola-2A)

The commentary above illustrates the extent to which conventional understandings of specific repertoire are played out in musicians' artistic decision-making about their own parts even in the first reading of a piece during rehearsal, and even within a pick-up orchestra situation. In other orchestral situations, however, musicians also referred to their understanding of context of a particular work or the biographical background of a composer when characterising their part:

What is Sibelius thinking of here. And yes, why did he retreat from society at the end of his life. Such a mystery. [...] Maybe this is why. Something rather threatening. Must find that in the sound quality. (ViolinII-2A)

Sometimes the right sound quality for a specific composer was more essentialised:

Trying to produce the best sound for Brahms. (Viola-4B)

But not everyone shares the same conventional understandings, or adheres to them in the same way:

It's frustrating to always try to perform what the composer wrote when so many other people don't! Dynamics, articulation, musical shape - all undefined and not coordinated. (ViolinI-1B)

Indeed, in one of the case studies, a conductor attempted to push the boundaries of accepted performance conventions by requesting unusual

articulations/note durations. This did not sit well with the musicians and caused a great deal of tension during the rehearsal process (see Action Map #6 in Section 3.4).

Some conventions appear fairly mundane, but have real significance with regard to who has influence in the performance of artistic decision-making. For example, it is generally accepted that the same musical material be performed in the same way throughout the ensemble unless there is a clear indication from the composer that it ought to be transformed:

I felt that the role that I had at this particular time, aside from playing, was to listen and match the way that the previous iteration of the same motive was played. (Trumpet-2)

The brass and string exchange of notes needs to be interpreted the same way, in style and length. (Bass-3)

Sometimes these decisions are worked out in rehearsal, but at other times musicians might feel compelled to replicate the musical style of colleagues who have had the tune first.

The impact of the recording industry in the development and perpetuation of accepted performance conventions should also not be underestimated.

In these short flute solos I was hearing in my head the way I heard it played by the LSO on a recording I'd been listening to that day - they were particularly light and playful. [...] (Flute-1-dep/Picc)

What the comment above highlights is the way in which institutions, by legitimising some performances and not others through the commodification and distribution of recorded products, shape idealised notions of performance traditions.

In addition to the broader conventions that can be seen to 'transcend' specific ensembles or playing situations, there are local conventions within orchestras that may influence the 'default' setting of their performance, such as their sound quality, timing, and approach to specific repertoire. This was particularly emphasised in the interviews by Charlie, Jack, Oliver and Harry. Jack noted that his orchestra had a unique sound quality that they would adhere to regardless of who was on the podium (see pg. 180), while Charlie noted that the orchestra's tendency to play behind the beat was perhaps a relic of its Germanic heritage (see pg. 182). Oliver emphasised that permanent music directors could often significantly influence the 'default' settings of orchestras, suggesting, for example, that when a guest conductor comes to the Hallé, they will still play it 'Mark Elder's way' (see pg. 182). Harry, on the other hand, noted that the sound and style of the bass sections that he leads is a direct result of playing styles that he learnt at music college (see pg. 183).

3.1.2.3

Training and Experience

It is possible to consider musicians' Training and Experience in combination with their knowledge of Accepted Performance Conventions as constituting their stock of knowledge and values that they bring to their practice. From conceptions about individuals' roles in the orchestra to knowledge about how to achieve desired outcomes on one's instrument, individuals are either explicitly taught certain skills and values, some of which they transform into embodied knowledge through intentional practice, or they gain these things through experience, including values such as what constitutes a 'good' performance or 'correct' execution. Apart from the elements of a musician's

ability that appear to be innate (their 'raw talent'), training and experience shape musicians' skills, values and tastes.

While increasingly conservatoires are beginning to include formalised orchestral training in their curricula, this is still a relatively new trend (Channing 2003:180-181). Even one of the younger professional string players interviewed noted that the crucial ensemble skills of playing in an orchestra were not something that they were taught:

The most important thing is learning how to do what everyone else is around you [is doing]. It is something you are never taught, something that you have no idea about until you turn up and just end up freaking out because you have no idea how this orchestra is playing together in the way they are. (Jack, professional violist)

Along with Accepted Performance Conventions, Training and Experience is one of the SoI that appears to 'haunt' individuals' MERID commentary rather than something that is often referred to directly. For example, individuals referred explicitly to their understanding of their specific role in a way that echoes knowledge gained from mentors, or from practical experience:

I felt that my role as an oboist was to try to blend into the wind section, but at the same time be independent of the string sound. (Oboe-1)

That is probably my biggest role, establishing continuing contact with the other section leaders and then reacting to the conductor and trying to link everyone together. (Violin-1A)

Similarly, the comment below details what appears to be a fairly routine set of goals for a musician executing their part in a performance context:

In this section, I was waiting to play towards the end of it when it reaches a climactic point. I was thinking of making sure I played the notes in the correct place, with the right articulation, the exact relative dynamic, the right intonation, playing within the context of everything around me and balancing my sound with my colleagues in the brass section. (Tuba)

Such performance values and the knowledge of how to execute them in the flow of performance are inevitably an outcome of experience and training. The financial reality of most professional orchestras necessarily relies on musicians and their ability to deliver musical products that are appropriately informed by Accepted Performance Conventions, whose responsibility it is to anticipate what will be required of them and be capable of delivering it from the first downbeat.

3.1.2.4

Commercial and Economic Forces

From financial constraints that have an impact on time, space and repertoire, to political and marketing concerns which determine artistic personnel and the distribution of remuneration, Commercial and Economic Forces affect the physical, temporal and psychological spaces in which musicians play.

First and foremost there is always a restriction on the amount of time that can be spent on rehearsal. This is less of a consideration for amateur orchestras, but it is fundamentally a financial issue for professional orchestras. In the UK in particular, professional orchestras are required to perform after very few rehearsals. As was already discussed in the interview section, more or less rehearsal time did not necessarily mean that the conductor was more or less able to convey their ideas to the orchestra. This depended greatly on their verbal and non-verbal communication skills, and their ability to persuade the orchestra to follow their lead.

For some participants less rehearsal time means there is more interpretive power in the hands of the musicians: as was heard earlier from a

questionnaire respondent 'a three-hour rehearsal leaves no time for a conductor to give his/ her penny's worth'. And a MERID participant noted how the lack of rehearsal time contributed a desirable spontaneity:

We didn't rehearse a lot before, so I remember not feeling very secure but I was also enjoying the spontaneity and found the piece full of humour. (ViolinII-2B)

Others felt that rather than creating freedom, limited rehearsal time just meant there was less time to fix ensemble or balance issues:

I was thinking that if we had more time [the conductor] might balance things more carefully and what a shame there is never more rehearsal time. (Viola-2B)

At this point I really felt that we could have done with another session on the Mahler before the concert day as the rehearsal had felt a bit rushed and there hadn't been time to fix a lot things. It was quite frustrating. (Horn-1)

Limited rehearsal time is also one of the influences that shapes the way individuals engage verbally in rehearsal. It is generally understood that time is at a premium and that if everyone were to speak up, nothing would get done:

Rehearsal time is short. With 60+ players if everyone spoke we wouldn't get any playing done. (R61-SemiPro-Str-S)

Rehearsal spaces and equipment cost money, and particularly when inadequate, the influence of these material factors can be felt:

Concerned about lighting throughout, not being able to see music properly. (Clarinet-2)

Commercial influences also have an effect on which artistic personnel are hired, particularly soloists and conductors, which can lead professional orchestra administrations to choose conductors who they believe will draw an

audience rather than those who are actually skilled conductors. The discrepancy between conductor skill and orchestra skill will be discussed in the section on conductors later on, but relevant here is the interplay between the competence of conductors, the time given to prepare performances, and the needs of professional orchestras to present an adequate musical product in order to keep up appearances and ensure future engagements for the ensemble as a whole. One of Brodsky's interviewees stated that they must 'constantly work under guest conductors who are below standard and although transient in the orchestra context, leave behind a permanent memory to the public as regards the artistic state and quality of the orchestra' (Brodsky 2006:683). In these situations musicians must find ways to play 'around' the conductor, and as noted earlier, this impacts where individuals direct their attention for information about how and when to play.

The role of remuneration also can impact the way that musicians are engaged with the artistic process:

If I'm paid, I do what the conductor wants—right or wrong... (R140-SemiPro-Str-P)

In professional orchestras how much individuals get paid is perceived to have a knock-on effect for the rest of the orchestra and can affect attitudes and moods:

[It is] actually very little money I have to say. Not so bad for principals, but for the rank and file... Now that's when I think they start to get a bit grumpy and you can sort of understand it. Dare I say this too, and this is anonymous, that when you hear or you know of various conductors and soloists earning HUGE amounts of money, perhaps five times more than the whole orchestra together...it is not a jealousy thing, it's just...what the really annoying thing is...what often happens is the orchestra sits on a bus for 8 hours and the guy who's conducting and who's making a lot of money flies. And you think, now, he wouldn't miss [out] if everybody flew. You know, the economics are

they're not flying because of his costs. Now if that were put that way, it would help the business a lot and it would give more...I don't know, it's a bit unfair I think on the players you know. [...] Again, if you're feeling grumpy or if you're feeling upset or whatever...I don't think it would creep in if the show's fantastic—if somebody's coming up with the goods. But perhaps if they're not coming up with the goods, then people say, hang on... (Leo, professional percussionist)

Commercial forces shape who performs, what gets played, how much time there will be to rehearse it, where and when the rehearsals and performances take place, all of which can have a real effect on the musical product. What Leo relates above is in the context of the interpersonal and political relationships that can arise in a professional orchestra due to demanding work schedules. The second broad category of influences addresses how individuals have influence within the rehearsal and performance process.

3.1.3

THE INFLUENCES OF INDIVIDUAL(S)

The SoI which have been categorised under Individual(s) are those which are directly connected to the individual agency of participants active in the performance setting and include Personal Engagement, Musical Authority, and Interpersonal Relationships. While the choice to follow or lead on account of one's position in the orchestra may be motivated by training and conventions, individuals can have influence through their decisions/actions beyond the institutional hierarchy in ways which shape the way they and others play.

3.1.3.1

Personal Engagement

Personal Engagement is used to denote the influence of one's own preference for the way that something should be played. Past experiences, engagement with the physicality of playing a particular passage, or feelings in response to the musical material that they are playing all affect musicians' approach to their own part.

I just felt in the zone and was playing the way I wanted to, particularly as we do know the symphony pretty well. (ViolinII-3B)

Sometimes an individual's Personal Engagement can prompt subtle shifts, like choosing to play on a particular string:

Should I cross to the D-string to make a softer sound? Yes, I think I will. Oh good, principal did, too! (Viola-5A)

Or a change of character in the sound:

Thinking about change in character in this moment. I want it to sound more urgent. (Cello-2A)

Anticipation and feeling of tension—want to create deep warmth. (Cello-3B)

Other players left commentary that exhibited a palpable visceral engagement with the musical material that they were playing. The following comments conjure vivid images of the players' bodies as they respond to the musical material of their parts:

This is the best phrase of the whole piece—it's so calm and I just feel free. [...] This bit is very angry and you have to feel angry to play angrily, I feel important here! (ViolinI-4A)

It is a powerful climax, and yet of innocence. It's not Mahler or Strauss, it's kinder, sweeter. I very easily identify myself with the roots of [the composer]: geography and language. It is a climax that smiles, and one wants to raise one's back in a gesture of honesty and straight-forwardness. I think of weigh-input and bow speed. How I can simply maximise my expression? For the top notes I think of the balance of my left hand as I listen to the line of the double basses with its strong, returning rhythm. (Cello-1B)

Sometimes personal preferences were at odds with what was happening in the orchestra overall:

Would like more dialogue here in the orchestra and more sense of desperation! (ViolinII-2A)

I don't like this articulation, I wonder if it's written in the part, I'm not used to hearing it like this. (Viola-1A)

While Personal Engagement may often have roots in historical influences—a passion for a particular work or the preferred 'feel' of a passage may be a result of past experiences and influences—the real relevance of this influence is that players are moved to perform in a particular way based on their own artistic convictions. A professional wind player indicated that as long as it is connected with what is happening around them, musicians' contributions of

their own musical ideas is an important aspect of orchestral performance: 'otherwise you go mad if nothing's happening around you to which you could aspire' (Anonymous). The same informant also noted that when musicians are not connected to what is happening around them they are a 'liability', and 'normally don't work for long'.

As mentioned above, Personal Engagement can either be an essential element of performance, or if expressed without an awareness of their colleagues, can create tension and disrupt the ability to maintain the PD. For example, in an episode in one of the case studies an associate principal cellist was clearly absorbed in their own sound world rather than being closely engaged with the principal cellist. In this instance what emerges from the other musicians' commentary suggests that this Personal Engagement had a disruptive effect on the ability of the ensemble to maintain cohesion (see Action Map #1 in Section 3.4). While it is clear from the data collected across the three phases of this research that musicians believe there are more or less appropriate times to express individual interpretive ideas, it is much less clear that the limitation on individual expression is on account of the conductor's alternative vision. Rather, influences like Accepted Performance Conventions or the need to maintain cohesion with one's colleagues may be as, if not more, influential in curtailing individual expression than 'interpretive' directives from the Institutional Hierarchy.

3.1.3.2

Musical Authority

Musical Authority refers to the ability of individuals to influence others based on their perceived musicianship (persistent) or compelling performance (in-the-moment). Unlike the authority bestowed by the Institutional Hierarchy, Musical Authority is in the ear or eye of the beholder. At times musicians may be inspired or compelled by a musical contribution from a colleague which changes the way they play their own part. In other cases, individuals may hold a certain amount of general Musical Authority; they are simply perceived to be 'better musicians' or have specific musical authority about a particular work. This responsiveness to others' playing was reflected in the 75% of questionnaire respondents who indicated that they would respond to a good idea arising from the group by incorporating it into their playing. As one questionnaire respondent said:

Sometimes a colleague's idea will be better or take the phrase on a different journey. That's the beauty of it. (R6-FTProf-W-P)

In the MERID responses, such comments were also very common:

In the beginning of the excerpt I was still thinking about how beautifully the Cor Anglais player had played his solo! It was inspiring to try to play the tune as beautifully, if possible. (ViolinI-3B)

The tone is set entirely by [the soloist] and watching and listening to her (really important to watch as well as listen) lets us know what we need to know about playing our part. I want to play as beautifully as she does. (ViolinII-3A)

I was very aware of the good rhythmic playing of the cellos to my right. I sought to maintain similar precision and intensity of sound. (Viola-2A)

Particularly significant, and perhaps even a little surprising, are the positions of the individuals who made the above comments: all 'rank-and-file' string

players. According to the Institutional Hierarchy these influences should be irrelevant as they are meant to be playing exactly the same as their section principals (see Action Map #2 in Section 3.4).

Some individuals are perceived to have privileged access to the knowledge of performance conventions which reflect the 'composer's intentions'. For example in the following comment, a colleague was known to have performed the same repertoire under a conductor who was renowned for his interpretation of this particular composer's work, but also shared a cultural heritage with the composer, privileging the conductor's insight.

Well I'd never played the piece before so I was really concentrating. I was listening too and watching the principal violist, who knows the music very well and played it many times with COE [Chamber Orchestra of Europe] and the great Paavo Berglund, so I was aware that he might do things in a certain way which I might learn from. (Viola-2B)

Similarly, when conductors are perceived to have Musical Authority in addition to their role in the Institutional Hierarchy, orchestras are more inclined to allow them to lead. Additionally, Musical Authority can be linked to issues of musical and personal 'trust', which Gritten has proposed is central to ensemble performance (Gritten in press 2017). Such Interpersonal Relationships are the focus of the last SoI that is a function of Individual(s) influence.

3.1.3.3

Interpersonal Relationships

While the effect of Interpersonal Relationships was not mentioned frequently during the data collection, those giving feedback about the framework

indicated that this was an important influence. The influence of Interpersonal Relationships refers to how the quality of relationship between two or more individuals outside a specific performance context shapes the way that they engage with one another during rehearsal or performance. Keller's research also found that musicians 'claimed that personal relationships between ensemble members impact upon [their] ability to engage in prioritised integrative attending' (i.e. 'dividing attention between a high priority part [one's own part] and the overall aggregate structure that emerges when all parts [including one's own] are combined') (Keller 2001:20-25).

A positive example of the influence of Interpersonal Relationships from the MERID data is given here:

Since this is so much like playing chamber music, I was watching [the leader] who I am used to following. I was more comfortable when watching him because of familiarity. (Cello-1B)

During my own data collection musicians generally refrained from speaking negatively about their colleagues on a personal level (this tact, incidentally, did not extend to conductors), which may explain why the influence of Interpersonal Relationships was not referred to more frequently. What was emphasised, however, and was discussed in the interview section by Jessica and William, was how the character and personalities of individuals was reflected in the way that they engaged as ensemble musicians:

What makes this orchestra wonderful, are not the musicians in it, but the people in it [...] who put all their musicianship and their humanity and their knowledge at the service of this unquantifiable thing. (William, professional conductor)

That musicians are influenced by the actions of others in their immediate surroundings is hardly notable, but what is interesting about the category of Individual(s) influences is that such influences are 'lateral' and not subject to the Institutional Hierarchy although they may come into tension with it from time to time. Musicians' own Personal Engagement, their responsiveness to others in the orchestra based on their judgment of the quality of their musical contributions (their Musical Authority), and the influence of Interpersonal Relationships, which might encourage or frustrate the ability to trust and engage with other musicians, can be seen to be powerful influences which shape individual decision-making about how to play their parts. In an ensemble context, relationships between individuals are also created via the musical text, score, or 'script'—the Musical Context—and the influence of this scripting of relationships will be explored in the following section on 'Musical' influences.

3.1.4

'MUSICAL'

'Musical' SoI encompass the influence of the Musical Context (the role of a particular part within the overall musical texture), as well as the Present Soundscape (the sound being produced by the ensemble at that particular moment).

3.1.4.1

Musical Context

Perhaps one of the most powerful SoI, Musical Context is a prime driver of decision-making among musicians. In order to know how and when to play, musicians are often trying to assess how their part fits within the overall Musical Context both vertically and horizontally (rhythmically, harmonically, texturally, melodically, developmentally, etc.). In this SoI, the way musical materials are distributed across the orchestra and the specific role that an instrumental part may play determines where musicians will direct their attention for information. There is significant overlap between Musical Context and the Cultural-Historical SoI as musicians draw not only on their stock of knowledge pertaining to general principles of musical coordination—which are themselves historically contingent—but more specifically, musicians engage their knowledge of the context and conventions of a particular work in order to contextualise their part.

For example, a bass line may provide the information needed for the full orchestra to make an *accelerando* during a particular passage:

Things starting to move. Keep ears and eyes alert. Watch the cellos/basses for movement of the bass line which has the strongest influence. (ViolinII-2A)

Or accompanimental figures might moderate their timing or dynamics to support a melodic line:

Of course, it is first and foremost important that the ensemble is cohesive, and if the melody moves forwards or lays back, the accompaniment needs to listen and follow and support. (Bass-1A)

We have a lot of scrubby repeated sixteenths here. I love that stuff. You get to support and structure what is going on in the melody lines. (Viola-1B)

Musicians expressed a high degree of awareness of the role that their part played in the overall context of the music, whether they were accompanying another figure, balancing their playing with that of their colleagues, or taking the lead. Here are just a few of the many comments that musicians made (see also Action Map #3 in Section 3.4):

I remember this very clearly, holding that B flat underneath the violin [soloist's] little turn. Listening to her pacing to know when to release. Making sure to come off the string so that it would ring nicely. (Viola-2B)

In this section I was aiming to provide a background cushion of sound, building up to the sudden interjection of the theme (forte). I then become aware of the flute melody and the need to accompany this. (Viola-1A)

At the start of the excerpt I was very aware of the sound I was making in support of the horn solo then oboe and flute solos. [...] As the excerpt moves on the 1st violins have a much more prominent role and I was thinking about the energy and bow strokes. I got a lot of energy from the conductor and was always aware of the horns. (ViolinI-3A)

I am aware that the oboe, although marked piano followed by a diminuendo to *ppp*, is the leading voice. I aim to be slightly louder than the other wind instruments whilst maintaining a soft timbre. (Oboe-1)

The change in tempo at this point is crucial, so checking visually what is going on as no obvious running quavers to help show me. Actually I think the violas are doing something melodically interesting, so that helps. (Bass-2B)

Understanding how their part fits within the Musical Context is important to many orchestral musicians and might even be perceived as crucial in a professional setting. New or unfamiliar music can be particularly challenging in this regard:

I was unsure how my part related to the other parts around me, and was therefore unwilling to commit. (ViolinII-2A)

Effectively, the manner in which the parts are distributed amongst the players brings into being (when performed) a set of social relationships which has the potential to empower some voices over others. For example, precedence may be given to melodic figures over accompanimental ones, or the relative dynamics mean that some instrumental parts may be in a stronger place to influence what is happening:

The oboe part interjects occasionally in this passage so I am concentrating on ensuring I listen to the players with the main themes and accompany without being intrusive. (Oboe-1)

Ensemble poor but it's not a place where my section can do much to adjust or improve it in any way. All we can do is be contained and wait for louder instruments to find common ground. (Viola-3B)

Here Cook's description of scores as 'social scripts' has particular resonance.

He draws on the work of Monson and Cottrell and states that:

Musical structure has 'as one of its central functions the *construction* of social context' (Monson 1996). [Although] Monson is talking with specific reference to jazz, Cottrell (2004:91) makes essentially the same point when he writes, within the context of WAM performance, 'Musical texts become sites through which social relationships are negotiated'. (Cook 2015:260, emphasis in original)

While it has already been noted that there is a relationship between the Institutional Hierarchy and the distribution of melodic and accompanimental material in an orchestral setting, the commentary from the MERID data

makes clear that relationships engendered by the Musical Context do not so much reflect simple leader-follower interactions, but rather more diverse relationships in which individuals may complement, support, ignore and challenge one another through their musical materials. Although the musical materials might 'script' relationships to a degree, there can still be tensions between the comparative influence that different parts exert, such as the relative importance of the shape of a melodic figure versus the rhythmic integrity of an accompanimental one. The way in which these are negotiated will depend greatly on the situation (rehearsal or performance), the individuals involved and their awareness of, and ability to adjust to, the Present Soundscape around them.

3.1.4.2

Present Soundscape

Although knowledge of the Musical Context will prompt musicians to approach their part in a particular way, or to expect or anticipate what might happen during rehearsal or performance, what *actually* happens during performance—the *sound* that is being generated—has a huge influence on the split-second decisions orchestral musicians are constantly making. Similar to some of the musicians in this study who reported using their 'ear antennae' or having their 'ears on stalks', Dobson & Gaunt's participants used the terms 'radar,' 'antenna' or 'aerial' to describe the process of 'listening to, communicating with, and adapting to other members of the ensemble at all times during rehearsal and performance'. Dobson & Gaunt found that 'rather than simply playing their part, the performer is always informed by listening and then adapting to the multitude of approaches that may be taken by

colleagues within the ensemble' (Dobson & Gaunt 2015:30). For example, an accompanimental part may be marked *mezzo piano* in the score but a musician may choose to perform it much louder in order for it to be heard on account of the dynamic situation of other parts at that time.

Listening to everyone playing and following my part... responding to the dynamic set (Viola-2B)

Here I was concerned about pushing the mid-range piccolo notes through strongly enough. They don't carry particularly well and I didn't want them to be completely lost amongst everything else going on. Trying hard to get clear attack on the high forte notes. (Picc)

Was thinking that there was no way the low pitches were cutting through the orchestra texture. Kept trying to create more volume. (Bassoon-1)

Alternatively, a musician might be playing slightly flat and not adjusting their pitch, pressuring their colleagues to adapt to them even when the general consensus might have preferred something else. One of Dobson & Gaunt's participants describes the process of taking in this aural information and then negotiating with others, or adjusting, in order to maintain the PD:

... in theory, all the things would line up, and they don't always. And it's knowing who to go with. Or it's realizing who isn't going to move, either because it's a piccolo [sitting] on the top of whatever, and she's going to be there so we have to do this, or because it's a guest player or something and they're probably not aware. [...] certainly the people that I really respect, I am aware of them all going 'right we're just going to have to adjust now'. [...] Listeners wouldn't be aware ... or like the trombones, if they're not playing, they wouldn't be aware. But they would hopefully just be aware of 'oh [...] that's really well in tune, that's nice.' [Participant 8] (Dobson & Gaunt 2015:8)

Unfortunately, intonation is not always adjusted so successfully as one of the present study's musicians' reports:

I have a quandary about the dominant 7th chord at the end of this section. My note is the 7th, so I should flatten quite severely to fit with just intonation. Unfortunately my colleagues are not listening carefully enough, so the result is poor tuning. (Clarinet-1)

What Dobson and Gaunt's participant highlights above is how this process of being tuned into what is taking place is very subtle and not easily recognisable even by other musicians in the orchestra who may not be involved in the particular passage of music being played. This is significant because, to date, most research has relied on the observable actions of musicians, whereas a crucial component of communication and interaction happens between what one hears and what one plays—a whole conversation takes place without the lift of an eyelid, gesture of an arm, or verbal utterance. The visual nature of the conductor's beating patterns and the focus on gesture for maintaining ensemble coordination has detracted from recognising what might be the most fundamental activity for playing in any ensemble: listening. The musicians in this study placed a great deal of emphasis on listening and responding to what was going on around them.

In addition to modifying intonation, musicians adjusted any number of musical parameters based on what they were hearing around them, including: when to play, at what volume, the length of notes, quality of sound and style, nuances of timing and phrasing. For example, musicians throughout the orchestra reported relying on the Present Soundscape for the pulse, or knowing precisely when to play their notes:

All the way through this section I am aware of continuous semiquavers and the need to keep that pulse going—listening to whoever is playing them at all times. The semiquavers are the key. (Bass-2B)

At the start I was aware of listening out for the constant quavers so I could place my pizzicato right in time. (ViolinI-7A)

Some adjusted note lengths based either within their section or across the orchestra while others modified volume, timbre or phrasing based on what they were hearing around them:

I am trying to balance the length of the staccato quavers with the rest of the trombone section. This involves listening to the length and dynamic that the principal player is playing them and matching it. (Trombone-2)

Listening to horns to judge length of crotchet chords. (Flute-2/Picc)

Duet with violins... lower part is ours... make this slightly quieter... listening and responding to how they are playing.... bowing etc. (Viola-2B)

The soloist is leading the orchestra. You have to listen to her phrasing and placement of the notes in order to bring across the music. You have to stay under her phrasing and go with her shape. I tried to stay quiet, my bow was mostly over the fingerboard in the opening passage. Each note had a slight taper and vibrato to warm the sound and blend with the violin. (Bass-3)

As much as the Present Soundscape provides information which prompts musicians to play in a particular way or at a particular time, it can also be disruptive and make it difficult for them to play in the manner they believe is best:

The main concern in this passage was dynamic and ensemble. I felt that the dynamic markings were not being observed. It was very difficult to hear the oboe, and there did not seem to be a very regular pulse. The overall texture felt very thick, and, personally I was trying hard not to allow all the small *crescendi* and *diminuendi* to cause me to play too loudly. Overall the strings felt overwhelming. (Cello-2A)

This section felt tricky to stick with the violas as I was sitting surrounded by second violins who weren't particularly together. (Viola-3B)

Indeed, the ability to listen and respond appears to be critical in order to maintain the PD. In a professional context this came out in a frustrated comment by a section principal:

There are a lot of string players who don't have nearly enough orchestral training and don't understand how to listen. (ViolinII-1A)

These 'Musical' influences are powerful shapers of decision-making during the flow of performance, with musicians juggling their understanding of how best to fulfill their role in the Musical Context within the current setting of the Present Soundscape. As the musical materials 'script' relationships between players—in that they may suggest leader-follower relationships such as in melodic and accompanimental figures—ultimately musicians are engaged in a much more nuanced set of actions which involve supporting, complementing and responding to others' sounds. Despite the Institutional Hierarchy, musicians in section positions as well as principal positions appear to be engaged in actively understanding their part's role in the Musical Context and dynamically responding to what they hear around them. The Present Soundscape is, essentially, the end product (setting aside other performance features for the moment) and the drive to preserve the PD means that its influence can be very strong in shaping individual decision-making in the moment. But of course this whole process does not happen in a vacuum. In particular, Acoustic Spaces have a lot of effect on what individuals can hear and when, and Bodies and Instruments also have their own set of limitations and affordances.

3.1.5

MATERIAL

The fleshy reality of an orchestral performance is that Bodies animate the Instruments, which, according to the nature of their materials and construction, resonate (to a greater or lesser degree) in the rehearsal or performance Acoustic Space. Instruments afford some sounds and not others, and may be temperamental—not responding in the expected or desired fashion—or simply have limits to the volume of sound they can produce. Where individuals are seated in the Orchestra Arrangement affects individuals' perceptual environments, and the spaces in which musicians play greatly affect what the musicians can hear around them or how they hear themselves. As musicians' commentary has already shown, they depend on being able to hear themselves *and* the rest of the orchestra (not just their section) in order to determine when and how to play. Crucially, the ability of orchestras to self-adjust balance affects the quality of sound, blend, character or profile of the overall output, as does the ability of musicians to hear parts containing the information they need for coordination. As should be clear by this stage, just having a clear view of the conductor is not enough to play together cohesively as a group.

3.1.5.1

Space Acoustics

Space Acoustics affect musicians' ability to gauge how much sound they need to produce, or cause sound to be delayed from other parts of the orchestra, making it difficult to know when to play, even within one's own section:

I find the acoustic in the [concert hall] too resonant for this music especially during the rehearsal as the temptation for everyone is to play too loud in order to hear themselves. The balance is critical and it is not being addressed. (Oboe-1)

Does the other side of the orchestra hear us as late as they seem to us? This feels all way too approximate! (ViolinI-1B)

The violas have a line with groups of 6 notes, quite low and with string crossing. The focus is even notes, smooth string crossing, and ensemble which can be tricky especially in this acoustic. (Viola-4B)

Sometimes several issues together frustrate musicians' abilities to use their eyes and ears to attain cohesion:

How on earth are we to play with rhythmical precision and musical commitment when the following factors [are] working against us?: 1/ we have a conductor who is thrashing around ahead of any pulse, and is therefore unwatchable 2/ we are playing in an acoustic which is at best unhelpful, [and] 3/ we are sitting in layout which has not been used for a long time, and therefore sounds very disconnected. In summary, this clip demonstrates very poor ensemble, and lack of engagement with the music. We sometimes have to wait for a 'concert hall' acoustic to begin to resolve these issues. (Bass-1B)

3.1.5.2

Orchestra Arrangement

As indicated in the above comment the way the orchestra is arranged can have a considerable effect on what individuals can hear. Charlie described that from the back of a violin section it can sometimes feel like the 'musical equivalent of charging into battle', since it can be challenging to see and hear

what is happening with the rest of the orchestra. Leo also mentioned a similar effect for the percussionist, who on account of their position at the back of the orchestra cannot rely just on what they hear as sounds may come late to their ears, but must use their eyes to gauge what is happening at the front.

Although there are fairly standard orchestral layouts for the string and wind sections, these do change from time to time and when they do, it can affect the information that individuals are able to obtain from the Present Soundscape:

Wow - cellos sitting next to me, have never heard their line here before. Their volume surprised me! (ViolinI-1B)

3.1.5.3

Instruments

Instruments also have their own material affordances and musicians might feel the need to compromise tone quality in favour of the PD when the Space Acoustics and the Musical Context make it difficult for their lines to be heard:

Very aware of balance during the first 40 seconds of this clip. Felt swamped and unable to project the flute solo owing to the thickness of the writing and the acoustic. Aware of the tone being absolutely on the verge of splitting as was having to push much harder than in the rehearsal. Cellos far too punchy, which I could hear and the other wind too loud as well. The accelerando that follows was faster than we had rehearsed, not everyone picked up the tempo. There was a feeling of having to hold it together by playing louder than I wanted. (Flute-1)

Each instrument responds differently to changes in temperature and humidity. Hot lights or cold and drafty buildings can wreak havoc with instruments (although some are more temperamental than others).

Timpanists using calfskin heads, for example, must constantly adjust the tension while playing as the temperature changes on stage will cause the

heads to tighten or relax and change the pitch. Double reed players have a notoriously difficult time with environmental conditions:

Bar 123: stalled the F# to A# slur. Reed is still quite resistant and capable of stalling, even though temperature in the hall is less hot than during the first half of the concert. Therefore put more air down it for the repeated phrase 2 bars later. This worked better. Bar 146 & 147: Concentrating on putting enough air through the instrument to sustain the slur, particularly over the awkward downward slurs. [...] Known that other double reed players have also experienced dry / resistant reeds earlier in the concert. (Bassoon-1)

Sometimes equipment just doesn't work the way players expect or requires extra attention:

I was shocked that several of my notes didn't speak this time the way I would have liked. (Trombone-1)

I was really beginning to relax into the rehearsal at this stage by my fiddle seemed to have developed a bit of a buzz and I was worried about what was causing it. (ViolinII-3B)

Similarly, Bodies don't always work in the desired way, and in combination with Acoustic Spaces, Orchestral Arrangements, and Instruments, the physical reality of playing an instrument is an important influence on the sounds that an individual makes.

3.1.5.4

Bodies

There is no doubt that orchestral performance is a deeply embodied process, and musicians expressed that they were reliant on their bodies 'knowing' how things go:

Rockin'! It seems like now that the fingers are more familiar with what they have to do, the tempo and phrases come more naturally. (Bass-1)

This bit... let my fingers do the work... I've put in the practice... trust that my fingers know where they are going... (Viola-2B)

Seemed to flow – well enough rehearsed – just came out of the fingers!
(ViolinII-3A)

They also needed to be able to move their bodies freely in order to play their instruments, which means that influences like the Orchestral Arrangement and Commercial and Economic Forces that define the spaces in which musicians perform can affect the sounds they are able to produce:

I felt very conscious that there was not enough space available on the stage, my movements were restricted. (Cello-1A)

While string players need physical space to move their bow arms, wind players are constantly negotiating their breathing in order to shape phrases and produce desired sound qualities:

Was my 2nd trombone solo! Was conscious of needing to bring it out even though only marked *pp*...and then needing to rethink my breathing as more volume too more air, which is where the phrasing went a little awry first time through. Played the rising and falling line in one [breath] 2nd time through, snatching a very quick breath after each phrase. (Trombone-2)

This passage opens with the end of the oboe solo and I am thinking about breath control as it is a long phrase and making a dolce sound. (Oboe-1)

Before we play here, I am very conscious of taking a positive large (but also relaxed breath), as we start off by playing a forte chord, followed by triplet rhythms, which then change as the time signature alters. Consequently, having a lot of air to make this rhythmic, chordal writing work is essential. (Trombone-2)

Musicians' bodies have their limits, however, and can become fatigued or begin to hurt (see also Kenny & Ackermann 2015):

Feeling my lip quite tired at this point and knowing that 1 and 2 are in unison I consciously played a little down in these few bars to ensure I had enough to get me to the end. (Trumpet-1)

Trying to relax my bow arm in the loud bits, and not try too hard to play loudly/force it. Have a thought that my arm wouldn't last the whole programme. (ViolinI-1B)

At this point in the show my main concern was to use a minimum of effort in order to have enough left in the tank for the solos after figure 11. I was feeling

quite relaxed at this point as everything had gone well and was really enjoying the performance. (Horn-1)

Nerves can also be an issue for amateur and professional alike:

The focus was to relax before the next entry which is physically and technically demanding and the adrenalin was pumping causing my hands to shake making it difficult to play with control. Here things came a little awry as we found ourselves not quite together with the orchestra toward the end of the section (probably due to me rushing because of the adrenalin) but readjusted where it mattered and we could be clearly heard (just prior to the end of the clip). (Harp-1)

[I] spent all day trying not to get nervous [...] Concert 'nerves' seem always to help produce excitement in the playing. Thought a lot beforehand about longer bows but quieter ones - I get a shaky arm/hand (right hand) on quiet bits in concerts. Think it paid off. (ViolinII-3A)

The Material influences described in this section can be seen to affect the choices that individuals make about how and when to play their parts. Information from the Present Soundscape, for example, is significantly shaped by the Acoustic Space and in particular affects musicians' ability to know how loud and when to play their notes. How the orchestra is arranged can mean that sources of perceptual information are compromised, making it difficult to see others, or affecting which parts of the ensemble can be heard from a given position in the orchestra, in turn prompting musicians to seek alternative sources of information to know how and when to play. Instruments have their own idiosyncrasies that affect the quality of individuals' sounds, but also interact with the conditions of the moment, at times requiring musicians to compromise tone in favour of volume, for example, or cope with environmental issues which impact instruments sound producing abilities. And significantly, musicians must use their bodies to animate instruments to sound, musicians are often negotiating nerves, fatigue and pain which affect both the sound that individuals make (as summarised in the joke: How do you get a violist to play *pianissimo tremolando*? Mark it

solo.), but also the choices they make about how to play (for example, holding back in one part to save energy for a passage later in the piece).

3.1.6

SYSTEMS OF INFLUENCE PRELIMINARY SUMMARY

The process of articulating and illustrating these diverse influences with empirical data fleshes out the findings of previous studies, which have observed that musicians respond to streams of information from multiple locations while performing, not just information coming from the conductor. This taxonomy emphasises the significance of Cultural-Historical influences in shaping the manner in which individuals are pre-disposed to perform their parts through Accepted Performance Conventions that both facilitate and constrain performance; the Training and Experiences that are fundamental to the shaping of embodied responses, values and preferences; as well as the Commercial and Economic Forces that influence or shape any number of parameters, such as time, space, and artist relations. But it also illuminates that individuals are also reacting in-the-moment to the actions of others, whose influence is supported by any number of factors such as their position in the Institutional Hierarchy, their perceived Musical Authority, or the role that their part is playing at a particular time in the Musical Context, all in an effort to maintain the Prime Directive. There are of course other motivators, and as was discussed in the interview chapter, it is possible that the ability to achieve 'group flow' is an intrinsic motivation for some musicians.

The SoI described in the previous pages do not pretend to represent *every* possible influence, but rather represent the influences that were evident in the data collected over the three phases. The interdependence of the SoI is characteristic of the Framework overall, as the boundaries between the

components of the Modes of Action and the Topics of Focus are also difficult to define. However, even though the SoI cannot be easily compartmentalised, they are identifiable, and the taxonomy offered here helps demystify a process that continues to be characterised primarily by its external structure. As mentioned in the Framework Overview, however, tensions arise between the SoI, prompting musicians to make split-second decisions about what is best to do in the moment in order to maintain the PD (at the very least) or accomplish artistic goals (personal or otherwise).

3.1.7

TENSIONS BETWEEN INFLUENCE SYSTEMS

Fundamentally, there is tension between and even within the SoI as demonstrated by the fictitious ‘ideal’ scenario offered in the Overview and in the examples given throughout the descriptions in the foregoing section. Musicians work to maintain the PD but influences routinely frustrate their ability to achieve group cohesion. Sometimes these are subtle and productive, causing individuals and the ensemble to solve problems in a way that creates a desirable result: a slow, nebulous down beat from a conductor might cause uncertainty in the strings who need to begin a passage *pianissimo*—as they surreptitiously enter, the music blossoms seamlessly from silence. In other situations material properties, such as Space Acoustics, Instrument properties, or other influences such as the Musical Context might be at odds with each other, making it difficult for musicians to hear the cues that they need in order to play together and put across a cohesive performance.

Although tensions can occur between any of the SoI there are some tensions that musicians negotiate more regularly than others. In particular, while it should now be clear that Institutional Hierarchy is not the only influence that determines how a musician will play, it is still a powerful one. The conductor is obviously a significant figure in the Institutional Hierarchy, and their actions, gestures and decisions are frequently at odds with other SoI. Tensions between (and within) the Institutional Hierarchy and the Present Soundscape are common and can be compounded by tensions with Material influences and that of the Musical Context.

Institutional Hierarchy vs. Present Soundscape (or 'seeing' vs. 'hearing')

In orchestras musicians are constantly assessing the information coming from what they see in relation to what they hear in order to make decisions about how and when to play their parts. What they *see* might be the movements of other musicians around them: bows, arms, breaths and bobs, or might be the gestures of the conductor. While there is a great deal of research on gesture in musical performance from a variety of perspectives (see Gritten & King 2011), what is of particular relevance here is the difference between gestures that result in sound production and those that do not. Whereas musicians' gestures while playing nearly always result in sound production, the conductor's gestures never do. If a musician bases their knowledge on exactly when to play only on what they see coming from the conductor, it can sometimes (or even frequently) mean that they are not with the rest of the group. Oliver described this in his interview as mentioned earlier, noting that if he plays with the gestures of the conductor during his euphonium solo in *The Planets*, he will invariably be late, whereas if he watches the bow arms of the violins, he will be able to produce his sound at the same time as the rest of the orchestra.

In addition to prioritising visual cues that are materially engaged with producing the Present Soundscape, musicians emphasised the crucial role of listening in order to maintain ensemble cohesion. As one questionnaire respondent offered: 'You look a lot and listen even more'. When the conductor's gestures are at odds with the Present Soundscape, musicians must decide if they are going to follow the Institutional Hierarchy and play at the time the conductor is indicating (or their interpretation of the gesture at

any rate), or whether they are going to play with the sound around them. For some this was intertwined with the influence of the Musical Context or the Present Soundscape:

This bit was frustrating as we need to play with the trombones but it felt as if they were dragging. I was trying to play on [the conductor's] beat, but then that made it not with the trombones. Then not sure what is better - play with the others or with the conductor. Not happy with that passage. (Trumpet-1)

Trying to keep time with the conductor but very difficult to achieve as whole orchestra is dragging. (ViolinII-3A)

For others it was additionally complicated by tensions *within* the 'institutional hierarchy':

At this spot I remember feeling that what I was hearing in the tempo of the music was slightly behind what I was seeing on the podium. As a section player I feel my job is to stick with the section. I recall that I felt uncomfortable with how the orchestra was not responding to the conductor. (Cello-1B)

Sometimes musicians prioritised aural information, not because there was a discrepancy between what they saw and what they heard, but because they felt that the gestural information from the conductor was not adequate for temporal coordination.

Listening to the semiquavers in the tambourine to make sure the cymbals at the start of the *allegro* are together with the section—it's a difficult note to place and conductors are usually not clear enough to rely on. (Perc-3)

Was wondering what to do here to be right. Following the conductor was only partly useful since we all react in different ways to what we see at a moment like this. Luckily for me I can see the leader so try and play with her. End result in general was quite messy. (Viola-1B)

The transition to the finale—the conductor is wildly gesturing but not much help in the *accelerando* so I listen and watch the leader to try and stay together. (Oboe-1)

However, auditory information was not always prioritised. Sometimes musicians felt they had to prioritise what they saw rather than what they

heard depending on whether the visual information was coming from the conductor or from other members of the orchestra:

Another increase in tempo here which I'm watching for. The strings are behind (again!) but I must go with the conductor's beat and the trumpets who are pushing forwards and have the same notes as me. (Clarinet-1)

Show very clear my pulse in the quavers and watch the leader showing the beat as sometimes the music is so complex you cannot just rely on what you hear. (ViolinII-1A)

This is a place where eyes need to almost replace ears. Music gets busy and things might reach my ears late, especially in an empty [concert hall acoustic]. Eyes to the violins, making sure I am coordinated. (Viola-3B)

Needing to prioritise visual information over aural information can also be the case for musicians who sit further back or play instruments which have a tendency to sound late. These individuals are often in the position of needing to anticipate the beat rather than wait to hear what is happening in order to play with the relevant parts:

Not sure if the back of second violins and violas understand that we have to produce the sound earlier so that the conductor hears it in 'time'. It's making them rush as soon as they hear flute solo stuff. They need to follow with their eyes not their ears. (Flute-1)

As Leo described in his interview, one has to rely on eyes rather than ears when sitting in the percussion section, prioritising information from the front on account of the influence of the Institutional Hierarchy within the string sections (section players waiting for those in front to play first):

It's just guess work, but being very attentive all the time. [...] You've got to keep eyes on the front and that's the conductor and the lead strings. You're watching their bows. But I think sometimes it can be a thing in orchestras which is quite natural, that people don't want to be ahead of a leader of a section, so if you've got strings and there are [...] ten, twelve, twenty [desks], that's a heck of a lot of people and you don't want to be ahead of the one in front of you and they don't want to...and so everybody doesn't want to be ahead of the leader, so everybody's that far back. And occasionally you do hear that where we're sitting. [...] We really hear, 'oh hang on, that's well behind there.' (Leo, professional percussionist)

Negotiating the visual and the aural is a delicate and complex issue, as musicians are weighing the relative merits of what constitutes 'right' at a particular time. In a rehearsal context 'being right' might be playing 'on the stick' in order to comply with the Institutional Hierarchy (which may very well be giving clear and helpful coordinating gestures). In a rehearsal, there is the possibility of stopping and addressing issues of coordination, and remaining unsynchronised with other players might even be a way of communicating an opinion that other parts of the orchestra are not in time with each other or are rushing or dragging. In performance, however, 'being right' might mean ignoring the gestures of the conductor in favour of adhering to the Present Soundscape whether or not it conforms to the conductor's gestures.

The scenario that follows came from observations during one of the case studies and details an exchange between the principal flute (appearing to speak on behalf of the woodwind section), the leader/principal of the first violin section, and the conductor:¹

A situation arose in one of the rehearsals of the case studies where the strings (principally the first violins), were playing to a different pulse than the winds (that is, they were basically in the same tempo, but the exact placement of the beat was at issue). The conductor repeated the section a couple of times and when it wasn't automatically fixed through repetition, stopped to ask what the problem was. The principal flute suggested that the violins were not following the

¹ Although this scenario was video-recorded, it was not an excerpt that musicians were asked to comment on through the MERID interface.

conductor's beat. The conductor apologized for not being clear, but the first flautist insisted that the conductor *was* clear and that the others needed to stay with him. The leader did not contradict the flute player's claim that the conductor was providing a clear beat (to do so would have likely been political suicide) and when they played the passage again, it was together.

The conductor in this case study had not established authority with the orchestra with regard to the clarity and effectiveness of his gestures and there were situations where the orchestra had already had to override or ignore his gestures in order to stay together. The tension created in the scenario above can be seen from one perspective as the lack of agreement throughout the orchestra about the quality of leadership from the podium *at that specific moment*. The first violins (following their principal player) voted with their sound to maintain the pulse on their own, independent of the conductor, while the winds (perhaps taking the lead of the principal flautist) voted to follow the conductor rather than the first violins. Because it was a rehearsal rather than a concert, this power struggle played out in an unusually direct dialogue between flautist, leader and conductor. In a way, the flautist had created a sort of checkmate with the leader, who could not openly admit to deliberately not following the conductor.

In a performance context such power negotiations would happen differently. Since the opportunity to stop is not available, the leaders influence would

likely be stronger in this case, as the cost of undermining the PD in performance is much too great.

Tension Within the Institutional Hierarchy

As mentioned in the section on Institutional Hierarchy there is tension within this category alone. There is an understanding that section members are called on first to play with their section principal before adhering to other sources of influence such as the conductor's gestures or instructions or the Present Soundscape (although they are expected to juggle these, too):

Extremely conscious of watching front desk violas so playing at exactly the same time as them with same use of bow and same amount of bow. Aware very much of rest of orchestra so playing as one with them, listening for tempo changes and dynamics. (Viola-5A)

As mentioned earlier, musicians' allegiance to their section is fundamental to their role in the ensemble. However, this can still cause tension for section members when a principal player does something that frustrates the section's ability to coordinate with the rest of the ensemble. A recent conversation with a professional woodwind player brought this issue to light:

The orchestra was playing for a conductor whose time beating was slightly erratic (who nevertheless had a lot of Musical Authority with the group), but overall the orchestra was managing to divine a pulse from the gestures and were playing a very familiar piece together in time. One principal wind player was rushing from time to time and upsetting the ensemble for the rest of the group. The second player could only follow the first player despite their awareness that this was causing the temporal disruption. Although these musicians had been

playing together for many years, the second player has a subservient role in the Institutional Hierarchy (as well as being a former student of the principal player) and it was not deemed appropriate to critique the principal player. But years of frustration had built up and the second player finally *did* say something to the principal (at the risk of compromising working relationships and even potentially losing their job) who defended their playing by saying that the conductor was moving the beat around and that the other musicians were wrong.

What this scenario demonstrates is that the complex tensions *within* the Institutional Hierarchy, as well as how they interact with the Present soundscape, can place individuals in very awkward predicaments and force them into playing in particular ways that go against their own judgement and other influences to which they would rather adhere.

Institutional Hierarchy and Prime Directive vs. Personal Engagement

Another common tension, and one that has been well reported by orchestral musicians, is the tension between the conductor's artistic ideas (or others 'above' them in the Institutional Hierarchy such as section principals) and those of the players. This has given rise to the image of the frustrated and repressed orchestral musician who is unable to make any personal musical contribution. As one of Cottrell's musicians stated:

'The whole nature of being an orchestra musician is that you basically subjugate your whole person, all your ideas, your own personal ideas, you have to just completely throw them away. Just say, right, I don't matter. The guy on the box, on the podium, he's the guy that matters, and you have to give them what they want.' (Cottrell 2004:107)

Some of the musicians in my own case studies also expressed this perspective in how the conductor's interpretation differed significantly from their own:

I was trying to get to grips with an interpretation which is definitely not mine - very difficult, as I love the piece, and it is hard to play it in a way that goes totally against the grain of how I imagine it! (ViolinI-3B)

This is one of my favourite pieces of music, ever! In this case I thought I'd just play it like it were the last time I would be able to, and just really go for it and enjoy it, and it worked, especially in the first movement. I do have very happy memories of playing it many years ago, when I got chosen for the first international youth orchestra of the Schleswig Holstein music festival, and Sergiu Celibidache conducted us. I can still hear him shouting in certain bits (like during this extract!), but I never again played it with a conductor who achieved such transparency and clarity. So, in a way, whenever I play this piece, no matter what I think of the current conductor, I'm re-living it in my memory, and thinking of this amazing interpretation. With any luck, any current interpretation doesn't interfere too much - this time it did, but it's still a great piece, no conductor can take that away. Thankfully!! (ViolinI-3B)

Similarly, a musician noted how they must follow the decisions made by the leader and/or the conductor with regard to the length of notes:

At this point, there is an articulation marking in the part (1st vln) which makes several of us think 'really?' (one bar of long notes). [...] However, [...] none of the section players have any say in whether notes are long, short or in-between. We can only find out what is required by another (leader or conductor) and comply. (ViolinI-2B)

It is not necessarily the case that musicians always have strong personal convictions about the way things ought to go (although sometimes they certainly do), but conductors might insist on musical interpretations that are counter-intuitive to musicians, go against performance conventions, or make playing their part more difficult than they feel is warranted (see Action Map #6 in Section 3.4)

Ridiculous bowing. [The leader] should have put her foot down or at least tried the perfectly logical one I suggested that I know works. (ViolinII-1A)

Wondering if this is always the tempo here. It doesn't seem to work. Too slow, or we aren't relaxed into it. Running out of air. Wondering if I can move [quavers] within [crotchets] so it has more movement. (Flute-1)

It is not only the Institutional Hierarchy that is at odds with individuals' Personal Engagement, but rather musicians may feel that they must put their own ideas aside in favour of maintaining the PD. Brodsky's study of UK professional orchestral musicians noted that this was a significant source of stress and dissatisfaction with their work: 'an orchestral contract may be considered to be the ultimate trade off for debased artistic standards; a rank- and file position can represent a subordination of virtuoso assertiveness and the repression of individual personality in the service of collective musical achievement' (Brodsky 2006:674).

Tensions Between Multiple SoI

Indeed, musicians often negotiate very complex situations while playing, and are often juggling multiple intersecting and competing SoI during a short period of time:

The woodwind and strings have the same rhythm here, so whilst I'm listening to match with the other players, I'm also mindful of turning the quaver into a semiquaver, given what I played from letter E. The diminuendo at the end of this passage needs to be rapid. I do this but the effect is lost because some players have not observed it. I'm hoping that the conductor might comment on this, given that this is the transition to a change of character in the next section. (Clarinet-1)

In the quote above, this clarinettist is balancing the need to play the same rhythmic figure as others (maintain the PD) with the desire to interpret the rhythmic notation in the manner he believes to be best (Accepted Performance Conventions and Training and Experience). He tries to assert the musical text by playing the dynamics as written, but on account of the nature of the line he is playing (*a diminuendo*) does not have power within the Musical Context to make his opinions audible to the other musicians. Moreover, he is not in a place within the Institutional Hierarchy to correct his

colleagues verbally. He is hoping for the intervention of the conductor on account of the importance of this particular part in the overall Musical Context.

This idea of 'tension' is not only about resistance or dissonance between two or more influences, but rather it animates the actions of musicians as they make decisions (consciously or instinctively) between the different sources of influence. For example musicians are constantly negotiating their ingrained knowledge of how to read or interpret music (shaped over time by Training and Experience and Accepted Performance Conventions) with what is being performed around them (the Present Soundscape). This is less a source of anxiety than a fundamental reality of performing in any group music-making context involving shared and interdependent musical materials.

3.1

SECTION SUMMARY

SoI and the inherent tensions between them are what motivate individuals in an orchestra to act in a particular way: asserting, demanding or adapting sounds, articulations, tempos, phrasing and all the other performance parameters which shape the artistic profile of a performance. While the influence of Institutional Hierarchy has dominated the understanding of the ways in which orchestras operate, and undoubtedly has a strong influence on the way in which musicians engage with performing their parts, in and of itself it is not a straightforward top-down hierarchy, nor the most powerful influence at any given time: the Musical Context can empower individuals or sections at different times and the Present Soundscape can very quickly alter previously expected courses of action. Moreover it is imperative not to underestimate (or overestimate) the influence of Cultural-Historical SoI in the way that they shape the stock of knowledge musicians bring to the rehearsal and performance situation. While these Cultural-Historical influences may prompt interactions between musicians, they also come into tension with other SoI during rehearsal and performance, in a process that happens instantaneously and beneath the level of conscious adaptation as well as through explicit and (at times) painstaking intentional change.

Orchestral musicians' desire to achieve and maintain the PD is strong.

Whether or not the privileged position of ensemble precision and notions of correctness with regard to intonation and rhythmic realisation are only a sign of the times, the importance with which these are culturally endowed is a

powerful motivator. Professional orchestras *must* be heard / seen to be performing together if they are to maintain their reputations and thus their livelihoods. While the same consequences do not apply to amateur orchestras, such ensembles are sites of 'serious leisure' (see Stebbins 1992) where participants are frequently (although notably not always) very much invested in performing to the best of their ability.

3.2

MODES OF ACTION

3.2.0

INTRODUCTION

Similarly to Dobson & Gaunt's (2015) research, which revealed that information within an orchestra does not simply flow from the podium to principal players and through to section players in a unidirectional fashion, my study makes it clear that musicians are engaged in a much more intricate dance of interaction, exhibiting varying degrees of leadership, 'followership', and assertive behaviour depending on the precise situation. Uhl-Bien *et al.* offer a constructionist framework for understanding leader-follower relationships, emphasising the need to recognise a stronger role for 'followership' by noting that 'leaders and followers interact together in context to co-create leadership and its outcomes' (Uhl-Bien *et al.* 2014:99). They note that leadership attempts are made through trying to 'influence' others while following behaviours are 'those that "grant" power and influence to another' (*ibid*). They note that following behaviours 'may take the form of succumbing to the wishes or desires of another by deferring, obeying, or complying' but can also 'involve "co-producing" leadership outcomes by still deferring to another and granting their leader claim, but also advising, challenging, correcting or persuading in a respectful and trusting way to generate more effective outcomes' (Uhl-Bien *et al.* 2014:99). Koivunen & Wennes' research found that the conductor's leadership was a product of co-

construction between players and conductor, but what the present study also reveals is the active role of ‘followership’ in the negotiation of relationships between colleagues as well. For the purposes of the Framework, it is not important whether musicians are blowing, bowing or bobbing, but rather *how* they are engaged with the processes around them. Are they leading or being led? Or are there other Modes of Action that describe a more complex engagement with the conductor and their colleagues?

I propose that there is an important role for individual imagination—sound ideation—in the accomplishment of all of the MoA, including Responding, Following Directions, and even Matching/‘Following’. Whilst it is not a *requirement* that individuals have a concept of the sound they wish to produce prior to dragging a bow across a string or pushing a stream of air through a tube, having acoustic performance ‘goals’ is an essential element of ensemble performance if anything other than total cacophony is to result. In solo performance Holmes observed that musicians ‘image (either physically or mentally) the character of sound that they wish to produce’ (Holmes 2012:304). Such imaging was apparent from the musicians in this study, as the commentary indicated that they were constantly constructing for themselves the acoustic goals that they believed were needed at a particular moment while simultaneously assessing their outputs against these ideals in an iterative process. Kemp proposes that:

The ability to internalize sound and to develop a rich, imaginative, and comprehensive internal representation, not only of what has been previously experienced, but also for imaging new, innovative compositions and interpretations, would appear to be an essential feature of a musician’s thinking. (Kemp 1996:44)

Drawing on Jaques-Dalcroze's approach to music education, in which he emphasised 'the notion of motor images in the ear, and associations between muscular and aural sensations', Kemp goes on to suggest that it is possible that 'kinaesthetic processes lie at the heart of the compositional and interpretative processes in music' (Kemp 1996:44).

Increasingly, empirical research supports the idea that there is an intrinsic coupling between humans' perception of sound, and action, gesture, shape, and space (e.g. Gritten & King 2011; Godøy & Leman 2010). Overy & Molnar-Szakacs developed a model they call Shared Effective Motion Experience, based on recent findings in mirror neuron studies. They propose that 'musical sound is perceived not only in terms of the auditory signal, but also in terms of the intentional sequences of expressive motor acts behind the signal. Thus, even a simple musical listening experience carries within it the presence of human action and human agency, and can facilitate feelings of empathy and social bonding' (Molnar-Szakacs *et al.* 2012:314).

Similarly, Godøy argues that 'musical sound is inseparable from body movement', that 'any sound and/or sound feature [is] actually included in some sound-producing action trajectory' (Godøy 2011:235), and that we develop increasingly refined associations between movements and sounds. Godøy argues that 'musical and everyday experiences cause the development of perceptual schema [*sic*] that include what comes before, during, and after the sounding of a note or group of notes or other sounds: a single note on the piano is embedded within the trajectory of the finger/hand/arm prior to the onset of the tone; and a group of piano notes is not just a collection of pitches

but a fused sound-action event in which the individual notes and finger movements are subsumed by coarticulation into a superordinate hand movement' (Godøy 2011:235).

The connection Godøy describes has been reflected in the findings of fMRI studies which have shown that trained pianists exhibit more pre-motor neuron activation than non-musicians when listening to piano music (Haueisen & Knosche 2001; Bangert *et al.* 2006) and that there is a correlation between first-hand familiarity with the sound-producing gesture and the extent of the pre-motor activity reflected in the brain (Lahav *et al.* 2007). This empirical evidence supports Clarke and Davidson's observation of nearly two decades ago that 'music is produced by human and instrumental movement, and is thus indelibly stamped with its bodily and instrumental origins' (Clarke & Davidson 1998:76).

The relevance here is that there is a strong argument to be made for the embodied nature of musicians' musical imagery—that auditory goals are closely coupled with the physical actions that produce them. In this study, musicians' commentaries revealed the primacy of this bodily connection:

The thinking here or in any of my comments is not in words, though, it is in gesture, movement and feeling and listening and responding. It is just a series of making decisions that happen in each second. (Cello-2A)

I was reacting to how the tension in the music builds up and as the last movement begins it is sheer release of tension and quite joyous. The full sound of the orchestra was all around me, you could feel the vibration, I was always trying to find subconsciously the right sound, thinking of how speed and weight to make it and feeling where the tension was and slowing the bow down there, going deeper into the string. It's exhilarating music and quite thrilling to play. Once the last movement starts one has to not hold back and just really play. (Viola-2B)

Using the classifications identified by Bangert *et al.* in their research on musical decision-making in expert solo performance, I propose that orchestral musicians' decision-making can also be understood as 'intuitive', 'procedural' or 'deliberate', where 'procedural' decisions are a subset of intuitive decisions and are defined as 'previously deliberate decisions that [have] become automatic over time' (Bangert *et al.* 2013:1). They describe the relationship between the categories in more detail:

Procedural decisions could be considered characteristic of mature, expert intuition, and may be contrasted with intuitive decisions that result from processes that have never been conscious. It may also be the case that some decisions categorized as intuitive were in fact procedural, but the deliberate basis for the decision had faded from consciousness. Nevertheless, the substantial proportion of intuitive decisions (27.6%) demonstrate that performance decisions are not always planned or highly practised; they may be quite spontaneous and based on a sense or feeling of rightness. (Bangert *et al.* 2013:15)

Whether or not the imaginative processes involved in sound production for orchestral musicians are conscious and deliberate or the result of embodied cognitive responses to present circumstances, the extent to which responsibility for their own performance can be attributed to individuals warrants some acknowledgement. Musicians are not puppets which are animated by the flick of a conductor's baton, or akin to George Lucas' stormtroopers whose individual decision-making capacity has been completely eliminated or suppressed by training. They are, rather, autonomous individuals who must construct for themselves the acoustic goals they wish to achieve in order to play a musical instrument in coordination with a large group of other musicians.

This is not to say that some orchestral musicians don't *feel* as though they are automatons, at least some of the time, as one of Cottrell's musicians

commented: 'When I'm in an orchestra I'm just a robot' (Cottrell 2004:107). As my own interviewees noted, in some positions, such as the rank-and-file strings, a musician is meant to play in precisely the same way as the section principal. But as has already been illustrated, matching a principal player is not as straightforward as it sounds, since musicians juggle many competing influences in a situation where aural and visual information streams are often compromised. Moreover, I return to Hallam & Ingold's assertion that 'copying or imitation is not the simple, mechanical process of replication that it is often taken to be, of running off duplicates from a template, but entails a complex and ongoing alignment of observation of the model with action in the world [and] in this alignment lies the work of improvisation' (Hallam & Ingold 2007:5).

What I propose is that orchestral musicians, rather than behaving like a herd of sheep following a shepherdess' crook, are actually engaged in many different types of MoA. These include varieties of leadership, 'followership', cooperation and negotiation, requiring them to imagine and produce sounds based on their embodied knowledge (intuitive and procedural responses) and judgment (conscious deliberate choices) about what they believe to be a desirable contribution at any particular moment.

The MoA for this framework have been identified through the MERID data in order to identify precisely the sorts of actions people actually perform in real-life situations as opposed to what might be suggested in their generalised reports. There are six MoA: Leading, Asserting, Responding, Matching/'Following', Following Directions and [Assessing], and they will be discussed in more detail below, offering examples from the data.

3.2.1

LEADING

Leading actions demonstrate a deliberate effort to influence others and often involve a high degree of individually generated sound ideation. In some instances individual musicians were quite clear about their leading intentions and expressed their preferences for how things should sound in the way that they played:

I was trying to influence towards stubborn, heavy second and fourth beats without pulling away from the group. I like to feel that two and four reluctantly overflow into 3 and 1 in this figure. (Cello-1A)

Here, instead of blending into the string bass sound as before, I try to lead the sound for the bottom end of the orchestra. While still balancing depth, I add brightness to be the "pointy end" of the lows. (Tuba)

I was hoping to end phrases gracefully here, to influence the bottom end in shaping the phrase endings without a bit of a bump at the end. (Cello-1A)

Other Leading actions were focused on maintaining cohesion within a certain part of the ensemble. In the examples below, the leader takes responsibility for the string sections while the principal flute appears to be acting as a liaison between the conductor and the wind section:

I'm giving quite a big lead at this point to try to make sure that the strings are moving together. (ViolinI-1A)

Trying to lead the woodwind entries and play together, not getting behind the conductor's beat. (Flute-1)

Although comments that expressed such Leading intentions were more frequently reported by principal players, there were some exceptions. The following pair of comments demonstrates how someone at the back of the orchestra took a Leading initiative that was felt at the front of the orchestra:

I felt the need to be pushing the tempo as there seemed to be an accretion of drag from the starting tempo... (Horn-2)

When it is played fast the tempo does not cooperate with the technical difficulties the strings face in this particular work. [...] I just wish the horns didn't push the tempo, and looked more at our conductor. (ViolinI-2A)

Players were not always successful in their leadership attempts. In fact, expressions of leadership (and in general expressions about actions) were often phrased in the context of 'trying':

Trying to hold and show smooth legato pianissimo line. (Viola-1A)

In the pizzicato passage, I was trying to stop my desk partner from playing the last note a tiny bit too early as she always does! (The cor anglais always slows a tiny bit.) However, I was unsuccessful. (ViolinI-3A)

While the Institutional Hierarchy certainly has an important role in encouraging or discouraging individuals from taking on leadership roles, as already observed, the Musical Context can also have a significant effect, since particular lines may have more or less influence at given moment.

But not all who are 'followed' are intending to 'lead'. Even when other musicians are Matching/'Following' another musical line in the orchestra due to the role that it plays within the Musical Context, this does not mean that the players playing those parts are aware of the attention focused on them, or are consciously trying to lead. In this sense, it is not necessarily productive to think of the relationship between instrumentalists in terms of 'leader-follower' dyads.

3.2.2

ASSERTING

Musicians also left comments that indicated a desire to achieve a particular outcome or sound without expressing that they did so due to a direct influence within the rehearsal or performance setting, or in a deliberate attempt to influence others. These Asserting-type actions are likely to be influenced by Personal Engagement and by underlying Cultural-Historical influences such as Training and Experience or Accepted Performance Conventions. These influences prompt musicians to perform their parts in specific ways based on their own knowledge and preference for how they should go, rather than Matching/'Following' someone else's phrasing or sound, Responding directly to another's ideas within the performance situation, or Following the Directions of the conductor, for example.

Some musicians gave vivid accounts of their experiences demonstrating

Asserting actions:

The ascending scale which happens four times has always attracted me enormously, so I'm very much in my own world focusing on my bow control and the overtones I want to produce. The harmonic progression is delayed to the 4th beat of the bar, so I enjoy the hanging feeling tremendously as we ascend. I choose another fingering than the norm, so travel up the D-string in order to make a vibrato accent stick out on the top note. Hearing it excites me, but there's also a sentimental element to it, which I feel is enhanced when the trumpet takes over the theme. The somehow relentlessness of the cello scale is highly sensual, I feel. The following material is a build-up of drama. And it's quite a bit of chopping away, tiring stuff. 100% commitment demands a good bow technique. I also decide whether I should play the *divisi* line as double-stops—for sport and power, really. (Cello-1B)

Other musicians were more general in their description of what they were trying to achieve:

As we got the tune I was trying to make a beautiful soaring sound. (ViolinI-7A)

[I] want to make a beautiful sound—its gorgeous. (Cello-3B)

We have the tune. Sing it out—thinking of my vibrato. (ViolinII-1A)

Sometimes the process was more subtle and found in the details of tone production, or the character of their part:

Projecting the little bird-like cries in the oboe part which are an important feature. (Oboe-1)

Must make a good rich sound and flow. (Viola-1A)

Was aiming to produce a large, well-rounded sound, in contrast to the material I had been playing before. (Cello-1B)

3.2.3

RESPONDING

Like Asserting actions, those in the Responding category also demonstrate that individuals construct acoustic ideals in order to perform in a way that they feel complements or responds to musical stimuli in their immediate environment. These actions are fuelled by the influence of the Present Soundscape, sometimes combined with Musical Authority and an awareness of the Musical Context. For example, individuals might elect to shape a phrase, or change the tone quality, intensity or texture of their playing in their Responding to something that has come before:

I heard the lively way in which the 1st and 2nd violins played this little motif and tried to imitate the style for the cello's response (Cello-2A)

I am impressed with the cello/bass/tuba sound and I was reacting to the deep range vs. the high range of the violin. It is stringent and can be harrowing. I used more bow pressure and vibrato when I was playing on the E string. (ViolinII-1B)

I love the sweeping phrases in the strings leading to this climax, and was totally caught up in the expression of the music, ready to join in with passion as the strings led us to the top of the emotional surge. (Oboe-3/Cor)

Musicians also sought to complement other parts in the musical texture, by adapting their playing to enhance others' lines or create an overall effect:

I was very aware of the sound I was making in support of the horn solo then oboe and flute solos. I was trying to create a sound colour to enhance these solos also being very aware of my dynamic. (ViolinI-7A)

Playing very even and smooth quavers against very free triplets in the wind and to create a still atmosphere (ViolinII-1A)

The act of blending is interesting when looked at from the perspective of individual agency. Blending involves modifying one's sound so that it joins with others' sounds to form a composite. In addition to blending with

instruments in one's own section, musicians frequently blend their sound across instrumental sections to create a unique timbral 'colour'. When musicians actively blend their sound, they are adjusting their sound quality in response to what others are doing, relying on their judgment about the desired overall result and their ability to imagine a desired outcome, as well as considering the role that their individual instrument plays in creating the composite sound. Musicians necessarily draw on their knowledge of the Musical Context, their Training and Experience and a variety of local and more general Performance Conventions to shape their decision-making.

This just happens to be at a section which is my absolute favourite as 2nd violins have the theme, so I was thinking of my sound, trying to blend with the cellos and of course the rest of the section. (ViolinII-1B)

I create a supportive sound that blends and adds a colour to the other low voices. (Tuba)

I was loving the blend in sound of the viola section and the cor anglais, and was trying to sing my line within the tone and timbre of the violas in front of me. (Oboe-3/Cor)

Hence, like Asserting actions, Responding actions rely on individual imagination, but this is developed in direct response to events in the present environment and suggest a volitional attitude toward musical dialog within the performance/rehearsal situation (see Action Map #2 in Section 3.4).

3.2.4

MATCHING/'FOLLOWING'

Matching/'Following' actions require problem solving and translation, particularly when seeking to match across diverse instrumental timbres. Here, the objective is to play exactly the same thing as others rather than offering new sounds that are in dialogue with other parts. The comments below show how this can involve a range of parameters including style, bow strokes, note lengths, pitch and timbre.

Here I take my cue from the trumpets and match their style on my first 2 notes. (Tuba)

Listening to the canonic entries and playing the canon. Matching my articulation with rest of section, heavy bow (Cello-2A)

Was trying hard to match sound and note-lengths with the rest of the section throughout this introduction. (ViolinI-3A)

For each entry I'm going to make, the first violins are already playing the note I need to match the pitch of. I'm trying to pre-hear my own pitch, to find an acceptable centre to match the slight spread of pitches I'm hearing from the first violins. (Clarinet-1)

In the examples above there is a sense that there is a certain amount of temporal space in which these processes can take place. However, this MoA has kept 'Following' in quotation marks because often what we think of as following in an orchestral context is really musicians being called on to *match* their colleagues playing precisely in the flow of the moment. Musicians must rely heavily on their ability to rapidly process information about what is going to happen next on the basis of aural and visual sources of information, as well as anticipating what might be coming in order to be physically prepared to produce matching sounds. When music has been rehearsed, musicians have had the opportunity to develop expectations for a particular

scenario; however, some parts or pieces may not be rehearsed or go as planned in performance, which leaves musicians needing to adjust quickly (virtually instantaneously) particularly when their goal is to match another player in every way.

3.2.5

FOLLOWING DIRECTIONS

Following Directions differs from the other MoA as it has to do with the translation of verbalised, written or gestural information into sound. As Weeks (1990) observed in his study on the group accomplishment of time in an amateur orchestra, this process requires varying degrees of interpretation on the part of the follower in order to transform directions (which may be quite clinical, such as 'play within the top three inches of the bow', to fairly metaphorical, such as 'it needs to sound more like a nuclear explosion') into sound products. The preference for non-verbal communication was made clear by my interviewees and this will be discussed further in the section on conductors. Generally speaking, however, during rehearsals, conductors (some more than others) will often stop orchestras to give verbal directions about a particular aspect of the music, which will then be played, sometimes repeatedly, until the orchestra produces something that is deemed acceptable to the conductor (or until the conductor decides to move on). Sometimes this process is clear and the conductor indicates that the instrumentalists have achieved what they were asking for. As often as not, however, players will not receive clear feedback on whether or not they have successfully achieved the desired outcome (if indeed the conductor had a clear goal in mind to begin with), and are often left having to assume that because they were not corrected again, their efforts were adequate.¹ Unfortunately, it is not at all

¹ It can actually be fairly striking how little feedback individuals get on their playing. Rob Knopper, in his blog detailing his first Metropolitan Opera gig as a percussionist, noted that despite his desire to know how he was doing, and his direct requests, he received absolutely no feedback from conductor or colleagues (accessed 7 May 2016 <http://www.robknopper.com/blog/2016/2/28/what-i-found-out-on->

clear that the conductor's lack of feedback constitutes satisfaction on the conductor's part that instructions have been understood and achieved. As one conductor noted:

Here with the trumpets. Just a little brash. Happy they are getting the notes and happy to leave them to it. They are pretty good players but not the strongest in the group and I know some of this is going to be a challenge already, so I don't push. (Conductor)

As discussed in Section 2.1.2, due to orchestral rehearsal conventions, the conductor is often the only one giving verbalised and non sound-producing gestural instruction. In the MERID data, where musicians did indicate that they were Following Directions, it was often on account of something the conductor said or showed:

During the rehearsal of this [the conductor] had said that the basses dotted crotchets were to be as rhythmic as though they were *pizzicatos*. I thought this was a very apt thing to say, and tried hard to play them in time. (Bass-3A)

I have sustained *fz* chords in an *ff* dynamic but know from previous comments by the conductor that the wind and horns have been too loud here. I make sure to back off each chord after the accent, in order to comply with this request. (Clarinet-1)

I was trying to play the triplets in this passage as legato as possible – [the conductor] had requested this in a previous rehearsal. (ViolinII-4A)

I was concentrating on counting rests for most of this section as I had a small solo entry coming up. The conductor's gesture made it clear that he wanted this to be heard. (Trombone-3)

However, as noted earlier it is sometimes difficult to gauge the connection between the gestural information coming from the conductor and the result in the ensemble:

This passage often slows down, as it did here. I was listening and watching and wondering whether what I was seeing from the conductor was being done by us, or whether he was wanting to slow down a bit more. (Viola-1B)

Indeed the transfer of information from conductor to orchestra is an area that continues to be explored in research into gesture and conductor-player communication (e.g. Parton 2014 on epistemic stance taking). However it is an area which demands continued examination, as it is difficult to quantify the effect of conductors' gestures on orchestral musicians' responses or the extent to which an orchestra's playing reflects a conductor's 'imagined' ideal.

3.2.6

[ASSESSING]

The last MoA, [Assessing], is effectively ‘action neutral’; although participants reported frequently that they thought critically about the sounds produced around them, the actions and directions of the conductor, or their own performance, participants did not always report how such assessments changed their behaviour in the moment. There are effectively three types of assessment reported by the participants in this study: the assessment of one’s own playing, the assessment of others’ playing, and the assessment of the playing/performance situation as a whole. These assessments often merge when playing, as a musician’s own performance or the performance of others is judged in relation to what is happening in the moment. In Dobson & Gaunt’s research, participants indicated that in general, self-assessment and assessment of the orchestra’s performance as a whole was an important responsibility of being in a professional orchestra:

The orchestra has to be extremely critical of itself at all times. There’s no place for complacency or arrogance. You have to look at what you’re doing all the time. It’s the same with your playing. Each and every member has to look after what he’s doing, and the orchestra as a whole has to do that as well. (Dobson & Gaunt 2014:306)

In this study, participants reported assessing/critiquing the quality of their own performance as well as the performance of others. Sometimes it was a matter of trying to understand if what they were doing was ‘right’:

Very conscious of trying to please the conductor. The more we covered the same passage, the more I felt it was me that was the problem! I don’t think that was the case looking back, but at the time I was worrying about it. (Flute-1)

Am I playing *ponticello* enough? Not sure. (ViolinII-1A)

At other times they expressed criticism or praise of a colleague's playing, or a conductor's actions or choices:

That was a disappointing line from the horns. (ViolinI-5A)

The transition between those two sections felt really awkward and blocky, not much finesse coming from the conductor (please don't pass that on!). (Viola-3B)

Nice oboeing! (Viola-3B)

Nice cello solo. [...] (ViolinII-2A)

It's still too slow! Is that John or Jessica playing? It sounds good. (ViolinI-5A)

Or of the orchestra's performance as a whole:

We ruin the start of this movement every time! The horns can't settle their syncopated rhythm and the woodwind can't agree on the length of the first crotchet and minim, so the tempo continues to be unstable. (Clarinet-1)

Minor ensemble discrepancy here [strings] but overall much better ensemble than in the [rehearsal hall]. (Bass-3B)

Musicians also frequently assessed the Present Soundscape in order to make judgements about how to Respond:

Dynamics, what's going on how can I show it's too loud? (Viola-1A)

Unison with the cellos here, often difficult to agree pitch of F ♮, never sure if they're too sharp or we're too flat. (Viola-1B)

That's a wonderfully orchestrated entry, and a well-paced crescendo from the players. Need to match the dynamic when we enter. (Cello-1B)

Significantly however, and as mentioned in the overview, the intensely time-bound nature of group performance leaves very little time for reflective deliberation. As a consequence, decisions are often the result of automatic responses developed through training and past experiences, what Bangert *et al.* have referred to 'procedural' decisions. This resonates to some degree with findings in Situation Awareness (SA) studies. SA research has suggested that

'in dynamic environments', in which 'many decisions are required across a fairly narrow space of time, and tasks are dependent on an ongoing, up-to-date analysis of the environment [...] conscious deliberation of solution alternatives [by experts] [is] rare,' rather, the majority of the time, 'experts [focus] on classifying the situation in order to immediately yield the appropriate solution from memory' (Endsley 1995:33-34). Researchers also note that: 'In addition to developing mental models with experience, a form of automaticity can be acquired. Automatic processing tends to be fast, autonomous, effortless, and unavailable to conscious awareness in that it can occur without attention' (Endsley 1995:45). This description of SA suggests the retrieval of pre-programmed protocols, and perhaps in the domains where SA is most frequently applied (e.g. military or medical), this seems appropriate. However, I would argue that whether in an orchestra, in an ambulance, or on a battlefield, responses must be adapted to the in-the-moment conditions. While orchestral musicians are typically not involved in life or death struggles (although reputations and livelihoods can be at stake), as mentioned in the overview there can be a feeling of needing to 'survive' during an orchestral performance. The drama that can unfold on the concert platform has even been likened to emergency situations, as this recent review illustrates: 'Tchaikovsky's Fifth Symphony suffered less violent abuse. The players, especially the leader [...] deserve medals for paramedical intervention.' (*The Times*, 11 November 2015).

3.2

SECTION SUMMARY

What is evident from identifying the types of action that musicians actually engage in during real-life rehearsal and performance situations is that individual agency is mediated and negotiated in more complex ways than might be expected within a static hierarchy of leaders and followers. Through playing their instruments, musicians give voice to their thoughts and feelings about how their part should be played at any particular moment. When they do this, they may be explicitly trying to lead or influence others around them, assert their own conceptions of how the music ought to go, offer musical responses to what is happening around them, match others' playing, or interpret and follow directions of those in positions of authority within the Institutional Hierarchy. They may be engaged in multiple actions at the same time, or in very rapid succession. The role of individual auditory imaging and imagination and its connection to embodied knowledge should not be underestimated in these contexts, since it is musicians' *actions* which result in acoustic contributions, whether through intuitive, procedural or deliberate decision-making.

Throughout Section 3.1 and 3.2 data from the studies has been used to illustrate the components of the MoA and the SoI, and over the course of those illustrations there have been indications of how these influences and actions are connected to the specific realisation of the 'expressive' parameters which shape the profile of an orchestral performance. Section 3.3 will describe each of the components of the ToF and its basis for inclusion in the

Framework through examples from the MERID data, as well as explore the types of action evident in the musicians' commentary with regard to the various ToF, and the relative influence of the SoI over these performance parameters as they were apparent in the case studies.

3.3

TOPICS of FOCUS

3.3.0

INTRODUCTION

As with the MoA, the ToF have been identified inductively through analysis of the MERID data in order to determine more precisely *what* musicians are focused on while they are actively playing during rehearsal and performance situations. While the data from this study does not lend itself to quantitative analysis, it is worth noting that instrumentalists reported primarily about issues of ‘when’ and ‘in what way’ to play (Ensemble Coordination and Musical Character) and spent less time describing technical problems or processes (Technical Issues). The comments revealed a critical awareness of their own, other players’, or the conductor’s performance, and their opinions about the music (Assessments and Feelings) as well as occasional attention to issues of rehearsal management and working conditions (Management Issues). Only a few of the comments left on the MERID system reflected a preoccupation with thoughts outside the rehearsal/performance context (Miscellaneous).¹ It was clear that musicians were often focused on multiple topics at once, so while the ToF are disaggregated here for explanatory purposes, in practice they are often interwoven. For example, topics such as Temporal Coordination are intricately linked to issues of Musical Time, as

¹ This balance is probably skewed due to the data collection method used. It is probable that musicians’ thoughts often drift to matters beyond the rehearsal or performance context but participants were not inclined to report on them during this study.

individual and group choices about tempo and the process of establishing tempo are often one and the same as the process of maintaining Temporal Coordination.

The following section will explore each of the ToF with particular attention to the thematic categories of Ensemble Coordination and Musical Character, as these represented the majority of musicians' commentary and are of central importance in tracking how musicians engage with the construction of 'expressive' performance outcomes. The aim is to identify the SoI that appear to be the most common influences which prompt musicians' decision-making about individual performance parameters as well as the MoA which musicians tend to engage with when dealing with specific ToF.

3.3.1

ENSEMBLE COORDINATION

The attention given to concerns with Ensemble Coordination throughout the commentary underscores the central role of the PD for musicians. Although precision in ensemble coordination has not always been the primary objective that it is today, as research into historical recordings has shown (see, for example Philip 2004:234-235), the aesthetic of precision in performance has become hegemonic, a Cultural-Historical influence that frequently supersedes other influences during performance. A similar influence can be seen to guide Stylistic Coordination where a fundamental tenet of modern ensemble performance demands, as one of my participants put it, that ‘shared lines [equals] shared styles’ (Tuba).

3.3.1.1

Temporal Coordination

Beyond an awareness of the general pulse or beat, Temporal Coordination denotes determining exactly when to play each note. For individuals or sections with shared lines, this might mean coordinating bow strokes, breaths and tonguings among any number of individuals and instrument groups to within approximately 30-50 milliseconds so that they are perceived as happening simultaneously (Rasch 2000:81).² Elaine Goodman, drawing on the empirical studies of synchronicity in ensemble performance by Rasch observes that ‘in fact, the execution of notes at exactly the same time by a

² The different types of attack (beginnings of notes) will affect how this is perceived. A legato violin section entrance will have more flexibility than a series of staccato wind quavers.

group of musicians is beyond the limits of human skill and perception: there will always be minute discrepancies in timing—that is, asynchronisation—between the notes intended to be performed simultaneously’, such that even within a small chamber ensemble, musicians are only able to create an ‘illusion of synchrony’ (Goodman 2002:155). Even creating this illusion can be incredibly challenging, particularly among 40+ musicians who are at times playing very different musical materials.

Although Rasch’s studies found that the inclusion of coordinating gestures by a conductor has a positive effect on the synchrony of events in a large ensemble, the case studies presented here reveal that the conductor’s ability to make a positive impact in this regard should not be taken for granted.

Although the questionnaire findings indicated that musicians believe they frequently look to the conductor to know when to play, what was revealed in the interviews and case studies is that actually musicians more often look and listen to sources of information other than the conductor to precisely coordinate their sound with their colleagues.

For the musicians in the MERID studies, the primary SoI engaged with in order to accomplish Temporal Coordination were the Institutional Hierarchy, the Musical Context, and the Present Soundscape (Material influences such as Orchestra Arrangement and Space Acoustics also play a role). Musicians engaged with these influence systems by Leading, Matching/‘Following’, Following Directions (in the sense of ‘playing on’ a conductor’s beat), and even occasionally Asserting. They prioritised influences depending on what was happening in the moment, particularly when there were discrepancies

within the ensemble. As was discussed in some detail in Sections 3.1 and 3.7, musicians were often engaged in negotiating competing influences within the Institutional Hierarchy and between 'sight' and 'sound'—asynchronies between the conductor's gestures and the Present Soundscape—in order to determine precisely when to play their part. In order to maintain the PD they tended to prioritise playing with their sections, fulfilling roles in the Musical Context and sticking with the Present Soundscape:

We have a couple of bars' rest here followed by a pizzicato B which has to be together. Wasn't finding the beat very helpful as it was not definite enough. Followed the Principal and it worked OK. (Viola-1B)

Extremely conscious of watching front desk violas so playing at exactly the same time as them with same use of bow and same amount of bow. Aware very much of rest of orchestra so playing as one with them, listening for tempo changes and dynamics. (Viola-5A)

The end of the excerpt was very awkward as we have sextuplets against the tune, when time is given here, as it was, we have to really stretch our 6s which is very difficult in a section of 14. I listened very hard in this excerpt and played with what I heard rather than watching the conductor. (ViolinI-7A)

Listening at all times to the rhythmic pulse in the middle/low strings to keep in the right place. At all times relating to what the cellos are doing as we are an extension of their line. Not just watching the beat, but referring at all times to what is going on musically. (Bass-2B)

Felt annoyed here that it was sounding quite untogether, making sure that I tried to keep a consistent beat, aware that things could spiral out of control at any point, listening to my colleagues rather than looking up. (Cornet-1)

Indeed, as expressed by Oscar in the interviews, the effect of the orchestra layout and the acoustics could require musicians to be proactive about Asserting their own parts:

Still thinking about ensemble—keep it with celli. Difficult to see and hear—it's probably too late if you play to what you hear, so really important to be strong and confident, but not stick out. (Bass-2A)

Individuals throughout instrumental sections (such as section string players) often attended to the Musical Context in the sense that they sought to Match/'Follow' colleagues with relevant melodic or rhythmic parts:

At the start I was aware of listening out for the constant quavers so I could place my pizzicato right in time. (ViolinI-7A)

I adjusted my playing by listening to the melody from the horns and making sure my part lined up with them. (ViolinI-2B)

Making sure the big tune fits with the intricate passage of the violins. At 1'21" it is a test of listening powers, fitting time passage with basses and cellos. (Timpani)

To make this entry after the slight pause I need to listen carefully to the woodwind, and in particular, the flute. (Bass-1B)

In this passage I am aware of listening to the moving semi quavers to ensure I fit in. (Oboe-1)

Jack noted in his interview that he always sought to figure out who was listening to who, and the Present Soundscape was an important source of information for determining when to play, but musicians' inclination to Match/'Follow' what they hear caused some sections to pull apart:

Always worry about this bit. We have repeated quavers to play that are fast but difficult for the rest of the orchestra to hear accurately. It's rarely perfect because inevitably some of us will adjust to fit with an out-of-time entry and some won't. (Viola-1B)

The emphasis on listening for coordination was strongly emphasised throughout musicians' commentaries, as was watching colleagues' sound-producing gestures such as bowing and breathing:

Watching first violin bows to show where individual pizzicatos need to be placed. (Bass-2B)

I then try to breathe with the trumpets to get the last note together with them. (Timpani)

As the second player, I use my section 'radar' to breathe in when the principal player breathes, this way our notes will sound at the same time. (Trombone-2)

These comments resonate with Oliver's observations about obtaining information from the bow arms of the violinists to know precisely when to play, pointing to the rich coordinating information embedded in players' sound-producing movements. McCaleb proposes that in chamber ensemble performance, in order to coordinate actions, instrumentalists draw on the embodied knowledge developed over the course of learning to play their instrument—an embodied knowledge that facilitates the fluid and instinctive realisation of their own musical intentions (McCaleb 2014). This tacit knowledge of one's own sound production is transferred to ensemble performance, enabling musicians to infer colleagues' musical intentions from very subtle motor cues. While McCaleb's focus is on the nuances and automaticity of this primarily visual aspect of ensemble communication, he acknowledges the crucial role of aural information in ensemble performance: visual inputs augment aural inputs, rather than displace or override them (McCaleb 2014:96). As explored earlier in the section on the MoA, the close coupling of sound and action makes it relevant to consider to what extent listening is akin to watching in terms of obtaining information about precisely when to play in an ensemble context. Beyond temporal synchronisation, however, coordination is more than just beginning and ending notes at the same time but includes coordinating stylistic components such as 'volume, timbre, articulation [and] expression' as well as accomplishing complex tempo fluctuations (McCaleb 2012:55) (see also Boerner & Streit 2007:133). The importance of Stylistic Coordination was emphasised by some of the MERID respondents:

I am frustrated here as we are not together, nor moving together musically within sections or collectively. (ViolinI-5A)

3.3.1.2

Stylistic Coordination

While Temporal Coordination was primarily concerned with vertical alignment, Stylistic Coordination was concerned both with simultaneous coordination, but also coordination between musical ideas. Due to this, in addition to the strong Matching/'Following' actions common in Temporal Coordination, there was also a role for Responding actions between parts over time. The Musical Context was highly influential as was the Institutional Hierarchy within sections. Musicians worked to Match/'Follow' section principals and stand partners to achieve unanimity in their style:

This is the second part of a famous viola section melody. I spend the time constantly checking that I am fitting in with Principal in terms of volume, use of the bow (which part of the bow, or how much bow to use) and phrasing, i.e. managing slurs and dynamics. As no2 I have to match him very carefully as people behind see both of us and we're meant to be doing the same thing! (Viola-1B)

Stick with section and desk partner, smooth playing and bow control. (Viola-3B)

They attempted to Match across instrumental sections when playing shared lines:

Listening very carefully to try to match volume and phrasing in cellos. (Bassoon-1)

Between lows and trumpets, as well as previously from the horns, we did not match styles at all. I'm aware there are differences in markings probably, but we should have all met somewhere in the middle. Shared lines = shared styles so it can be match more. (Tuba)

And musicians also took stylistic cues from others who had previously played similar material and observed that others ought to be matching stylistically:

Make a seamless connection with the first violin quavers as we follow their phrasing and colour. (ViolinII-1A)

The brass and string exchange of notes needs to be interpreted the same way, in style and length. (Bass-3)

What was clear from the MERID commentaries is that ensemble coordination is not a simple process of following the conductor, but a complex series of interactions which occur as sounds and gestures emanate from a variety of different sources. Where cultural conventions drive aesthetic values of ensemble alignment, precision, and stylistic matching, musicians negotiate a mixture of influences and rely on, and also juggle, visual and aural information in order to make decisions about when to play.

This last quote is offered here as it vividly expresses the complexity and ‘in-the-momentness’ of playing together with one’s section and the orchestra as a whole:

At the start of the clip I was listening to the rest of the orchestra [and] trying to play very legato, rather desolate sounding triplets. Intonation is quite tricky as is blending so my ears were on stalks. As the pace and mood of the passage hotted up, I was not only counting like crazy as I have never played this piece before but I was trying to play with real precision going with the mood of the music and reacting to it, watching and listening all the time to try to be really together with my section and being vital with the rhythm. (Viola-2B)

While the musicians in my studies were clearly concerned with Ensemble Coordination, the amount of attention given to this issue in the commentary was not greater than that paid to Musical Character. Nor did matters of

Musical Character only appear once Ensemble Coordination issues had been addressed. They were, rather, a regular focus throughout the rehearsal and performance process, either in tandem with coordination or on their own, and were a prevalent topic across the different skill groups.

3.3.2

MUSICAL CHARACTER

3.3.2.0

Introduction

There is an underlying assumption that as far as performing orchestral music is concerned, playing the right notes in the right place is all an orchestral musician needs to be responsible for—it is the conductor's job to bring expressive characterisation to the piece through their body language (which instrumentalists then instinctively respond to) or by describing verbally in rehearsal exactly how each note is to be played. While this is an extreme characterisation, it is surprisingly close to widely-held beliefs. It should be clear by now from the data already included in the previous sections that musicians are engaged with a range of influences which shape decision-making regarding the 'expressive' parameters of performance that define the overall profile of an orchestral performance. Those comments which were concerned with Musical Character are of particular relevance to the main questions of this research, since it is very much the qualities of what is being coordinated that differentiates one (equally competent) performance from another. The aspects of performance involving Musical Character reported by the musicians in my study have been grouped into three categories: Musical Time, issues such as tempo, tempo changes, nuances of timing, note duration (articulation) and rhythmic realisation; Volume, specifically dynamics and balance; and Quality which encompasses parameters such as articulation (attack/emphasis), pitch (intonation/vibrato), timbre (tone quality/blend).

3.3.2.1

Musical Time: tempo, tempo changes, nuances of timing, note duration (articulation), and rhythmic realisation

Aspects of Musical Time have long been recognised to be at the heart of defining interpretations and contributing to the expressive profile of performances (Seashore 1938; Todd 1985, 1992; Clarke 1988; Bowen 1996; Windsor & Clarke 1997), the choice of which in an orchestral context has historically been attributed to the conductor (see Bowen 1996). Timing (as well as dynamics) has been a main focus as researchers have sought to map the shared performance parameters that performers utilise for communicative and expressive purposes.

For many of the musicians in this study, thoughts and opinions about the tempo, the nature of the pulse, rhythmic feel and the negotiation of note duration were prominent concerns. Their comments detail the ways in which aspects of Musical Time are negotiated, revealing that the establishment and accomplishment of Musical Time is less straightforward than might be expected given the presence of a conductor. The following material clearly illustrates that concerns with issues of Temporal Coordination overlap significantly with issues of Musical Time; the subtle difference is that the former is concerned with coordination regardless of the nature of characterisation of the musical materials, whereas issues of Musical Time are primarily concerned with the ways in which the *quality* of these aspects are constructed. The first three, tempo, tempo changes and nuances of timing, will be discussed together, followed by issues related to note duration (articulation) and rhythmic realisation.

Tempo, tempo changes and nuances of timing

Significantly, tempo within an orchestral performance (or rehearsal) is not static: 'deliberate' and 'accidental' shifts, perhaps around phrase boundaries or when accomplishing difficult or complex passages, for example, means that time can stretch or compress, while more significant time changes come at transitions or during *accelerandi* and *ritardandi*. Sometimes players 'rush' or 'drag' in relation to one another, a previously established pulse, or the time-keeping indications of the conductor. The 'nature' of the time is also at issue: it is possible to maintain a consistent tempo, but play either at the 'front' or 'back' of the 'beat', which can affect the 'feel' of the music. Nor is tempo static between different rehearsals or performances of the same piece, even with the same conductor and group of musicians. In effect, tempo within orchestras is constantly shifting (even if minutely), thus requiring constant attention.

As with the responses to the questionnaire, in which musicians stated that they primarily look to the conductor for information about tempo, it was clear that musicians in the case studies also believed that one important role of the conductor is to set and maintain tempos through their gestures. While a few comments indicated that sometimes this is as straightforward as it sounds, as has already been suggested not all conductors have equal skill in gesturing in a way that communicates tempo effectively. Even when they do, musicians may respond to them differently, choose not to watch them at all, prioritising different SoI, or simply be focused on other tasks such as reading their music. (Simple distraction or ambivalence should also not be ruled out). Although, as with Ensemble Coordination, the influence of the Institutional Hierarchy is strong (both from conductors and section principals) other influences that are significant shapers of tempo-related issues in the MERID data include the

Material influence of individuals' bodies—what tempos feel right, what they can technically accomplish with breath and fingers—and the influence of Personal Engagement, which is often expressed through the influence of the Musical Context of their part.

It was relatively common for musicians in the case studies to comment that they were looking to the gestures of the conductor in order to help accomplish tempo transitions, and equally common to complain that others were not doing this.

I was aware of the *ritardando*, and was therefore thinking about not only the sound around me, but about the necessity of glancing up at the conductor's beat. (ViolinII-2A)

I'm not looking at the printed music here as I need to pick up exactly how much faster the tempo is going to be; it's different every time! I'm hoping that my colleagues will do the same... (Clarinet-1)

I wanted everyone to follow [the conductor] as he sped up at the end... they didn't but I wasn't sure where the drag was. (ViolinI-3B)

Aware of a slight *rall.* coming up and hoping the whole cello section responds. (Cello-1A)

I have two short interjections to the flute melody here and it's a shaky moment. I feel that the flutes have come in slightly late this time but have made up the time somehow, so I match my staccato quavers to the conductor's beat, rather than risk sounding rushed. I ignore the *p* marking here as otherwise I won't be heard. I also take care that that my gestures (taking a breath and movement of the end of my instrument) are clear, to avoid uncertainty for my colleague playing second. (Clarinet-1)

Once again, within the Institutional Hierarchy individuals sometimes prioritised sticking with their section principal, or looking to the leader:

At this spot I remember feeling that what I was hearing in the tempo of the music was slightly behind what I was seeing on the podium. As a section player I feel my job is to stick with the section. I recall that I felt uncomfortable with how the orchestra was not responding to the conductor. (Cello-1B)

At 0.45 [the leader] set off very fast and we all had to adjust very quickly to get back together. (ViolinI-3A)

Conductor beats upward from below the "line". This is a) lethargic and b) hard to see. At the end of the clip, he changes to downwards with better results. [...] Violins were behind in the *accelerando* to the 4th movement tempo. For some reason, the leader felt he had to take over in this. (Bass-1A)

Although this allegiance was sometimes a matter of course, in the comment above it appeared that the leader acted as a surrogate when the conductors' gestures were not clear. At times, musicians reported being uncertain about what the conductor was trying to convey, or whether the orchestra's response was what the conductor wanted:

Does he want that next bar delayed slightly? (Viola-5A)

This passage often slows down, as it did here. I was listening and watching and wondering whether what I was seeing from the conductor was being done by us, or whether he was wanting to slow down a bit more. (Viola-1B)

I was thinking it feels like we are dragging, thought [the conductor] was trying to move on, but wasn't sure if it was me rushing. Thinking the whole thing is a bit slower than I'm used to in practice. (ViolinI-1B)

In all the case studies there were times (in some more often than others) where musicians responded differently to conductors' gestures. As Henry mentioned in his interview about watching his colleagues rather than the conductor, this is because fundamentally everyone interprets the conductor's gestures and 'intentions' differently:

The ensemble in the following [section] is problematic with differing interpretations of the conductor's beat and the final passage nearly falls apart as some sections rush. (Oboe-1)

Towards the end of this clip the brass rushed repeatedly and excessively every time we played it. I cannot understand why this was not addressed. It de-stabilised the whole orchestra and added nothing to the performance. It was suggested that they misunderstood the conductor's intention at this point, why not just stick with the composer's intention? (Bassoon-2)

I felt like it was hard to play the tempo with the strings - they seemed sluggish, or not unified. In the winds it felt like trying to keep the tempo on the stately, slow side. I could have made it sluggish, though, as it is a challenge to anticipate the sound before the downward stroke of the beat. Often it is a challenge to get the same effect created in the winds and strings. (Flute-3)

All through this 12/4 section there was a feeling of inertia. Pulse felt sluggish, not because of the tempo but just the playing behind the beat constantly. [...] The strings were late to the brass, and wind were stuck in the middle as the *accelerando* just didn't get going. The wind moving quavers needed to flow and we were having to adjust each bar. This in turn makes it hard to find the breath in the music. (Flute-1)

Whether players interpreted conductors' gestures differently or were simply not prioritising conductor directives, some of the commentary indicated that the accomplishment of tempo change requires shared expectations throughout the ensemble. For example, the first comment below suggests that there was a general consensus within the orchestra (tacit or otherwise, and including the conductor or not) about the rate at which a particular transition was meant to happen. It appears that the way that it was played in rehearsal that afternoon was deemed undesirable and that it was generally agreed that they would not do this in performance. Despite this nominal 'shared goal' cohesion was still elusive:

I just remember a degree of anxiety at the transition from the third to fourth movement, as there was a desire on the orchestra's part not to slow too much, as had happened in the rehearsal, but to lead directly into the tempo of the last movement. However, things were still pulling one way or another and it was difficult to know exactly where to play for a couple of bars. (Cello-2A)

This moment was never right in rehearsal or performance. The collective view of this *rall.* was not coherent. Something for another day... (Bass-1B)

The *accelerando* that follows was faster than we had rehearsed, not everyone picked up the tempo. There was a feeling of having to hold it together by playing louder than I wanted. (Flute-1)

This is just before the moment that caused a lot of trouble in rehearsal. The trumpets came in with the descending chromatic scale at a faster speed, upsetting the ensemble. In the concert there was an attempt to accelerate just before their entry, but it was still a mess and after the syncopation section we never managed to land on the 2/4 bar line with the trombone entry. (Cello-2B)

We played this many times. Each time the *accelerando* was at a different pace. This made it hard to keep together as the strings have off beat rhythms through most of the passage and their response to the changing beat is so much slower than the wind and brass sections. There is always a feeling of the orchestra having to play catch up when we play this passage. (Flute-1)

Interestingly, 'establishing' time at the beginning of a piece also proved to be a group process:

We ruin the start of this movement every time! The horns can't settle their syncopated rhythm and the woodwind can't agree on the length of the first crotchet and minim, so the tempo continues to be unstable. I don't need to look at the music here, so I'm watching the conductor's beat. I must remember to speak with the other wind players, so that we can get consensus on the opening notes. (Clarinet-1)

The three quavers in the first bar always seem a challenge to play together and cleanly especially as the tempo is hardly established by that point. (Viola-4B)

As can be seen in many of the comments above and those quoted earlier, there was a sense in player's comments that individuals have a responsibility to construct and maintain tempo or 'pulse'. They expressed this through their criticism of others' failure to do so and through a recognition of their own role in the process:

I got a bit frustrated as it went on because I don't think my partner and I agreed on the tempo particularly in the *marcato* crotchets - I think she rushed and I think she thought I held back. (ViolinII-3B)

In this section, I am concentrating on maintaining a steady beat as well as speed. (ViolinII-1B)

Listening at all times to pulse of the orchestra, and what the wind are doing to prepare the next 'major' tutti. Pulse, pulse, pulse...(Bass-2A)

Love the tempo, and we kept it! Great ending; together and with our conductor. (ViolinI-1B)

I felt like I was late playing my entrance in the piccolo on both notes. The cue was clear, but my delivery was late. This section is winding down and transitioning to the pulsating next section. My own inability to follow and anticipate the arrival of the downbeat. Maybe I should have just looked up more instead of anticipating so much. Really isn't exactly with the flutes and I slowed things down more than the conductor was aiming at. (Flute-3)

Players took on different responsibilities in this regard depending on the role of their part within the Musical Context:

At this point the flutes are providing a new pulse to accompany the trumpet solo. Very aware of the really beautiful playing from the trumpet at this point and trying to keep steady for him. (Flute-1)

Some utilised the role of their part within the Musical Context to influence what others were doing, affect the character of the music, or solve ensemble problems, at times drawing on the influence of their own Personal

Engagement:

I felt the need to be pushing the tempo as there seemed to be an accretion of drag from the starting tempo... (Horn-2)

In rehearsal we were unsuccessful in resolving the ensemble issue of off beat flutes (pushing the beat), on beat basses, and late violins: mostly because in the poor acoustic of the [rehearsal hall] we couldn't identify the problem. In the [concert hall], we could be clear about the analysis [...] but we were not decisive enough to fix it 'in the moment'. The solution should have been to 'drive' the bass line closer to the flutes, and expect the violins to keep up. (Bass-1B)

For the Strauss waltz the 3rd and 4th horns play off beats. With the tempo changes throughout (which I like) it seemed like we needed to be right on top of this. Sitting right in front of the snare helped. Basically [the third horn] and I bobbed to the downbeat and pushed the off beats as much as possible. (Horn-4)

At the beginning of the clip the timpani punctuates the downbeat and I tried to add a little tension and (almost!) push the tempo faster. This creates excitement against the upcoming sudden tempo change. [...] At the end my long rolls and a few downbeats support the basses and we drive the piece home to the end. The tempo doesn't get faster per se, but the low instruments do push toward the "front" of the beat which makes it much more exciting. (Timpani-1)

I was trying to influence towards stubborn, heavy second and fourth beats without pulling away from the group. I like to feel that two and four reluctantly overflow into 3 and 1 in this figure. (Cello-1A)

As mentioned in Section 3.1.4.1, the influences within the Musical Context do not always lead from the melody down. While melodic lines might have the power to influence tempo through expressive phrasing (or just not keeping a steady beat) the pulse can shift, making it difficult for players to fit in their accompanying figures. At other times it is the motor rhythms that define the pulse:

I was thinking about how difficult it was to fit in our semiquavers when the tempo was changing all the time. But still enjoying the harmonies. (ViolinI-7A)

Violas play quavers which have to be very stable within the section. I'm hoping the tempo doesn't move much. (Viola-4B)

Making sure that the tempo is picked up from the start for the syncopation and that it fits with the conductor's beat and the wind and string tune. (Horn-3)

All the way through this section I am aware of continuous semiquavers and the need to keep that pulse going—listening to whoever is playing them at all times. The semiquavers are the key. [...] The change in tempo at this point is crucial, so checking visually what is going on as no obvious running quavers to help show me. Actually I think the violas are doing something melodically interesting, so that helps. (Bass-2B)

In addition to the influences of the Institutional Hierarchy, the Musical Context and, at times, individuals' Personal Engagement, another key influence that emerged from the MERID data with regard to tempo was the Material properties of individuals' Bodies—whether tempos 'felt' right or enabled technical execution (see Action Map #4 in Section 3.4 for an example of this influence in a concert setting):

I love the tempo taken by [the conductor]; [...] *spiccato* sections were easy to play at that tempo, and it didn't lose the excitement that this overture requires. Some conductors think that fast and furious makes this overture exciting but [this conductor] didn't fall in that trap. When it is played fast the tempo does not cooperate with the technical difficulties the strings face in this particular work. [...] I just wish the horns didn't push the tempo, and looked more at our conductor. (ViolinI-2A)

Wondering if this is always the tempo here. It doesn't seem to work. Too slow, or we aren't relaxed into it. Running out of air. Wondering if I can move [quavers] within [crotchets] so it has more movement. (Flute-1)

I was so relieved with the tempo [the conductor] took during this rehearsal! I felt like I had the confidence to go ahead and try to make a more wave-like phrase instead of just scrambling to get more notes. (Cello-2A)

This whole passage feels slow and laboured. No sense of direction at all. [...] Yet again we feel unable to play in time as the passage is not suited to this slow speed. (Flute-1)

The final two comments regarding tempo given below demonstrate the confluence of multiple SoI during scenarios involving a soloist and the significance of tempo on the characterisation of a performance. Depending on the specifics of the situation, soloists may have more or less influence within the Institutional Hierarchy. While the first comment below illustrates the mediating role that a conductor might play in order to bring an orchestra together with a soloist's unexpected tempo in performance, the second one demonstrates the tensions between a soloist and a conductor. These can be caused by the Material influences of the Orchestra Arrangement, the Commercial and Economic Forces which shaped the amount of time for the rehearsal and the power relationship between conductor and soloist, the Cultural-Historical influences of Performance Conventions and the tension between individuals' Personal Engagement:

This is a tricky opening for the conductor because [the soloist] was choosing a tempo that was slower, but very rich and romantic in her sound. [...] I think the strings wanted to go a tiny bit faster than [the soloist] and it was work for the conductor to balance the two out! (Flute-3)

Because I was standing in front of the orchestra, I was very concerned about not being able to see [the conductor] at the podium, which was slightly behind me. In the end, we managed to create a bit of contact with me turning sideways in order to catch him out of the corner of my eye. There was quite a bit of *rallentando* toward the end of that section, and there was no way for me to predict how much time [the conductor] would take on it. I had hoped to take the first section faster, as I had heard on a number of recordings. The rehearsal time was so limited, that this was the first run through we had had of this intricate piece, which made me terribly nervous about all the spots in my solo that were open to individual interpretation, depending on how the conductor wants to pace it. I was trying to guess what [the conductor] wanted to get out of this piece, while attempting to adapt as much as I could to his vision of it, which was different in a variety of ways from my own. [...] Ideally, there would be scope for a bit more discussion and some give and take. The *rubato* section at the end, for example is better off controlled by the [soloist] in this instance, as the conductor is [in] a holding pattern. As it happens, the tempi wound up being quite different in performance just a few hours later. (Soloist)

What the preceding discussion and commentary strongly suggests is that the process of conveying, establishing, maintaining and changing tempo is fraught with complications. Interestingly, the MERID data and interview commentary both supported and contradicted the data collected by the questionnaire in which musicians reported nearly always looking to the conductor for tempo. Although it was clear that the conductor was an important source of information about tempo, the actual accomplishment of tempo is a much more complex activity: the influence of the conductor through the Institutional Hierarchy is in tension with other influences within the Institutional Hierarchy as well as with Material influences, the Musical Context, Personal Engagement and the Present Soundscape, as musicians seek to maintain the PD.

Note duration and rhythmic realisation

The sub-category of Musical Time also covers note duration and rhythmic realisation. Here, note duration refers to the length of a note, whereas rhythmic realisation has to do with the relationship between notes in a relatively small rhythmic unit such as a triplet or dotted figure.³ As Cook has pointed out, despite the apparent precision of Western rhythmic notation and pitch specification, it is precisely the specific nature of these elements that are negotiated during the rehearsal process (Cook 2004). The system of crotchets,

³ While technically speaking note durations are 'articulations', in that 'articulation' refers to 'the degree to which each of a succession of notes is separated in performance' (see White, B. "articulation." *The Oxford Companion to Music*. Oxford Music Online. Oxford University Press, accessed May 7, 2016, <http://www.oxfordmusiconline.com/subscriber/article/opr/t114/e420>.) The term is colloquially used to more generally refer to a wider range of musical notations which might indicate different types of attack or emphasis as well as note duration such as slurs, accents and *tenutos*. On account of these overlapping usages, for the purposes of this Framework, 'articulations' has been used to describe attack and emphasis. Having said that, in part of what follows, 'articulation' was used by some musicians to refer to the length of notes.

quavers and semiquavers used to notate durations and rhythms are interpreted differently depending on performance conventions, and in performance durations are modified to facilitate the variety of expressive possibilities. So what influences players to decide how long or short to play their notes?

Implicitly there is a strong role for Accepted Performance Conventions and Training and Experience, in terms of having a stock of knowledge of performance conventions related to specific historical eras or composers' works, in addition to the more generic conventions of performance from notated scores. But again, what was clear from the MERID commentary was that the aesthetic of precision, which guides most orchestral playing in the 21st century, demands that when musicians have shared parts, they play them in the same way. This may prompt musicians to prioritise those sources of influence which help achieve the PD, such as Matching/'Following' principal players or others in the Musical Context over Performance Conventions. The influence of the Institutional Hierarchy in terms of conductor prerogatives was also apparent and in some cases in conflict with other aspects of the Institutional Hierarchy as well as with Material influences, and others' Personal Engagement.

Musicians noted when others did not adhere to the performance conventions of the notation or the convention of matching note lengths across shared thematic material:

The melody line is supposed to be staccato here, but some sections are playing the notes too long. (Clarinet-1)

The wind's entry echoing the strings is not a consistent length to the strings.
(ViolinI-5A)

They indicated that at times they deferred to section principals to know how long to play their notes:

I am trying to balance the length of the staccato quavers with the rest of the trombone section. This involves listening to the length and dynamic that the principal player is playing them and matching it. (Trombone-2)

Thinking about breathing together with 1st flute and matching note lengths.
(Flute-2/Picc)

They also described listening for other elements in the Musical Context for information about note durations:

Listening to the brass and matching their weight, length. (Viola-1B)

Concentrating on articulation and trying to match this and note lengths within the [woodwind] section. (Oboe-1)

The woodwind have a unison rhythm for most of this passage, so I'm listening for note lengths here, in case I need to clarify with the other players afterwards. (Clarinet-1)

Try to match crotchet lengths with wind and other horns. (Horn-1)

While some of the MERID commentary implied that conductor intervention was needed for resolving differences between individuals and sections, there was a sense that players felt that they and their colleagues had a responsibility to achieve unified note lengths independent of conductor directives.

There can also be tension between the influences given above. In what appears at first to be a fairly simple comment, a cellist describes a situation that is rather complex when placed in the rehearsal-performance context of this specific place in the music (for the wider context see Action Map #1 in Section 3.4).

At this point in the rehearsal I remember being concerned about the bow stroke on the *pp* triplets. It is marked *spiccato*, but was being played on the string and was too loud. (Cello-2A)

Reading between the lines, this musician is saying that at least one person on the first desk of cellos was ignoring a printed indication to play *spiccato* by playing on the string, and in doing so was probably playing longer than the indication for the bouncing stroke implies (which may have also contributed to the increase in volume). This put the cellist in an awkward position: either play what they believed was correct and in doing so *not* match note lengths and dynamics with the front desk of cellists, or play in the same manner as the cellist(s) in front, going against their own judgement by contributing to what they perceived as a mischaracterisation of the musical notation and an imbalance in the relative volume of the cellists' part within the overall musical context. Although this was a printed instruction, sometimes annotated orchestral parts are provided by a conductor which may include articulations and indications of note durations as well as bowings or indications of where to breathe for winds, and these annotations can be in tension with other influences (See Action Map #6 in Section 3.4).

In one case study, note lengths (in that they were connected to marked articulations and bowings) were the focus of a great deal of tension between the conductor and the string players. The conductor had provided a set of annotated parts specifying unusual articulations and bowings that were inconsistent with what many of the players expected or desired for the particular composition:

His bowings are just WRONG. Our part is a mess. We used to have [our previous conductor's] bowings for this piece. Aaaaagh. (ViolinI-6A)

Generally, there were lots of instructions written in the part which didn't seem to be right, so we all tried to figure out what was happening, whether to play on or off or long or short or up or down-bow. It looks like we are peacefully playing, but underneath was a current of big question marks going on. (ViolinI-3B)

The influence of the Institutional Hierarchy was very strong in this scenario:

At this point, there is an articulation marking in the part which makes several of us think 'really?' (one bar of long notes). There are other, small, bowing differences and you can see an alertness. In fact one player stands shortly afterwards to check the markings in the other parts. However, despite this alertness and subsequent questions put forward, none of the section players have any say in whether notes are long, short or in-between. We can only find out what is required by another (leader or conductor) and comply. (ViolinI-3A)

Revealingly, this player notes that in performance the leader makes the final call with regard to note lengths, as they must be unanimous.

We had been asked at the rehearsal to play the quavers longer, but it's still the leader's call as to how long and we must copy as closely as we can, in the moment. (ViolinI-3A)

I found this movement very hard to do this week as it was so full of gaps and commas so had to watch those around me as much as possible. Sometimes I don't watch the conductor much, just a general impression in my peripheral vision, I get more clues from players, and again, this was a passage where note-lengths vary and must be unanimous, so most of my attention was on the leader. (ViolinI-3A)

Others attended to section principals and the Present Soundscape:

We are starting to change our stroke, brushing and gradually becoming shorter and stronger, so listening to violas and looking at other section principals to make sure we are all thinking the same! (ViolinII-1B)

One player notes that the conductor's written indications conflicted with the Material influence of her instrument and the embodied instincts of the section as a whole:

Heavy quavers seem to want to be played off the string in middle of bow, despite being pencilled ON the string. Glad when section principal changed it! (ViolinII-4B)

Somebody's pencilled dots misleading on last note of each slur. I felt only the tiniest breath of air needed between slurs. We all seemed to feel it the same way without anything being said. (ViolinII-4B)

Overall, the above discussion suggests that while note lengths may be requested by conductors, conductors' influence over this parameter is far from absolute, and players are often drawing on other SoI to determine how long or short to play their notes. While the influence of Performance Conventions and instructions from the Institutional Hierarchy may play a role to begin with, the influence of the PD strongly shapes the preference for attention to the Present Soundscape, the Musical Context and other elements of the Institutional Hierarchy such as section principals and the leader.

Connected to note duration is the process of rhythmic realisation. Again, despite the appearance of the precision of musical notation with regard to durations and rhythms, when rhythms are realised in performance they are necessarily somewhat inflected in contrast to the mathematical precision of their rendering by a machine or computer. The way that note lengths combine to construct rhythms is another opportunity for expressive possibilities:

The dotted rhythm comes across a lot more precise today in the first violins (less "swingy" and more ferocious). (ViolinI-3B)

Even slight discrepancies between the way that individuals or sections perceive or feel a rhythm can lead to a lack of coordination as the following comment illustrates:

The violas have continuous sextuplet semiquavers here, the cellos have a long note tied to the first of one group of sextuplets. This wasn't together, I spoke to the no.2 cello and we discovered that while the violas were thinking of the sixes in three groups of two the cellists were doing the opposite. As soon as they tried thinking it the same as us it fitted. Just shows how the way you are thinking actually changes the rhythm you play. Obviously if you played like

a computer it would all fit automatically. No conductor intervention here - he hadn't noticed it was wrong and didn't hear us fixing it. (Viola-1B)

While 'rhythm' wasn't referred to as frequently as note lengths by the musicians in the case studies, when they did mention it they referenced Performance Conventions in terms of the 'correct' realisation of the notation, they described adjusting rhythms to Match other relevant parts in the Musical Context, and they noted that there was again a role for the Institutional Hierarchy when it came to maintaining the PD.

Opening- trying to balance playing confidently and ensuring I had the correct rhythm, while being aware of the rest of the section. (ViolinI-3A)

It's easy for the dotted rhythm to sound like a triplet, so I need to exaggerate the rhythm which will match with how the first bassoon is playing the same pattern. (Clarinet-1)

I was aware of adjusting the triplet rhythm so that it more closely matched what the leader was doing - even though I considered it rushed. (ViolinII-2A)

However, a description from a mid-section violist in one of the case studies illustrates that coming to agreement on rhythmic figures within the ensemble can be a dialogic process between members of the ensemble worked out through their playing. He left three comments chronicling such a process over the course of a 1'40" excerpt:

Here, our rhythm started to deteriorate, with some of the players reverting from a 3:1 ratio to a 2:1 ratio. I wasn't really thinking about bowing much until there were these two camps of players. At the moment I became aware, I switched to a hooked (down-down, up-up) bowing to add the impact of on-beat accents and in-string tone, hoping to reinforce the rest of the string players trying to maintain 3:1 rhythm. (Viola-2A)

By this point, the 3:1 party and the 2:1 party have compromised on something that's closer to 2:1 and feels like a slow Irish jig. I am trying to hold 3:1, thinking the quadruplet in my head for each beat. Looking back at this recording, it's evident that the players' timekeeping energy subsided a little as the strings worked through their compromise. (Viola-2A)

Here, at the return of the primary theme, the 3:1 party of the First Violins strongly asserts the internal rhythm to convince the 2:1's that their subdivision sounds like limp spaghetti. This is convincingly followed by the

rest of the orchestra, though traces of the 2:1 pop up right before the phrase ending. (Viola-2A)

In summary, musicians' commentaries from the case studies regarding the accomplishment of aspects of Musical Time depict processes that are more dynamic and contingent than prescribed and unidirectional. Although the influence of the Institutional Hierarchy appears to be strong with regard to tempo, changes of tempo, and nuances of timing, it is not always a positive influence, prompting musicians to engage with other SoI in order to establish and change tempi. Some musicians are even deliberately Assertive with regard to using their part's role within the musical context to influence tempo and feel. The negotiation of note durations and rhythmic realisation is also depicted as a more dialogic process, but one that is heavily influenced by Musical Context and the role of section principals within the Institutional Hierarchy.

3.3.2.2

Volume: dynamics and balance

In addition to aspects of musical timing, volume is a significant component of phrase shape (Todd 1992), and is crucial in establishing the relationships between parts sounding simultaneously (balance) as well as the relationship between events in the unfolding of a musical line or larger formal structure. Similar to the lack of precise meanings in the notation of note lengths and rhythms, dynamic markings in scores do not specify precise volumes and, moreover, are not always deemed to be reliable, requiring continual judgments to be made about the interpretation of dynamic indicators. Volume and balance were an on-going concern for musicians in the case studies and

players indicated making choices about their own volume based on what role their part played in the Musical Context, what they were hearing in the Present Soundscape, and whether or not the conductor asked for something in particular.

While musicians' comments indicated that they were often clear about what they believed the balance *ought* to be and the dynamic at which they should play their own parts, unlike issues of coordination or timing, the nuances of balance appeared to be much more difficult for individuals to coordinate among themselves. Due to accepted rehearsal etiquette/behaviour, players did not usually speak up if they believed the balance to be problematic and had to rely on the conductor and the conductor's acoustically advantageous position at the front of the group to identify and manage balance issues.

Musicians indicated responding to conductor gestures for information about how loud to play their parts, but also expressed frustration at conductors' failure to intervene when they felt the balance to be problematic, as well as at the lack of rehearsal time available to address balance issues.

I had a small solo entry coming up. The conductor's gesture made it clear that he wanted this to be heard. (Trombone-3)

Nice trumpet sound. Must keep calm and well out of the way. Our comments should be rhythmic but unobtrusive. [The conductor] indicating that this is what he wants. (ViolinII-2A)

I find the acoustic in the [concert hall] too resonant for this music especially during the rehearsal as the temptation for everyone is to play too loud in order to hear themselves. The balance is critical and it is not being addressed (Oboe-1)

I wish [the conductor] would stop the brass just blaring! (ViolinI-2A)

I was thinking that if we had more time [the conductor] might balance things more carefully and what a shame there is never more rehearsal time. (Viola-2B)

Ominous rumblings in the music. Like an impending earthquake. How could one manage the acoustic, balance etc. to really make us shudder? Needs much more rehearsal time than we have got unfortunately! (ViolinII-2A)

As a whole, musicians' comments suggested that there is a sense of distributed responsibility for maintaining a good balance: players should take it upon themselves to achieve good balance in the first place by attending to the indications in the written part and make good decisions about modifying these as appropriate given the Musical Context and the Present Soundscape:

Trying to match dynamic with my desk partner, as we were *divisi a2* with homorhythmic lines. (Cello-1B)

I'm being careful not to overplay the forte marking, in case I cover the first bassoon line. (Clarinet-1)

The oboe part interjects occasionally in this passage so I am concentrating on ensuring I listen to the players with the main themes and accompany without being intrusive. (Oboe-1)

As a brass player it is important not to overpower strings and woodwind in this section. We are constantly using our ear to blend with the musical situation. (Trumpet-2)

I am aware that the oboe, although marked *piano* followed by a *diminuendo* to *ppp*, is the leading voice. I aim to be slightly louder than the other wind instruments whilst maintaining a soft timbre. (Oboe-1)

During the final phrase you hear us play at the end of the clip, we are attempting to make this project using more air, thus creating a louder note, we are also making it intensely rhythmic so it balances, and takes over from the rest of the orchestra, as is written in Berlioz's orchestration and dynamic markings. (Trombone-2)

They expressed frustration with colleagues when they appeared not to be observing dynamic markings, creating balance issues:

The main concern in this passage was dynamic and ensemble. I felt that the dynamic markings were not being observed. It was very difficult to hear the oboe, and there did not seem to be a very regular pulse. The overall texture felt very thick, and, personally I was trying hard not to allow all the small

crescendi and *diminuendi* to cause me to play too loudly. Overall the strings felt overwhelming. (Cello-2A)

Winds are consistently too loud forcing the strings to constantly fight to be heard. No soft dynamics (Bass-1A)

Dynamics, what's going on? How can I show it's too loud? (Viola-1A)

In the comment that follows, a clarinettist offers some insight into nuances of balance negotiations prompted by the influences of Accepted Performance Conventions, Institutional Hierarchy, Musical Context, and Present Soundscape:

There are three short entries coming, all marked *piano*, but which need to be heard. I think the strings should be playing more quietly (they are *pp* in my score) and I've been hoping that the conductor will draw attention to this in previous rehearsals. I'm going to play at the dynamic I think is appropriate (fairly quiet) and let the conductor decide if the balance is OK. I'm hoping my second clarinet (who is on trial for the vacant second seat) will play louder than in previous runs of this section. I might need to encourage her (again), not to be afraid of appearing to play louder than me, because the second line is usually lower in tessitura (octaves in this case). (Clarinet-1)

In this commentary, the clarinettist describes gauging the dynamic that she will play by balancing the indications in the orchestral score (not just their own part, but the entire orchestral score which they have consulted) with the dynamics they are hearing in the Present Soundscape. While the clarinet part is marked *piano*, the strings are meant to be *pianissimo*, suggesting that the clarinet line should be heard over the top of this. The clarinettist perceives the strings as playing too loudly, but rather than playing louder than indicated in the clarinet part in order to retain the relative dynamic, she chooses to play at the dynamic that she believes to be appropriate, i.e. 'fairly quietly', and waits for the conductor to decide if the balance is acceptable. The inference here is that the clarinettist hopes that the conductor will hear that the clarinet line is not being heard well enough and ask the strings to play softer. As this is a rehearsal, rather than a performance, the clarinettist is attempting to use the

influence of their role within the Musical Context to make a point and hopefully effect change toward a balance that they perceive to be more closely related to the indications in the score. At the same time, the clarinettist is using their position in the Institutional Hierarchy to influence how loud the second clarinettist should be playing.

A few other musicians noted the effect of the Institutional Hierarchy at the section level:

This is the second part of a famous viola section melody. I spend the time constantly checking that I am fitting in with principal in terms of volume [...] I was pleased to find that he wasn't playing it especially loudly, i.e. as it is marked. Some principal violas think that all viola tunes have to be belted out full volume. (Viola-1B)

There were other SoI, such as Personal Engagement and Material properties of Instruments, which influenced individuals' dynamic choices:

Here comes the fabulous transition into the last movement. We all love it. [...] Always a hard moment to get through and I am always interested in the start of the last movement being marked only *f* (not *ff*). It's a bit like reaching calmer waters after being out on the high seas. Wonder if that dynamic is really going to be adhered to or are we all going to just play our hearts out as loud as possible!! (ViolinII-2A)

[about the same excerpt as above]
It's exhilarating music and quite thrilling to play. Once the last movement starts one has to not hold back and just really play. (Viola-2B)

Decided to disregard the *p* dynamic to make sure all notes spoke clearly. [...] (Bassoon-1)

Sometimes players increased their dynamic in order to assert a leadership role for the sake of ensemble cohesion:

Aware of the tone being absolutely on the verge of splitting as was having to push much harder than in the rehearsal. [...] There was a feeling of having to hold it together by playing louder than I wanted. (Flute-1)

Sounds out of time here....we violas are supposed to be keeping things together with our semiquavers....up a notch of dynamic. (Viola-2B)

The issues related to volume such as dynamics and balance appear to be areas in which players are really called on to make judgements about how loud to play their parts, and to do so in dialogue with Accepted Performance Conventions (the musical notation), their awareness of the Musical Context of their part, the Present Soundscape and any indications from the Institutional Hierarchy. At the same time, players are very much at the mercy of the Institutional Hierarchy, as due to rehearsal etiquette they are reliant on the conductor to identify and address issues of balance. In addition, Material influences have a significant effect as musicians have to contend with Instrumental tendencies, Orchestra layout and Acoustic Spaces in order to play at a volume they believe to be appropriate to the situation.

3.3.2.3

Quality: articulation (attack/emphasis), pitch (intonation/vibrato), timbre (tone quality/blend)

Those elements of performance that have been grouped under Quality include: articulation (attack/emphasis), pitch (intonation/vibrato), and timbre (tone quality/blend). While musical notation has the capacity to specify type of attack or where emphasis should be placed through the use of markings such as *accents*, *tenutos*, and *marcatos* or bowing instructions such as *spiccato*, *jeté*, *martelé* and *portato* etc., not all scores contain detailed instructions and even when they do, their exact realisation in sound is always open to interpretation. Additionally, even when indications are absent, the type of attack used and how emphasis is placed on notes are the ways in which musicians 'enunciate' musical figures, and in combination with timing and dynamics are how musicians make 'musical sense' out of the notation. Beyond the general indication of which note to play (such as A or Bb), aspects

of pitch such as intonation and vibrato are even less frequently specified in musical notations, but are matters of constant negotiation during group performance. They are important in the characterisation of musical material, as differing performance practices and shifting harmonic contexts move the goal posts for achieving desirable intonation between parts and the use of *portamento*, *vibrato* and inflections of pitches may be employed for expressive effect. Similarly, timbre is rarely specified in musical notation beyond the occasional string effect such as *sul tasto* or *ponticello* or in descriptors like *dolce*, *feroce*, or *cantabile* (see Cottrell 2004:45), but is actually an important musical parameter for characterising performance and even articulating larger-scale structure, which will be discussed in more detail later.

Articulation (attack/emphasis)

As mentioned in Section 3.3.2.1, ‘articulation’ technically refers to the degree of separation between notes. However, in everyday use, and in the case studies, musicians also used the term ‘articulation’ to refer to how a note or a group of notes begin, or to indicate if notes are slurred together or detached from one another (even where this doesn’t change the duration of the note).

I added some more consonants—articulation—on the two separate notes to add the heightened excitement for the arch shape of the phrase. (ViolinI-1A)

Putting consonants in front of the notes here in my head as to try to make my bow make a clear articulation. (Cello-2A)

In this section I was very aware of the fact that we (low strings) play the downbeats and the upper strings play off of us so I was trying to play with a clear articulation without being too loud or accented. (Cello-1B)

It seems the intonation and articulation in the horns for the big melody line went well at the concert. I fixed my last slur and the result is better. (Horn-4)

As with other ToF, there was a role for Following the Directions of the conductor, (the discussion earlier in Section 3.3.2.1 on note lengths overlaps with the concerns with articulation here) but instructions were not always clearly communicated, or taken on by the players:

Strong bow and full sound, smooth articulation requested in reh. (Viola-3B)

At 1:00 the gestures of the conductor were what initiated more accent on my part. (Cello-1B)

[The conductor] comments about the phrasing unclear...does he want more accents or a smoother rendition? (Flute-1)

I'm exaggerating the *fz* marking on every other crotchet and backing off the unaccented crotchets as requested by the conductor on previous occasions, but it makes little difference to the sum effect if many of the players are ignoring this. (Clarinet-1)

And again, musicians described Matching/'Following' other elements of the Institutional Hierarchy, or relevant parts in the Musical Context:

Concentrating on articulation and trying to match this and note lengths within the section. (Oboe-1)

Listening to the canonic entries and playing the canon. Matching my articulation with rest of section, heavy bow. (Cello-2A)

In the viola part the phrasing here is more like 6/8 than 3/4 and I was trying to tell whether my desk partner (the Principal Viola) was accenting it like 6/8 or just phrasing off between the slurs. I thought this might be discussed by the conductor - it wasn't. (Viola-1B)

I was trying to match the articulation and dynamics of the other woodwind players with the same figures as my part, particularly if we played the figure simultaneously. (Oboe-3/Cor)

The character of this section seemed to be somewhat introspective. I believe that I always try to adjust to what is around me, trying to match pitches, dynamics, articulations, and the style of playing of those around me. (Flute-2)

Would love my bow to be with the brass's lips more. (Cello-1A)

However, musicians' approach to articulation, as with the forthcoming discussions of pitch and timbre, appeared to involve more Asserting actions than the other ToF already discussed.

Bit more aggressive with the bow on this entry, and then tone it with vibrato. (Cello-1B)

Little accent on each note here to the end in hopes to add to the energy. (Clarinet-2)

0:31 Replacing sticks ready for next entry, requiring a smoother sound at 1:16 then back again at 1:25 for next passage of rhythmic interjection. (Timpani)

Trying to capture the change of style at the new tempo with the accented notes being light rather than raucous. (Trumpet-1)

Really focusing on the bowing. Getting the articulation lively. (ViolinII-1A)

Using my bow to make change of character. (Cello-2A)

While the above comments may very well be rooted in previous exchanges between musicians or due to instructions from the conductor, the musicians' lack of reference to specific influences is notable and distinctively different from other types of commentary, suggesting the influence of Personal Engagement over other SoI.

Pitch (intonation/vibrato)

Pitch in orchestral performance is a complex issue and one that will not be exhaustively discussed here. What is relevant, however, is that despite the appearance of the precise notation of pitches in musical notation, the actual realisation of pitches can vary considerably, particularly in an ensemble setting with shared melodic lines and distributed harmonies. For the musicians in these case studies, concerns with pitch focused on ensemble intonation and vibrato as an expressive effect. Ensemble intonation can be seen as a critical issue with regard to the PD. Like precision in Temporal Coordination, 'good' intonation is a hallmark of quality performance and the pressure to perform with good intonation appears to be strong. As one of Dobson & Gaunt's participants was quoted as saying earlier in Section 3.1.4.2, it is not necessarily a matter of being 'right' oneself, but achieving good

intonation might mean adapting to those who are 'out': 'it's realizing who isn't going to move, either because it's a piccolo [sitting] on the top of whatever, and she's going to be there so we have to do this, or because it's a guest player or something and they're probably not aware' (Dobson & Gaunt 2015:31).

With regard to intonation, players in the case studies appeared to draw on their knowledge of Accepted Performance Conventions (in regard to what constitutes 'correct' intonation), and were primarily influenced by the Present Soundscape and the Musical Context. As always, there was a sense of section solidarity, but the influence did not always work from principals down, but had more to do with the role of musicians' parts. And at times the Material properties of instruments affected musicians' ability to achieve their intonation goals.

In general, musicians noted the need to be adaptable and to adjust to what they were hearing around them:

If I recalled well, my feelings at this moment was to be aware of the winds, this is a very difficult section to play well in tune, and it requires a lot of discipline to listen and execute correctly at the same time. I was trying to make sure I had a good intonation with our section and with the rest of the wind section. [...] Individual intonation is different than group intonation, so we need to be adaptable. (ViolinI-2A)

I work hard at listening to my section and the rest of the orchestra to find common ground with intonation but found myself second guessing myself at times. (Clarinet-2)

In particular players sought to adjust their pitches due to the specific harmonic context, but not without some frustration at times:

Always about pitch in these *tutti* chords in winds and brass. Gotta not be flat

on the top of the chord which generally requires playing sharp which pisses off the oboist. Same story different day... (Flute-1)

I play the dominant 7th on the bottom of the chord, so intonation has to be very low. (Tuba)

I have a quandary about the dominant 7th chord at the end of this section - my note is the 7th, so I should flatten quite severely to fit with just intonation. Unfortunately my colleagues are not listening carefully enough, so the result is poor tuning. (Clarinet-1)

Musicians noted that sometimes it was difficult to come to a consensus on intonation:

Unison with the cellos here, often difficult to agree pitch of F natural, never sure if they're too sharp or we're too flat. (Viola-1B)

It was potentially a personal issue:

[Janet's] piccolo sounds out of tune there. (Flute-1)

The material properties of their instruments also influenced musicians' choice of how to address intonation issues:

The final chord! I'm frustrated here by poor intonation from the flutes (sharp), where I should be flattening my 3rd for just tuning. I'm concerned that my instrument doesn't centre this note very well anyway, so I choose to back off the volume (the third should be the least audible note in the chord anyway) and let the trumpet take the strain! (Clarinet-1)

I was trying to evaluate a reed not previously used in this series of rehearsals with respect to tone and intonation. (Bassoon-1)

As I was playing a different instrument from normal for this repertoire I was trying hard to make sure the sound was good and in tune and matching the rest of the section. (Trombone-3)

Playing on D trumpet tonight which makes tuning more difficult. So listening to my intonation during these few bars and making sure that I'm in tune with the 2nd player. (Trumpet-1)

Although in the first comment below a player suggests that vibrato might help soften intonation issues, in the following comment a player noted that

sometimes a section's intonation could be negatively influenced by an individual's choice of vibrato:

Concentrating on my intonation and vibrato (making sure it's continuous) in this movement in general. I always feel like I'm not really in tune with [the leader] so in the slower movement it's useful to have the time and to play softer to really hear and blend with her. (ViolinI-1B)

I noticed that the F# on our scale down was out of tune. I had thought the rest of the tune was good. I wasn't sure whether this note was being given too wide vibrato by someone or whether they missed it. I thought if it kept happening it would be worth asking the principal if he thought it was worth passing a message back. I was pleased it wasn't me! (Viola-1B)

However, primarily, players referred to vibrato in the context of trying to achieve an expressive goal:

I choose another fingering than the norm, so travel up the D-string in order to make a vibrato accent stick out on the top note. (Cello-1B)

Entry at bar 13: decided to crescendo early to grow into bar 14, and with vibrato. (Bassoon-1)

Tempted to use a lot of vibrato here and get very expressive, but should probably keep a lid on to stay in tempo. (Cello-1B)

We have the tune. Sing it out, thinking of my vibrato. (ViolinII-1A)

I am impressed with the cello/bass/tuba sound and I was reacting to the deep range vs. the high range of the violin. It is stringent and can be harrowing. I used more bow pressure and vibrato when I was playing on the E string. (ViolinII-1B)

While comments about vibrato appeared to primarily reflect personal preferences, there was also attention to how vibrato matched within the section:

I try to match the first cellos' dynamic and vibrato. There's an expressive bulge in each phrase. (Cello-1B)

[The principal cello] is using more vibrato than I thought she was. I'll try adding some more in our next rehearsal. (Cello-2A)

Or blended in with a solo line:

Each note had a slight taper and vibrato to warm the sound and blend with the violin. (Bass-3)

Although it was not directly apparent in the commentary in this study, conductors do sometimes ask for more or less vibrato, which is alluded to in the comment below:

Bow on the string, vibrato, rounding off, watching, on the A string - all this for a three note phrase - partly good practice, partly comments made by [the conductor] in previous rehearsals. (ViolinII-3A)

Perhaps more than articulation, musicians' comments about vibrato suggest the influence of Personal Engagement, as well as Asserting and Responding MoA. On the other hand, while what constitutes 'good' intonation within the Musical Context is undoubtedly underpinned by Cultural-Historical influences, during the flow of performance the stronger influences appeared to be the Present Soundscape and Institutional Hierarchy within sections, not to mention the role of Interpersonal Relationships, which can inevitably exert an insidious influence. Indeed very little was said regarding conductors and issues of pitch, although one comment indicated that it was the conductor's responsibility to insist on 'good' intonation:

I do wish all of our conductors would be more strict on good ensemble tuning... (Clarinet-1)

From a practical perspective the lack of reference to conductors regarding intonation is not surprising. A conductor may request that a musician play a note flatter or sharper, or spend time tuning a chord during rehearsal, but the next time the passage is played the precise context will be slightly different and it is up to the perception, abilities and judgements of the players to decide how to adjust. So beyond a general gestural indication to an individual

player that their note should be inflected up or down, conductors' gestures can do little to change the intonation of a group in the flow of performance. While it was suggested by wind players in casual conversation during the data collection process that conductors can make it difficult to play 'in tune' by modelling restricted posture or breath (see also Manternach 2015), this is a realm where the Institutional Hierarchy in terms of the conductor's influence appears to have much less effect (independent of long-term music director roles such as those in teaching environments, where over time conductors may work to improve musicians' intonation skills).

Timbre (tone quality/blend)

The importance of timbre in the characterisation of performance warrants some consideration. Cottrell notes that 'traditional musicology has frequently marginalized the study of musical timbre, largely because the notation system which underpins Western art music is all but incapable of conveying timbral information' but that 'musical timbre can both represent and connote information which is significant, not only in itself, but also in terms of our perception of the music' (Cottrell 2004:44-45). Holmes also emphasises the significance of timbral information in performance and draws on research in auditory perception to argue that timbral information is 'perceptually more salient than pitch' (Holmes 2012:302). She observes that in addition to forming musical identities through their 'distinctive sound', musicians use timbral information to communicate musical structure and emotion in their performances (Holmes 2012). Moreover, McAdams & Giordano assert that timbre 'can play a role in larger-scale movements of tension and relaxation', noting that 'timbral roughness is a major component of musical tension'

(McAdams & Giordano 2008).

In the interviews musicians described how individuals have their own unique sound developed over time through training and experience, and that there can be local conventions within orchestras and sections with regard to timbre. And although timbre may not often be specified in notation, commentary from the musicians in the case studies demonstrated that musicians were drawing on Performance Conventions to Assert the 'best' sound for a particular composer, era or work, and emphasised Responding to colleagues and the influence of the Present Soundscape.

Musicians' comments from the case studies indicated that they were aware of their own sound quality and how it interacted with that of others. This was particularly evident in the wind sections:

I was conscious of my own sound quality and intonation. (Flute-1)

This is a question and response passage with the flutes. The first flute is absent this evening, so the third/piccolo player is depping. I know that she has a different sound and playing style from the regular first player, so must be ready for this. (Clarinet-1)

I was [...] conscious that flute 2 had a particularly broad, full tone and I didn't want flute 1 to get lost behind it! (Flute-1-dep/Picc)

Musicians also described being aware of the sorts of sound that they were trying to achieve at various points in the music. Often the descriptions involve other parameters of Musical Character as well, such as volume or attack, giving an overall sense of the character, or sound world that the musician is aiming to create. Musicians appear to rely on their own sensibilities in this regard:

The *pizzicato* underneath the piccolo is very subdued and tender. [...] The *pizzicato* needs a round, ringing sound, and to be synchronized with the violas and the cellos. (Viola-2B)

pp phrase (pencilled *espressivo*)—will the right sound for this come from starting on A or D string? (ViolinII-4B)

Anticipation and feeling of tension—want to create deep warmth. (Cello-3B)

The bow needs to create a pure, clean, and crisp sound that is full of a weightless energy. (Viola-2B)

As this was the first rehearsal of the week my primary focus was reminding myself of the notes and my own personal fingerings [for] this familiar piece. Together with trying to produce the best sound for Brahms. The first rehearsals also show the conductor's concept, which will dictate a lot of this. (Viola-4B)

Musicians were also engaged with what was happening around them in the Present Soundscape, Responding to and complementing what other musicians were offering, sometimes as a result of 'in-the-moment' Musical Authority (see also Action Map #2 in Section 3.4):

The delicate and light timbre created by the strings causes me to play lighter and more precisely, and more quietly than in the [other piece on the programme]. (Timpani)

[The leader] and [associate leader] to my right are using lots of bow and a resonant stroke on this return of the melody so will do the same in our antiphonal phrase. [...] (Cello-1B)

When I heard the winds come in, I felt that I needed to play with more intensity to contrast their legato lines. (ViolinII-1B)

I tried to keep the *pizzicati* light and soft to reflect the change in mood and also let the flute shine through. (Cello-2A)

At this point was aware of balancing the sound between the string section—more in bass, but supporting the overall colour of the sound. (Bass-2B)

The transition out of the grandiose section is rather delicate, I felt the strings did a nice job with letting core sound fade into the horns and wood winds. [The composer's] orchestration is fantastic and helps the orchestra accomplish this. (Bass-1)

Players also attempted to Match or blend their sound with others due to the relationship of their part to others in the Music Context:

I was listening to the rest of the orchestra [and] trying to play very legato, rather desolate sounding triplets. (Viola-2B)

When I enter with the 2nd clarinet parts I try to add to the excitement but match the light texture of the other woodwinds. (Clarinet-2)

I was loving the blend in sound of the viola section and the cor anglais, and was trying to sing my line within the tone and timbre of the violas in front of me. (Oboe-3/Cor)

Or alternately, make their sound distinct on account of the Musical Context:

I play the triplet passage louder and more cleanly this time but decide that I need to brighten my tone next time as I still think I can't be heard clearly when I enter. (Clarinet-1)

And there was a role for Institutional Hierarchy at section level:

I feel my role as a second clarinet is to help make the first clarinet sound good or better. I constantly try and match her tone quality, timbre, intonation and style of playing. (Clarinet-2)

In the case studies, the role of the Institutional Hierarchy at the conductor's level with regard to timbre was all but absent, musicians indicating that they were either drawing on their own concepts or the influence of others around them. While there were a few comments that indicated the conductor had asked for a particular sound quality during rehearsal, not a single comment of the 1500+ collected indicated that a musician changed their timbre in response to the conductors' gestures.

In this passage I was trying to make a full but rounded sound. [The conductor] doesn't want a harsh, brash forte. So I wasn't playing that loudly, but trying to play with good tone. (Trumpet-1)

This lack of attention paid to the conductor regarding issues of timbre is reflected in the questionnaire responses (see Section 2.1.4.1) as well as in the comments by Joshua, who noted that conductors rarely have the gestural facility to communicate effectively about sound quality. However, it is

potentially at odds with an observation Harry made in his interview, in which he noted that conductors, like musicians, inherently 'have a sound' as soon as they step on the podium—an observation that is in accordance with theories of kinaesthetic empathy proposed by Koivunen & Wennes (see discussion in Section 3.1.2.1). The extent to which a conductor's simple presence meaningfully shapes the types of timbre employed by musicians to characterise performance is a separate question which is beyond the scope of this thesis to address.

3.3.2.3

Section Summary

As a whole, musicians' commentaries from the case studies suggest that when engaged with issues of Quality, such as articulation, pitch and timbre, musicians, in addition to Matching/'Following' section principals, were also likely to Assert their own Personal Engagement drawing on their Training and Experience, knowledge of Performance Conventions, and Respond to colleagues on account of the Musical Context and the Present Soundscape. While musicians noted Following the Directions of the conductor, particularly for issues of articulation, the conductor was rarely cited as the primary source of influence for making decisions about these performance parameters.

3.3.2

SECTION SUMMARY

What emerges from the analysis of the MERID commentary is that aspects of Musical Character such as issues of Musical Time, Volume and Quality, are distinctly not simply determined by top-down decision-making. The desire to achieve stylistic coordination, again fuelled by the PD, prompts allegiance to section principals and deference to the Present Soundscape, while inspiration from colleagues (Musical Authority) and one's own Personal Engagement prompts individuals to Assert and Respond, rather than simply Match/'Follow'. What is perhaps the most surprising is the reliance on individual contributions in the establishment and maintenance of tempo and the accomplishment of tempo changes, as well as the significant role of Material influences in the shaping of tempo choice.

Up until this point the discussion has concentrated on the ToF in which musicians were actively engaged with the performance parameters that can be seen to most prominently shape the performance outcomes. While the majority of the comments from musicians case studies were concerned with issues of Ensemble Coordination and Musical Character, these were not the only preoccupations for orchestral players during rehearsals and performances. The following sections will take a look at some of the concerns with Technical and Management issues, as well as musicians' Assessments and Feelings about what was going on around them, as the musicians' commentary on this issues offers additional insights into orchestral player experiences.

3.3.3

TECHNICAL ISSUES

Although Technical Issues were not reported as frequently as other ToF, both amateurs and professionals mentioned them from time to time. It was suggested by a professional flute player that the lack of technical concerns reported by professional musicians was on account of the ease and familiarity of the standard orchestral repertoire relative to the technical skill levels of the performers. Indeed, the comments reported by more skilled players showed a proactive attention to Technical Issues as well as a description of the physical process more frequently than reports of technical difficulties. All of the comments, however, highlighted the influence of the Material properties of individuals' Bodies and their Instruments, occasionally illustrating how Technical Issues could dominate a musician's attention. A variety of comments illustrating the above are offered here:

I prepare for the oboe solo by focusing on the breath before I play and then on keeping the throat open, then listening to the cello solo before the second phrase. (Oboe-1)

These off-beat quarter notes need to be big and fat. To do this for the low F# needs a change of embouchure for me. Then the issue is getting the note in tune; I need to pull it up. I may push my second slide in for this piece, then pull it back out for the other movement. (Horn-4)

In the quiet bit in the beginning of the excerpt I was struggling a bit with bowing technique and couldn't control it quite as well as I would have liked. I remember thinking that I really need to sort this out! The loud bit is much easier to play, very passionate, and fun to play. (ViolinI-3B)

I am thinking about the bowing here - it's tricky and needs concentration. But it was fine! (ViolinI-3B)

During the rehearsal, I was trying to evaluate a reed not previously used in this series of rehearsals with respect to tone and intonation. A potential candidate for the second half of the concert. A different reed had been in use during the Strauss & Smetana which are in the first half of the concert. The reed for the Strauss has to cope with the killer-slow tempi & high register writing in the 2nd movement. (Bassoon-1)

I was wondering if, over the hundred or so years of people playing this symphony, other cor anglais players have had the same difficulty in putting the bell up! It won't go as far as the oboes, because of the angle of the crook. I decided to play all the more strongly to match the powerful sound of my colleagues, but was aware that this practical difficulty had momentarily taken me away from the passion of the music and brought me down to earth. I was soon to be swept up again, however. (Oboe-3/Cor)

3.3.4

ASSESSMENTS AND FEELINGS

As mentioned earlier in Section 3.2 on the MoA, musicians were often engaged with [Assessing] what was going on around them. The following comments illustrate some of these opinions about colleagues' performance and their feelings about the music. Primarily individuals left positive comments about their colleagues' performance:

Is that [John] or [Jacob] playing [the trumpet solo]? It sounds good. (ViolinI-5A)

Yes, they [the violas] GOT IT right at last I was really pleased that they got the entry right and was thinking that I hoped the rest would be as good. (ViolinI-3B)

Mmmm, bassoonist is making nice short notes. (Viola-2B)

However, this wasn't always the case:

Oh, no ... not that horn again cracking their note. (Viola-2B)

Bloody awful. Totally untogether. He hasn't ever got it right. (ViolinII-1A)

This playing seriously lacks drama and is an audible soup. (ViolinII-6A)

Musicians also expressed opinions and feelings about the music and how it felt to play it:

I love this phrase... each time before we start this section I mentally prepare myself for the beauty. (ViolinI-5A)

Eelief-such a lovely tune - enjoying i. (Cello-3B)

Great cor playing, but I just didn't enjoy the piece at all, [this composer's music] is not my thing. (ViolinI-3B)

Relaxed and enjoying it. Conductor seemed happy and energised. (ViolinI-7A)

I was thinking this is a really corny bit, much prefer the next section as it is more dance like. (ViolinI-5A)

I was thinking this spot is so beautiful. Love the interaction of the different rhythms within the sections of the orchestra against the melody line. (ViolinI-1B)

I was thinking what an amazing piece of music [this] is and how ahead of it's time it was when written. Also how exciting it is to listen to and play and how I always enjoy a performance of it. It never gets boring. Great stuff. (Tuba-2)

The significance of the comments above (and the others that they represent) is that they suggest the differing affective states of the musicians. Naturally, these responses were not uniform throughout the orchestra. For example, while the same passage was perceived by one person to be 'seriously lack[ing] drama' another exclaimed: 'Excitement, especially with change of key—wonderful!'. The extent to which these affective states contribute to the type of engagement or quality of output from individual musicians is something that needs further exploration. They do, however, suggest an element of Personal Engagement as players are emotionally and physically engaged with playing their parts or listening to the orchestra as a whole.

3.3.5

MANAGEMENT ISSUES

In particular, comments about rehearsal management and orchestra layout drew attention to the influence of the conductor in terms of controlling what parts of the music are rehearsed and how the orchestra is arranged on the stage or rehearsal venue. As conductors typically have control over the orchestra layout, when sections are moved, it can have a significant effect on what individuals can hear in the orchestra around them:

We are sitting in layout which has not been used for a long time, and therefore sounds very disconnected. [...] (Bass-1B)

I remember feeling that sound was very different as the orchestra was set up the opposite way in the hall compared to usual. (Oboe-1)

And (as was discussed in Section 3.1.2.1) musicians' commentaries illustrated how a conductor's distribution of rehearsal time affected what they could expect in performance:

Would have been nice if we'd rehearsed this a tiny bit instead of playing the opening of the piece 20 times. (ViolinII-1A)

The significance of the remark above and those from Section 3.1.2.1 should not be underestimated when considering the number of performance parameters that need to be negotiated in order for musicians to play together in a cohesive and potentially meaningful way. As the interviewees described in Section 2.2.3.3, depending on the familiarity of the materials, a lack of rehearsal time can either create an exciting and focused performance or leave musicians feeling as though they are just trying to survive, causing them to revert to 'default settings' or to engage with other SoI to maintain the PD. In

particular it means that there is less time for conductors to give verbal instruction, so the extent of their influence is transferred in large part to effectiveness of their non-verbal communication skills during performance.

3.3.6

MISCELLANEOUS

Finally, the commentary also illustrated that sometimes players are thinking of other things beyond the rehearsal setting. Again, not many of these comments were reported on the MERID system, but it is reasonable to assume that such thoughts did not seem appropriate to report in the context of the study:

Page turn coming up, but there's some rests to do it in. I wonder what the score is at St Mary's? We need a win tonight... (Cello-1B)

Even in this short passage, there was a great deal of mind wandering - probably contributing to the tuning defects - including whether or not to go to the pub after, how nice the lady is who gives me lifts to and from orchestra, wondering what the importance and relevance of mainstream repertoire is and why so little 'modern' music is included in this [...] (ViolinI-7B)

3.3

SECTION SUMMARY

The purpose of the detailed exploration into the ToF in the preceding sections has been to illustrate through first-hand, real-world accounts, not only the types of performance parameters that individuals were focused on, but also the relative influence of the different SoI on these parameters. Additionally, it identifies the MoA in which musicians were engaged in order to build a more nuanced understanding of the authorship of the performance parameters which shape performance outcomes. While acknowledging the limited scope of the six case studies, which represent only a small cross-section of orchestral experiences as a whole, the combination of the experiences reported by the musicians in the MERID data taken in the context of the data from the questionnaire and the interviews does suggest some trends regarding the relative influence of the various SoI on the parameters of performance discussed in the ToF. Brief summaries of the preceding sections are offered here:

Ensemble Coordination proves to be an area where musicians rely heavily on their knowledge of the Musical Context while negotiating between information from the Present Soundscape and visual information coming from the conductor as well as relying on visual cues from players with relevant musical parts or attending to specific individuals (such as section principals or the leader) due to the Institutional Hierarchy. While visual cues are clearly important they do not override auditory information, which in the

moment defines the immediate needs in order to maintain the Prime Directive.

The performance parameters that shape Musical Character appear to be affected to different degrees by the various SoI. Issues of Musical Time (such as tempo and timing), are shown to be significantly influenced by the gestures of the conductor both during rehearsal and during performance, although such influence is not straightforward as individuals may interpret information differently and conductors have varying degrees of skill with regard to indicating tempo and tempo changes. However, conductors may need to balance artistic ideals with the technical capabilities of their players, and the PD can override the concern to follow the conductor's lead. This is similar to Ensemble Coordination, where attention to the Musical Context and the Present Soundscape as well as solidarity with one's section may put the power of tempo choice in the hands of a prominent musical line. Moreover, players might deliberately attempt to shape the character of the performance by how they push or pull the tempo with their own playing.

Issues of note duration and rhythmic realisation are influenced quite differently from issues of tempo and timing. Accepted Performance Conventions and Training and Experience play significant roles in shaping how musicians will choose to respond to the notation on the page. Once in rehearsal or performance musicians may adapt to section principals on account of their role in the Institutional Hierarchy (and the influence of the PD), or others in the orchestra on account of their Musical Authority or role in the Musical Context, responding to what they hear in the Present

Soundscape. Sometimes shared note lengths and rhythmic realisations manifest through compromise while other times sometimes there are Leaders and those that Match/'Follow'. Conductors may be more or less engaged with these details through rehearsal discussion and annotated scores, as well as gestures to greater and lesser degrees. The scope for detailed instruction about these issues depends a lot on Commercial and Economic Forces, which significantly influence rehearsal time.

Volume (dynamics and balance) appears to be a realm where individuals have a great deal of responsibility for determining how loud or soft to perform their parts, drawing on their stock of knowledge about Accepted Performance Conventions, the Musical Context, and the Material Properties of their Instruments and Acoustic Spaces in response to the Present Soundscape, while simultaneously being very much reliant on the conductor for feedback on whether or not their volume is contributing 'appropriately' to the overall balance. Conductors' gestures can be conducive to giving information about dynamics, but they are still unable to micro-manage all individual parts in a performance and must rely to a great extent on player judgement.

The influence of the SoI with regard to aspects of sound Quality also vary, with parameters like articulation (attack) sharing a similar influence profile to that of note duration and rhythmic realisation, although perhaps with more of an influence of Personal Engagement, while pitch 'choice' (intonation) is driven significantly by Accepted Performance Conventions and negotiated in response to the Present Soundscape and Musical Context with Institutional

Hierarchy having an additional influence as players may try to match section principals. Expressive pitch variation such as vibrato, on the other hand, appears to be shaped primarily by Personal Engagement (not to discount the implicit influence of Accepted Performance Conventions and Training and Experience), but is at times modified due to the Institutional Hierarchy; this might be matching vibrato to a section principal or making a change in response to a specific request from the conductor.

Timbre was revealed to be an area in which musicians were very much involved in Asserting timbral ideas (either gained through Training and Experience or Accepted Performance Conventions) and Responding to their colleagues' contributions in the Present Soundscape due to the Musical Context of their part, or their Musical Authority. As suggested by previous research, timbral information can be a significant shaper of the expressive profile of performance and while individuals have their unique 'sound' and sections and orchestras develop 'sounds' which characterise their ensemble, conductors can, over time, be shapers of these institutional sounds (depending on Commercial and Economic Forces which shape how much time a conductor spends with an orchestra). While musicians noted conductors' requests for a particular sound quality, they also noted that information about timbre is rarely conveyed in conductors' gestures. However, it may be that the fundamental physicality of conductors' bodies may affect musicians' tone at a subconscious level.

Technical Issues primarily highlight the Material influence of bodies and instruments and how these influences can shape performance decisions,

while Assessments and Feelings bring to light the affective states of musicians and suggest the role of Personal Engagement in the way that musicians perform and experience their parts. Management Issues draw attention to how the conductor's authority to manage time and space can shift what influences might become primary shapers of the end musical product.

As mentioned in Section 2.3, the analysis process that gave rise to the development of the FIAOP was conducted through the dynamic mapping of musicians' comments. These Action Maps animate the components of the Framework and illustrate interactions between musicians which are taken from the case studies. Although the Action Maps were built using the animation features of PowerPoint, they are included in this thesis in three formats: as a PowerPoint (.ppt) files, in video format (.mov), and also as a set of pictures taken from the PowerPoint presentations which can be found in Section 3.4. A final commentary and summary of the FIAOP and its implications for a revised understanding of the authorship of orchestral performance is offered in the final Summary and Conclusions.

3.4

ACTION MAPS

Seven Action Maps accompany this thesis. As explained in Section 2.3, the Action Maps provided a way of modelling the MERID data for the purposes of analysis. While the analysis process involved the construction of numerous maps, only a few of them are offered here. These include data from five of the six case studies, but are not meant to be a representative sample of all of the data. Their purpose in their inclusion here is to illustrate how the components of the Framework apply to real-world scenarios and interactions in a dynamic fashion. The PowerPoint (.ppt) file and the same file made into a movie (.mov) accompany this thesis on a DVD. However, still images from the PowerPoint presentations are included in this section.

The following list is an index to the images provided in this chapter as well as the order of the Action Maps in the PowerPoint presentation and the movie.

An Introduction to Action Maps

Action Map #1, *Maintaining the Prime Directive*

Action Map #2, *Responding to Musical Authority*

Action Map #3, *Details and Decision-making*

Action Map #4, *Tempo and Material influences*

Action Map #5, *'Followership' and the Bass Section*

Action Map #6, *Getting to Grips With a Different Interpretation*

Action Map #7, *'Not Sure Where to Play That'*

ABOUT ACTION MAPS

The Action Maps have been designed in PowerPoint to illustrate the MERID data dynamically. Slides contain animated objects such as musicians' comments, action animations, and analyses, which can be viewed by 'clicking' through the presentation. Occasionally animations take a second or two to finish. If you find you have missed an animation, simply click 'back' using the left arrow on your keyboard.

Movies of the PowerPoint presentations (.mov) are also available and do not require PowerPoint to view. Please see Section 3.4 in the thesis for information about how to access the movie versions.

When you have finished reading this text box, please 'click' to move on.

Next you will see a brief primer on the Action Map animations (now 'click'...)

ACTION MAP KEY

- Blue circles indicate a Following Directions action
- Light green circles indicate an Asserting action
- Brown circles indicate a Matching/'Following' action
- Orange circles indicate a Responding action
- Grey circles indicate an [Assessing] action
- When rimmed in red, actions are thwarted or unsuccessful
- When rimmed in red, it indicates a negative or problematic influence
- Dark green circles indicate a deliberately Leading action
- Yellow arrows and circles indicate where influence is coming from

ACTION MAP #1

Maintaining the Prime Directive

This Action Map details the concert experiences of four musicians (Cello-1B, Flute-1, Violin-2A and Viola-1A) over the course of 15 bars and including a 5-bar transition to a faster tempo; and one musician commenting on the same passage during a rehearsal earlier that same day (Cello-2A).

The commentary reveals concerns with Topics of Focus such as Temporal and Stylistic Coordination, Musical Time, Volume (dynamics and balance), Tone Quality, and Pitch (vibrato); musicians engaged in Modes of Action including Responding, Matching and Asserting; and the intersection of a number of different Systems of Influence such as Personal Engagement, Institutional Hierarchy, Space Acoustics, Accepted Performance Conventions, Musical Context, Present Soundscape and Instrumental Material Properties.

Click for next slide

Conductor

Cello-2A makes a negative Assessment of a situation where she is caught between the competing influences of the Institutional Hierarchy; her own notions of correctness with regard to the interpretation of the notation (i.e.. Accepted Performance Conventions/Training and Experience); her awareness of the section's role in the Musical Context; and her awareness of the relative balance informed by the Present Soundscape.

'Very aware of balance during the first 40 seconds of this clip. Felt swamped and unable to project the flute solo owing to the thickness of the writing and the acoustic.'

The negative influence of the Present Soundscape prompts Flute-1 to choose a louder dynamic than she feels is best, which negatively interacts with the Material properties of her Instrument.

'I remember being concerned about the bow stroke on the *pp* triplets. It is marked *spiccato*, but was being played on the string and was too loud.'

'Aware of the tone being absolutely on the verge of splitting as was having to push much harder than in the rehearsal. Cellos far too punchy, which I could hear and the other wind too loud as well.'

'I remember feeling anxious about the general ensemble (togetherness) for the orchestra as the cello section front desk seemed at odds rhythmically.'

Cello-1B asserts her musical preferences influenced by her own Personal Engagement, physical response to her instrument (Material) and the Musical Context (trumpet).

'My instincts would have been to follow them for the musical pulse, however I remember focusing more on listening to the tune in the winds as it seemed more stable. This was not satisfying however. I also remember wishing for more rhythmical direction from the front (conductor).'

'The ascending scale which happens four times has always attracted me enormously, so I'm very much in my own world focusing on my bow control and the overtones I want to produce.'

Wanting to obtain information from the Musical Context of the cello line, but on account of other influences (potentially disruptions in the Institutional Hierarchy, Interpersonal Relationships, or Cello-1B's Personal Engagement), the information was not available in the Present Soundscape and Viola-1A attempted to look for other sources of information to determine when to play, none of which appear to have been fruitful.

Violin-2A makes a negative assessment about ensemble cohesion on account of the Present Soundscape.

'Things starting to move. Keep ears and eyes alert. Watch the cellos/asses for movement of the bass line which has the strongest influence.'

'I choose another fingering than the norm, so travel up the D-string in order to make a vibrato accent stick out on the top note. Hearing it excites me, but there's also a sentimental element to it, which I feel is enhanced when the trumpet takes over the theme. The somehow relentlessness of the cello scale is highly sensual, I feel.'

'Hope everyone is watching and listening. Dangerous. Very turbulent like hitting turbulence in an aircraft!!'

Violin-2A is attending to the Musical Context for information about when to play.

ACTION MAP #2

Responding to Musical Authority

The following series of comments has been taken from an orchestra's first rehearsal of an excerpt from Prokofiev's *Romeo and Juliet*. It illustrates the affect of in-the-moment Musical Authority, as the quality of one musician's playing is Matched and Responded to by others in the group.

Click for next slide

The principal cello's Personal Engagement appears to have affected their playing in a way that is perceived as Musical Authority to others, which, in addition to her deliberate Leading efforts, influences others to Match/'Follow' and Respond to the quality of sound by emulating or contrasting the timbre with their own sounds. In this excerpt the bass line enters first within the Musical Context, followed by the melody instruments, contributing to the relative influence of the bass line in this specific situation.

'When I play this melody, I drew inspiration from the heavy and ferocious sound coming from the basses, cellos, and tuba (and the weighty movements of the conductor).'

'I was always really blown away by the power of the sound coming from the cellos and basses in this section. It really fueled me to dig deep and find the same richness and power when playing my own part.'

'I am impressed with the cello/bass/tuba sound and I was reacting to the deep range vs. the high range of the violin. It is stringent and can be harrowing. I used more bow pressure and vibrato when I was playing on the E string.'

'That immediately influenced my thinking about the music and bow strokes. I tried to respond with a similar intensity but didn't feel was totally successful.'

'In this first reading of the Montagues and Capulets I was quite absorbed in remembering faces from an experience I had with the piece in 1988.'

'I was trying to influence towards stubborn, heavy second and fourth beats without pulling away from the group. I like to feel that two and four reluctantly overflow into 3 and 1 in this figure.'

'I was sort of trying to function as a liaison between [the conductor] and the brass.'

'What I remember about this part of the rehearsal is being very struck by [the principal cellist's] start to this movement. There was such intensity and a bass quality to the way she cued the entrance.'

'In this section, I could work on imitating [the principal cello's] bow stroke a little better. Her style really sets a fantastic mood for this bass line.'

ACTION MAP #3

Details and Decision-making

This Action Map details the decision-making of a Tuba player for the 6 notes he plays over 18 bars of Brahms Symphony No. 2.

The player is engaged with the Institutional Hierarchy, Present Soundscape and Musical Context of his part and appears to draw on Performance Conventions and Training and Experience, while he Follows Directions, Asserts, Responds and Leads at various times regarding nuances of timing, pitch, volume and timbre.

Click for next slide

Conductor

'This part is thematic for the tuba, which isn't very common for this instrument. I change my sound to project more, making it slightly more direct.'

'I played the first low B too "loosely" and was flat, but fixed it for the second one, using the bass trombone note as my guide.'

'Here, instead of blending into the string bass sound as before, I try to lead the sound for the bottom end of the orchestra. While still balancing depth, I add brightness to be the "pointy end" of the lows.'

'The thematic material ends, and I must suddenly switch gears to create a more rounded sound to support the other low instruments, creating a space for which the higher winds and strings can sit on.'

'Here I'm thinking about the low E that I have to play. The conductor holds back a bit right before my entry, so I have to be sure and wait.'

'I play the dominant 7th on the bottom of the chord, so intonation has to be very low.'

'I also have to bridge my sound between the trombones and basses, so it has to be large and resonant, as well as direct.'

This Tuba player is Following the Directions of the Institutional Hierarchy regarding nuances of timing, but she Asserts, Responds and Leads with regard to pitch and tone colour. She draws on her knowledge of the Musical Context as well as information from the Present Soundscape, while the influence of Performance Conventions and Training and Experience can be seen to underpin her decision-making process.

Conductor

ACTION MAP #4

Tempo and Material influences

In the following series of comments taken from a single performance, it appears that the conductor is attempting to negotiate various competing constituencies as well as his own artistic ideas with regard to the choice of tempo. The physical needs of the string players were at odds with those of some of the winds and brass, and attempts were made in rehearsal to find a tempo that would work for both. The tempo issue was not resolved by the time the dress rehearsal ended, causing the performance to feel somewhat precarious for the players but also exciting.

Click for next slide

'Tricky moment with triple tonguing—only just fast enough for me.'

'Thinking this is a good tempo for triple-tongued triplet quavers.'

'Thinking the tempo was quite fast and thinking that the woodwind a struggling a little with the triplets. Although the bassoon doesn't struggle and complained about it being too slow in the afternoon I was thinking that this had maybe backfired a little as it was perhaps on the margin on the night.'

'This is fast...Are my triplets in time?'

'Oh no! Not that bit for the 1st violins...Can they play together at this faster speed?'

'I was profoundly relieved that [the conductor] hadn't taken this movement quite as fast as he did in the rehearsal. I had been feeling mutinous about his preferred tempo. It's all very well wanting things to be exciting, but tempo isn't the only way to produce excitement, and too fast means scrappy and scrambly.'

'Even better as the 2nds join and it hasn't fallen apart yet! [The conductor] very precise with his beat and keeping a steady tempo.'

'I am really concentrating now because we've got the really fast arpeggios coming up in the first violins and I know I can play it...'

'This is the run in to it and the die is cast...Just hoping now!'

'Here it is. I remember thinking that we just about got away with it.'

'I was excited for the solo violin 1 runs at about 1:10 and during those bars was keeping my eye on the music while at the same time concentrating on the baton in my peripheral vision to ensure that I finished at the correct time. Then relief and pride, because we all did!'

'I had caught a comment [earlier] from [the conductor] to the bassoonist that he couldn't 'shift' the strings. So I leant to my left all through this movement to really watch [the conductor] and make sure that I was 'on point', on the beat and hopefully that would bring some of the other players with!'

ACTION MAP #5

'Followership' and the Bass Section

This Action Map presents a detailed analysis made by Bass-1B about an uncertain entry of the bass section during a performance of a familiar piece. It illustrates how disruptions within section cohesion translate to disruptions in the Present Soundscape which effects other musicians' ability to maintain the Prime Directive. It also illustrates the complex Interpersonal Relationships that can operate within sections and the active nature of supporting roles in the Institutional Hierarchy.

Click for next slide

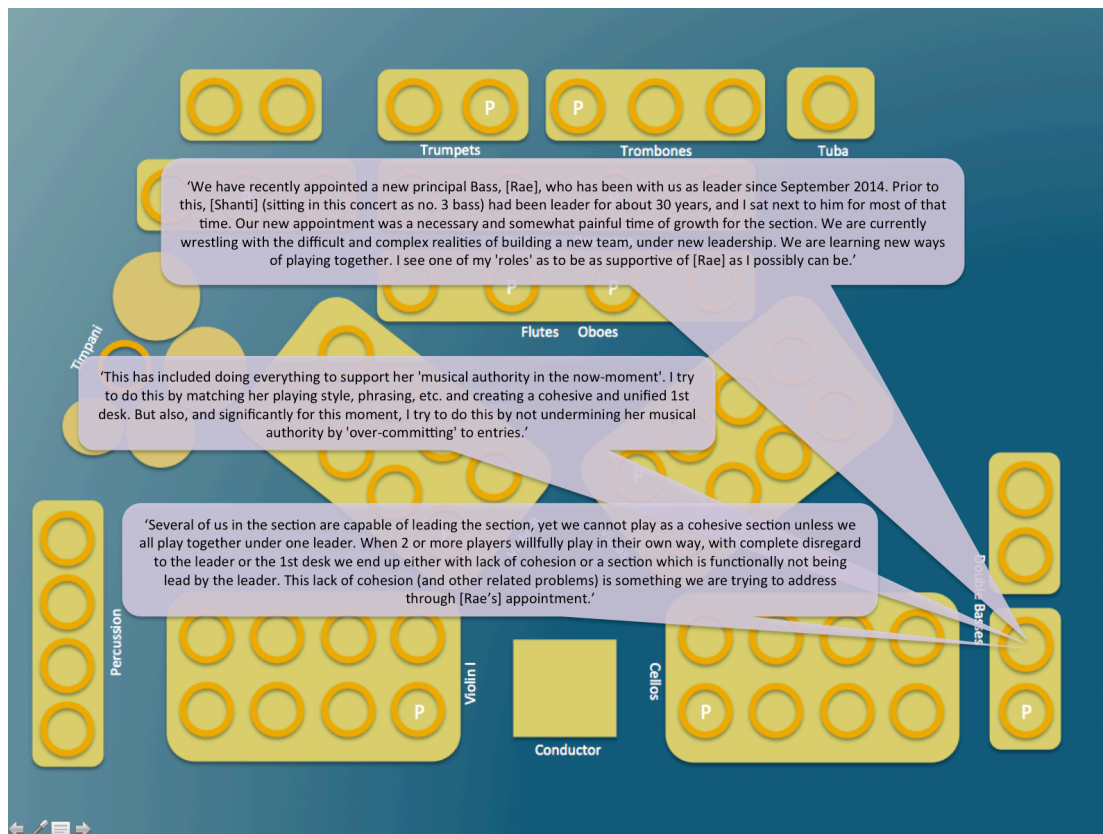
Labels in diagram: Flutes Oboes, Violin II, Violas, Double Basses, Percussion, Timpani.

'This clip reveals a moderately complex moment. At the simplistic top level, the basses made a weak entry, followed by a 'misalignment of the ensemble' a few bars later. In simplistic terms this contribution was below our acceptable standards of performance. This entry and following passage is a classic 'tricky' moment for the basses, and over the years we, as a section, have 'got it wrong' some times, and nailed it many other times.'

'What actually happened, as far as I can understand it, putting my recollection of the moment together with an analysis of the clip was: The section was not brought in clearly and decisively by our leader, [Rae]. I made the entry correctly on my own, but in a non-demonstrable way, and with poor sound quality. The section was 'startled' by this failure and as mentioned above, the following passage generated a further ensemble error as a result.'

'Usually, when I make a mistake, or when I get it right and others make a mistake, I am clear about what happened in the moment. On this occasion, I was not sure. [Rae] was clear that she felt she made a mistake (and although she did not need to, she graciously apologised). I was not sure that I made the entry correctly (perhaps I was early....). I checked with [Shanti] (to my right) who was not clear about what happened either. I have performed this piece correctly many times as No. 2 bass, with [Shanti] as leader and also performed it correctly as leader myself. And yet we were both unable to decisively give a clear analysis of what happened. It was only when I studied the clip that what actually happened became clear. The question is 'why?'. What was going on in our performance or team dynamics which resulted in this moment?'

Labels in diagram: Horns, Percussion, Timpani, Flutes Oboes, Violin I, Conductor, Cellists, Double Basses.



ACTION MAP #6

Getting to Grips With a Different Interpretation

This Action Map contains commentary from a rehearsal where the conductor was trying to achieve a particular interpretation that was convincing to some players and not to others who really struggled to embrace the conductor's ideas. The use of conductor-marked parts which contained directions for specific articulations in the strings were a particular source of tension, as the indications were at odds with some of their own Personal Preferences, their understandings and experiences of Accepted Performance Conventions and the Material properties of their Instruments. On account of this, the musicians' ability to Follow the Directions of the conductor were frequently frustrated, and the information from the Present Soundscape appeared to be at odds with what they were seeing in their parts. The comment from Flute-1 illustrates how performers are often not given feedback on whether or not they are meeting the conductor's expectations.

Click for next slide

The diagram consists of several interconnected text boxes on a blue background with yellow circular patterns. The boxes contain the following text:

- Top Left:** 'Very conscious of trying to please the conductor. The more we covered the same passage, the more I felt it was me that was the problem! I don't think that was the case looking back, but at the time I was worrying about it.'
- Top Right:** 'The influence of the Institutional Hierarchy (markings in part) is at odds with the Present Soundscape (what the musicians heard their section playing) frustrating the players' ability to Follow Directions'
- Middle Left:** 'Flute-1 is attempting to make sense her own role in the context of the of the Present Soundscape in order to Follow the Directions of the conductor but did not receive feedback about whether or not she was achieving the desired result'
- Middle Center:** 'Heavy quavers seem to want to be played off the string in middle of bow, despite being pencilled ON the string. Glad when the principal was not the conductor.'
- Middle Right:** 'We have pencilled markings for short/ long quavers. What does the conductor actually want? He doesn't seem to notice.'
- Bottom Left:** 'The Influence of the Institutional Hierarchy is (choice of bowings) at odds with the player's preferences and local conventions'
- Bottom Center-Left:** 'I was trying to get to grips with an interpretation which is definitely not mine - very difficult, as I love the piece, and it is hard to play it in a way that goes totally against the grain of how I imagine it'
- Bottom Center:** 'There is tension within the Institutional Hierarchy (bowings/ markings in part conductor vs. section principals) as well as between Material influences (bow properties) and Institutional Hierarchy (conductor)'
- Bottom Center-Right:** 'The influence of the Institutional Hierarchy is in tension with Personal Engagement'
- Bottom Right:** 'This passage is one that [the conductor] worked on for some time, to me it is a crucial moment in his interpretation. The pace of the music is slow and he wanted a luxurious sound.'
- Far Bottom Left:** 'His bowings are just WRONG. Our part is a mess. We used to have [our previous conductor's] bowings for this piece. Aaaaagh.'
- Far Bottom Center:** 'It's frustrating to always try to perform what the composer wrote when so many other people don't! Dynamics, articulation, musical shape - all undefined and not coordinated.'
- Far Bottom Right:** 'Tension between Present Soundscape and Accepted Performance Conventions/ Personal Engagement'
- Very Bottom Center:** 'Generally, there were lots of instructions written in the part which didn't seem to be right, so we all tried to figure out what was happening, whether to play on or off or long or short or up or down-bow. It looks like we are peacefully playing, but underneath was a current of big question marks going on.'
- Very Bottom Right:** 'Tension between the Institutional Hierarchy and Accepted Performance Conventions'

ACTION MAP #7

'Not Sure Where to Play That'

The following series of comments are taken from a pair of rehearsals and illustrate the tension that can arise between the conductor's gestures and other Systems of Influence, such as the Present Soundscape, individuals' Personal Engagement, and other aspects of the Institutional Hierarchy, such as section principals.

Click for next slide

Labels in diagram: Flutes, Oboes, Violin II, Violas, Double Bass, Percussion, Timpani, Conductor, P

The influence of the Present Soundscape overrides the Institutional Hierarchy in order to maintain the Prime Directive

Tension here between the Institutional Hierarchy and players' desire to maintain the Prime Directive through the Present Soundscape

Both the Institutional Hierarchy and the Present Soundscape frustrate the player's ability to achieve the Prime Directive

The influence of the Present Soundscape overrides the Institutional Hierarchy in order to maintain the Prime Directive

'Conductor talks way too much! Has trouble showing what he wants with gestures so talks instead. Others start to lose attention because he rambles on and concentration wanes making rehearsal long and tedious. We can't get on with truly listening and playing together because his lack of clarity creates chaos.'

Lack of clarity in communication from the conductor frustrates this player's ability to Follow Directions

'Disconnect between wind and strings. [The conductor] trying unsuccessfully to move the tempo on here.'

'I have to ignore the conductor in this spot as it's much better for me to listen in order to balance and be together with others. If I watch, I risk being too focused on what the conductor is doing and throwing things off.'

'Do you seriously want a rit that big?'

'Oh dear, it would seem he really does want to! But the music just gets stuck.'

'By my goodness, we'll never get there.'

'Does he want that next bar delayed slightly?'

'There is a ritardando before every ritardando! We may not ever get to the end!'

hmm. Not quite sure where to play that. It's a bit swimmy!

'He talks SO much nobody listens anymore. If he had the technique he could SHOW all these things.'

'I was aware of the tempo being a bit free and each section taking time. It was difficult to know exactly when to play especially as the conductor was pulling the tempo about too.'

'often slows down, as here. I was listening and watching and wondering whether what I was seeing from the conductor was being done by us, or whether he was wanting to slow down a bit more.'

'The end of the excerpt was very awkward as we have sextuplets against the tune, when it was given here, as it was, we have to really stretch our 6s which is very difficult in a section of 14. I listened very hard in this excerpt and played with what I heard rather than watching the conductor.'

The influence of the Present Soundscape overrides the Institutional Hierarchy in order to maintain the Prime Directive

Labels in diagram: Trumpets, Trombones, Clarinets, Bassoons, Flutes, Oboes, Violin II, Percussion, Conductor, P

4.0

SUMMARY AND CONCLUSIONS

4.0.1

BRINGING THE STUDIES TOGETHER

This thesis has sought to synthesise information from a wide variety of musicians working and playing in diverse orchestral contexts regarding their thoughts, beliefs and experiences of creativity in orchestral music-making as well as about what prompts them to make the decisions they do about how and when to play their parts. The questionnaire findings showed that orchestral musicians have widely differing opinions about what it means to be creative in orchestral performance, and that they have varying beliefs about how much they are responsible for interpreting their own parts. While in some cases this was correlated with their instrument, position and identity category, there was also considerable variation on an individual level. The questionnaire also revealed that musicians across instrument, position and identity categories tend not to look to the conductor as frequently as might be expected for information about expressive performance elements such as nuances of phrasing, articulation and tone/timbre, and suggested that other sources of information such as section principals and players with relevant parts may be used instead.

The interviews brought nuance to these findings as musicians described the basis for their beliefs about whether or not performing orchestral music ought

to be considered creative. In the process they drew attention to issues surrounding definitions of creativity such as: the production of new 'written' material; the role of individual decision-making; and the significance of 'novelty', as they described the lack of creativity in what they believe is the reproduction of performance conventions. At the same time the interviewees noted the importance of bringing more to the performance than the notation strictly suggests and that their freedom to do so in an orchestral context varied according to the context of their part; some felt that there was individual decision-making available to them even in section member roles, while others felt that they were more constrained. While the notion of a 'creative orchestral performance' did not resonate with musicians, they often described what made a playing experience 'special' or 'unique' in terms of the types of relationship that emerged between them and their co-performers—many describing experiences that accord with definitions of group flow and the experience of co-presence with their colleagues which facilitated spontaneity during performance. Emphasising the need to maintain group cohesion, the interviewees detailed the mechanisms that they utilise in order to play together as a group, as well as other factors that shaped their decision-making about their parts. From these descriptions the interviews generated a number of influences that were used to explore the MERID data and inform the development of the Framework. Before offering a final summary of the Framework and a discussion of its implications for the authorship of orchestral performance, there are some lingering issues that need to be addressed.

4.0.2

A FEW FINAL CONSIDERATIONS

First, throughout the discussion and illustration of the FIAOP very little distinction has been made between rehearsal commentary and performance commentary. This is because in terms of what the Framework explains, it matters very little whether musicians are in rehearsal or performance.

However, it is worth noting that during performance the influence of the Prime Directive tends to be stronger, prompting musicians to prioritise information that will help them maintain cohesion; and that the conductor's prerogative to start and stop the orchestra's playing at any time and give verbal commentary is typically eliminated. As noted in Section 3.1.2, the conductor's influence in performance can and often does go beyond their ability to influence the orchestra with their gestures, in that orchestral players may make the effort to fulfil conductors' verbal requests from the rehearsal process, but the shift in power away from the conductor to section principals, the Musical Context and the Present Soundscape during performance can be significant depending on the specifics of the situation.

Second, while a good deal of attention was given to making comparisons between amateur and professional views in the analysis of the questionnaire and the interviews, during the analysis of the MERID data it became clear that there were fewer notable differences between the amateur, semi-professional and professional commentaries. Moreover, the relatively small number of case studies makes comparisons between these three groups difficult. For example, musicians in both the amateur and professional

orchestras demonstrated very high levels of awareness about their role within the Musical Context and the Institutional Hierarchy as well as sophisticated ideas about what they were trying to achieve with their playing. If there was an observable difference, however, it was that musicians in the amateur and semi-professional orchestras tended to express more positive attitudes toward their conductors than those in the professional orchestras, including reports of trying to achieve conductor directives and looking to the conductor for gestures to know when to play. While there may be a variety of explanations for this difference, the data suggests a couple of possibilities. First, in the questionnaire, amateur musicians were more likely to note that they deferred to the perceived greater expertise of the conductor and section principals, in contrast to professionals who often expressed frustration at the lack of competence of their conductors.¹ Second, as is described in a variety of ways across the data set, playing together cohesively in a large ensemble is extremely difficult; on the whole, amateur orchestras have less experience and skill compared to their professional counterparts when it comes to maintaining group cohesion. Due to this, amateurs may rely on the aid of the conductor's coordinating gestures more frequently (as ineffectual as those gestures may be for achieving highly coordinated performance).

Indeed one of the more conspicuous aspects of the musicians' reports across all three phases of this research, and the third and final issue to discuss here, was the instrumentalists' generally unfavourable assessment of conductors' effectiveness. While it is easy to maintain a certain scepticism regarding the

¹ As Botstein (2003) has noted, the exceptionally high level of expertise in today's professional orchestras means that many conductors may fail to have a comparable (let alone greater) level of skill and knowledge to that of the groups they purport to lead.

professional musicians' attitudes in the interviews concerning their frustration at the incompetence of the conductors with whom they frequently work, and the amateur musicians' varying perspectives on how much conductors influenced the way they played, there were still surprisingly few reports from the musicians in the case studies indicating a direct positive 'influence' coming from the conductor to the musicians. There are undoubtedly many possible explanations for this, but I explore here three that warrant addressing.

First, it is possible that positive (effective/successful) influences from conductors to musicians are common and therefore did not trigger responses from the musicians or were simply overlooked through being too obvious to mention—musicians reported 'problems' rather than mundane events. Second, it is possible that the conductors in the case studies were simply not good conductors in terms of being able to express information verbally or through their gestures, or they had no Musical Authority with their orchestras. And third, it may be that the method of data collection encouraged musicians to vent their frustrations by providing a platform for their voices to be heard.

It is certainly worth considering that, due to their routine nature, there may have been more positive 'influences' coming from the conductor to the musicians than were reported. However, some musicians *did* report positive influences, just not very many, and certainly reported on mundane events such as breathing and counting bars' rest, which suggests that the effect of conductors' influence was not wholly unreportable. It is also notable that

there were relatively few reports of conductor-to-player influence in the case study involving the orchestra that I conducted, and that players spent more time describing their own contributions and their responses to their colleagues than influences coming from the podium. In this case it seems that players would have been more likely to report positive conductor-player influences, since they knew that I would be reading their comments. Hopefully, the lack of such reports does mean that I belong to the category of conductors incapable of conveying meaningful information through words and gestures, but that possibility cannot be ruled out either.

With regard to this and the second explanation offered above, it is not possible to say whether the conductors in these studies represent a reasonable cross-section of the profession or were all genuinely less skilled than their average counterparts. While the former is very hard to assess, the latter is unlikely, but many more studies would need to be done to provide answers to either of these questions. The final explanation given above for the lack of reports involving positive influences from the conductor to the players raises questions about musicians' perceptions regarding the purpose of the research. While it is possible some players may have seen the study as an opportunity to communicate frustrations about the music director to the administration through an anonymous channel, this is also unlikely because there are generally more productive channels for voicing such concerns within an orchestra. Moreover, it was made emphatically clear through the printed and verbal communications that the data collected from this study would be used strictly for academic research purposes. So while these studies certainly do

not represent all instrumentalist-conductor relations, there is no reason to believe that these orchestral contexts or their conductors are exceptional.

There are, however, substantial problems with trying to determine the effectiveness of conductor gestures on an orchestra's playing, especially in a naturalistic setting. One of the perspectives that is lacking in this study, and in research on orchestral interaction more generally, are unguarded reports from conductors about their experiences. In particular it would be revealing to hear if and how they adapt to orchestras' responses to their verbal and non-verbal directions. From my own perspective as a conductor, I know that this process is dialogic, even when it appears to be directive. What I will admit from my own experience (although with some hesitation even here), is that not only do I constantly develop performance goals and objectives in response to what I am hearing from the group, I have even knowingly allowed it to seem that an interpretive idea arising from the group was my idea all along; such are the shackles of the myth of the omnipotent conductor for those standing on the podium.

Even if it is assumed that there is often more of a positive correlation between conductors' influence and musicians' decision-making than was suggested by the data, it doesn't change the fact that conductors' directives (verbal or gestural) are often in tension with other Systems of Influence, or are passed over in favour of other influences that support the Prime Directive. However, one of the strengths of the Framework is its ability to account for local variations in the strength of any one of the influences.

4.0.3

SUMMARY OF THE FIAOP and THE AUTHORSHIP OF ORCHESTRAL PERFORMANCE

4.0.3.1

Summary of the FIAOP

Although the components of the Framework were identified from the data collected for this research, and, as detailed in Section 3.3, the relative influence of the SoI over various performance parameters was suggested by the musicians' commentaries, the Framework itself is *neutral* in that it does not propose a hierarchy of influences beyond noting the overriding concern with the Prime Directive.² This is a crucial point because despite the diverse perspectives obtained during this research, the specific conditions of any particular orchestral context can radically change which influences become the primary shapers of individuals' decision-making. At the same time, what this small number of case studies strongly suggests is that the influence of the Institutional Hierarchy (section principals included) is only one of many competing factors that musicians must negotiate, and that a conductor's influence is much more mediated than is often assumed. Significantly, the other SoI, and the inherent tensions between them are revealed to be powerful shapers of musicians' decisions and actions, the results of which can be seen to directly produce the characteristic features of a given performance, such as tempo, articulation and timbre.

² Despite the ubiquity of the influence of the Prime Directive, it is worth reiterating that what it means to 'play together' will vary from individual to individual and from situation from situation. Moreover, for some 'just trying to get the notes right' may supersede all other concerns.

In particular, Cultural-Historical influences haunt the MERID commentaries as musicians assert their stock of knowledge about what is needed from their playing at any given moment, drawing on Accepted Performance Conventions and their Training and Experience. However, from anthropological perspectives that place the power of cultural production in the hands of actors in their performance of cultural conventions musicians are also actively producing and transforming these conventions, even as they may feel constrained by them (see Hallam & Ingold 2007 for their theory of cultural improvisation and Ortner 2006 for a discussion of practice theory). Indeed, it is possible to speculate that the tension felt by players in terms of the restrictions on their freedom of choice about how to play their part is derived less from explicit directives from the Institutional Hierarchy and more from their perceptions of cultural expectations, including the aesthetics of unanimity and precision which are powerful shapers of many of today's orchestral practices.

In contrast, a striking feature of the MERID data was musicians' (principals and section members alike) descriptions of Personal Engagement and their awareness and responsiveness to in-the-moment Musical Authority. Indeed, one of the contributions of the Framework is that it reconceptualises orchestral musicians' actions as *active*, rather than *passive*, by recognising the necessary roles of imagination and anticipation in Matching/'Following' and Following Directions while highlighting the regular presence of Asserting, Responding and Leading actions. This further suggests that it is necessary to move away from understanding the relationships enacted in orchestral performance in terms of domination, submission and insubordination, and

toward understanding musicians as engaged in a much more intricate web of social negotiations wherein colleagues may support, invite and compromise as well as thwart, demand and undermine. Misunderstandings may arise as well as feelings of transcendent connectivity, as individuals instigate and negotiate an array of competing influences in the flow of performance.

While musical materials afford and even suggest the performance of certain relationships through their scripting of parts, they don't *prescribe* that the relationships be enacted in any particular way. So although conventions such as 'melody lead' may be a strong influence in prompting individuals, or groups of individuals to take on a more supportive role in particular musical context, musicians may choose other alternatives. Significantly, several of the interviewees described how relationships between performers were very much defined by the performers' personalities, or the culture within a group. These perspectives suggest that the Musical Context can afford collaboration as well as alienation depending on the Interpersonal Relationships between musicians.

4.0.3.2

The Authorship of Orchestral Performance

This study provides empirical evidence to support the theoretical claim that the creative product of an orchestral performance is necessarily an emergent phenomenon. Thus, it can be argued that the authorship of the creative product of orchestral performance actually hangs in the interstices between people and even between people and their material and cultural environments—authorship exists in interaction. Importantly, however, those

interactions are not neutral, but are embedded in continually shifting power relationships—relations of authority. Furthering Faulkner's findings, however, this thesis has demonstrated that authority is *granted* to individuals throughout the orchestra, as well as to cultural influences and by transference to social and cultural institutions. In the process of granting authority through the negotiation of competing influences, musicians construct, reaffirm and transform authorial relations. Moreover, this process of negotiation often takes place during the flow of performance and in moment-to-moment interactions that allow little time for deliberate decision-making, requiring musicians to rely on intuition and embodied knowledge to negotiate a shifting landscape of influences in order to determine how and when to play their parts.

In summary, while it must be acknowledged that musicians are authors of their own actions and thus the sounds that they make, tracking the influences that prompt musicians' actions has facilitated a much more nuanced reading of authorship in orchestral performance. Through the collection and analysis of a large quantity of empirical data this study has shown that the authorship of orchestral performances cannot be primarily attributed to the conductor. Rather, the greater influence of the Prime Directive and the mechanisms necessary to achieve and maintain group cohesion place authorship not only in the dynamic interaction of individuals' decision-making, but their negotiation at the intersection of numerous conflicting influences, many of which cannot be attributed to individuals alone, but are the product of much larger social agreements. Since, like creativity, authorship is a social ascription, the attribution of which and holds a great deal of importance in

our capitalist and prestige economies, I would argue that it is ethically imperative to recognise the fundamentally distributed nature of group musical authorship.

4.0.4

IMPLICATIONS AND CONCLUSIONS

This study contributes to the social psychology of music-making by proposing a theoretical framework for orchestral performance which is grounded in a substantial body of empirical data, where no theoretical framework has existed before. In doing so, it has laid a foundation for future theorising about orchestral performance beyond models of conductor leadership, which, up to now, have dominated scholarship in this arena. Additionally, the findings of this research have several further implications. First, they suggest that accepted orchestral practices which privilege the perception of the conductor's authorial influence need to be examined and even revised. Second, they challenge some of the existing theories of group creativity, and group flow, including the necessary conditions for co-presence. And third, they challenge received notions about the connection between the values enacted in orchestral performance and the way in which they reflect, or are reflected in, wider social constellations.

As Levine & Levine have noted, the myth of the omniscient and omnipotent maestro permeates orchestral practices from rehearsal etiquette to the rituals surrounding performances. To recognise truly the distributed nature of the creative authorship of performance would require letting go of this concept, an action which would result in the unfettering of conductors and musicians alike, enabling more productive working relationships by eliminating the pretence that the person on the podium has more power than they actually do. Such an action would hardly turn orchestras into a model of an egalitarian

society, but it would certainly be a step forward in making the conducting profession a meritocracy rather than a realm where conductors' competence is beyond reproach. Moreover, it would require a hard look at the discrepancy in remuneration between conductors and players and a revision of approaches to publicity, as well as a potential transformation of performance rituals. For instance, what might the consequence be if the conductor walked on stage with the rest of the instrumentalists?

These findings make it very difficult to maintain Sawyer & DeZutter's assertion that symphony orchestras tend not to manifest 'collaborative emergence', but rather that the 'creativity resides, in large part, in the creativity of the composer and of the conductor', and therefore such group processes do not require interaction analysis (Sawyer & DeZutter 2009:91). On the contrary, and as Lewis (2012) has already argued, emergence is *fundamental* to the performance of orchestral music in that it hinges on the moment-to-moment interactions of individuals, over which no single individual has control, and there is no known outcome. In their creation of definitions of group creativity, group flow, and collaborative emergence which they articulate *in contrast to* 'activities that are relatively predictable—for example, a symphony orchestra performs from a score and is guided by a conductor' (Sawyer & DeZutter 2009:82), Sawyer and DeZutter betray their lack of understanding of the processes which underpin orchestral performance.

Similarly, and returning briefly to an argument made earlier in Section 2.2, Cook's assertion that Schutz's mutual 'tuning-in' available in chamber

settings is lost in an orchestral context is difficult to support. It is clear that co-presence is not only experienced by musicians playing in orchestras, but that it may also be the case that co-presence and its relationship to concepts of group flow are intrinsic motivators for individuals' participation in orchestral music-making. What current research on sound-action awareness suggests, and the findings from this study support, is that co-presence can be experienced through sound and does not require face-to-face contact.

Born proposes that such performance socialities, which she describes as the 'the intimate microsocialities of musical performance and practice, the social relations enacted in musical ensembles, and the musical division of labor' (Born 2011:266), are deeply connected to imagined communities, wider social identity formations, and institutional forms, and that there is a need to critique how these cultural forms shape performance socialities. However, there is potential danger in reading such connections from the 'top down'. The 'institutional forms' that surround orchestral practices, such as its professional forms, markets and explicit hierarchies have long shaped assumptions about the inherent nature of performance socialities, which is why the 'bottom-up' approach taken by this research is essential. From this perspective it is possible to see a layering of social constellations: what is observable from the 'outside' in terms of the production of the performance event may involve the performance of values which do not mirror what is happening on the 'inside' in terms of the values enacted through the microsocialities of performance. Indeed the paradox is that an orchestral performance affords the simultaneous realisation of what appear to be

conflicting values regarding issues of freedom, power, and notions of the collective vs. the individual.

The reason why 'bottom-up' readings taken from a broad cross section of orchestral practice are so important is because the extant research on orchestras has privileged professional forms, and in doing so has focused on the types of relationships that are primarily the product of market forces and the role of the 'professional' orchestral performance as a site for the accumulation of cultural capital. Baker (2014), for example, draws on these reports to highlight the misalignment between *El Sistema's* objectives of 'social harmony' and the development of 'democratic values' with those of orchestral performance (Baker 2014:112-114). He links the discourse of 'harmony' to a managerial state, noting that images of the 'harmonious society have often revolved around strict control and an absolute ruler' (Baker 2014:208), and contrasts this with a description of the relationships enacted in a democratic society 'in which relations of conflict are sustained, not erased' noting that 'without antagonism there is only the imposed consensus of authoritarian order' (Baker 2014:65-66). Interestingly, his description of a democratic society resonates more closely with the findings of this study, which acknowledge the productive tensions between influences and individuals.

Where Baker is right is that the accepted cultural practices of orchestral performance afford the performance of inequality and even legitimise the performance of abusive relationships which he has clearly observed in *El Sistema's* institutionalised orchestral practices. However, by privileging these

negative accounts of performance socialities without critique and by completely overlooking the multiplicity of orchestral practices, he fails, along with many others, to recognise that orchestral performance affords the enactment of any number of social ideologies. While at the extremes it might be possible to observe orchestral performance as enacting the values of autocratic regimes on the one hand or utopian and egalitarian societies on the other, the vast majority of orchestral practice does not reflect either of these scenarios. Rather the activity of orchestral music-making affords a space in which people can engage in any variety of social interaction and in doing so enact the myriad values of human relationships.

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APPENDIX

Questionnaire:

Performer Perceptions of Creative Decision-making
in Orchestral Performance

Performer Perceptions of Creative Decision-Making in Symphony

Consent

INTRODUCTION

The purpose of this survey is to collect perspectives from musicians regarding their experience of the creative decision-making process in the rehearsal and performance of orchestral music.

If you agree to participate, this online questionnaire should take approximately 10 minutes to complete.

Participants must be at least 18 years of age and must be active instrumentalists in at least one UK based orchestra.

RISKS

There are no foreseeable risks associated with participating in this research.

BENEFITS

There are no benefits to you as a survey respondent.

CONFIDENTIALITY

The questionnaire is submitted anonymously and contains no questions that could positively identify an individual or ensemble. Please [click here](#) for more information about the confidentiality of your responses.

PARTICIPATION

Participation in this study is voluntary. If you wish to participate, click "Next" below. If you do not wish to participate, click "Exit This Survey" at the upper right corner of your web browser. You may skip any question you do not wish to answer and may exit the survey at any time by clicking on the "Exit This Survey" link.

CONTACT AND COMPLAINTS

If you have a concern about any aspect of this project, please speak to the researcher, Cayenna Ponchione (+44 (0)7530 234178; cayenna.ponchione@music.ox.ac.uk), who will do her best to answer your query. If you remain unhappy and wish to make a formal complaint, please contact the Research Ethics Committee at the University of Oxford (ethics@socsci.ox.ac.uk; +44 (0)1865 614871; Social Sciences & Humanities Inter-Divisional Research Ethics Committee, Oxford University, Hayes House, 75 George Street, Oxford, OX1 2BQ, UK).

Performer Perceptions of Creative Decision-Making in Symphony

Survey Information

The following questionnaire is designed to collect **PERCEPTIONS OF ORCHESTRAL MUSICIANS** from a **VARIETY** of backgrounds and performing situations.

These **EXPERIENCES MAY VARY FROM ENSEMBLE TO ENSEMBLE** and may be dependent on **PLAYER POSITION** in the orchestra (e.g. principal/string/brass, etc.).

SOME QUESTIONS MAY NOT SEEM RELEVANT to your particular situation, please do your best and feel free to use the **COMMENT BOXES** to clarify answers.

Please do your best to **RESPOND** to the questions with regard to **YOUR POSITION IN THE ORCHESTRA THAT YOU PLAY WITH MOST FREQUENTLY**.

This survey contains 23 questions over 9 pages.

Performer Perceptions of Creative Decision-Making in Symphony

Definitions

DEFINITIONS

CREATIVE is used throughout this survey. Defining creativity is difficult, particularly in music performance. Please respond to the questions using **YOUR reaction** to the use of the word in context.

INTERPRETATION is used here to refer to the artistic decision-making process involved in performing music from a written score.

Performer Perceptions of Creative Decision-Making in Symphony

Information about your orchestra - Page 1/9

1. How many orchestras do you currently play with?

- 1
 2-3
 4+

Other (please specify) / Comments:

2. What type of orchestra do you play in?

*If playing in several, please **SELECT ONE** that you will use as the basis for your responses to this survey.*

- University
 Amateur
 Semi-professional
 Professional

Other (please specify) / Comments:

3. This orchestra has...

- a **full-time conductor** with no other conductors
 a **full-time conductor with occasional guest** conductors (1-2 a year at most)
 a **regular conductor for about 50%** of the rehearsals and concerts and many guest conductors
 no regular conductor, it changes by concert/performance
 no conductor at all, it is conductorless

Other (please specify) / Comments:

4. Which of these terms best describes YOU as a musician generally?

- Student
 Amateur
 Semi-professional
 Professional (in a full-time orchestra)
 Professional (freelance orchestral)

Other (please specify) / Comments:

Performer Perceptions of Creative Decision-Making in Symphony

Information about your position in your orchestra - Page 2/9

5. What is your usual position in this orchestra?

	Section leader/principal	Co-principal	Section member	N/A
String	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Woodwind	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Percussion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (harp, piano, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify) / Comments:

6. How do you rate your skill level in comparison with the rest of the orchestra?

- Top 10%
 Above average
 Average
 Below average
 Bottom 10%

Other (please specify) / Comments:

Performer Perceptions of Creative Decision-Making in Symphony

Questions - Page 3/9

7. Please RANK how well these phrases describe YOUR EXPERIENCE of performing orchestral music.

Orchestral music is...

a **creative** activity.

an **expressive** activity.

an **interpretive** activity.

a **skill/craft**.

Comments:

8. How creatively do you feel you can engage with the following orchestral repertoire?

Remember you can use the comment boxes to clarify answers.

	Not at all	Some	A fair amount	A lot	N/A
Baroque	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Classical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Romantic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20th-Century	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contemporary (new works)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

Performer Perceptions of Creative Decision-Making in Symphony

Questions - Page 4/9

9. How much room do you feel you have for artistic decision-making about your own part?

	None	Some	A fair amount	A lot
Overall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tempo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Articulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tone/timbre	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nuances of phrasing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical (fingerings/bowings)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

10. How much do you think the conductor relies on YOUR musical judgement?

	Not at all	Some	A fair amount	A lot
Overall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tempo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Articulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tone/timbre	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nuances of phrasing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical (fingerings/bowings)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

Performer Perceptions of Creative Decision-Making in Symphony

Questions - Page 5/9

11. Do you come to rehearsal with an interpretation of your part in mind?

- Never
 Sometimes
 Often
 Always

Other (please specify) / Comments:

12. On average, how much to you feel you must modify your interpretive ideas in rehearsal/performance?

- None
 Some
 A fair amount
 A lot

Other (please specify) / Comments:

13. How much do you agree or disagree with the following statements?

	Disagree	Somewhat disagree	Somewhat agree	Agree	N/A
It is essential that I develop nuanced interpretations in order to fulfill my responsibility to the orchestra.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I develop personal, nuanced interpretations of my parts even if I must modify them later.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sometimes develop multiple interpretations to be prepared for decisions made in rehearsal/performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing interpretations is irrelevant since I play what is on the page.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

Performer Perceptions of Creative Decision-Making in Symphony

Questions - Page 6/9

14. Expressing individual interpretive ideas by **PLAYING** them in rehearsal and/or performance...

Check all that apply.

- is **not appropriate** in an orchestral setting.
- is an **essential** aspect of performing orchestral music.
- is **appropriate**, but must be kept within the interpretation of the conductor.
- is **more appropriate** in some roles (e.g. principal players) than in others.

Other (please specify) / Comments:

15. If you believe that a passage could be played differently or better, do you...

Check all that apply.

- Say something to the **entire ensemble**
- Say something to the **conductor during rehearsal**
- Say something to your **section leader during rehearsal**
- Say something to the **person next to you**
- Play** what you feel to be correct/best
- Talk to **section principals after rehearsal/during breaks**
- Talk to the **conductor after rehearsal/during breaks**
- Do or say nothing**

Other (please specify) / Comments:

Performer Perceptions of Creative Decision-Making in Symphony

16. When responding to a good musical idea arising spontaneously from the orchestra rather than from the conductor do you...

Check all that apply.

- Adjust your playing** to incorporate or respond to the idea
- Wait for the idea to be recognized by the **conductor or section leader**
- Vocally express your approval** of the idea at an appropriate point in the rehearsal
- Do or say nothing**

Other (please specify) / Comments:

Performer Perceptions of Creative Decision-Making in Symphony

Your responses are important to us, so hang in there!

Just a few more questions to go.

Since this survey is directed at a wide variety of orchestral musicians, some of these questions may not seem relevant to your experience.

You are encouraged to use the comment boxes, especially where you feel there are not adequate response options.

Performer Perceptions of Creative Decision-Making in Symphony

Questions - Page 7/9

17. Which statements reflect your experience?

Check all that apply.

- I make suggestions** in rehearsal *because* I believe it is an important part of my role in the ensemble.
- I do not make suggestions** in rehearsal *because* it is not part of my role.
- I make suggestions regardless** of whether or not it is a part of my role *because* I am concerned with the quality of the music.
- I do not make suggestions regardless** of whether or not it is part of my role *because* I have given up trying to offer artistic ideas.

Other (please specify) / Comments:

18. How much do you feel your active engagement in the rehearsal process has to do with YOUR personality?

- Not at all Some A fair amount A lot

Other (please specify) / Comments:

19. How much do you feel your active engagement in the rehearsal process has to do with the personality of the CONDUCTOR?

- Not at all Some A fair amount A lot

Other (please specify) / Comments:

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20. Assuming conductor competence, please rate how frequently you rely on/look to the conductor for...

	Never	Sometimes	Most of the time	Always	N/A
Precisely when to play	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tempo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metre / Place in the bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dynamics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Articulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Timbre / Tone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

21. In the absence of a conductor, who would you look to/listen for?

	Leader / concert master	Section principal	Person next to you	Players with relevant musical parts	No one	Other
Precisely when to play	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tempo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metre / Place in the bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dynamics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Articulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Timbre / Tone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

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22. How much do you feel the following factors affect your ability to engage creatively with orchestral music?

	Not at all	Some	A fair amount	A lot	N/A
Accepted performance conventions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fidelity to the composer's intentions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The expectations of the audience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Historical precedence (recordings)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

23. With regard to your satisfaction and enjoyment performing orchestral music, please rank the importance of the following performance characteristics.

Do your best to rank them in relation to each other, although you may select the same rating for more than one if you wish.

	Level of importance
Precision /technical accuracy	<input type="text"/>
Expressive performance	<input type="text"/>
Emotionally charged performance	<input type="text"/>
Unique performance/interpretation	<input type="text"/>
Historical accuracy/true to the composer's intentions	<input type="text"/>
Standard reading/interpretation	<input type="text"/>

Comments:

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THANK YOU

24. You are encouraged to leave any additional comments and thoughts here.