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Paradox of Perception:
The role of the second chair second violin in a
symphony orchestra.

A thesis presented in partial fulfilment of the requirements for the degree
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Abstract

The objective of this research thesis is to add to our understanding of work practices in the symphony orchestra and, in particular, to explore the functioning of the hierarchy which exists among the musicians of the orchestra (Koivunen, 2003; Marotto, Roos & Victor, 2007)

As the literature regarding the orchestral organization is concerned primarily with relations between conductors and orchestras and, further, with the offstage implications of these interactions (Koivunen, 2003), I have focused instead on the onstage relationships among musicians that occur in the course of rehearsal, concert, and recording activity.

In order to investigate these relations, I have undertaken a critical and reflexive study of the role of sub-principal (second chair) second violin in a full-time, fully professional symphony orchestra. In so doing I sought to interrogate my own experience through an autoethnographic methodology which is grounded in the phenomenology of Merleau-Ponty (2002) and draws on the sensemaking ideas of Weick (1995, 2001).

The picture that emerged from this research was one of an embodied musician engaging in empathetic interaction with colleagues; this interaction is, I argue, based on sensemaking activity which occurs in a kinaesthetic loop that, while underpinned by creative empathy among musicians, draws on and is generated by auditory, visual and physical information virtually simultaneously. Which of these elements takes precedence was found in this study to be linked to the nature of the activity being undertaken.

Keywords: Orchestra, Autoethnography, Kinaesthetic Loop, Phenomenology, Sensemaking, Kinaesthetic Empathy

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1 INTRODUCTION

This report represents the meeting of two paths in a personal journey.

Having recently passed the midpoint of my career as an orchestral violinist and now reaching the closing stages of a course of study which has allowed me to study the orchestra from a variety of non-musical perspectives, undertaking this research has offered me the opportunity not only to interrogate and distil my knowledge of the orchestra as both observer and practitioner, but also to make a contribution to our understanding of orchestral work practice.

As a second chair second violinist I have long been intrigued by what makes my role different from the principal second violin on the one hand and a section player on the other; on the occasions when I have played in the principal's position or in the section I have noticed the change in demands made on my playing style and the different qualities required in my interactions with colleagues, despite my continuing to play the same music regardless of which position I sit in.

These are not just questions of familiarity or otherwise with the roles concerned; these differences are also embedded in the change in communication practices involved and the differing spatial situations in which each player experiences orchestral activity.

For example, where I sit in the second violins has a material impact on what I see and hear, largely due to concomitant changes in physical circumstances. This in turn influences from whence I seek guidance and which forms of communication I privilege.

By way of further illustration, I recently sat for a brief period at the back of the second violin section. This required, for instance, that I privilege visual over aural information whenever close attention needed to be paid to the cello line as, in that situation I could hardly hear the cellos and so relied on what I could see from the front desk of the second violins and the conductor.

In contrast, when I returned to the second chair position I could see and hear the cello section very clearly indeed. Figure 1 (p. 29) shows physical distance to be the reason, in this instance, behind the back stand player's issue.

This also demonstrates the importance of the musical hierarchy to the string section of the orchestra in particular (see Figure 1, p. 29); here, when playing at the back I visually sought direction from the front stand of the second violins and the conductor, but when sitting at the front I was able to obtain my information directly from colleagues in the other section concerned.

As a student of organizations, on the other hand, it has become apparent to me that the literature regarding orchestras is concerned almost exclusively with offstage, non-musical activity (e.g., Arian 1971; Atik, 1994; Glynn, 2000) and, in a probable reflection of the standardized nature of orchestral music-making (Mintzberg, 1998), presents players of the orchestra as a single group engaged in a highly commodified activity with little room for individual artistic freedom (Arian, 1971; Attali, 1995; Hart, 1973).

In addition, the predominance of conductor-related analysis in the literature has exacerbated these tendencies, despite several scholars highlighting the importance of onstage relations among players to orchestral performance (e.g., Allmendinger, Hackman & Lehman, 1996; Lehman, 1999; Marotto, Roos & Victor, 2007).

While this reflects both research purpose and analytical convenience, perhaps the main problem confronting the outside observer of the orchestra is the difficulty in investigating musical, as distinct from non-musical, interaction among players (Koivunen, 2003), especially as so much of the communication and knowledge in this area is tacit and taken-for-granted.

My primary objectives in conducting this research were thus threefold: to examine and interrogate my own experience as an orchestral player and as a member of the internal orchestral hierarchy of a professional symphony orchestra; to complement the conductor-centred, single-group view from outside the orchestra with a personal view of how one musician relates to his colleagues; and to enrich our overall picture of the orchestra by providing a perspective from onstage to add to our knowledge of non-musical, offstage activity.

This investigation has been confined to my own experience in rehearsal, concert and recording activity as captured in my Field Diary which was kept during the most recent concert season of the orchestra in which I play; I have not, as a result, drawn any conclusions regarding the experience of my fellow musicians.

Autoethnography, underpinned by the phenomenology of Merleau-Ponty (2002), has been employed as a research methodology in order to preserve the personal character of my story and the inductive, qualitative nature of the research, while at the same time situating the narrative within the orchestral lifeworld from which it was drawn.

To facilitate analysis of the Field Diary I have employed the sensemaking ideas of Weick (1995), adapted to the orchestral setting by Maitlis (2005). This has, in turn, been adjusted to a phenomenological approach using the work of Stablein (2002) and Sadala and Adorno (2002).

In developing this methodological framework I have sought to unpack tacit knowledge and taken-for-granted work practices and so to interrogate relations which are very much embedded in the fabric of orchestral work practices.

I now review the literature concerning the orchestra on which this study is based.

2 LITERATURE REVIEW

Musical groups in general and symphony orchestras in particular have received a good deal of attention in the literature associated with the study of organizations (Lehman, 1995; Turbide & Morgenstern, 2000).

Notwithstanding this interest in the orchestral organization, onstage interaction between musicians remains, with the notable exception of Murnighan and Conlon (1991), somewhat underinvestigated.

Three main directions have emerged in this literature; analyses of the working lives of professional orchestral musicians, discussions of orchestral leadership focused primarily on the conductor – whether as main protagonist (Hopkins, 2009; Sachs, 1993) or as an organizational metaphor (Mintzberg, 1998; Ropo & Sauer, 2007) – and the case study (e.g., Castañer, 1997; Maitlis, 2005). With regard to the symphony orchestra, these last generally either describe the orchestra's more routine activity or use one or more orchestras as research sites for the scrutiny of particular organizational phenomena.

The following review will briefly examine key works from this canon as well as scholarship which suggests how orchestral work practices might be considered further; the literature selected has not only helped to identify, contextualize and shape the research topic but has also informed subsequent analysis and discussion.

2.1 The orchestral musician at work

Among the studies examining the lives of professional musicians, Allmendinger et al. (1996), Brodsky (2006), and Mogelof and Rohrer (2005) all refer to relationships between co-workers. Allmendinger et al. (1996) explore player job satisfaction and motivation through data collected with regard to variables such as remuneration, job security, and attitudes to orchestral management.

Satisfaction with co-worker relationships is one of the areas investigated, but beyond reporting that “there are no significant differences on this measure among countries” (Allmendinger et al., 1996, p. 204), these scholars give little information regarding the constitution of these relations, nor any indication as to whether they are artistic or organizational in nature.

Simply by acknowledging this dimension of orchestral work, however, Allmendinger et al. (1996) recognize the importance to the orchestra of interactions among its members. The survey undertaken by Mogelof and Rohrer (2005) reports similar results to Allmendinger et al. (1996), finding that there was little difference between orchestras with regard to levels of satisfaction with collegial relations. Again, no conclusions are offered about the character of these relationships, although the inclusion of co-worker relationships in this research once more suggests their significance to the orchestral organization.

Brodsky (2006) employs a different approach to collegial interactions in the orchestra, preferring instead to examine “the emotions and cognitions” (p. 685) of professional orchestral musicians. In doing so he makes the salient point that “music performance expertise on the professional level involves autonomic and proprioceptive systems, which require an exceptionally high ... degree of training and skill as well as the blending of emotion-intelligence, response-control, and empathy-command” (p. 674). This foreshadows the ideas of embodiment, sensemaking and empathy which are at the methodological and analytical heart of the present study.

2.2 The conductor as orchestral leader

The second and most extensive body of literature associated with the symphony orchestra is concerned with the conductor as orchestral leader. This material encompasses a wide range of perspectives, from personal professional experience (Hopkins, 2009; Nierenberg, 2009) through the artistic and biographical (Lebrecht, 1991, 1996; Matheopoulos, 1982; Sachs, 1993) and more generally organizational (Atik, 1994; Boerner, Krause & Gebert, 2004; Hunt, Stelluto & Hooijberg, 2004; Mintzberg, 1998; Ropo & Sauer, 2007) to discussions of the conductor as a socio-political phenomenon (Attali, 1995; Canetti, 1962).

Hopkins' (2009) retrospective exploration of his professional conducting career includes a discussion of his extensive involvement with the orchestra in which I play. His analysis of, for example, the acoustics of venues in which this orchestra performs and the different forms of activity in which the orchestra continues to be engaged has therefore provided this study with important contextual background.

Nierenberg (2009) also interrogates his own conducting experience, using that knowledge to offer insights into what he considers to be the essentials of leadership in organizations. He usefully introduces ideas such as engaged listening on the part of musicians and also suggests that a key leadership function is the "taking [of] responsibility for how [a group's members] collaborate" (p. 6). In the literature which explores the means by which conductors achieve their musical, artistic and personal goals, Lebrecht (1991, 1996) provides an overview of the history and evolution of the conducting profession from the late nineteenth century to the present day.

His investigation charts the transformation of the role from that of resident director to what Lebrecht (1991) labels "the remote-control chief conductor" of more recent times: "where Mahler (1860–1911) conducted 111 times in one season at the Vienna Opera, Claudio Abbado (1933 –) in the same office kept his commitment to just twenty performances" (p. 133).

This has, in turn, had significant consequences for onstage and offstage orchestral activity as the hierarchies among both players and administrators have, in large measure, filled the managerial vacuum that has resulted from such extended absences (American Symphony Orchestra League, 1993; Lebrecht, 1991, 1996).

Matheopoulos (1982) and Sachs (1993), in addition to giving rich and detailed background information, examine the onstage work practices of eminent conductors in some depth.

Matheopoulos (1982) analyses the working methods of the conductors in her study based not only on interviews with the conductors themselves but also on discussions with musicians who have played under their direction. This lends a balance to her argument which is not always present in Lebrecht (1991) due to his frequent reliance on a single source as the basis from which he makes many of his claims. To give one example, in her analysis of the work of the Austrian conductor Carlos Kleiber, Matheopoulos (1982) cites administrators and players as well as Kleiber himself in order to better understand the achievements of this enigmatic but extraordinary musician (Lebrecht, 1991; Matheopoulos, 1982).

Focusing on the life and work of the Italian conductor Arturo Toscanini (1867–1957), Sachs (1993) offers, in the chapter *Watching Toscanini*, a detailed and valuable examination not only of Toscanini's conducting technique but also of how that technique was employed in order to realize Toscanini's musical ends.

Of particular interest in the present context are Sachs' (1993) observations regarding Toscanini's communication practices in performance when verbal direction was no longer possible. For example we learn that in a filmed performance of the slow movement of a Beethoven symphony Toscanini on several occasions gave cues "only with his eyes, so as not to disturb the flow of the music", while later in the same movement, "[Toscanini's] beat is so clear and compelling that even when he makes no subdivisions [of the beat], one can feel where each note *must* be placed" (p. 153, emphasis in the original).

This resonates with my own experience with other conductors and, importantly for this study, underscores the significance of visual and gestural, as well as purely auditory, direction in the orchestra.

With the brief but illuminating study by Mintzberg (1998) of a day in the working life of Bramwell Tovey – then Music Director of the Winnipeg Symphony Orchestra – the focus turns from artistic to organizational analysis. Tovey is shown to exercise what Mintzberg (1998) describes as ‘covert’ leadership; rather than engaging in ‘overt’ leadership practices such as motivation and coaching, Tovey, in Mintzberg’s view, leads through “rather unobtrusive actions that infuse all the other things a manager does” (p. 5). Unpacking this osmotic interaction between direction and response has proven to be a key research task in the present research thesis.

Atik (1994), Boerner et al. (2004) and Hunt et al. (2004) all take a more general view of orchestral leadership in the context of relations between conductors and musicians. While these studies provide useful insights they all, however, suffer from data-related flaws which to some extent undermine their respective findings.

In Atik (1994) primary data from musicians and managers “for purposes of convenience ... are grouped together” (p. 24). This, as Lebrecht (1991, 1996) and Matheopoulos (1982) make clear, is a combination whose constituents are likely to share widely different, if not diametrically opposing, views on the conductors with whom they work, making the separation of any data collected from these two groups desirable, if not essential.

Hunt et al. (2004) draw their conclusions about “what conductors and musicians actually do” (p. 146) entirely from documentary evidence, most of which was collected for other research purposes, while Boerner et al. (2004) base their findings on a single, albeit relatively comprehensive, survey sent only to players.

Perhaps Atik's (1994) key contribution, grounded in his data obtained from players, is his identification of what he labels "followership" (p. 27) and the associated observations that "gaining consent of the follower is a basic component of the leadership process," while studying the orchestra "suggests an interactive and dynamic perception of the relationship between superior and subordinate" (p. 27). This has implications not only for the examination of relations between conductor and player but also for the interrogation of interactions among players themselves.

Hunt et al. (2004) seek to dispel "romantic analogies" in order to study conductors and musicians "more realistically" (p. 145). In so doing, and despite the data-related issues mentioned earlier, they draw conclusions which indicate a number of promising directions for further investigation of the orchestra, some of which were pursued in the present research.

They suggest, for example, that "the conductor gives certain parameters for filling in the sound to replace the score (vision) and the musicians must make creative choices both individually and as a group as to how to meet the conductor's interpretive desires (implementation)" (Hunt et al., 2004, p. 145).

Furthermore "the way musicians solve the challenges of balance, intonation, phrasing, and handing off melodies to one another is an additional important aspect of the creative process" (Hunt et al., 2004, p. 158). This suggests an important line of inquiry regarding interaction among players; in addition, how I make sense of my working environment in order to make these choices and meet these – and other – challenges is central to this study.

While the data of Boerner et al. (2004) may be skewed by their somewhat surprising decision to omit conductors from the sample on which they base their study, their conclusions regarding "the operationalization of follower behaviour" – which includes "co-operation (ensemble playing) and its prerequisites (skills and motivation)" (p. 471) – are, as they pertain to the players in their extensive sample, less compromised.

For instance, Boerner et al. (2004) point out that coordination in the orchestra is not just the result of conductorial direction; it also stems from “both horizontal and vertical interaction” between and across hierarchical levels, which in turn requires “inter-team co-operation” (p. 475). In addition, in a comment which was instrumental in both the identification of the research problem and the choice of methodological approach used in my own study, they point out that “whereas the characteristics of the individual tasks ... are often considered ... the co-ordination between tasks is overlooked” (p. 475). Coordination and control – and the interpersonal relations involved – therefore emerge from the study by Boerner et al. (2004) as key elements in orchestral work requiring further interrogation.

Ropo and Sauer (2007) explore the success of Finnish conductors, finding that, in addition to the individual’s talent, “Finland has been an incubator, a place where conductor competence is developed intrinsically by a core group in a national setting” (p. 14). Their article, while not directly influencing the present study, thus furnishes important background information regarding the system which has produced, in the person of the current Music Director of the orchestra in which I play, an individual whose presence pervades the Field Diary and who features in several of the diary entries selected for further analysis.

Attali (1995) and Canetti (1962) are concerned with the wider issue of the conductor as a figure of power. In his interrogation of “what structures and processes pattern both music and work” (Prichard, Korczynski & Elmes, 2007), Attali (1995) portrays the conductor “as a leader of men, simultaneously entrepreneur and State, a physical representation of power in the economic order” (p.67), while for Canetti (1962) “every detail of [a conductor’s] public behaviour throws light on the nature of power” (p. 394).

While these are perspectives at a level of abstraction which is beyond the much narrower scope of this report, both these scholars nonetheless identify a source of a conductor’s power which underpins his or her relations with the musicians: the authority imparted by the possession of the full musical score.

This, Attali (1995) suggests, “is an external algorithm, a ‘score’ (*partition*), which does what its name implies: it allocates [the musicians’] parts” (p. 66, emphasis in the original). For Canetti (1962) the full score brings omniscience to the conductor as, “while the players have only their own parts in front of them, he has the whole score in his head, or on his desk. At any given moment he knows precisely what each player should be doing” (Canetti, 1962, p. 396).

Attali (1995) is, in my view, quite correct in stating that the orchestral conductor “did not become necessary and explicit until he was legitimated by the growth in the size of orchestras” (p. 66). The full score is thus not only a direct link to the composer of the music at hand; its possession also represents an outward manifestation of the legitimacy referred to by Attali through the formalizing of the conductor’s dual roles of central coordinator and chief interpreter. This perspective is supported by the large number of references, taken from across the different forms of orchestral activity covered in the Field Diary, to my seeking guidance and direction from the conductor.

The focus on conductor-based orchestral leadership which characterizes the majority of the literature (Koivunen, 2003) remains, however, problematic. As Lebrecht (1996) and others (American Symphony Orchestra League, 1993; Hart, 1973) have pointed out, the modern music director is something of an absentee landlord, relying on the administrative expertise of an executive director in the office and strengthening the musical hierarchy within the orchestra itself. This, in the orchestra’s case, is particularly salient with regard to the maintenance of playing standards and player appointments (Lebrecht, 1996; Lehman & Galinsky, 2000).

2.3 The case study

The increasing complexity in both the administrative and musical sides of orchestral management thus emerges as an important reason for the case study becoming an increasingly popular, and perhaps more appropriate, means of interrogating orchestral work.

An early example of the genre which furnishes much important information of continuing relevance is Hart's (1973) multiple-case survey of the symphony orchestras in the United States of America (USA). Hart's review demonstrates how orchestral musicians in the USA, excluded from the formal power structure of executive director, board chair and music director, have developed their own collective voice through unionisation.

This has had a significant impact on relations between musicians and managers, which in Hart's (1973) view has in turn had largely negative artistic consequences, including a loss of a "sense of artistic mission" (p. 469) on the part of individual musicians. Among Hart's solutions to this issue is a diversification of activity to include performances in smaller ensembles which is in itself "a cooperative art, a blending of individual impulses into an integrated whole" (p. 469).

Arian (1971), in one of the rare accounts written by a professional musician, suggests a similar scenario in a single-case study of his former employer, the Philadelphia Orchestra. In his examination of the deterioration in relations between the management and the players which culminated in the musicians' strike of 1966, Arian identifies the existence "among the musicians of the Philadelphia Orchestra, in addition to an alienation from management, an intense alienation from the work which they are called upon to perform" (p. 81).

The location of this alienation, in Arian's (1971) view, resided in a number of causes, one of which was the perception that a player in an orchestra is treated, in the words of one violinist, "like a cog in a machine" (p. 83) at the expense of artistic individuality and freedom. Many Philadelphia Orchestra members therefore turned to extra-curricular chamber music activity in order to preserve their artistic identity.

Glynn (2000) finds similar issues in her study of the Atlanta Symphony Orchestra strike of 1996. While recasting the conflict between artistic and financial goals that besets many arts organizations (Kotler & Scheff, 1997) as tension between the orchestra's economic identity on the one hand and its artistic identity on the other, Glynn (2000) also identifies "deliberate identity strategies employed by musicians to keep their professional ideology intact" (p. 290). Among these strategies were free concerts in smaller conductor-less ensembles such as string quartets.

Arian (1971), Hart (1973) and Glynn (2000), while all concerned primarily with exploring offstage issues outside the scope of this study, thus highlight the importance of cooperative work practices among players, as well as between players and conductors, to the maintenance of orchestral unity (Glynn, 2000) and individual artistic vitality (Arian, 1971; Hart, 1973). Furthermore Arian (1971) and Glynn (2000), in citing player comments in support of their findings in this regard, both suggest that collaboration at work is perceived by players as being at the heart of successful orchestral activity.

Castañer (1997) examines leadership in arts organizations through an investigation of music director succession in the Barcelona Symphony Orchestra. Again, although the main focus of Castañer's research is elsewhere, his study provides a useful outline of the impact of a conductor's leadership style on players in the orchestra; "a collaborative and stimulating atmosphere results in better concert performances than a climate in which the conductor and musicians are adversaries" (p. 394).

In contrast to Hart (1973), Arian (1971), Glynn (2000) and Castañer (1997), Lehman (1999) and Lehman and Galinsky (2000) scrutinize the operation of two self-governing orchestras: the Berlin Philharmonic (Lehman, 1999) and the London Symphony Orchestra (Lehman & Galinsky, 2000).

Lehman (1999) considers the Berlin Philharmonic to be a "near-ideal example of a self-governing organization" (p. 11). Central to the success of this, one of the world's pre-eminent symphony orchestras (Lebrecht, 1996), is "an unparalleled 'esprit du corps' ", the essence of which "comes from two sources: its legal and operating structure, and its few, but inviolate, group norms" (Lehman, 1999, p. 21).

Chief among these norms are “notions of personal responsibility, artistic self-determination, and the paramount importance of the music itself” (Lehman, 1999, p. 21). These individual attributes are then submitted to the process of musical co-creation with colleagues; “[the Berlin Philharmonic] is an orchestra that intellectually participates in the solution of difficult passages, individual problems of intonation, and questions of ensemble” (Stresemann, cited in Lehman, 1999, p. 21).

In their study of the London Symphony Orchestra (LSO), Lehman and Galinsky (2000) also consider the structure of a self-governing symphony orchestra. They point out that, with the extra responsibility of self-governance, players also have to bear both “the direct economic consequences of their decisions and the burden of having to dismiss their colleagues” (p. 3).

An important result of this shared responsibility, as with the Berlin Philharmonic, is the orchestra’s collegiality. As one player in the LSO put it, “here we own the place, we run it ... There is a great feeling of camaraderie in this orchestra. There is both great individuality and brotherhood” (Martin, cited in Lehman & Galinsky, 2000, p. 7).

This is manifested, for example, in recruitment practices: here a player is judged by his or her peers “on the player’s compatibility with the section and with the orchestra’s overall sound as well as on his or her competence as an instrumentalist” (Lehman & Galinsky, 2000, p. 8). In contrast, in most orchestras in the USA – including those investigated by Hart (1973), Arian (1971) and Glynn (2000) – the Music Director has the formal authority over the “hiring and firing of players” (Lehman & Galinsky, 2000, p. 11).

Most importantly for the present research, Lehman (1999) and Lehman and Galinsky (2000) demonstrate not only how successful self-governing orchestras function; they also illustrate, as do Arian (1971), Hart (1973) and Glynn (2000), the significance of collaboration and cooperation in the context of orchestral work.

Murnighan and Conlon (1991) investigate interaction among instrumentalists through a multiple-case study of British string quartets. Much of what they describe is applicable to the orchestra; especially germane to the present research is the “Paradox of the Second Fiddle” (p. 169) – where the second violin in a string quartet is expected to assume full artistic responsibility but remain largely subordinate to the first violin – as I am not only a second violinist but also a second chair player. Equally illuminating is their exploration of conflict resolution in a string quartet. The parallels between how quartet members and orchestral section leaders deal with confrontation and contradiction are quite striking, not least in that complete resolution of disagreement is not necessarily either attainable or desirable.

2.4 Sensemaking, kinaesthetic empathy and the orchestra

Among recent contributions to research on the symphony orchestra, one of the most important is the work of Maitlis (e.g., 1997, 2005). In a series of articles based on a longitudinal, qualitative and multiple-case study of offstage decision-making in British orchestras, she has explored a variety of perspectives, among them player roles (Maitlis, 1997) and sensemaking in organizations (Maitlis, 2005).

Her adaptation (Maitlis, 2005) to the orchestral setting of the sensemaking/sensegiving framework of Weick (1995) has generated a methodological tool well-suited to the analysis of working relationships within the orchestra. How I have applied the sensemaking idea to the onstage relations encountered in orchestral activity will be discussed in the methods chapter of the present research.

As Maitlis (2005) points out, the wider orchestral organization is engaged in a “broader range of situations involving a diverse range of stakeholders”; most analysis of sensemaking, however, “has focused on situations in which there is some pressure ... to make sense of the world quickly” in groups characterized by “tightly coupled social systems” operating in “high-reliability environments” (p. 23).

Her investigation therefore seeks to increase the scope of the sensemaking idea to include circumstances such as those encountered in offstage orchestral activity, where the pressure to perform is less intense and the consequences of any action are less immediate.

In this study I put forward a complementary view of the orchestra to that of Maitlis (2005) by interrogating my own relations and activity as a player in rehearsal, performance and recording. As analysis of the Field Diary revealed, onstage music-making is characterized by exactly the attributes identified by Maitlis (2005) in her review of sensemaking scholarship; the pressure on sensemaking activity in the orchestra is frequently considerable, playing activity has an immediate impact on colleagues, and the orchestra is continuously engaged in “tightly coordinated collective action” (Maitlis, 2005, p. 23).

Differences between offstage sensemaking activity and the sensemaking and sensegiving that occur onstage, also reflect, on several dimensions, the often uneasy coexistence between artistic and economic identities in the wider orchestral organization (Glynn, 2000).

This tension is explored further in Koivunen’s (2003) analysis of discursive and aesthetic practices in orchestral leadership in which she contrasts the bodily knowledge of the musician – “musicians, dancers and actors work on their self to reach results and the knowledge dwells in their bodies” (Koivunen, 2003, p. 159) – with the “Cartesian dualism” between mind and body that pervades “traditional leadership literature” (Koivunen, 2003, p. 158).

In addition, Koivunen (2002, 2003) also investigates the privileging in the modern organization of the visual over the auditory; here, too, the manager wants to ‘see’ results while for the musician, a fine performance is, first and foremost, an experience in sound.

If the tension between art and economics, which can be so divisive in the orchestral setting (Arian, 1971; Hart, 1973; Glynn, 2000), is to be more fully understood, Koivunen’s (2002, 2003) work therefore suggests that further interrogation of onstage relations among musicians is required.

This, for the outside observer is not an easy task: in one example, “the inner hierarchy of a symphony orchestra remains a somewhat mystical area of my data. It is either a very unproblematic matter or the musicians avoid talking about it. I suspect the latter” (Koivunen, 2003, p. 105). This may explain why, despite her contention that leadership roles within the orchestra are “very significant” these positions remain for Koivunen (2003) also “somewhat invisible” (p. 15) when viewed from outside the orchestra.

Marotto et al. (2007) also refer to the impact of this hierarchy on orchestral coordination in their study of Marotto’s experience as a student conductor of a conservatoire orchestra. They observe that communication among members of this hierarchy, and within the orchestra as a whole, is non-verbal and “constantly occurring within groups, across groups and with the conductor” (Marotto et al., 2007, p. 401).

Furthermore, reinforcing the need for greater understanding of onstage relations among musicians, they note that “group peak performance is contingent on how group members interact with one another and engage in their task” (Marotto et al., 2007, p. 404).

My own experience, drawn from a number of entries in the Field Diary, implies that the reticence encountered by Koivunen (2003) is most likely due to the tacit and taken-for-granted nature of many of the work practices of members of the orchestral hierarchy.

Observation and interrogation thus requires detailed knowledge on the part of the observer if the functioning of this hierarchy is to be captured in a form which can be analysed further.

Verbal communication, for instance, can only occur in rehearsal, while visual and gestural communication is ongoing; also, adding further complexity for the researcher, the musical discourse between players in which these practices are embedded is, as Marotto et al. (2007) point out, unspoken.

In a move which indicates a possible direction by which the Gordian knot of interaction among orchestral musicians might be untangled, when examining non-verbal, onstage communication, Koivunen (2003) suggests that when following the conductor, musicians engage in their own empathetic bodily response. Known as 'kinaesthetic empathy' (Pallaro, 1995; Parviainen, 2002), this idea is drawn from the field of dance therapy (Pallaro, 1995) and refers to "the embodying of [a] client's feeling states by the therapist. It utilizes the kinaesthetic, self-perceiving awareness of the therapist coupled with a bodily felt understanding of the patient's inner affective states" (Pallaro, 1995, p. 182).

Bahn, Hahn and Trueman (2001) explore the kinaesthetic qualities of music and dance performance in a technological context, beginning with an analysis of the performer's physical interaction with their instrument. This relationship generates a "resonating feedback loop between [the performer's] touch, the sonic result [emanating from the instrument] and feel [of the instrument in the performer's hands]" (Bahn et al., 2001, p. 2).

The "empathetic experience" of musical performance extends, in Bahn et al.'s (2001) view, to the audience as well; for the listener there exists "a connection of the body to sound production, a kinaesthetic empathy with the act of creating sound and the visceral/gestural interaction of the performers in the musical context" (Bahn et al., 2001, p. 2).

Cumming (1997) also discusses the kinaesthetic elements of music-making, opining that gesture, in musical performance, “is an interpretant, a link between a melodic figure and a particularly shaped expressive movement, which is recognized during listening by an impulse toward bodily response or by the desire to entertain a kinaesthetic image in the mind” (p. 9).

Expanding on the notion of the kinaesthetic in orchestral music-making, I therefore postulate later in the study that, based on my experience as captured in the Field Diary, my communication and interaction with colleagues occurs in a kinaesthetic loop, where aural, visual and gestural forms of information are constantly being absorbed and generated in the course of orchestral activity.

Drawing on the work of the scholars outlined in this review, I now turn to the research question which has been developed in order to facilitate exploration of my communication and interaction with colleagues within the context of the hierarchical arrangements that exist in the symphony orchestra.

3 THE RESEARCH PROBLEM

The literature just reviewed describes – often in considerable detail – the orchestra from an organizational perspective. The picture that initially emerges is one of an entity that functions through a strict hierarchy with musicians responding instantly to the direction of a strong central authority.

Work in an orchestra is not, in my view, such a simple equation of cause and effect. Bahn et al.'s (2001) observation that “musical contexts form a complex field of sonic, visual, and social interactions” (p. 2) indicates that orchestral music-making, while highly standardized (Mintzberg, 1998), is, in practice, a multi-layered and complex activity; this is supported by both the discussion in the literature of kinaesthetic response and in the collegial relations described by Murnighan and Conlon (1991).

In addition, as Langendörfer (2008), in her exploration of personality stereotypes among orchestral players, demonstrates, the orchestra is not the entirely homogeneous group that many studies, probably for the sake of analytical convenience, suggest.

A professional symphony orchestra thus represents, to the student of organizations, something of an anomaly; how does such a disparate group of highly trained individuals function in so apparently mechanistic a working environment with such success?

Simply to frame this broader problem in terms of conductor/player interaction is manifestly inadequate. Further investigation of the internal orchestral hierarchy identified by Koivunen (2003) and Marotto et al. (2007) is clearly necessary; given the impact of relationships among musicians on this hierarchy, investigation of the orchestra must go beyond relations between player and conductor to interrogate onstage relations between players and among instrumental groups.

Interrogation of orchestral work practices is further complicated by the relative ‘invisibility’ of the orchestral leadership hierarchy to the outside observer (Koivunen, 2003), with even so astute an observer of organizations as Mintzberg (1998) asserting that, in an orchestra, “there are sections, but they have no levels of supervision” (p. 6).

Furthermore the “Paradox of the Second Fiddle” (Murnighan & Conlon, 1991, p. 169) is extended in the orchestra to the other string sections as well; most orchestras have, for example, several concertmasters who are all vested with more formal authority –and receive higher remuneration – than their counterparts in other sections who may in practice have greater artistic responsibility.

As a front stand string player I am, then, an important link in the hierarchical chain of the orchestra in which I play. I have, however, neither the responsibility nor the authority vested in either the section principal or my counterpart in the first violins but my function is similar to that of the second chair viola, cello and double bass respectively.

Furthermore, what do I actually ‘do’ that differentiates my role from a section second violinist on the one hand and the section principal on the other, especially given that – with few exceptions – we play the same notes?

I have sought to address these issues in the investigation of the following research problem:

How does the second chair second violin in a symphony orchestra contribute to orchestral coordination and control?

3.1 Limitations

I have not pursued this research by scrutinising the politics and personalities in the orchestra of which I am a member or, indeed, of any other orchestra; rather I have interrogated the relations, actions and responses that constitute my own professional story. I do not discuss the offstage implications of onstage work, nor is my intention to generalize with regard to how others may have experienced the events captured in the Field Diary.

For these reasons, in addition to the hierarchical invisibility and second fiddle paradox mentioned earlier, I have employed autoethnography as the methodological vehicle most likely to promote the necessary combination of reflexivity and rigour; exactly how this was undertaken is the subject of the next section of the report.

I do not, then, presume to follow Hunt et al. (2004) in drawing conclusions about what other musicians do, but have limited the study to my own experience, seeking in the process to enrich our understanding of the orchestral organization.

With these caveats in mind, I now outline the methodology through which the research question has been investigated.

4 RESEARCH METHOD

4.1 Methodological Overview

The methodology used in the examination of the research problem was qualitative, inductive and autoethnographic within a conceptual orientation provided by the phenomenology of Merleau-Ponty (2002, 2004) and the approach to sensemaking in organizations of Weick (1995, 2001).

This position was generated by two key properties of the research question; firstly the processual nature of the ‘contribution’ I made – and continue to make – as second chair second violin and, secondly, the fundamentally interpretive character of my attempt in this study to interrogate *how* I made that contribution.

Before describing the application of this framework it is first necessary to situate the study within the “dazzling array of methodological choices” (Prasad, 2005, p. 3) available to the researcher seeking to understand work processes in organizations.

In *Crafting Qualitative Research* Prasad (2005) traces four comprehensive orientations toward qualitative research in the social sciences and humanities, each of which is characterized by a different approach to the understanding of social phenomena. The *structural* tradition seeks knowledge of society through the investigation of the structures which underpin social phenomena, while the *critical* tradition is concerned with the “power relations” and “conflicting interests” that mediate social forms (p. 109). The *post* traditions – such as postmodernism and postcolonialism – instead “take issue with virtually every major plank of the edifice of Western philosophy and science that came into being after the Enlightenment” (p. 211).

Following Prasad (2005) I have located this study in the fourth category – the *interpretive* tradition – which is the broad perspective in qualitative social science research that “takes *human interpretation* as the starting point for developing knowledge about the social world” (Prasad, 2005, p. 13, emphasis in the original). Prasad here uses the term tradition not only to encompass the “shared set of ontological and epistemological assumptions” involved in the “understanding [of] one’s own paradigm and preferred method” but also to acknowledge that a qualitative research orientation may draw on a wide range of conceptual tools while rarely being governed by “a pristine set of rules” (Prasad, 2005, pp. 7–8).

Under the overall rubric of the interpretive meta-tradition, Prasad (2005) identifies a number of sub-traditions such as hermeneutics and ethnography; these sub-traditions may share “the fundamental intellectual orientations of interpretive or social constructionist philosophy” (p. 9), but they may also differ in areas such as the nature and collection of data.

Written text, for example, is often the preferred data source for hermeneutic analysis while an ethnographer is more likely to seek understanding of the actors in a particular social context through extensive fieldwork (Prasad, 2005).

These differences notwithstanding, the philosophical foundation which “at some level undergirds all interpretive research in the social sciences” (Prasad, 2005, p. 13) is the phenomenology of Husserl (cited in Matthews, 2002) and his disciples such as Heidegger (cited in Matthews, 2002,) and Merleau-Ponty (2002, 2004).

According to Stablein (2002), “Heidegger embeds human consciousness in the temporal and social world”, while Merleau-Ponty “adds the important insight that human consciousness is embodied” and that “the body perceives in pre-conscious awareness, already actively organizing and forming the lifeworld prior to conscious attention” (Stablein, 2002, p. 4).

In order to study the experiences and practices that constitute my working life I therefore had to turn to “methods that treat the lifeworld as valid data” (Stablein, 2002, p. 5).

One such perspective is Weick's (1995, 2001) approach to sensemaking in organizations, embedded in the orchestral context by Maitlis (2005). As Sondak (2002, p. x) points out, "sensemaking is a process of construction of self and world, of filtering information, and of creating meaning"; sensemaking is therefore a social and interpretive process central to our perception of, and action in, our lifeworld. As such it is well-suited to a phenomenological research orientation, as for phenomenologists 'reality' emerges from "acts of interpretation" and it is "these interpretive acts that constitute valid targets for scholarly inquiry" (Prasad, 2005, p. 13).

Considering organizations in this way also allows examination of occasions for sensemaking experienced by individuals in organizations and, by extension, the often explicitly personal perspectives that arise (Snook, 2002). Furthermore, as Maitlis (2005) has suggested, much of the literature investigating organizational sensemaking is drawn from crisis situations in organizational settings characterized by high reliability and tight coupling where there is pressure to act, close coordination among actors and immediate consequences following action.

There is a natural affinity here between such a view of organizational activity and the everyday work experience of the orchestral musician; indeed, how musicians respond with such immediacy and precision to external stimuli such as variations in musical nuance and changes in the conductor's 'beat' is an important thematic thread running through this study. Moreover, while onstage incidents that could be regarded as crises are, in the author's experience, rare, orchestral music-making is nonetheless a combination of close coordination, immediate consequence, and – especially in concert – the pressure to consistently produce performances of a high quality.

As a professional orchestral player I could not, however, realistically expect to examine sensemaking in the orchestra from a neutral perspective. I therefore decided to embrace the personal nature of my inquiry by employing autoethnography as my methodological vehicle of representation.

Representation, as Linstead (1993) points out, is problematic whichever research route is taken, as it inherently carries “a *double duality* – the epistemological one of construction/reproduction and the moral-ethical one of representation of communities to audiences” (p. 104, emphasis in the original).

The epistemological issue – the ‘re-presenting’ of my story “in a way that is answerable or accountable when interrogated from the perspective of other experiences” (Linstead, 1993, p. 104) – is here akin to questions of replicability and generalizability in empirically-based research. As the present study is concerned with understanding and insight (Alasuutari, 1995; Sadala & Adorno, 2002) rather than the testing of hypotheses, I have, in this context, sought instead to answer epistemological concerns through sound methodology.

Autoethnography – “a form of self-narrative that places the self within a social context” (Reed-Danahay, 1997, p. 9) – was employed as the final link in the methodological chain of the study in part to address the moral-ethical problem raised by Linstead (1993); “how well and with what authority the ‘tribe’ studied is represented” (p. 104). How well I have represented my musical lifeworld is for others to judge, although I do claim representational authority as a consequence of my 33 years’ experience as a professional orchestral violinist, the last 15 of which have been spent in the role under investigation.

As the exchange between Anderson (2006), his supporters (Atkinson, 2006; Charmaz, 2006) and his critics (Denzin, 2006; Ellis & Bochner, 2006) in the *Journal of Contemporary Ethnography* shows, the ‘ethnography of the self’ is still contested terrain.

Where Ellis and Bochner (2006) seek autoethnography “that ties sociology to literature, expresses fieldwork evocatively, and has an ethical agenda” (p. 445), Anderson (2006) finds that “the definitive feature” of what he terms ‘analytic autoethnography’ is the “value-added quality of not only truthfully rendering the social world under investigation but also transcending that world through broader generalization” (p. 388).

Another important and related characteristic is whether the emphasis, in an autoethnographic context, is on autobiography (e.g. Rambo Ronai, 1992) or on “a form of ‘native ethnography’, a study of one’s own group” (Reed-Danahay, 1997, p. 8).

I have no political or ethical ‘agenda’ in this study, nor do I offer any generalization with regard to the work experience of other musicians. I have, however, sought to evoke the orchestral lifeworld through a rich and, it is to be hoped, an honest description of one player’s story.

The account that has emerged does, therefore, go some way towards addressing Linstead’s (1993) concerns as it exemplifies the “production of new knowledge by a unique and uniquely situated researcher” while offering “small-scale knowledge that can inform specific problems and specific situations” (Denzin & Lincoln, cited in Wall, 2006, p. 3).

This also supports Ellis and Bochner’s (2000) contention that autoethnographers “vary in their emphasis on the research process (graphy), on culture (ethnos), and on self (auto)” and that their work, as a result, falls somewhere “along the continuum of each of these three axes” (p. 198).

It is this very adaptability which allows the genre to accommodate the emotion and evocation of Ellis and Bochner (2006) alongside the analysis of Anderson (2006) despite the concomitant dialectic tension between autobiography on the one hand and ethnography on the other (Reed-Danahay, 1997). Indeed, as Ellis and Bochner (2000) have themselves argued, “many writers move back and forth among terms and meanings in the same articles” (p. 198).

Stylistic flexibility is, for me, not the only benefit of autoethnography, however; it has, on a personal level, allowed me to examine and take stock of my experience as a professional orchestral violinist while bringing the field and academic worlds together in an attempt to further enhance our understanding of the orchestral organization.

4.2 Research Context

Consisting of approximately 90 musicians (New Zealand Symphony Orchestra, 2007; Hopkins, 2009), the orchestra in which I have situated this study is a full-size, full strength and fully professional symphony orchestra.

Allmendinger et al. (1996, p. 340) define a professional symphony orchestra as an ensemble “whose primary mission is public performance of those orchestral works generally considered to fall within the standard symphonic repertoire and whose members are compensated nontrivially for their services”. Furthermore, as these authors suggest, “the core task of symphony orchestras is well defined and similar both within and across nations, in that symphony orchestras around the world play largely the same repertoire with roughly the same number and mix of players” (p. 340).

The orchestra as an organizational form has evolved to cope with the ever-increasing musical and logistical demands of this repertoire, as composers such as Haydn and Beethoven followed by Berlioz and then Wagner sought bigger orchestras capable of an ever-expanding range of instrumental tone colour (Grout, 1980).

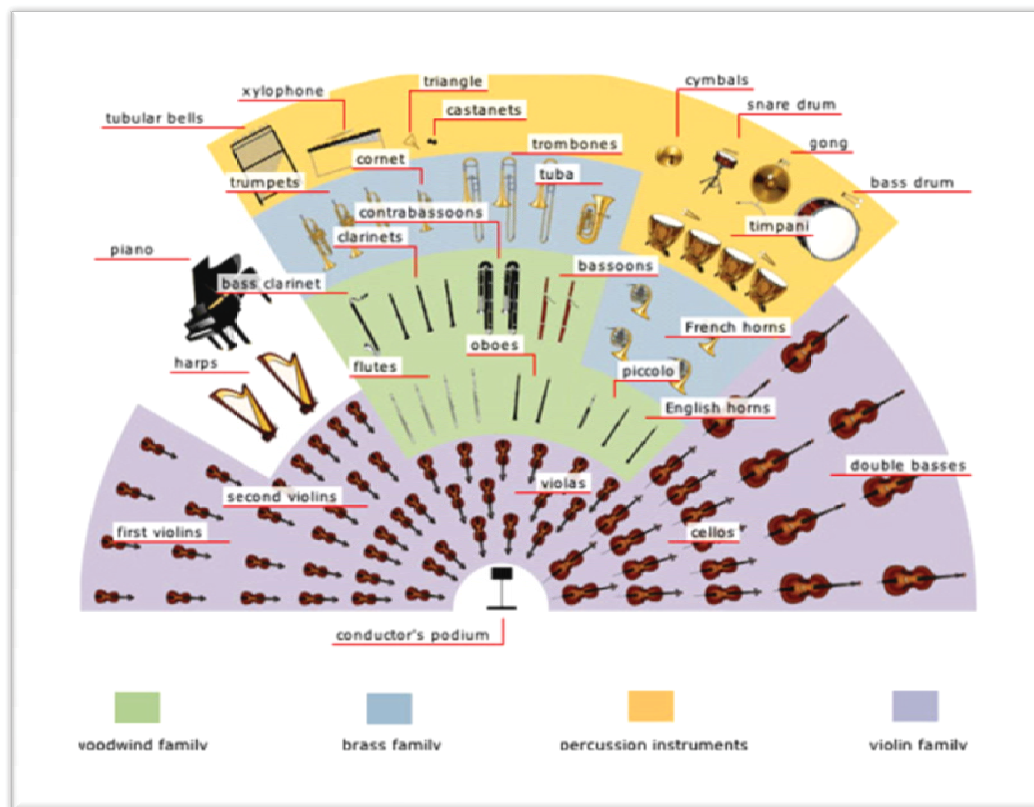
This development reached its apogee during the late 19th and early 20th century with the works of Gustav Mahler and Richard Strauss (Grout, 1980; Lebrecht, 1991); since then, symphonic repertoire has reflected a change in content through such mechanisms as the atonality and the twelve-tone system of Arnold Schoenberg and the neo-classicism of the later works of Igor Stravinsky rather than any sustained attempt to expand the orchestral forces required to express that change (Grout, 1980; Lebrecht, 2007).

The increased complexity of the orchestral organization brought about by this evolution led in turn to a reorganization of the orchestra, suggested by among others the composer-conductor Carl Maria von Weber (1786–1826), now regarded as the “architect of modern orchestral seating” (Lebrecht, 1991, p. 15).

This reorganization was based primarily on grouping the orchestra into sections which reflect how the instruments are played, notwithstanding occasional experiments by conductors such as Stokowski (Arian, 1971) and composers such as Stockhausen (Grout, 1980). Simply put, percussion instruments are struck and wind and brass instruments are blown using reeds or mouthpieces, while stringed instruments are played by drawing a bow across the strings.

The diagram below illustrates a common orchestral seating plan:

Figure 1 The Symphony Orchestra (Oakland Symphony Orchestra, 2008)



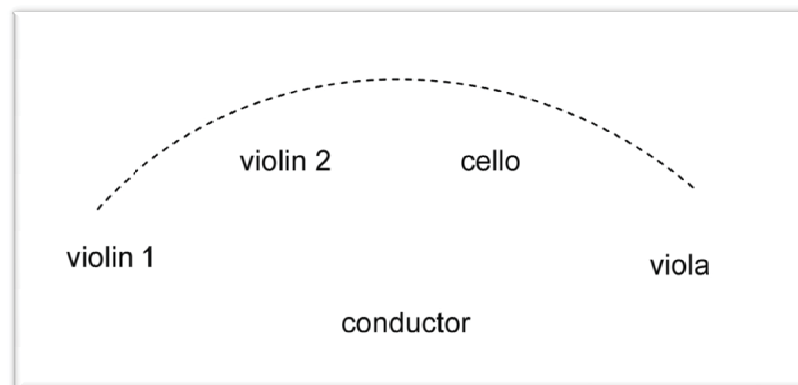
As this illustration shows, the larger sections are further subdivided into smaller sections by instrument. By way of example, the violin family, more commonly known as the string section, consists of the first violins, the second violins, the violas, the cellos and the double basses.

The division between first and second violins is not, however, based on instrumental differences but on differing musical roles. This is analogous to the string quartet, where the first violin is usually asked “to play the tune, often referred to as the ‘top’ ” while “seconds play the same instrument as the first fiddle [violin] and must often echo the first, playing an octave lower” (Murnighan & Conlon, 1991, p. 166).

Each section has a principal player and a second-in-command who play solo lines as necessary; in the wind, brass and percussion this occurs almost all the time as there is one player per musical part, while in the various string sections solos are required much less frequently (Koivunen, 2003).

As Koivunen (2003) points out, a variety of seating plans have been employed as orchestras seek to maximise the effectiveness of their musical resources. For the present research the key configuration is that of the string section; the spatial configuration currently used by the orchestra in the study is as follows:

Figure 2 The String Section



This arrangement is important to the present study as it affects all the key relationships on which my work practices depend as well as the perceptions on which those practices are based.

My diary entries consistently demonstrate, for instance, that the concertmaster has a central part to play in how I perform my role as I receive both visual information and verbal instruction from him, especially in rehearsal. In addition, his input is an important element in how I interpret direction from the conductor.

A change in seating arrangements can therefore have a significant effect on relations within orchestral work; this became apparent with the preferred seating layout of the previous Music Director, where the second violins were placed opposite, rather than next to, the firsts.

In this instance it was very difficult to see, let alone to hear, the concertmaster which in turn created musically-related work issues that were only resolved with the introduction of the seating plan outlined in Figure 2.

The two violin sections, which are in this instance placed side-by-side, have 30 players seated two players per stand. The 16 first violins are led by the concertmaster and associate concertmaster followed by the assistant concertmaster and principal first violin.

The 14 second violins are led by the section principal who is in turn supported by the sub-principal (second chair) and assistant sub-principal (third chair). In addition, the concertmaster has overall responsibility for the strings in general and the violins in particular; he or she is also regarded as the senior manager of the orchestral musicians.

I, as sub-principal second violin, therefore ‘report’ to my stand partner the principal, who in turn reports to the concertmaster. I am also responsible for assisting the principal in running the second violin section; this function is largely concerned with support and coordination, although I am required to deputize for the principal when he is absent.

While playing I work with the principal, other front desk players and the conductor to ensure that the section receives consistent direction. Here physical and visual information complement the musical and aural component of music-making and so facilitate the precise coordination needed in orchestral playing.

The orchestral hierarchy thus described should, in theory, dictate that communication between sections is principal to principal; in practice, however, second chair players will often act as intermediaries, answering questions from, or passing information to, other sections on behalf of the principal. Furthermore, section members may approach me with concerns which they feel may require intercession with the principal or the concertmaster.

As a result, the invisibility of musicians in leadership roles referred to by Koivunen (2003) is a manifestation of a conscious attempt on the part of these players to minimise disturbance to orchestral routine through a low-key, non-disruptive approach as musicians seek to understand and implement the conductor's musical vision (American Symphony Orchestra League, 1993; Hopkins, 2009).

In addition, the commercial evolution of the administrative component of the orchestral organisation (Allmendinger et al., 1996; Maitlis, 2005) has led to off-stage involvement in orchestral decision-making for musicians in a variety of capacities. Much of this involvement is, in the orchestra in question, through various committees which have elected player representatives from across the orchestra.

The present study will not address this kind of player participation in the making of orchestral decisions except insofar as that issue relates to my role as sub-principal second violin. The interactions and experiences on which my narrative is based are drawn instead from the orchestra's onstage activity.

During the period covered by the field diary this activity fell into three main categories; rehearsal, concert performance and recording. Each of these categories varied along several dimensions, some of the most important of which are outlined below.

Rehearsal

These varied in length from a half hour pre-concert seating rehearsal to the standard two and a half hour rehearsal call.

The rehearsals at the beginning of a concert series tended to involve more detailed work on technical issues such as ensemble, phrasing and intonation. As the rehearsal period progressed the focus tended to be on the bigger interpretative picture, such as how a particular phrase might fit into the conductor's overall musical conception of the piece being rehearsed.

Rehearsals for recording, and especially in the rehearse-record environment of film music, tended to remain oriented towards technical elements including ensemble, intonation, and, in the case of film productions, coordination with images. This in most cases reflected the added input of the recording producer or film director.

Concert

'Standard' concert repertoire is often difficult technically to play and musically to interpret, but these difficulties tend to be known in advance and can be prepared for. This is often not the case with 'contemporary' scores or less familiar music, where issues frequently become apparent only in rehearsal.

In one programme that was performed during the study, a newly-commissioned work was followed in rehearsal by a well-known violin concerto. While I was able to prepare for the concerto, as the speed and orchestration of this work are to a large extent well-known, a seemingly innocuous passage in the modern piece became much tougher when the composer, on hearing this music for the first time, decided that the passage in question needed to be played considerably faster.

Different concert venues can alter visual and auditory relationships as stage conditions and acoustics vary from venue to venue. While for most ethnography “architectural structures are merely props used in the social drama” (Hammersley & Atkinson, 2007, p. 39), the acoustics of a concert venue – which are a function of the architecture of that venue – have a direct and material effect not only on the way orchestral musicians play but also, as a consequence, on the way they interact.

The nature of the concert itself also affects performance-related pressure. ‘Lighter’ concerts with more ‘popular’ repertoire tend to involve lower levels of the mental stress often associated with concert performance due to their inherently more relaxed character.

Recording

Recording concert repertoire I found during the course of the research to be qualitatively different from recording music for film. The former seeks, among other things, to capture one conductor’s interpretation of a given piece of music at a particular point in their career. The recording producer facilitates this by ensuring that the technical aspects of the recording, such as consistency of tempo among different ‘takes’ of the same passage, are taken care of (Hopkins, 2009; Lebrecht, 1991, 2007). In the latter case, the conductor and the musicians are actively involved in realizing the film director’s interpretative vision; here the music underpins a different kind of storyline, with both conductor and musicians working to align the musical score with the on-screen action.

As the field stage of the study progressed it also became apparent that most of my raw material was located in a small number of key relationships.

These were:

The principal second violin

Not only is this musician my immediate superior in the orchestral hierarchy, but he is also the colleague with whom I work most closely.

The second violin section

Most of what I do in terms of both leadership and coordination is directed towards the overall contribution of this group. Their responses and actions give perhaps the most obvious indicators of how I perform my role.

The conductor, and in particular, the Music Director

Most musical activity in the orchestra is ultimately driven by the conductor and, more especially, the Music Director (Koivunen, 2003; Ropo & Sauer, 2007). In addition to his conducting duties, the Music Director also plays a key role in the artistic management of the orchestra; his overall responsibility for programming and guest artist selection are but two instances of this. The impact of this influence was apparent throughout the study.

The concertmaster

In the orchestra the concertmaster is considered to have overall responsibility for both violin sections. I report to the principal second violin who in turn reports to the concertmaster; he therefore has considerable influence over how I perform my duties.

The principal viola and the principal cello

Passing on the concertmaster's directives to, and facilitating communication with, these individuals is essential for the smooth functioning of an orchestral string section. Because of the seating arrangements this environment of intense communication was, and continues to be, a daily occurrence.

The associate principal (second chair) cello

Due to the configuration of the string section outlined earlier, this colleague sits immediately to my left. As a result he makes an important contribution to my work practices and environment, as well as being the main point of contact that I have with the viola and cello sections.

These relationships are of prime importance because, with the exception of the second violin section, I receive visual as well as aural information from these individuals; how I respond to what I hear from other members of the orchestra is nearly always in the context of what I can see and hear from one or more of the colleagues mentioned above. This was evident throughout the field diary.

4.3 Research Methodology

For Stablein (2002, p. 7) a research methodology based on a phenomenological orientation such as that of Merleau-Ponty (2002) “begins with a devotion to fidelity, then shifts explicitly to an interpretation of the data for research relevance”.

Sadala and Adorno (2002) identify three key phases in a phenomenological research process: *description*, which “is intended to mirror and express a participant’s conscious experience”, *reduction*, or “a critical reflection on a description’s contents” (p. 289) and *interpretation* as the researcher moves from reflection on the informant’s meaning to an understanding of the research issue in light of this reflection (Stablein, 2002).

In the discussion that follows I outline how each of these phases was employed in this study.

4.3.1 Description

The period in the field during which I sought to capture my work practices and interactions in the field diary and the field journal constitutes the descriptive stage of the study. This phase consisted primarily of writing diary entries recording and reflecting on my work experiences, supplemented by informal interviews and secondary data to aid chronological accuracy.

Participation and Observation

The primary method used to collect the raw material for this study was participant observation. As this research underpins an autoethnography, I not only observed my interactions with others; I was also exploring, in the role of key informant, myself.

My observation and field-notes therefore had to describe my reactions and emotions, my taken-for-granted assumptions as a musician as well as what I did and why I took those actions.

The events in question ranged from the relatively trivial, such as the order of the musicians with whom the conductor shook hands at the beginning of the day's rehearsal, to the major, an example being a disagreement, in concert, between the conductor and soloist with regard to the speed at which a particular passage was to be played.

Degrees of formality and the manner of communication also varied; a gesture or glance from a conductor in performance became, on more than one occasion, the subject of a lengthy conversation at the hotel bar following that concert.

Ethics

Despite the autoethnographic focus of the research, the lifeworld of the orchestra is fundamentally social in nature; as a consequence of this, my story is drawn almost entirely from the investigation of my interactions with my fellow musicians, even though I sought to interrogate my experience and not theirs.

This raises ethical questions such as preservation of anonymity, power relations between me and my colleagues, the potential for conflict of interest, and the risk of harm, especially in view of the emotional undercurrents inherent in the interpretation of the music itself.

In accordance with Massey University's research ethics code I therefore submitted an application to the Massey University Human Ethics Committee (MUHEC) for approval to proceed with my research. This approval was given, subject to the committee's concern regarding the possible identifiability of those in leadership roles in the orchestra; in order to address this issue, the committee requested that I inform my colleagues that I was undertaking the research and, in addition, give any who might have wished to do so the opportunity to opt out of the process.

As a consequence of this, I informed both the players and the administration of the orchestra about the study by means of an information sheet, approved by the MUHEC, which was attached to the orchestra's weekly schedule of activity and distributed to all members of the organization (see Appendix A, p. 121). I also made a copy of the first draft of the analysis section available to interested colleagues for comment. While no substantive changes emerged from their feedback, some minor adjustments to factual detail – such as what repertoire was performed in which venue – resulted. No one chose to opt out of the research.

Supplementary and Secondary Data

Additional information, mainly from informal interviews and publicly available documentary sources such as annual reports and newspaper articles, was used in order to verify factual information such as the chronology of certain events.

Recording and Organizing

The experiences and interactions embedded in the context outlined above were captured in a field diary written to coincide with the first and last visits of the Music Director during the orchestra's annual concert season.

The initial access to, and physical exiting from, the field which is often problematic for ethnographers (Hammersley & Atkinson, 2007; Neyland, 2008) was not, in this case, an issue as I maintained my role with the orchestra throughout the course of the study. Of greater concern was the issue of when to ‘close the diary’ and turn to the business of analysis and writing (Emerson, Fretz & Shaw, 1995).

The time period covered by the Music Director’s involvement with the orchestra during this period therefore provided logical starting and finishing points for the diary; not only was a rich variety of activity undertaken during this time-frame but also a number of decisions germane to the research – such as the change to the new seating arrangement outlined earlier – had time to take effect.

Recorded intensively during this time period, each diary entry described an event or activity that occurred during a working day. In the context of a phenomenologically-based autoethnography, the use of a field diary was, however, itself potentially problematic for both data collection and data analysis, as the bracketing of the researcher’s presuppositions – which is central to the phenomenological method (Groenewald, 2004; Sadala & Adorno, 2002; Stablein, 2002) – was complicated by my being both the researcher and the musician who was the subject of the investigation.

I therefore sought to suspend my research-related preconceptions, particularly where they related to possible interpretative outcomes, but to include those of the musician; in the latter case these were themselves potential sources of information.

For this reason I divided each diary entry into two parts; the first consisted of as unadorned a record as I could make of what, in my view, took place. The second was a slightly more expanded commentary on each occurrence and was intended to capture my thoughts and feelings as close as practicable to the event in question.

In including “the personal and emotional” in this way I sought to “facilitate reconstruction of a setting or scene at some later point in time” while enriching the “accounts of the processual nature and full complexities of experience” (Emerson, Fretz & Shaw, 2001, p. 361) that informed the resulting autoethnographic journey.

I also added a note, usually one or two sentences long, at the end of each entry relating the event to the overall research question. This served not only as an *aide-mémoire* regarding selection and context but also recognized that “the first impression ... is often insightful” (Alasuutari, 1995, p. 179).

By way of example, the following entry describes a seating rehearsal just prior to a concert:

Event: Conductor briefly goes over the most problematic passages.

Commentary: He knows a) what to work on and b) what to trust the musicians with.

He trusts us so we, I think, reciprocate. This is not destructive or picky rehearsing; I personally focus better on what he’s asking for as I know that what he’s working on needs fixing.

Note: ‘Middle Management’ responding positively to constructive rehearsal/direction.

The diary was not, however, intended to be the ‘finished product’; rather, it resembled a “loose collection of possibly usable materials, much of which will never be incorporated into a finished text” (Emerson et al., 2001, p. 353). I therefore continued the nascent process of ‘storytelling’ in a field journal in which field notes were regularly reviewed and material reorganized according to the themes, categories and “units of meaning” (Groenewald, 2004, p. 17) that began to emerge.

This journal provided a bridge between the raw diary entries and the written autoethnography, beginning the process of analysis while enabling me “to retrace and explicate the development of the research design, the emergence of analytic themes, and the systematic collection of data” (Hammersley & Atkinson, 2007, p. 151).

4.3.2 Reduction

The Field Diary and Field Journal are both instruments of data collection and the foundation of subsequent analysis. They nonetheless remain no more or less than a representation of my perception – albeit in something of the fundamental sense advocated by Merleau-Ponty (2002) – of certain events, interactions and work practices.

The journey which I have undertaken since deciding to scrutinize my role in the orchestra from an organizational rather than a strictly musical perspective has led me to seek the analytic path for this study not only in my personal experience as a professional violinist but also in the dialogue that occurred throughout the study between the musician as diarist and the musician as researcher.

This conversation further reinforced for me the connection between the autoethnographic orientation of the investigation and the phenomenology of Merleau-Ponty, as for Merleau-Ponty “the writer’s thought does not control his language from without; the writer is himself a kind of new idiom, constructing itself, inventing new ways of expression, and diversifying itself according to its own meaning” (2004, p. 40).

For me the Field Diary therefore represents not only my record of the events in question but also the link between my subconscious, taken-for-granted work practices and my conscious attempt as a researcher to unpack, interrogate and recast these practices using the language of organization studies rather than that of musical interpretation.

But the study is more than just an interrogation of my record of events; it is also an examination of the occurrences themselves. As I did not have a range of viewpoints from a number of participants, however, analysis became, potentially at least, problematic.

Again, Merleau-Ponty provided the key. Using a metaphor centred on a nearby house, he reminds us that a particular phenomenon can be experienced from different perspectives; “I see the next-door house from a certain angle, but it would be seen differently from the right bank of the Seine, or from the inside, or again from an aeroplane; the house itself is none of these appearances” (Merleau-Ponty, 2002, p. 77).

In other words, the same individual can experience the same episode, incident or artefact in different ways. Playing the same piece of music in rehearsal, performance and recording – as happened a number of times during the study – is one instance of this, while performing the same work in several different venues during a tour – a commonplace occurrence for this particular orchestra – is another.

This view is on its own insufficient if a quasi-Cartesian distinction between subject and object is to be avoided. Merleau-Ponty’s (2002) seminal idea of the embodied subject resolves the issue, however, while also providing the necessary unifying concept; “Our own body is in the world as the heart is in the organism; it keeps the visible spectacle constantly alive, it breathes life into it and sustains it inwardly, and with it forms a system” (p. 235).

Merleau-Ponty (2002) then elucidates this statement in a description of a tour of his apartment, pointing out that “I could not grasp the unity of the object without the mediation of bodily experience”, an overall view of something which includes “all habitual perspectives” and depends on “my knowing that one and the same embodied subject can view successfully *from* various positions” (p. 235, emphasis in the original).

The diary entries relating to Beethoven’s *Eroica* symphony, for example, describe the same music from a range of viewpoints; these vary along a number of dimensions such as the differing acoustics among venues and whether the events in question occurred in rehearsal or in concert performance.

The longitudinal nature of the study thus provided the opportunity for me to experience certain phenomena from a range of similar but slightly different angles and, as a result, to have a variety of perspectives. Despite this, the bracketing of my pre-conceived notions as a researcher while still acknowledging my pre-reflective experience as a musician remained an issue.

The popular view of the conductor as all-powerful autocrat is one example of a commonly-held perspective that is easy to accept at face value (Lebrecht, 1991; 1996). My actual experience, based on the narrative that emerged from the accounts in the field diary, is that the relationship is considerably more nuanced and, onstage at least, involves musical co-creation – albeit of the *primus inter pares* variety – as much as dictatorial direction.

This made the second stage, phenomenological reduction (Sadala & Adorno, 2002), all the more important as the taken-for-granted aspects of my professional lifeworld are key threads in the narrative fabric of the study.

I began the analytic process by revisiting the raw diary entries and rereading these several times in order to gain an overall perspective of the story therein. This overview, combined with the relevant information from the ongoing bracketing process, was then “disaggregated into meaning units as an intermediate step to finer-grained analysis” (Stablein, 2002, p. 10) that were drawn directly from the diary entries as shown in Figures 3 and 4.

Figure 3 Diary Entry

Event: Wind solo/first violin unison passage not together.

Commentary: Second violins were caught in between here – do we follow the wind player (solo line) or the first violins (hierarchy)? Hierarchy seems to win; also I could see the conductor, concertmaster, principal and my music. In this sort of situation the no. 2 has to lock in to the no. 1 in order to send a unified message to the section; I ‘got out of the way’ until I could do this.

Note: No.2 helping to create the conditions for no.1 to fix the problem

The selected diary entries were then distilled into units of meaning, as in the following example.

Figure 4 Units of Meaning (*based on Stablein, 2002, p. 13*)

1. Wind/first violin passage not together.
2. Second violins caught in between here.
3. Do we follow the wind player (solo line) or the first violins (hierarchy)?
4. Hierarchy seems to win.
5. Also I could see the conductor, concertmaster, principal and my music.
6. In this sort of situation, the no. 2 has to lock into the no. 1.
7. In order to send a unified message to the section.
8. I ‘got out of the way’ until I could do this.
9. No.2 helping to create the conditions for no. 1 to fix the problem.

Still setting aside the research question, these “significant topics in [the] transcript” (Sadala & Adorno, 2002, p. 289) were then re-examined in order to express “the central theme of each meaning unit briefly and simply” (Stablein, 2002, p. 13) as shown in Figure 5 below.

Figure 5 Central Themes

1. Ensemble issues between other musicians.
2. It is our (second violins) problem too.
3. A choice has to be made from two not entirely satisfactory alternatives.
4. Decision as to who to follow is made.
5. Visual information and hierarchy emerge as the key drivers of this decision.
6. Shows how I fit into the orchestral hierarchy in such circumstances.
7. Attempt to create and give clear direction to subordinates.
8. Space is made for understanding as the basis for action.
9. How I see the role of a second chair player.

Following Stablein (2002), I here moved from “a stance of openness to the reported experience to an interpretation of that experience”, using the insights gained from the central themes to develop “a situation-specific narrative communicating what the researcher has learned about the research question from the informant” (p. 10).

4.3.3 Interpretation

The Embodied Musician

Before outlining how the information and insights distilled from the reduction phase of the study were interpreted, it is first necessary to explore the idea of the musician as embodied subject, especially as, in Merleau-Ponty's (2004) view, music "is too far beyond the world and the designatable to depict anything but certain outlines of Being" (p. 293).

Here Merleau-Ponty is clearly describing music as experienced by the *listener*. Music as experienced by the *practitioner* is very different, being more akin to what Baldwin, in his edition of Merleau-Ponty's work, describes as "Merleau-Ponty's late account of the reversibility of the body, the touching which is tangible, the seeing which is visible" (Merleau-Ponty, 2004, p. 290).

This speaks directly to the relationship between musician and instrument; when playing I regard my violin bow, for example, as an extension of my right arm and, as a consequence, as an extension of my musical persona. As Prasad (2005, p. 13) points out, this is not to deny my bow "its ontological existence, but to show that even [my violin bow's] material reality comes into being through acts of social interpretation and meaningful sense making". Perhaps even more importantly, this notion addresses the relationship among players in the orchestra in a fundamental way, as not only do I *hear* my colleagues but I am also *heard* by them.

These ideas indicate that there is a connection between the embodied musician, his or her instrument, and the music being played which differs along a number of fundamental dimensions from the experience of the audience member.

For example, as Hopkins (2009) and others (e.g. Fischer-Dieskau, 1990) have argued, music is a language and, as such, is concerned with communication. Understood in this way, an important connection becomes apparent between music as experienced by the practitioner and language as conceived by Merleau-Ponty; "it is clear that language intervenes at every stage of recognition by providing possible

meanings for what is in fact seen, and that recognition advances *pari passu* with linguistic connections” (Merleau-Ponty, 2002, p. 151). For the professional musician the language of music is therefore an integral part of the pre-reflective work experience.

The relationship between the musician and the printed musical score – not just the seeing and the visible but also the player and the played – adds a further dimension to this discussion. What occurs during the transformation of the inanimate notes on the page into the lifeworld of music in performance is one of the most complex questions of all, and is at the heart of any discussion about musical interpretation.

While this is primarily a musical rather than an organizational issue, and given the conductor’s pre-eminence as ‘interpreter-in-chief’ (Hopkins, 2009; Lebrecht, 1991, 2007), orchestral musicians do, in my experience, endeavour to realize the musical intentions of the composer at hand.

The touching and the tangible, the hearing and the heard, and the discourse of music – whether spoken or played – thus emerge for me as perhaps the key elements in my discussion of the musician as embodied subject in the orchestral lifeworld. As such they have proven to be central to the interpretive phase of the study.

Sensemaking

After reducing – or, rather, concentrating – the story from the field into units of meaning and their associated central themes, the research question and purpose were reintroduced during the analytic and interpretive phases of the methodological process. I then turned to the second key conceptual framework employed in this study; organizational sensemaking (Weick, 1995, 2001). Maitlis (2005) has applied this to the symphony orchestra, focusing on the social processes that underpin sensemaking and sensegiving in the orchestral organization.

While drawing on Maitlis' (2005) ideas, I have taken a slightly different path, using the sensemaking approach as the interpretive component of a phenomenologically-based autoethnography. This methodology has been designed to enable the interrogation of the organizational lifeworld in which I was – and remain – embedded, as I sought to understand onstage sensemaking moments and their consequences for individual action rather than any implications these moments may have for offstage activity.

For Maitlis (2005), “sensemaking is a process of social construction in which individuals attempt to interpret and explain sets of cues from their environments” through the creation of “rational accounts of the world that enable action” (p. 21). In the present research, which owes as much to Merleau-Ponty (2002) as it does to Weick (1995), these accounts not only represented interpretation as the basis for action; they also informed my examination of the pre-reflective experience that necessarily precedes any such interpretation. The accounts described in the diary entries thus contained the meaning units (Stablein, 2002) which underpinned subsequent analysis and interpretation.

Following Maitlis (2005), I sought to distil from these units of meaning “narratives of the sensemaking process” (p. 27); this step corresponds to the ‘central themes’ and ‘situation-specific narrative’ or ‘situated description’ of Stablein (2002). By way of illustration, the diary entry shown in Figures 3–5 is further explored in Figures 6 and 7.

Figure 6 Central Themes and Orchestral Coordination

1. Problem significant enough to be widely apparent.
2. Initial confusion, however slight.
3. Problem situated.
4. Solution decided from among alternatives.
5. Importance, and sources, of visual information.
6. Hierarchy of orchestra in action.
7. Second violin section (our subordinates) gets clear direction from front desk which should in turn help to contextualize the solution that has been adopted.
8. Shows how I gave myself the space to make sense of the situation without disrupting what the no.1 was trying to do while enabling me to distil a course of action from the information I was receiving.
9. Supporting and directive aspects of the second chair player's role – sensemaking and sensegiving.

Figure 7 Situated Description

An ensemble problem between a wind player and the first violins put the second violins in a somewhat awkward and confusing position.

Based on hierarchy (I 'report' to the principal and we both 'report' to the concertmaster) and visual information from several sources, I cut back on playing volume and physical gestures, fully rejoining the principal when he had developed a solution based on direction from the conductor and the concertmaster.

This was intended to give clear direction to the second violin section and to contextualize what they were receiving from the conductor. This event, for me, showed the second chair second violin being involved in both sensemaking and sensegiving.

This situated description of a sensemaking moment also serves to illustrate the pre-reflective perception that precedes the rationalization of environmental alternatives – I felt that something was awry before I consciously understood what the problem was – and the creation of an account on which action can be based; furthermore, the whole incident under scrutiny took less than two seconds from the beginning of the passage to the resolution of the problem.

Following the interrogation of the diary using the methodology outlined above, richer narratives began to emerge which underpinned a more general description of how I make sense of the orchestral lifeworld in which I work.

This description – not to be confused with the descriptive material contained in the field diary – equates in this study to Maitlis' (2005) identification and outcomes of forms of sensemaking and, as such, is the basis for the analysis which follows.

5 ANALYSIS

5.1 Introduction

Revisiting the narratives drawn from the field revealed two central themes running through the diary.

Firstly, of the key relationships outlined in the methods section, the most important were those between me as the second chair second violin and the principal second violin, the conductor and the concertmaster. These individuals featured either singly or in combination throughout the Field Diary. Secondly, a theme of coordination and its close relative musical direction permeates the narrative which emerged from the diary entries.

These core dimensions in turn provided loci around which a small number of issue domains coalesced; not only were these domains to prove central to the organization of my argument but they each suggested different facets of the form that discussion would ultimately take.

The issue domains arose within the context of three main categories of orchestral activity. These, as outlined earlier, were rehearsal, concert performance, and recording. While rehearsals may be separate events from concerts they are nonetheless the forum where concert performances are prepared and where the interpretation created by the conductor with the orchestra and experienced by the concert-going audience is developed.

Furthermore the recording of concert repertoire is not only different from performing that music but is also, as the experience captured in the field diary shows, qualitatively different from recording for film.

I have therefore selected diary entries describing rehearsals and concerts in order to frame a more general performance-based narrative, while the complementary narrative based on the recording environment draws on both the recording of concert repertoire and recording for film.

Each of these diary entries was then analysed using the framework outlined in the methodology section to yield situation-specific descriptions; in these descriptions, which have been included in this analysis, I reinterpret the experiences recorded in the diary entries in light of the wider research question.

As the basis for the more general performance and recording narratives, these descriptions are thus intended to link the raw material of the diary entries with the reflexive analysis which follows.

Finally I offer an overall response, grounded in the story which has emerged from the performance and recording environments, to the question of how the second chair second violin contributes to orchestral coordination and control.

5.2 Performance

Underlying considerations of coordination and musical direction represent, in many respects, a continuum of cause and effect; clear musical intent and direction from the conductor will, for example, usually result in a well-coordinated response from the orchestra. The distinction that I have made between direction and coordination is therefore a device to facilitate analysis of the story in the Field Diary while enabling the interrogation of taken-for-granted areas of orchestral activity; it is rare for events occurring in the lifeworld of the orchestral musician to be so obligingly clear-cut.

In order to demonstrate how coordination develops – both in terms of technical precision and the emergence of a unified approach based on the conductor's interpretive ideas – during the course of a rehearsal and concert season, I begin by examining six diary entries which relate to the preparation and performance of one piece: the *Eroica* symphony by Beethoven, written in 1803.

The first three entries describe modifications to a key coordinating mechanism – the direction of the bow strokes employed by the string players – and the organizational ramifications as the various string sections sought to assimilate these changes.

The second group of three entries is concerned with ensemble issues, both within the second violins and between the second violins and other sections, and how these issues are resolved. One entry also unpacks the impact on coordination of direction of an instrumental line from within the music itself.

As the conductor is a central figure in the story of any professional orchestral player, I then continue the investigation by briefly examining how I make sense of, and act upon, direction from the conductor. Musical direction in the orchestra does not only come from the conductor, however; I therefore conclude this section with a further example of direction from within the orchestra in which the conductor explicitly requested one particular string group to lead.

The Eroica Symphony

The key issue domains interrogated in this series of entries relate firstly to alterations in the bow strokes used by the wider string section and secondly to ensemble issues both within the second violin section and also between the second violins and other sections.

Issue Domain 1: Bowing Changes

The direction of the bow stroke is, for any string player, a key interpretive tool (Galamian, 1985). For the string players in an orchestra bowing is also a vital coordinating mechanism (Yffer, 1995), as it underpins visual and musical alignment among the members of the different string sections.

This alignment is an issue of considerable complexity; while there are only two directions for a bow stroke ('up' or 'down', although more than one conductor has expressed gratitude that there is no 'sideways' option) the range of available bowing patterns, from single notes to whole phrases, is vast.

When other variables such as dynamics (the continuum between loud and soft), articulation (long, short and the whole spectrum of possibilities in between) and tone colour are introduced, issues involving bowing can, in a rehearsal context, become both contentious and disruptive.

While bowing is primarily a technical issue for string players, there are a large number of musicians in the orchestra's string section. The conductor will therefore often communicate changes directly to the front stand of the relevant section or to the concertmaster. This information is then passed on after the section principal and/or the concertmaster has contextualized the conductor's request. One player from each stand is expected to continue playing where possible while the other one writes the alteration into the musical score.

Diary Entry 1: Situated Description

The conductor asks for numerous changes to an important coordinating mechanism (bowing) which leads to some confusion in the string section. These changes are nonetheless accepted because of the conductor's own playing ability; this ability for me lends authority to his requests as I assume that his suggestions will work.

The concertmaster contextualizes these changes for the strings and, as I can see the concertmaster, I adapt most of these for the second violins in order to accommodate any differences that may arise. I leave major modifications to the principal, although he continues to play where possible. I also check with the nearest section player to ensure that the alterations have been understood and passed back.

This is all intended to make the process as quick and unobtrusive as possible. It also shows the internal hierarchy in action.

The changes referred to in this diary entry occurred, as frequently happens, on the first day of the rehearsal period. Work in the orchestra in which I play is both a multinational and multilingual activity; in this instance a Russian conductor was conversing with our Finnish concertmaster in English which was in turn laden with the jargon associated with orchestral music.

Even though both musicians speak English fluently, some nuance was still lost. As a result, in order to make sense of the conductor's instructions, I relied as much on visual information from the concertmaster and the section principal as I did on verbal direction from the conductor.

Given this background, some confusion was predictable when the conductor began to ask for an extensive overhaul of the bowing as players sought to clarify his intentions. Because this conductor is a fine violinist in his own right, however, my questions were related to what he wanted, not to whether or not he had the requisite technical knowledge to ask for these changes to be made.

As many of the changes, while directed at the first violins, affected the second violins as well, I sought information from both the conductor and the concertmaster. Because of the seating arrangements I can easily see the concertmaster whereas the principal cannot; I therefore adapted most of these changes for the second violins while the principal continued to play.

While this process clearly exhibits elements of interpretation and translation, it also shows "authoring as well as reading" (Weick, 1995, p. 7) in the contextualization of the conductor's ideas. The second violin may "echo rather than lead the first violin in the melody of a piece" (Murnighan & Conlon, 1991, p. 169), but the line played by the second violin is often subtly different, combining melodic and rhythmic elements and in so doing providing the link between these two in the musical texture. This in turn has organizational as well as musical implications as the conductor and orchestra seek to develop a unified approach to the music.

Changing bowings, especially on the scale undertaken here, is therefore as much about the creation of a musically distinct but related voice for the second violins as it is about producing an exact copy of what the first violins are doing.

This point was reinforced by the conductor on several occasions as he requested changes from the second violins directly instead of going through the concertmaster. When this happened I would write down what the principal did in response to these requests as he played, acting as something of an orchestral amanuensis in order to maintain the continuity of the rehearsal.

These modifications thus emerge as more than just changes to a coordinating tool; by actively engaging in the change process in the manner that I did, the alterations I made gave concrete form to my account of the interpretive lifeworld of Beethoven's symphony which the conductor was seeking to create through working with the orchestra in such detail.

Because of the hierarchy in the orchestra (Koivunen, 2003; Lebrecht, 1991; Marotto et al., 2007), these changes also represented occasions for sensegiving (Gioia & Chittipeddi, 1991) as the task of informing the section fell, in the interests of continuity of rehearsal, to me.

On occasion a major change would require the principal to stand up and tell the section about the change during a pause in the rehearsal; usually, however, I would catch the eye of the closest section member and point to the relevant part of the music. This player then passed the information back to the other members of the section.

This method of communication not only reflects a desire on my part to speed up the transfer of information with minimal disruption. It also shows the difference in the sensegiving activities of both the section principal and the second chair player both in terms of the relative importance of the information we give and also with regard to how we deliver it.

Furthermore, while I may, as suggested earlier, have access to more complete information by virtue of the extra visual information available to me, the principal remains the section leader and as such he must be both consulted and deferred to.

Diary Entry 2: Situated Description

Further to Diary Entry 1, I have other suggestions based on what I can see from the first violins in particular. Due to the seating arrangements I can see the concertmaster better than the principal, so my information may be more complete.

As time is limited and the rehearsal has already been disrupted by the bowing changes, I try to avoid 'bombarding' the principal, only raising important issues in a deliberately low key manner. He either decides himself or, if necessary, seeks further input.

As the no. 2 player I can do this; a section player is not expected to make these sorts of suggestions on anything other than a sporadic basis. Because I take care not to abuse this privilege, and bearing in mind that this diary entry applies to a full day's rehearsal, most of my advice was acted upon. My aim here was to give the principal *space* to make his decision.

Diary Entry 3: Situated Description

The rehearsal environment at the beginning of a season is often characterized by some confusion as the conductor and orchestra get used to each other. In the context of Diary Entries 1 and 2, the bowing changes had an impact on all the strings, so further refinement was needed.

There is too much information for one person to make sense of in the time available, so I act as an information filter, pointing out major issues between sections and dealing with minor points myself where possible.

Again, I keep this input low key and unobtrusive; the aim is not only to achieve unity between sections but also to implement the conductor's revisions as efficiently and effectively as possible. This demonstrates the second chair supporting the principal through the provision of accurate – and digestible – information.

As both these diary entries indicate, the second chair player also acts as an information gatekeeper, helping the principal make sense of a variety of situations not only by filtering information but also by choosing the appropriate time to make suggestions and observations.

Dealing with information in this way is an important aspect of the second chair role because, as Weick (1995, p. 103) points out, the “pressures of everyday life can be additive”, and may lead to impaired sensemaking as important peripheral detail is progressively ignored. This is significant as “sensemaking is about context” and “to lose the periphery is to lose the context for the center, which means that the center vanishes” (Weick, 1995, p. 104).

Although this may not be as disastrous for an orchestra in rehearsal as it was for either the flight crews in Tenerife or for the Mann Gulch fire-fighters (Weick, 2001), information overload over the course of a detailed and strenuous rehearsal can, especially for senior members of the orchestral hierarchy, lead to poor decision-making as concentration and stamina wane. This can in turn result in counterproductive tension and frustration as the effective use of rehearsal time diminishes.

While this gatekeeping may be a form of ‘giving sense’ to the principal in order to improve the basis on which he makes decisions and gives direction, the situation is qualitatively different from my relations with the members of the section as there is no hierarchical imperative dictating that the principal either accept or act on my ideas.

Simply having a good idea or a valid suggestion is therefore insufficient; as my input derives its authority from informal influence rather than formal responsibility, that input must be restricted to important information and its delivery timed with considerable care. My ability to make these judgement calls has, I feel, improved with experience and as I have become more accustomed to my colleague’s work practices.

The need for judgement is clearly shown in Diary Entry 3 where we were seeking unity not only with the first violins but also with the other string sections as well. Because of the relationship between the first and the second violins, which is, from an organizational perspective, similar to that investigated by Murnighan and Conlon (1991) in the context of the string quartet, I have to closely follow – and, where necessary, make the principal aware of – what the concertmaster is doing.

Close coordination of this nature is not, however, present in relations between the second violins and the violas, cellos or double basses. Here not only are the relationships among musicians much more equal but also the instruments are played differently; the emphasis is, as a result, more on collegial accommodation than hierarchically dictated replication.

As a consequence, matching technical mechanisms such as bowing is desirable rather than essential, unless the same musical line is involved. I therefore only alert the principal of my section to discrepancies which are significant, as in most instances the requirement is to coordinate rather than to match exactly.

Taken as a group, Diary Entries 1, 2 and 3 demonstrate that changes to a coordinating mechanism as fundamental yet everyday as the direction of bow strokes for the string players not only have an impact at the time the changes are made but can also have consequences well after the event, as the musicians, guided by the orchestral hierarchy, make sense of the changes and seek to develop accounts that will enable collective action while minimising any disruption to orchestral routine.

Issue Domain 2: Ensemble Problems

Diary Entry 4: Situated Description

A particularly exposed second violin passage was not synchronized among section members, leading to momentary disagreement and confusion. I sought guidance from the conductor and the principal, who jointly provided direction which I responded to.

As collective action comes from the combination of individual accounts, the front desk needed to be united here since, because of the seating, many section members could see one but not both of us.

Within a second or two of the issue arising, the conductor provided a solution which the principal then contextualized for the section, supported by the second chair player.

This event exemplifies a common situation which must be dealt with quickly and, especially in a concert situation, non-verbally while all concerned continue to play.

This incident occurred some distance into the last movement of the *Eroica* symphony. In this section the second violins begin a fugal passage which is, in my experience, often problematic due to the sparse, and therefore exposed, nature of the musical texture at this point in the score.

The situation here was further complicated by a number of background factors. Firstly, being a symphony of some significance, this piece is usually programmed towards the end of the concert. As this symphony is both musically difficult and physically taxing, fatigue can become an issue, especially in the music where the problem arose.

Secondly, the passage starts just after a page turn which, while not difficult to execute, can be distracting. This is because the physical action of turning the page – the player on the left leans forward, takes the bottom corner of the right hand page in his or her right hand, and then turns the page – can itself be disruptive as the music is briefly obscured for the player on the right. Furthermore both musicians must ‘count their bars’ in order to continue playing once the process is complete.

For the player on the left the physical awkwardness of the procedure, which is exacerbated by having to hold the bow in such a way that the page can be turned, can lead to a small loss of mental composure which may in turn give rise to wrong entries and other inaccuracies following the page turn.

Because of this context, I was already aware of the possibility of ensemble issues developing. When the loss of cohesion among the second violins became apparent, I immediately looked to the conductor and the principal for direction as these individuals have both the musical and hierarchical responsibility for the generation of solutions to problems such as this. Correspondingly I paid less attention to what other sections were doing as, with the second violins being the leading musical voice here, I took it for granted that the rest of the orchestra would adjust as necessary.

The aim on my part was to respond as quickly as possible to the conductor and the principal, as the combination of the sensemaking accounts developed first by the conductor, then by the principal and finally by the second chair should ideally result in clear and unified sensegiving to the members of the section.

A further reason for me acting in this manner is that, due to the seating arrangements, several section members are only able to see the conductor but not the principal. These players then rely on me for what other section members will be getting directly from the section principal.

As professionals who were quite possibly as aware of the problem as me, the section players would in all likelihood have been seeking such direction; the quick resolution of the issue – the whole incident took place over just a few seconds – suggests that the collective sensegiving from the front stand was both effective and efficient, helping first to identify and then to resolve the problem described in Diary Entry 4.

The next entry, however, demonstrates that issues of synchronization do not always begin in one's own section. These problems often originate elsewhere and can then spread with great rapidity to sections of the orchestra which were not initially involved.

This was the case in the incident outlined in Diary Entry 5 where an ensemble problem between the first violins and a wind soloist put the second violins, who were playing an accompanying line, in the invidious position of having to decide which of the conflicting musical voices to follow.

Diary Entry 5: Situated Description

A lack of cohesion between a wind player and the first violins puts the second violins in a somewhat awkward and confusing position.

Based on hierarchy (I 'report' to the principal and we both 'report' to the concertmaster) and visual information from several sources, I cut back on playing volume and physical gestures, fully rejoining the principal when he had developed a solution based on direction from the conductor and the concertmaster.

This was intended to give clear direction to the second violin section and to contextualize what they were receiving from the conductor. This event, for me, showed the second chair second violin being involved in both sensemaking and sensegiving.

As in the events described in the previous entry, my own aim was to make sense of the situation in such a way that I could quickly generate an account which would in turn enable me to contribute effectively to any collective response.

The first issue to be resolved was the location of musical direction, as this provides the context for understanding what the conductor may be indicating. In this instance, while musical imperatives pointed to the solo wind line, the organizational hierarchy of the orchestra suggested the first violins. In addition, with only a minor adjustment on my part, I was able to include the conductor, the concertmaster, the principal second violin and the musical score I was playing from in my field of view whereas I could only hear, rather than see, the solo wind player.

Visual information, which has an immediacy which aural information does not, thus combined with hierarchy to underpin my decision to go with what I could *see* rather than with what I could only *hear*.

As I am also ultimately a member of that hierarchy and so generate part of the sensegiving information from which the members of the second violins in particular develop their individual sensemaking accounts (Maitlis, 2005), I am, to a large extent, compelled by hierarchical imperatives to act in this way (Marotto et al., 2007).

Diary Entry 6: Situated Description

The rhythmic figure from the cello section that is driving this music is, to me, both visible and audible; I interpret the conductor's gestures in light of musical imperatives such as this.

This kind of musical element underpins not only overall orchestral unity but also my contribution to the direction of the second violin section.

As a result, fundamental musical features such as rhythm lay the foundation for the process of co-creation which, led by the conductor, is at the heart of orchestral music-making.

The event discussed here exhibits characteristics which lend themselves to a variety of analytical perspectives. I have chosen to include it at this point in the narrative because this entry captures what I consider to be an essential feature of orchestral music-making; that the music as realized by the musicians is central to the 'sensible environment' (Weick, 1995) in which orchestral work takes place.

In this example, how I interpreted the conductor's directive beating was very much influenced by the driving rhythm being played at that point by the cello section. Indeed the conductor himself focused on shaping the longer musical line, using wide, sweeping gestures to suggest a general melodic impulse, and left rhythmic coordination of the music to the cellos.

During this passage both the principal second violin and I could see and hear our colleagues on the front stand of the cello section. Even had we not been able to hear them, the almost percussive physicality of their bow strokes gave a striking visual vitality to the music. To paraphrase Follett (cited in Weick, 1995, p. 32) music in instances such as this “releases energy in me and I in it; it makes me think and plan and work, and I make it bear [audible] fruit ... this is a creating process”.

For orchestral musicians this process begins with the printed score. The notes on the page are then brought to life in a journey of co-creation between the conductor and the players; here the conductor shaped the melodic line while the cellos provided the rhythmic ‘engine’ which both energized and coordinated the music. In an organizational sense this combined direction constructed the framework in which I engaged in individual sensemaking and sought, together with the section principal, to ‘give sense’, through our gestural activity, to the members of the second violins.

Weick (1995, p. 30) argues that “in organizational life, people often produce part of the environment they face” and that the environment thus created constrains individual actions. While this is clearly the case in the situations described in Diary Entries 4 and 5, here the effect was more positive; rather than feeling constrained by this musical environment, I felt inspired and emotionally liberated by the collective interpretation of Beethoven’s music that was unfolding.

Issue Domain 3: Musical Direction

Of the literature on orchestras that was reviewed early in this study, the majority is concerned with orchestral leadership in general and the role of the conductor in particular (e.g., Atik, 1994; Castañer, 1997; Hunt et al., 2004). While this is not the main focus of the present research, the organizational structure of the orchestra is such that the conductor’s influence is central to orchestral coordination and control (Hopkins, 2009; Lebrecht, 1991; Yffer, 1995).

Any study of orchestras must therefore address some facet of the conductor-orchestra relationship, and this report is no exception. I will, however, be examining onstage interaction rather than the offstage activity that concerns Lebrecht (1991),

Glynn (2000) and others. In addition I will briefly investigate the question of musical direction from within the orchestra itself, as this direction not only comes from the conductor but may also come, as Diary Entry 6 has already shown, from the players themselves.

A striking feature of these entries which may seem obvious but is nonetheless generally taken for granted is the degree to which the conductor does or does not verbally direct the orchestra. While in concert direction clearly has to be non-verbal, it is also the case in rehearsal that the less a conductor talks the more players are forced to *watch* and not just to listen to him or her (Matheopoulos, 1982; Sachs, 1993).

The following entries not only suggest how one conductor managed this but also demonstrate how this direction was contextualized.

Diary Entry 7: Situated Description

In a venue with particularly reverberant acoustics the conductor dealt with this challenge by adjusting the size and scope of his gestures and ensuring, by using his eyes as well as his baton, that the players concerned understood his intent. He also knew where to put the gestures in order to generate a unified orchestral sound, thereby demonstrating good rhythm as well as good technique.

We (the front desk) must contextualize this for the section as the conductor cannot show everything. I therefore have to make sense of direction from the conductor and contextualization from the principal simultaneously if I am not only to play where I'm supposed to but also to support the principal in directing the section.

Diary Entry 7 describes a rehearsal in an especially reverberant acoustic. This acoustic created an interesting dilemma for the conductor; a large beating pattern may have helped accuracy of ensemble, but this would most likely have been at the expense of dynamic control, as large gestures are usually employed when an increase in volume is required. A spoken request to play softly could also have been made, but this would not have required us to watch the conductor's baton to the same extent.

Large gestures are not necessarily desirable in an acoustic such as the one in question as the amount of sound produced in response can easily become overpowering. Instead this conductor employed a small but very accurate beat not only in order to facilitate coordination without excessive dynamic volume, but also to encourage the players to pay close attention to his direction. This clarity was essential as, in such an acoustical situation, visual information tends to be more reliable and is certainly more immediate than its aural counterpart.

This solution was reinforced by the conductor ensuring that his baton was, for the players at whom his attention was directed, in their mutual line of sight. The conductor-baton-player connection thus established is an important technical means for the conductor to convey musical intent (Hopkins, 2009; Matheopoulos, 1982; Sachs, 1993; Yffer, 1995).

Equally importantly, this conductor beat fractionally ahead of where he wanted the collective orchestral sound to occur. This fraction of a second allows players to interpret the conductor's gestures while assimilating what is being played around them and, after making individual sense of this information, to develop an account which allows them to situate their contribution within the overall response of the orchestra.

Diary Entry 8: Situated Description

A conductor for whom I have a good deal of respect gives explicit direction to the second violins. I respond accordingly and without question.

In this instance the conductor is my main source of motivation; with lesser conductors I look more to the principal. This does not, however, occur in isolation as I interpret this direction in the context of what I can see and hear from elsewhere in the orchestra.

Diary Entry 8 provides a concrete example of direction from the conductor *vis-à-vis* the second violins. Here the conductor, in a very short space of time, required us to play at both ends of the articulation spectrum; very short and staccato on the one hand, and very long and broad on the other. These extremes were indicated with two very different styles of beating, with a very crisp and angular pattern eliciting the staccato articulation and a less abrupt, more rounded beat being used to indicate the longer sounds.

This represents, however, a less than complete picture. Important information, such as in which part of the bow to play, what length of bow stroke to use and, in some cases, which string to play on, all has to be indicated before section members can decide where and how to play their music. This contextualizing of the conductor's direction is a key responsibility of the section principal, supported in turn by the second and third chair players.

In order to respond to the conductor and principal in a way that not only allows me to play accurately but also to support their combined direction, I have to make sense of their individual but hopefully complementary accounts simultaneously; it is my *perception* of these accounts that provides the quality of unity I derive from their direction and on which I predicate my subsequent actions.

This perception is, in turn, grounded in assumptions based on experience and training (Weick & Roberts, 2001) which are so deeply ingrained as to render the whole process subconscious.

That said, this perception is not static. The conductor featured in Diary Entries 7 and 8 exhibited a level of technical skill which is not, unfortunately, always present; with less able conductors I found that my focus shifted more towards the principal and the concertmaster. Furthermore, a survey of similar diary entries throughout the concert season indicated that not only do I concentrate more on the principal's contribution if I perceive the conductor to be technically weak, but also that, in the second violins at least, the principal and second chair together seem to assume greater directive responsibility.

Diary Entry 9: Situated Description

Seeking a richer, rounder sound from what is acoustically a very direct playing technique, the conductor asks us to listen to – and to play after – the lowest musical voice as this has the longest acoustical response time. While they may hear the change in sound, an outside observer would be unlikely to recognize how this was achieved.

I delay and soften my gestures in order to play as requested while joining what appears to be a mutually agreed response among the front desks. This unified approach not only contextualizes the conductor's request for the individual sections but also ensures that the strings play together as a group.

This entry, in a similar way to Diary Entry 6, captures an instance of musical direction coming from within the orchestra. The conductor asked for this effect to be produced by the players because, given the split-second timing required, a beating gesture from him to achieve the same result would, in his stated opinion, have been clumsy and probably counterproductive.

The playing technique in question, which is referred to by string players using the Italian term *pizzicato*, is produced by plucking the instrument's strings, usually with the right hand. The effect is not only immediate but also tends to be quite percussive.

As the conductor required something less abrupt, but also given that each individual string section was playing a single note within the chord at the time, he sought to soften the sound by spreading the chords in question. This was to be achieved by having the double basses lead each chord with the rest of the strings following a fraction of a second later. The intended result was to be a succession of chords with greater richness and warmth than before and less of the angular ‘front’ normally associated with *pizzicato* notes.

In order to respond to the conductor’s request, I altered my bodily approach as well as my musical intent by delaying and softening my gestures, using a ‘brushed’ rather than a ‘from the string’ attack. In so doing I sought to minimise the front of the note and to create not only a sound but also a gesture that was less immediate and abrupt.

At the same time, while playing with the principal, I was also aiming to provide appropriate direction to the members of the second violin section, as, by the very nature of the effect being asked for, the conductor was consciously encouraging direction from within the orchestra, in this instance sacrificing clarity of ensemble for tonal warmth.

I also noticed that my front desk colleagues in other sections, while all seeking added input from the concertmaster, were responding in a similar way to me; this unity of response resulted in the required sound being produced by the string section without the conductor having to resort to beating indications that he clearly regarded as an option inferior, in this instance, to player-led direction.

5.3 Recording

Preamble: Adapting to the recording environment

Concerts, both in preparation and performance, differ from recordings along several dimensions. Perhaps the most obvious of these is the replacement of a live audience with an impersonal set of microphones and a recording producer who, no matter how personable, can sometimes seem like the disembodied voice of an unseen deity when commenting on the orchestra's work through the loudspeaker connected to the recording booth.

In addition, while small errors are in concert both fleeting and often unnoticed, such infractions in recording are not only registered but also in the process brought to the attention of all present. The passage is then repeated, as if any further reminder for the transgressor were needed, until the necessary correction is successfully made.

The increased focus on accuracy in this context is also heightened by physical constraints, as a 'take' – the colloquial name for the segments in which music is recorded – can, despite being both musically and technically satisfactory, be ruined by the extraneous noise made by dropped pencils and creaking chairs.

From an organizational perspective, one of the most significant differences between the performance setting and the recording environment is the impact on the orchestral hierarchy of the recording producer. While the sound engineer also has considerable influence on any recording through technical matters such as the choice and placement of the microphones, it is the producer who guides the recording process, not only by pointing out errors and providing musical advice but also by ensuring that the scheduled repertoire is recorded during the time available.

Furthermore, whereas in concert it is the conductor who leads proceedings, in recording the producer absorbs much of that responsibility (Lebrecht, 1996, 2007); in recording for film the producer is usually joined in the recording booth by the film's director, who in turn gives input to ensure the alignment of the musical score with the onscreen action.

Recording for film and the recording of backing tracks for rock or pop music both have the additional complication of a click track. This is a computer-generated rhythmic pulse provided to the musicians through headphones with the purpose of facilitating precise coordination, although, as we shall see, this is not always successful. As this rhythmic pulse is, in concert, an important attribute of the conductor's beat, the addition of the click has ramifications not only for the orchestral hierarchy, but also, at a personal level, for my own sensemaking and sensegiving activity.

I therefore start this section of the analysis with a diary entry which relates to the brief period of adjustment between the different forms of music making. This entry captures the unease – and the impact of that unease – that I experienced when compelled to adapt to the resulting change in my sensible environment (Weick, 1995).

Diary Entry 10: Situated Description

After an absence of some months from the recording environment, the orchestra begins recording some standard concert repertoire with the Music Director conducting.

During the initial period in which the microphone settings are being finalized, the conductor makes the observation that the orchestra's collective approach is somewhat tentative.

I do, personally, feel this way; the extra attention to accuracy required in the recording situation is having a negative impact on my music-making because it is conscious and, as a result, awkward. This is due largely to a diminished familiarity with the recording environment.

One of the most difficult aspects of recording, for me, is the injection of sufficient emotional intensity into my playing in the absence of the audience feedback which occurs in the concert hall.

This is exacerbated by the inherent constraints of the medium itself; in order to keep extraneous noise to a minimum I scrutinize my conscious movements and, where possible, eliminate the unnecessary ones. I restrict, for example, the physical movements I make when cueing the section in conjunction with the principal quite considerably. In concert these movements occur naturally and almost subconsciously; at the beginning of the recording period in question I found myself being rather more circumspect.

My attempts to limit nonessential noise are not on their own enough to explain my feelings of insecurity, given that the seating arrangements, stage setting, conductor and repertoire were all unchanged from the concert performance a few days before.

Weick (1995) provides an important clue as to the probable source of this discomfort. “The content of sensemaking is to be found in the frames and categories that summarize past experience, in the cues and labels that snare specifics of present experience, and in the ways these two settings of experience are connected” (p. 111).

But, as Weick (1995) reminds us, it is “a cue in a frame that makes sense, not the cue alone or the frame alone”; the meaning of either the cue, the frame or the relations between them “is determined by [our] momentary awareness of the other two” (p.110). By way of example, at one point early in the recording session the principal gave a cue to the section which I felt was not as emphatic as it had been at this point in the same music during the recent concert series. Consequently I played more softly than I had in performance, unsure as to whether I was too loud or whether the change arose because he was experiencing the same feelings of disquiet as me.

The balance of my perception of all three – the frame of the music, the physical and musical cues from my colleagues, and, as a result, how I made sense of the information I was receiving – was subtly altered by the presence of the microphones, the introduction of a recording producer, and my own past experience of the different pressures that the recording environment brings to bear.

This change in perception therefore had a direct impact on my sensemaking and sensegiving activity, disturbing the equilibrium between subconscious and conscious which underpins my routine work practices, and, ultimately, contributing to the tentative playing identified by the conductor in Diary Entry 10.

Issue Domain 4: Hierarchy

The next Diary Entry investigates my perception of the impact of the recording producer on the hierarchy of the orchestra.

Diary Entry 11: Situated Description

The producer of this recording is one I respect, based not only on the success of previous projects but also on the courteous, pertinent and direct instruction he gives.

This direction is based only on what he hears; from the recording booth the producer cannot see us play. The quality of the recording depends on his ability, in this demanding context, to identify, locate and describe problems which the conductor and players then address.

Because of constraints such as time pressure and the added technical demands of recording, the producer must be direct, accurate and brief without undermining the confidence of the musicians.

As an extra set of highly trained ears the recording producer thus has a level of artistic responsibility equal in many ways to that of the conductor.

I include discussion of this entry because, during the recording sessions in question, this individual had what I felt to be almost as significant an impact on my sensemaking activity as the conductor, despite him being unseen while we were playing.

The producer has an important sensegiving role in the recording process as he (and for some reason recording producers are, as in this case, nearly always male) provides an overview of the orchestral soundscape that is as nearly objective as can be expected.

Even the conductor has a perspective of the overall orchestral sound which is less than ideal, constantly having to adjust to acoustical anomalies created by variables such as the physical distance between him and the players of some instruments.

The producer, on the other hand, receives the entire orchestral sound all at once through the loudspeakers in the recording booth, giving him an immediate and comprehensive impression from which to formulate his appraisal. For this reason I rely as much on the producer as the conductor for information regarding the contribution of the second violins, particularly with regard to technical issues.

Such openness to external analysis carries with it an element of individual vulnerability; how the producer approaches the sensitive matter of criticism is therefore central to the success of any recording project. The provision of sufficient detail in a manner which is concise but not aggressive, and courteous but not obsequious, is a delicate balancing act which must nevertheless be performed successfully if the recording is to be completed and the self-confidence of each musician maintained (Lebrecht, 2007; Yffer, 1995).

This producer, for me, had the necessary skill. Many of the points he made, although potentially controversial, were put in almost disarming fashion; a below-pitch note was “a little under” rather than the less precise but more blunt “it’s out of tune”, while instead of baldly stating that one particular note was “too short” he inquired if “we could have the chord a little longer next time”.

This way of working had, in my case at least, a positive effect, encouraging me to make whatever adjustment was required without me feeling in any way personally threatened. I also found that my feelings of insecurity, referred to in Diary Entry 10, were quickly replaced by a return in confidence in response to this approach.

As many of the producer's suggestions were given straight to the conductor who then made alterations accordingly, I came to view the producer and conductor as a musical partnership, forming a team that, by developing a unified account from two potentially conflicting points of view, mitigated the ambiguities that arise in the dual-command situation of the recording environment. If these conflicts are not resolved the consequences can be quite destructive; in this instance, however, the direction I received had a stimulating and positive effect on my playing rather than the reverse.

In recording concert repertoire, the conductor, while sharing some responsibilities with the producer, remains a first among equals, particularly *vis-à-vis* the orchestral musicians. This changes in the film recording environment, even if, as often happens, the conductor is also the composer of the film score.

In this situation the film director becomes the central artistic authority, which in turn reflects a qualitative change in the function of the music being recorded. Instead of being the ultimate focus of activity the music, despite its underpinning and enhancing the onscreen action, is here relegated to a secondary role; the conductor and orchestra are no longer seeking to bring to life a particular piece of symphonic music but rather to combine to provide one piece in the overall film-making puzzle.

This is epitomized by the introduction, described in Diary Entry 12, of the electronically generated rhythmic pulse known colloquially as the 'click track' or simply just the 'click'.

Diary Entry 12: Situated Description

A mechanical and 'objective' intervention in the form of a click track played through individual headphones is introduced for film recording. This is intended to ensure precise alignment of the music and the on-screen action.

The conductor still offers musical and technical guidance but now shares the responsibility for rhythmic direction with the pre-recorded click. This extra degree of technical accuracy is, however, achieved at the expense of creativity which is not, in any case, a primary goal of this kind of activity.

The conductor also becomes, in this context, less of an artistic authority and more of a coordinator.

The Diary Entries that relate to film recording revealed that the click track affected my sensemaking and sensegiving activity in a number of ways.

Firstly, as each musician has to wear headphones in order to hear the click, the ability to hear what is being played is impaired, even when, as is common practice, the headphones are placed over only one ear.

Secondly, even when the pulse of the click has been set, it is not, as will be seen in Diary Entry 13, necessarily unambiguous.

Finally, despite the reduction in the conductor's role as key creative driver that characterizes film as opposed to concert recording, a conductor is still needed to indicate where the music actually starts, where each bar or measure of that music begins and ends, and to arbitrate when problems arise.

How I make sense of these issues differs between recording media. The influence of the producer, the introduction of the click and the use of headphones are three of the sensegiving variables which can change according to the recording situation; a fourth is our familiarity or otherwise with the music which we are recording.

When recording concert repertoire the music involved is usually to some extent familiar; if we have not recently performed the piece in question then the music is at least available for preparation ahead of time. In the film setting this is almost never the case, and what music has been written in advance is often subject to alteration during the course of the recording itself.

As a result the players are usually sight-reading music for film, a situation which is rendered still more uncertain by the use of headphones. This impairs what are two key sensemaking tools for an orchestral musician; familiarity with the music, which allows greater focus on interpretive development, and the ability to hear either one's own instrument and what colleagues are playing. The impairment is primarily due, on the one hand, to the extra concentration required to read an unfamiliar score and, on the other, to the headphones covering one or both ears.

I therefore rely primarily on the click, less on the principal second violin and still less on either the conductor or the concertmaster for direction. Furthermore, again due to the presence of the click track, my perception of the ability or otherwise of the conductor becomes more or less irrelevant, as he or she is working in a coordinating rather than a creative capacity.

But this does not mean, as the event described in Diary Entry 13 illustrates, that the conductor is redundant in the film recording environment.

Diary Entry 13: Situated Description

Several attempts at a particular passage are rejected by the recording producer and film director. The conductor locates the problem and has the mechanical component of the pre-recorded material – the click track – turned off.

It then became apparent that the playing by the musician on the track was musical if not metronomically accurate. An outside observer would be unlikely to notice the inaccuracy because of the musically natural phrasing by the player involved; this is suggested by the speed with which the problem is resolved once the click is dropped.

Rhythm is, for me, an integral part of the pre-reflective foundations of music-making; this incident illustrates the point.

In this incident, the orchestra was unable, despite repeated attempts, to coordinate with either the click track or the pre-recorded backing track. When a solution from those in the recording booth was not forthcoming, the conductor asked to listen to the click and backing tracks separately and alone.

Having located a poorly calibrated click track as the source of the problem, he asked for the click to be turned off; the orchestra then played with the backing track alone. This was immediately successful as the musical intent shown by the players on the pre-recorded track was – if still perforce a little inflexible – much easier to follow than the mechanical but erratic click.

To me this reinforces the suggestion made earlier (see p. 43) that music for the orchestral musician shares many of the attributes of spoken and written language as understood by Merleau-Ponty (2002).

Among these qualities, Merleau-Ponty (2002, p. 207) identifies

the power to understand over and above what we may have spontaneously thought. People can speak to us only a language which we already understand, each word of a difficult text awakens in us thoughts which were ours beforehand, but these meanings sometimes combine to form new thought which recasts them all, and we are transported to the heart of the matter, we find the source.

Such a view helps to explain why the conductor's preparatory upbeat, for instance, is so important in concert performance (Sachs, 1993). Here the gesture not only gives the tempo of the music, but also reminds the musicians in the instant before they play of the interpretation developed together with the conductor in rehearsal. At the same time this upbeat has to generate the energy, both physical and emotional, that underpins the co-created musical lifeworld of concert performance.

There is also an analogy to be drawn here between features such as those that inhere in music and what Merleau-Ponty (2002) refers to as “a *gestural meaning*, which is immanent in speech” (p. 208, emphasis in the original); music, as an unspoken language, depends not only on the physical gestures of playing but also on the musical gestures embedded in the written notes if it is to coordinate among musicians while communicating with an audience.

This gestural meaning is, for me, largely lost when a click track is introduced, however mechanically accurate that device may be. This, in turn, directly affects my sensemaking activity; my subconscious absorption of the musical and rhythmic intent of my colleagues becomes instead a conscious attempt on my part to understand the tempo of the music as defined by the click. How I view the actions of my fellow musicians alters as a result, as I tend to try to ignore any information that disagrees with my perception of the click track.

Once the click was turned off during the event referred to in Diary Entry 13, I found that the balance of my sensemaking patterns was restored. The instrumental backing track may have been pre-recorded, but as it retained some gestural meaning – and therefore the inherent rhythmicity of music in performance – my response was instinctive and immediate. Such a response is, for me, much less straightforward if I am required simply to follow a mechanical device such as a click track.

This Diary Entry shares with Diary Entries 10–12 a common concern regarding the changes to my own sensemaking that occurred in response to the less familiar hierarchical arrangements encountered when the concert hall is replaced by the recording studio.

The question then arises: did these changes in my *sensemaking* lead to a parallel change in my *sensegiving* activity? Analysing Diary Entry 10, with its suggestion of physical constraints in the recording environment, indicates that this may indeed have been the case. Changes in my sensegiving were, however, not immediately obvious to me and became apparent only towards the end of the recording activity covered by the Field Diary.

Diary Entry 14: Situated Description

Music-making in the film score recording environment becomes more commodified as individual artistic responsibility diminishes and demands for technical precision increase.

Rhythmic direction, for example, comes primarily from the click track which, as it is played through headphones supplied to all the musicians, is experienced with the same immediacy by section member and principal player alike.

The influence of click and conductor thus combines to render extra input from the front desk largely unnecessary.

In the performance environment – which is where most of my orchestra's activity occurs – the members of the second violin section frequently seek direction and clarification from the front stand with regard to the music at hand.

Many of these queries require an interpretive decision on the part of the principal or, less often, from the second chair player in order to reduce environmental ambiguity, such as a discrepancy with another section, or to contextualize instructions from the conductor or the concertmaster for the second violins.

While the nature of the questions being asked did not change to any significant degree when recording concert repertoire, the substance of questions from the section changed markedly during recording sessions for film; nearly all the inquiries now seemed to relate to technical specifics such as dynamic level and possible wrong notes in the score. Musical and artistic concerns which previously were commonplace, such as requests for rhythmic direction and queries regarding rhythm or interpretation, had now become almost nonexistent.

This reflects, among other things, the immediacy with which all players receive rhythmic information from the click track and the commensurate reduction in ambiguity that occurs. In addition, each section member can see the conductor; as a result, the accounts formed by individual sensemaking are closer to the collective account of the entire section than is initially the case in the more ambiguous environment of concert performance. The responsibility that the front desk has for rhythmic and interpretive direction is, therefore, no longer of such importance in recording for film which in turn renders sensegiving interventions such as physical cueing largely superfluous.

The lessening of artistic responsibility that is captured in this diary entry represents another aspect of my localized experience of the change that occurs in orchestral sensemaking and sensegiving activity in response to the requirements of the recording of music for film.

This series of diary entries has a number of implications with regard to the organizational function of the orchestral hierarchy as a coordinating arrangement, also indicating that one of the key musical properties underpinning that function is rhythm and, more particularly, rhythmic direction.

The contribution of this direction to the gestural meaning of music as a language (Merleau-Ponty, 2002, p. 208), and therefore to an understanding of music as perhaps the main language of the orchestral musician at work, is another possibility which is suggested by this line of inquiry; it is to these analytical directions which I now turn.

6 DISCUSSION

6.1 Introduction: The orchestra and the literature

The interrogation of my own work practices from an organizational rather than a musical perspective has raised a number of intriguing analytical possibilities. In order to situate these within the wider context of research into the orchestral organization, I now turn to a discussion of my analysis with regard to the literature reviewed earlier in the study.

As previously outlined, this literature falls into three broad categories: analysis of job satisfaction and motivation among orchestral players; investigation of conductor-driven orchestral leadership; and the case study of the orchestral organization.

This classification is itself a generalization based on the wider research aims of scholars working in this area rather than on the more immediate focus of their respective studies. For example the work of Allmendinger et al. (1996) and Mogelof and Rohrer (2005), while concerned primarily with motivation and job satisfaction, also acknowledges the importance of collaboration with colleagues in the life of the orchestral musician.

Boerner et al. (2004), on the other hand, employ an analysis of levels of cooperation among players as a key measure of the success or otherwise of a conductor's leadership, while Glynn (2000) refers to player behaviour in a case study exploring identity within the symphony orchestra. Lehman (1999) and Lehman and Galinsky (2000) each examine player-led cooperative orchestras as organizational structures.

Maitlis (2005) adapts the sensemaking and sensegiving concepts of Weick (1995) to a multi-case study of the offstage organizational activity of British orchestras and their stakeholders, expanding Weick's (1995) ideas to include a broad range of organizational actors with differing hierarchical and functional characteristics.

While these studies add significantly to our knowledge of the organization of the modern symphony orchestra, important questions remain, particularly with regard to the orchestra's activity on the concert platform.

If, for example, cooperative relations among musicians in concert performance are so significant, what are the work practices in which these interactions are located? How is the direction of the conductor contextualized so that collaboration between individuals translates into unified collective action? And, given that orchestral work depends not only on cooperation among individuals within the orchestra but also on collaboration between the musicians and the conductor, what are the links between onstage orchestral direction and cooperation among players?

Nierenberg (2009) alludes to these problems based on his own experience as a professional conductor. As with most of the literature, the concern here is with relations between the conductor and the orchestra as a group rather than with interactions among individuals.

Matheopoulos (1982) and Sachs (1993) also provide useful information on the conductor's perspective of onstage interrelations among musicians, with the former deriving her material from interviews with orchestral musicians and a number of eminent conductors, while the latter examines the career and work of the conductor Arturo Toscanini. The chapter *Watching Toscanini* in Sachs (1993) is a particularly useful analysis of how one conductor achieved his onstage musical goals.

Koivunen (2003) and Marotto et al. (2007) also shed light on relations among musicians in performance, with the concept of kinaesthetic empathy where “musicians react with their bodies to conductors’ gestures” (Koivunen, 2003, p. 211) proving especially relevant in the context of the present research.

These authors, while acknowledging the importance of the internal hierarchy of the orchestra, are still concerned primarily with the influence of the conductor and write largely from an outside perspective, although one of the authors of the Marotto et al. (2007) study enrolled as a student conductor at an Eastern European conservatoire in order to undertake his observation. The work environment of the student orchestra he conducted is, however, fundamentally different from that of a professional orchestra; rehearsals for individual programmes took weeks rather than the few days that is the professional norm, and what is considered familiar, standard repertoire for professionals was at best unfamiliar and at worst unknown to the student players (Marotto et al., 2007).

The investigation by Murnighan and Conlon (1991) of British string quartets thus represents a rare examination of interaction between instrumentalists and was especially germane to the present research because of the authors’ perceptive discussion of the musical and organizational aspects of the relationship between the first and the second violin.

I have sought to build on the work of all these authors by offering a view of orchestral music-making written, as it were, from the inside. Furthermore I here provide what is, in many ways, a complementary perspective to that of Maitlis (2005) by applying the ideas of sensemaking and sensegiving to the *onstage* activity of orchestral musicians in performance; in contrast to the majority of the literature that has just been revisited, I am not concerned with the offstage impact of onstage action, but rather with interrogating my own work practices in the course of rehearsal, concert performance, and recording activity.

This inside perspective required first that I mitigate the possibility that my professional experience and expertise would amount to little more than technically literate prejudice through the use of an appropriate philosophical and methodological research framework. This framework had not only to acknowledge my biases but also to allow for the interrogation of tacit and taken-for-granted features of orchestral music-making.

It is for this reason that I have employed an autoethnographic orientation towards the research problem which is underpinned by the phenomenology of Merleau-Ponty (2002). In so doing I have sought as far as possible to maintain fidelity to the everyday orchestral lifeworld while situating that lifeworld within the context of the narrative that has emerged from the events and episodes captured in the Field Diary.

In the course of this narrative I have explored my own work as a violinist in a symphony orchestra. Based on the professional story located in this exploration and drawing on the literature surveyed earlier and briefly revisited, I will now discuss the central organizational issue arising from the research question: how and what I have contributed, in the role of second chair second violin, to orchestral coordination and control.

6.2 Coordination and control in the orchestra

6.2.1 Heedful or habitual? My contribution in context

“Group playing in an orchestra, particularly in the string sections, requires tremendous coordination skills” write Marotto et al., “and the slightest technical variance in playing ... can affect overall group performance” (2007, p. 403).

The importance of collegial cooperation in orchestral music making is a thread which runs through the literature, whether in discussions of player motivation (Allmendinger et al., 1996), analyses of conductor-driven orchestral leadership (Boerner et al., 2004; Marotto et al., 2007; Mintzberg, 1998; Nierenberg, 2009) or the psychology of orchestral music making (Langendörfer, 2008).

In the course of the present research I also found that the idea of coordination among players was closely linked to notions of hierarchy and control; diary entries concerned primarily with coordination almost always contained some reference to the orchestral hierarchy while those interrogating my contribution to control also alluded, almost without exception, to the impact of that contribution on collaboration with my colleagues.

This suggests that my work practices are akin to the heedful contribution of individuals to collective activity outlined by Weick and Roberts (2001); “a heedful contribution enacts collective mind as it begins to converge with, supplement, assist and become defined in relation to the imagined requirements of joint action presumed to follow from some social activity system” (p. 266).

These authors also remind us that:

Heedful performance is not the same thing as habitual performance. In habitual action, each performance is a replica of its predecessor, whereas in heedful performance, each action is modified by its predecessor. In heedful performance the agent is still learning. Furthermore, heedful performance is the outcome of training and experience that weave together thinking, feeling, and willing. Habitual performance is the outcome of drill and repetition. (p. 264)

I characterize my contribution as heedful rather than habitual because, while there is much that is routine and repetitive in orchestral playing, no two performances are ever quite the same, nor do conductors have exactly the same relationship with each orchestra that they work with.

The distinguished Dutch conductor Bernard Haitink suggested as much to an interviewer in response to questions about the differences between orchestras, stating that he begins rehearsals

with ninety-nine per cent of my interpretation in my mind. But you must always leave something to orchestras. For example, I'm about to conduct the Mahler sixth [symphony] in Paris with the Orchestre de Paris which has different qualities, a different chemistry, and whose approach to Mahler is different from that of ... the Concertgebouw [orchestra]. (Haitink, cited in Matheopoulos, 1982, p. 197)

Some repetition is undoubtedly necessary in order for players to assimilate each conductor's view of the music at hand and to adapt to whatever differences the new interpretation may bring. Diary Entries 1–3 illustrate my role in adapting and contextualizing, for the second violin section, changes made by the conductor to an important coordinating mechanism – the direction and length of the bow strokes employed by the various string sections.

Taken individually, these changes appeared at the time to be little more than minor technical modifications. Viewed collectively, however, the different bowings represented a major shift from the previous conductor's interpretation as, by altering both articulation and sound quality, they amounted to a change in the stylistic approach of the entire string section.

The drill and repetition referred to by Weick and Roberts (2001) is therefore not, in orchestral work, an end in itself; rather it is undertaken in order to lay the foundation for the process of co-creation that is concert performance. This is akin to the *embodied* view of the habitual action of the musical instrumentalist taken by Merleau-Ponty (2002) as the musician strives to bring the music to life. “We say that the body has understood and habit has been cultivated when it has absorbed a new meaning, and assimilated a fresh core of significance” (p. 169). It is this form of habit which is, for the orchestral player, central to heedful activity.

Diary Entry 9 provides an especially salient example of habit – in the sense employed by Merleau-Ponty (2002) – resulting in a heedful musical contribution. In order to achieve the musical effect desired by the conductor, the orchestra rehearsed the *pizzicato* chords in question a number of times so that, with the double basses playing first and the rest of the strings following a fraction of a second later, an organic interpretative flow to the passage could be achieved. No two repetitions were identical; furthermore in recording this music, rather than record each chord on its own, we played the passage several times with each rendition differing slightly from its predecessor. This provided the conductor and producer with a number of alternatives for the purposes of post-production. The aim here was to achieve a musically coherent result rather than metronomic accuracy.

6.2.2 Musical direction and the second chair second violin

Diary Entry 9, as outlined above, shows that musical direction in the orchestra does not come from the conductor alone. Diary Entry 6 provides another example of that direction coming from within the orchestra. Here the rhythmic figure from the cellos left the conductor space to concentrate on broader interpretation; from my own perspective, how I made sense of the conductor's direction was underpinned by the rhythmic energy that I could feel coming from the front stand of the cello section in particular.

This entry also emphasizes the importance of rhythm as a coordinating, as well as a musical, feature of orchestral music making. The following vignette from an orchestral player regarding the Italian conductor Carlo Maria Giulini further illustrates the point, describing how, when Giulini began one particular opera aria by the Italian composer Verdi,

He would turn to the second violins – which he had seated opposite the first violins – with a most intense look and make them play [the] rhythm absolutely regimentally, like a military band for the first bar or two. Then he would leave them to it, turn around to the first violins and conduct the melody in a completely different, lyrical way. (Nash, cited in Matheopoulos, 1982, p. 173)

Having set the rhythmic figure in motion, this conductor then gave the responsibility for maintaining that rhythm to the players of the second violins, in effect entrusting them, however briefly, with musical authority second only to his own. Embedded in both Diary Entry 6 and in this illustration are notions of coordination – the rhythmic figure is the coordinating mechanism keeping the orchestra together – and control, as the player or players of that figure are given the responsibility for leading their colleagues during the passages in question.

Interestingly, Weick and Roberts (2001) also highlight rhythm as an organizing feature of work environments characterized by high reliability and tight coupling, where each organizational actor depends on the contribution of the others and the results are immediate: “Even though pilots have to rely on the catapult crew, they remain vigilant to see if representations are similar. Pilots keep asking themselves questions like, ‘Does it feel right?’ or ‘Is the rhythm wrong?’ ”. These questions relate, however, not to the pilot’s aircraft, “but [to] the joint situation to which he has subordinated himself” (Weick & Roberts, 2001, p. 265).

In joint situations such as those described in Diary Entry 6 directive guidance originates in the inherent rhythmic logic of the music itself. There are, however, occasions where the *musical* hierarchy of the primacy of the melodic line, underpinned by rhythmic pulse of the music, is insufficient in this regard; the *organizational* hierarchy of the orchestra, led by the conductor and concertmaster (Koivunen, 2003; Marotto et al., 2007), then takes over. This usually occurs when there is a misalignment among musicians, as shown in Diary Entry 5.

This entry also concisely illustrates my sensemaking and sensegiving activity in action. Here the first violins and a solo wind player were playing the same melody but lost synchronization part way through. Had this happened in rehearsal, the conductor would probably have stopped and outlined his preferred interpretation of the passage; the music would then have been repeated as necessary until a unified approach had been achieved.

The incident to which this diary entry refers occurred in concert; stopping was therefore no longer an option. My concern on feeling the problem arise was first to reduce the ambiguity in what I was hearing from the first violins and solo wind player to the point where I could make sense of this information, and then to produce a rational account from which I could contribute to collective action.

I did this by focusing on the gestural direction coming from the conductor, concertmaster and principal second violin – and consequently on what I could hear from the first violins as the section led by the concertmaster – rather than the purely aural information coming from the solo wind line. This reaction was instinctive and grounded in the training and experience that is identified by Weick and Roberts (2001) as a key component of any heedful contribution.

Having made sense of the situation and located the source of what my training and previous experience also suggested would be a solution to the problem, I then coordinated my own gestures with the principal second violin in such a way that our sensegiving activity was unified. The aim of this was to give clear direction to the second violin section.

I was concerned here with providing direction to the section for which I have some responsibility, assuming as I did so that direction from the conductor and the concertmaster through the section principals would be perceived in a similar way throughout the wider string section; any sensegiving on my part to members of other sections was therefore suggestive rather than directive as at no stage did I seek to explicitly impose my own view of what should be done on my colleagues.

These hierarchical arrangements are further complicated in recording by the introduction of a producer for concert repertoire, and then the addition of the film producer and the click track in recording for film. While the film producer is, nominally at least, the key artistic authority in this situation, Diary Entry 13 shows that the conductor remains an important figure, contextualizing and interpreting for the orchestra instructions from the film producer. In this instance the conductor ascertained that the musical atmosphere provided by the musician on the backing track was of greater importance to the film producer than mechanical accuracy of the click track and directed the orchestra accordingly.

The preceding overview illustrates not only the overall context in which I make my contribution, but also begins my examination of the perceptual processes involved in the sensemaking activity of the embodied musician. These processes will now be interrogated further.

6.3 The embodied musician and sensemaking in the orchestra

A heedful contribution is part of a process of interrelating between individuals that generates joint action (Weick & Roberts, 2001). Furthermore, “the contributions of any one individual begin to actualize collective mind to the degree that heedful representation and heedful subordination define those contributions” (Weick & Roberts, 2001, p. 266). This suggests not only subordination to collective aims but also that there is a connection between an individual’s hierarchical situation and joint activity; it is just such a link that I seek to explore in the present study.

In order to do this, it is first necessary to “treat interrelations as a variable and interrelating as a process”; this view not only “suggests a way to conceptualize collective mind” (Weick & Roberts, 2001, p. 266) but also implies that the interactions that occur in the course of a heedful contribution can themselves be usefully interrogated in order to understand these interactions further.

In this regard, analysis of the Field Diary revealed that visual, aural *and* physical information received in the process of interrelating with my colleagues shaped my sensemaking activity; taken as a whole rather than individually, the various diary entries also showed that this activity was underpinned by my training as a musician and previous experience as an orchestral player.

This supports a view of experience which acknowledges embodiment because, as Matthews (2002) in his survey of the work of Merleau-Ponty has pointed out, “if the human subject necessarily has its ‘being-in-the-world’ ... [then] what someone has been in the past provides reasons for her present actions, which are directed towards the future” (p. 93).

The Field Diary shows that I rarely, if ever, received the information from which I generated my sensemaking accounts exclusively through one avenue. It was rather a case of one or more sources being privileged over the others, as in Diary Entry 12 where the aural information of the click track was given greater weight or in Diary Entry 5, where I consciously focused on what I could *see* from the conductor, concertmaster and principal second violin rather than on what I could *hear* from the solo wind player.

In Diary Entry 6, however, it was undoubtedly *gestures* – the forceful physical attack associated with the rhythmic figure played by the front stand of the cello section – that energized my musical response.

It also became apparent during the study that the balance of my sensemaking behaviour between the different forms of information was at least partially related to the form of activity being undertaken; while, as one might expect in an art form concerned with sound, the aural is of central importance, in performance the visual and the gestural each assumed a greater role, due in part to the enforced absence of verbal instruction in the concert environment. In recording for film, however, the mechanical intervention of the click track resulted in an increased reliance on the direction from the aural information being disseminated through the headphones.

Interestingly, my adjustment to these changes in my sensemaking patterns was, at the time the events occurred, largely instinctive, with understanding only emerging later as I interrogated the events in question, first while writing the diary entries themselves and then later during more detailed analysis.

Merleau-Ponty (2002), in his discussion of an organist in action, captures the connection thus:

Between the musical essence of the piece as it is shown in the score and the notes which actually sound around the organ, so direct a relation is established that the organist's body and his instrument are merely the medium of this relationship. (p. 168)

Viewed in this way, the lifeworld of the performing musician is characterised by a continual ebb and flow between the aural – “the notes which actually sound” – the visual – the musician *sees* the notes in the printed score – and the physical – “the organist's body and his instrument” (Merleau-Ponty, 2002, p. 168) – as each stimulates, and is stimulated by, the others.

My experience, as it emerged from the Field Diary, not only supported this perspective but went further, suggesting that the sensemaking and sensegiving activity of the orchestral player can be seen as a kinaesthetic loop, underpinned by creative empathy among the musicians, which encompasses sight, sound, and action. This idea will be examined in more detail at the conclusion of this discussion.

The embodied nature of my contribution thus renders analytical separation of the links between the printed music and the sound world created by the orchestra and the conductor somewhat artificial. There are nonetheless various forms of communication at work in the orchestral setting and so, bearing in mind the close connections that exist between these practices, in order to unpack the interactions which constitute my sensemaking activity further I now discuss each of the key elements – the aural, the visual, and the physical – in turn.

6.3.1 Aural communication

Aural information is at the centre of the artistic lifeworld of the orchestral musician, not only because symphonic music is an art form in sound, but also because of the nature of hearing itself. “When I hear ... I gather sound simultaneously from every direction at once; I am the centre of my auditory world, which envelops me, establishing me at a kind of core of sensation and existence” (Ong, cited in Koivunen, 2002, p. 101).

As I play in the orchestra, I hear not only the sounds emanating from the orchestra itself but also extraneous noises ranging from slamming doors to ambulance sirens, although I am not always consciously aware of these things.

These sounds alone represent a potentially overwhelming quantity of information that needs to be assimilated and interpreted. When combined with the visual input derived from the conductor, concertmaster and other colleagues, all while playing often complex musical scores on a physically demanding instrument (Koivunen, 2002), it becomes clear why the ability to process, and thus to make sense of, auditory information is so important to the orchestral musician. As one conductor has recently suggested, “the key to good playing is the orchestra’s active, engaged listening” (Nierenberg, 2009, p. 6).

This does not simply mean to be aurally engaged in a manner similar to that of an audience member; the idea also implies visual awareness of the gestures of colleagues in one’s field of vision as well as being physically engaged in the process of one’s own playing. Listening, unsupported by visual and physical engagement, is insufficient.

This process of engagement is grounded in the organizing logic that underpins orchestral activity and is derived from the music itself, beginning with the printed music and brought to life in the sound world generated by the musicians: “henceforth the music exists by itself and through it all the rest exists” (Merleau-Ponty, 2002, p. 168).

The music at hand – both in terms of the notes on the page and *vis-à-vis* this music as previously experienced by me in earlier performances and rehearsals – thus provides the causal map (Snook, 2000, p. 18) for my music-making.

Once the orchestra begins to play, the musical map is translated into sound that I experience largely as a continuous flow of auditory information. This musical flow is punctuated by moments such as written pauses, beginnings and endings of phrases, and important or technically difficult passages which require that particular attention be paid to certain musical features within those events.

During these moments, as Diary Entries 7 and 9 suggest, in order to reduce ambiguity and so to make sense of the situation at hand, I seek supporting or clarifying information from my environment in the form of visual or physical input from my colleagues and in particular from the conductor, concertmaster, and the principal second violin.

This view of my work practices supports Weick's (1995) contention that sensemaking is an ongoing activity. He also makes the point that in order to engage in this behaviour "people chop moments out of continuous flows and extract cues from these moments" (Weick, 1995, p. 43); this, for me, is exactly what happens in the course of orchestral activity as I seek visual and physical cues – against the backdrop of ongoing music-making by my colleagues – in order to allow me to understand my environment, and so to generate the account which underpins my contribution to the orchestra's performance.

The increased attention to certain musical characteristics that I experience at pivotal moments in the music is related to the heightened arousal that Weick (1995) identifies as a central feature of occasions for sensemaking.

In typical orchestral activity this arousal anticipates, as well as follows, these musical events (Koivunen, 2003; Marotto et al., 2007), reflecting not only the nature of the event itself but also the emotion inherent in musical performance (Brodsky, 2006). Arousal in the sense employed by Weick (1995) is, in orchestral activity, more a characteristic of non-routine situations such as the incidents described in Diary Entry 5.

Here the arousal indeed occurred “roughly 2 to 3 seconds after an interruption” (Weick, 1995, p. 45). In this case the unexpected loss of synchronization between the first violins and a solo wind line constituted the interruption to routine activity; this was exacerbated by the impact of the issue on the second violin line. Again, I *heard* the problem before becoming aware of it in any other way. My level of arousal was therefore greater than is usual in concert performance but not alarmingly so, as previous experience in similar situations directed me once again toward the conductor, concertmaster, and principal second violin for guidance.

This diary entry illustrates another feature of sensemaking activity in the orchestra; the balance between the need for information and the translation of this information into action. This is an equation of some delicacy because, as Weick (2001, p. 50) points out, “if you choose in favour of accurate sensing” by seeking all the information that is available, “you reduce your capability to take strong action.” While acting on complete information may be desirable, it is rarely possible, as the time constraints of orchestral music-making allow only a few seconds – if that – for sense to be made of a given situation and action to be taken.

The orchestral hierarchy, in facilitating the efficient flow of musical direction, continues to be a very effective arrangement for allowing individual musicians to draw on aural, visual and physical sources in their sensemaking activity with considerable rapidity; this in turn permits the kind of heedful contribution on which orchestral music-making depends. In Diary Entry 5, despite the ambiguity and uncertainty engendered by the non-routine nature of the events in question I was able to find the guidance I needed easily and quickly and so to make the contribution required by the situation.

6.3.2 Visual communication

The information I derived from visual sources – not only what I could see but also from actual eye contact with colleagues – proved to be important particularly in my coordinative work practices. I did not use eye contact in the context of control except to alert section members to the alterations described in Diary Entries 1–3; such contact on the part of any musician other than the conductor is generally a sign that something out of the ordinary is happening or will be required, and, as such, is used by the concertmaster to lead and, on occasion, the principals to coordinate activity.

I now discuss these visual communication practices in the context of my three most important working relationships. These are my interactions with the conductor, the concertmaster, and the principal second violin.

The Conductor

In the case of the conductor visual direction was usually sought and given for general musical guidance such as the overall shaping of musical phrases, changes of tempo, direction at important focal points in the music and any passages of particular significance to the second violins. For the most part, as, due to the seating arrangements, the conductor occupied a large part of my peripheral vision, any change in his or her direction that required added attention on my part was relatively obvious.

Diary Entries 7 and 8 show that visual communication, and especially direct eye contact, is a vital part of the interrelating process between conductor and player, especially in concert performance. In rehearsal the conductor can stop proceedings to make a correction or a musical point. But as a conductor is not occupied with playing an instrument and therefore makes no sound (Nierenberg, 2009), he or she is restricted solely to visual and physical direction in concert performance or recording.

As a result, conductors and musicians alike rely heavily on visual communication to enhance precision of ensemble; it is for this reason that Carlo Maria Giulini began his tenure as the Music Director of the Los Angeles Philharmonic by saying to the orchestra that “I will not remember your names for a little while. But I shall know your eyes!” (Matheopoulos, 1982, p. 172).

Coordination and control are, however, closely linked. The eye contact that is so important for coordination between musician and conductor is also a manifestation of the conductor as *the* central coordinating authority in orchestral performance. Canetti (1962) gives one reason for this; “[the conductor’s] eyes hold the whole orchestra ... he is omniscient, for, while the players have only their own parts in front of them, he has the whole score in his head, or on his desk” (p. 396).

I, as a player, see, in the notes of the printed music, a representation not only of what I am currently doing but also of what I will do in the immediate future. What I see and hear from my colleagues puts this activity in context so that I can contribute on time, in tune, with the appropriate style and at an appropriate dynamic level.

The conductor, by virtue of having the whole score in front of him or her, at once sees the individual and collective contributions of the orchestra members and is therefore able to coordinate and balance the orchestra’s sound while moulding the music that is to come.

This is also because, as he or she is not concerned with the actual mechanics of playing an instrument, “he has the mental space for looking beyond *right now* so that he can shape the future” (Nierenberg, 2009, p. 6, emphasis in the original).

While a full discussion of the sources of a conductor's leadership, authority and power is beyond the scope of this study, I did find that all three were reinforced by both visual and physical communication practices, especially in concert performance and the associated rehearsals where the conductor is the undisputed central artistic authority (Canetti, 1962).

As the diary entries – such as Diary Entries 7 and 8 – demonstrate, when I look at the conductor I am seeking either answers to questions regarding where to play, dynamic volume in relation to other instrumental lines, correct articulation and the like, or confirmation that I am doing what is required. He or she will usually be occupied with other musical tasks, as in Diary Entry 7, so I gauge my actions accordingly.

Occasionally, however, he or she may respond by looking directly at the second violins – generally at the principal, occasionally at me as the second chair player if the principal, for whatever reason, is otherwise occupied, and less often at the whole section. This will usually be in order to give explicit direction as in Diary Entry 8 or to solve a problem, such as the loss of cohesion within the section described in Diary Entry 4.

The visual direction I receive from the conductor is therefore almost always part of a communicative statement, with eye contact accompanied by corresponding physical gestures. This gestural activity will be further explored shortly.

Diary Entries 11–13 show a change in the nature of this visual communication emerging in recording for film, due to the addition to the hierarchical arrangements of the recording producer, the film producer, and the click track; here conductors engaged in considerably less visual communication while the orchestra was playing, becoming more focused on alignment with the information coming through their headphones in the form of the backing and click tracks.

The Concertmaster

In rehearsal, I sought guidance from the concertmaster when changes were made which affected the second violins by watching what he was doing as often as by verbal requesting; equally, I would often see a discrepancy between the concertmaster and the second violins which I would then point out to the principal when the opportunity arose.

In concert performance my attention to visual information from the concertmaster increases considerably, especially if problems such as the loss of cohesion described in Diary Entry 5 arise between different sections of the orchestra.

This is due not only to the greatly reduced margin for error that characterizes the concert setting but also to my being able to see the concertmaster but not, unless he is playing a solo passage, to hear him separately from the first violin section of which he is the leader.

The concertmaster's input becomes, from a hierarchical perspective, especially important if a significant problem arises, as in one incident early in the Field Diary where the conductor and the soloist disagreed on the speed at which the music should be played and so threatened to cause potentially damaging and widespread confusion.

Here the concertmaster quickly ensured that he established eye contact with his colleagues on the front stands of the strings and then gestured with his violin exactly where he expected us to play. This, for me, stabilized the situation, reduced ambiguity and enabled me not only to make sense of what was happening but also to be part of the solution that was rapidly being generated.

Moments such as these, while rare in my professional experience, do nonetheless occur. Because of the speed with which they arise, the orchestral discipline referred to by Lebrecht (1991) is essential if the source of the problem is to be located and a solution that can be implemented quickly enough is to be developed.

Central to that discipline is the internal orchestral hierarchy led by the concertmaster (Koivunen, 2003; Marotto et al., 2007) and the section principals; equally important, however, is a timely and appropriate response from subordinates.

In this respect the incident just described provides an excellent example of why training and experience are so important to a heedful contribution (Weick & Roberts, 2001). My training suggested where the problem was while my experience told me where the solution would probably be generated; as a result I was looking at the concertmaster well before he made his stabilizing gesture and was therefore able to respond to his direction with considerable speed.

Again, my *sensemaking* was a combination of the aural and visual as I heard the issue arise and then looked at the concertmaster for guidance. *Sensegiving* activity on the part of the concertmaster – as I could not hear him separately from the rest of the first violins – was, however, visual and gestural; he first established eye contact and then gestured with his instrument in order to establish a point around which the players could cohere.

The Principal Second Violin

My most important source of visual information is, however, the principal second violin. A recurring theme throughout the Field Diary is the extent to which I depend on this player for specific direction and contextualization of direction from elsewhere. The information I receive from the principal frames my sensemaking activity for two key reasons: firstly, he is my immediate superior in the orchestral hierarchy and leads the section of which I am a member, and, secondly, most of the information on which I base my activity is derived either directly or indirectly from him.

He is, for instance, one of only two individuals – the other, due to the seating arrangements, being the second chair cellist – that I can clearly hear within the musical texture even when they are not playing a solo line. In addition, he is constantly in my field of view either centrally, when his activity is the focus of my attention, or peripherally, when it is not.

Actual eye contact for the purposes of coordination and control most commonly occurs between us in rehearsal, as shown in Diary Entries 1–3. Here I either actively sought his direction or sanction for some action I had taken, or he sought my attention in order to indicate that I should do something, such as the marking of a bowing or articulation indication in the printed part.

In concert, the principal is always in my line of sight, even when my attention is directed elsewhere. This enables me to contextualize and digest what I see and hear, or, as Weick puts it, “to separate signal from noise” (1995, p. 50); the visual information I receive from the principal therefore not only reduces the situational ambiguity which can impair sensemaking practices (Weick, 1995), but also provides me with an important filter which allows me to distil what I need in order to contribute appropriately.

This was in evidence in Diary Entry 5, for example, where I could see the principal contextualizing the direction from the conductor and the concertmaster through a combination of rhythmic placement and articulation of the notes of the second violin part. In Diary Entry 7 this contextualization occurred again; on this occasion the principal, while glancing at me to get my attention, used much shorter bow strokes – which I then matched – in response to the conductor’s smaller beating gestures.

The visual information I received from the conductor, concertmaster and especially the principal, thus emerges from the pages of the Field Diary as a vital influence on my sensemaking activity in the orchestra. What I see mediates what I hear and how I act, enabling me to make a contribution that is subordinate, yet heedful and supportive, as is appropriate for a second chair player who is also an engaged and involved musician.

If, as Weick (1995, p. 50) suggests, “The choice between action and deliberation is irreversible”, then the visual component of my sensemaking is central to my ensuring that prompt deliberation is linked to appropriate action.

6.3.3 Physical and gestural communication

Of the three forms of communication practice which shape my work-related sensemaking activity, perhaps the most easily observed, and thus the most straightforward for the outside researcher to understand, is the physical side of orchestral music making.

Arguably the most overt characteristics of this, especially with regard to orchestral coordination and control, reside in the gestures of the conductor. As Canetti (1962) suggests, “in front, [the conductor] is faced by a small army of professional players, which he must control. For this purpose ... he uses his hands, but here they not only point the way, as they do for [the audience], but they also give orders” (pp. 395–396).

The following example, which describes the Austrian conductor Carlos Kleiber in performance, illustrates the point:

In Verdi’s *Otello* he wanted a short, precise chord ... normally he conducts with his right hand, of course, but for that big chord his left hand would come sweeping down very precisely, like a guillotine, spot on, and you could be in no doubt whatsoever about what he wanted. (Nash, cited in Matheopoulos, 1982, p. 449)

Diary Entries 7 and 8 support this, showing the conductor using gestures designed to achieve specific results. In Diary Entry 7, we see a smaller beating gesture encouraging the orchestra to play more softly. This technique certainly had the desired impact on me as I responded not only by minimising my own movements but also by calibrating these to match what the principal second violin was doing.

This was especially true of the gestures associated with my bow strokes as these govern both the sound I make and how I am seen by members of the section; my gestural activity thus makes a vital contribution to my sensegiving, as my gestures are manifestations of both response and intent.

My actions here reinforce the idea of kinaesthetic empathy, as in seeking to match my gestures to those of the principal, I also sought to place myself “inside the other person’s experience” (Koivunen, 2003, p. 11).

This is akin to what occurs in a string quartet, where there is no conductor but the music is directed by one or more of the players while the musicians heedfully engage in a way which may be musically subordinate but is nonetheless creatively supportive (Murnighan & Conlon, 1991).

Empathy, whether musical or gestural, is also central to my working relations with the principal second violin. As the Field Diary clearly demonstrates, the influence of the actions and instructions of this player permeates my work practices and sensemaking activity.

In rehearsal – as shown in Diary Entries 1, 2 and 3 – any additions or alterations to the printed musical text or instructions to the section members made by me were made subject to his approval. While this approval was often given verbally, eye contact, accompanied by an affirmative or negative gesture, was also used in order to minimise disruption to the rehearsal.

As is the case in my relations with both the conductor and the concertmaster, so the visual and the gestural assume a greater role in my relations with the principal in concert performance as the option of verbal communication is removed.

If my activity in rehearsal is calibrated to be supportive and subordinate, in concert this calibration becomes even more important as, in the absence of verbal instruction, I seek not only to make sense of information from the conductor and the rest of the orchestra in the context of the second violin part, but also to engage in coordinated sensegiving activity with the principal which results in meaningful and unified direction to the members of the second violin section.

In order to achieve this it is important that my movements do not contradict those of the principal. I have to avoid, for example, making larger or more forceful gestures than his, and if he cues the section at a particular moment it is better that I make no gesture at all rather than move either ahead of or later than him.

I also generally avoid physically moving more than is required by the playing of my instrument, as this too can be seen as undermining the principal's direction. The main exceptions to this are when a problem of ensemble arises, either within the section or elsewhere, where there is uncertainty about exactly where to begin, or when it is important that the entry of the second violins is absolutely clear and confident.

In these instances I watch the principal particularly closely, supplementing his gestures with my own and closely examining his activity for any indication that my contribution is anything other than what is required.

This was the case in both Diary Entries 4 and 5 as I kept playing – despite the noticeable deterioration in ensemble that occurred in these instances – but with very little movement and a reduced dynamic volume. This enabled me to make sense of the nature of the loss of cohesion and to seek direction from the conductor, concertmaster and, especially, the principal. Once I had understood what the problem was and where the solution lay, I was then able, when I fully rejoined, to gauge my bodily movements precisely so that they supported and enhanced what I perceived the principal's sensegiving gestures to be.

Diary Entry 14 shows that this balance changes in recording for film. Here the need for gestural direction from the principal or the second chair player was greatly diminished, as was my focus on the conductor as the central coordinating authority of the orchestra.

This hierarchical arrangement was altered in recording film music by the introduction of the click track, as each player receives the same information from this source simultaneously. I continued to play with the principal and to follow the conductor, but now not only did the click take precedence over these two as a rhythmic guide, but also its intervention reduced considerably the need for any associated sensegiving input on the part of front stand.

Having interrogated the aural, visual and physical elements of my sensemaking and sensegiving practices individually, I now turn to a more detailed examination of how they combine in a kinaesthetic loop to underpin my contribution to orchestral coordination and control.

6.4 The kinaesthetic loop

The events outlined in the Field Diary collectively demonstrate the indivisibility of the aural, the visual and the physical during onstage orchestral music-making. In concert performance, as shown in Diary Entries 4 and 5 for example, I *heard* the issue, *saw* the direction of those who had the responsibility for solving the problem and made the *gestures* that constituted both my musical response and my sensegiving activity.

This, in my view, shows that the role of kinaesthetic empathy in orchestral music-making is both comprehensive and fundamental. Drawn from dance and movement therapy (Pallaro, 1995; Parviainen, 2002), kinaesthetic empathy is “the bodily process of taking-in, or tuning-in to a client’s movements and bodily expressions” (Fiedler, cited in Pallaro, 1995, p. 183).

Kinaesthetic empathy, then, is not simply physical mimicry but also involves emotional perception; “our emotional reactions are not only determined in terms of kinaesthetic recognition, but in terms of kinaesthetic response as well ... We may perceive emotional behaviour in others and immediately experience it within our bodies through kinaesthetic empathy” (Berger, cited in Pallaro, 1995, p. 183).

Cumming (1997) links the kinaesthetic to the musical by suggesting that gesture “is an interpretant, a link between a melodic figure and a particularly shaped expressive movement, which is recognized during listening by an impulse towards bodily response” (p. 9).

This, to me, suggests more than just imitation of the conductor’s gestures (Koivunen, 2003; Marotto et al., 2007), pointing instead to empathetic interaction not only with the conductor but also with colleagues in the orchestra.

In Diary Entry 9, for example, the conductor, having asked the remainder of the string section to play their notes a fraction behind the double basses, found that directing the double basses while attempting to indicate exactly where the other string players should play was both clumsy and counterproductive.

While the concertmaster did provide some direction here, the response from the members of the front stands of the string sections was one of ‘leading together’ in gestural empathy, with the note played by the double basses – which involved not only the note itself but also the associated physical gesture – generating an “impulse towards bodily response” of the kind identified by Cumming (1997, p. 9) from me and, so it seemed, from my colleagues.

Sachs (1993) captures something of the power of this co-creative force in his description of the Italian conductor Arturo Toscanini in performance with the NBC Symphony Orchestra. For Sachs, Toscanini’s conducting was “not merely beating time but drawing the musicians into the music and helping them progress through it, persuading them to bring it to life; it activated and shaped the music” (p. 150).

Analysis of the Field Diary suggests that it is this empathy which, grounded in the guiding logic of the music itself, underpins a kinaesthetic loop in which the aural, visual and physical elements of my sensemaking activity operate in a continuous and mutually supportive cycle of generation, feedback and response; this loop in turn drives not only coordinative activity but, through the gestural manifestation of this empathetic interaction, directive sensegiving as well.

In this the concept of the kinaesthetic loop is an extension of the ideas of Bahn et al. (2001) who, in writing of the physical relationship between players and their instruments, contend that “the instrument conducts touch, amplifies it and sonifies physical gesture. In return, the body responds to the ‘feel’ of the instrument and its resulting sound. A resonating feedback loop between touch, sonic result, and feel is formed” (p. 2).

To take a relatively commonplace example of the kinaesthetic loop in practice, I breathe in with the upbeat gesture which I see from the conductor at the beginning of a piece of music. This natural response in itself creates associated gestures on my part that involve my instrument and my right arm and bow; this in turn has an immediate impact on the sound I produce.

In the process I assimilate both the style and the timing implicit in the conductor’s gesture, not only responding bodily to his direction but also engaging in a process of interrelating with the conductor and my colleagues which is, in my view, one of co-creation emerging from the empathetic interaction between player and conductor and underpinned by the conductor’s interpretive intent.

This example further suggests that not only is “gesture ... in part a trace of a performer/instrument relationship” (Bahn et al., 2001, p. 2) but also that these gestures are, in addition, embodied manifestations of the relations among players and between the players – both individually and collectively – and the conductor.

Kinaesthetic empathy thus extends for me beyond relations between the players and the conductor to the interactions among the players themselves, and occurs not only in gestures but also through eye contact and engaged listening (Nierenberg, 2009).

In Diary Entry 4, for instance, I *heard* the loss of cohesion among the second violins but was only able to make sense of the situation by seeking *visual* and *gestural* direction from the conductor, the concertmaster, and, especially, from the principal.

Having received this direction and reduced both the amount of sound I was producing and the associated physical gestures in order to facilitate my sensemaking activity, I rejoined the continuing musical line while paying even closer attention to the gestural activity of the principal.

The influence of kinaesthetic empathy is also apparent in Diary Entries 6 and 9 described earlier, where the conductors concerned chose to *relinquish* some of their directive authority to players. The rhythmic energy that emanated from the cello section in Diary Entry 6 was not only musical but also physical, manifesting itself in the bow strokes of the front stand of the cellos in particular. These gestures, while regular, were powerful, abrupt and quite percussive and prompted an equally energetic response from me and the principal second violin.

In recording for film, however, the introduction of the click track altered this arrangement; Diary Entries 12–14 suggest that as my focus on the click increased, so the attention I paid to the visual and auditory information being generated by my colleagues in general and the principal in particular waned. As a result of this, while I still engaged in some of the rehearsal and concert behaviours mentioned earlier, some of these, such as questions of ensemble and tempo, were instead mediated by the click track rather than the principal, the concertmaster, or the conductor.

The idea of the kinaesthetic loop is also at the heart of understanding the delicate balance between the subordinate and the supportive in the activity of the second chair second violin. Here the relationship between the second chair and the principal emerged as similar to that between the first and second violins in the majority of the string quartets surveyed by Murnighan and Conlon (1991) – subordinate but still needing to retain some individual musical authority – although in the orchestra there is, of course, the added imperative of a formal organizational hierarchy.

Consider, for example, Diary Entry 7. In this instance the conductor was dealing with problems of dynamic level created by the acoustic environment of a particular concert hall. My response to the conductor's direction and also to that of the principal –the conductor on this occasion used a small beating gesture while the principal used a smaller bow stroke which in turn generated less sound – was

immediate and appropriate, as I moved with but not more than the principal, matching my sound to his as I did so. This showed that not only that I had seen the gestures of the conductor and the principal but also that I had understood, and empathized with, the intent behind them.

Diary Entry 10, on the other hand, indicates what happens when empathetic interaction is, for whatever reason, either diminished or absent. Here the tentative approach identified by the conductor became apparent to me in my conscious and awkward realization of aspects of my playing which I usually take for granted. This included, for example, how I made sense of the recording situation in response to the presence of the microphones on stage and the producer in the booth. These, for me, combined to add a form of psychological pressure which briefly undermined not only my awareness of my physical space but also my confidence in the accuracy of my playing; this pressure, by adding to my perception of uncertainty and ambiguity, affected the quality of my overall contribution. The conductor's comments implied that my response to the unfamiliar environment was by no means unique among the musicians of the orchestra.

As this is an autoethnographic inquiry into one player's work practices, however, I have not discussed the implications for the wider orchestral group of the idea of the kinaesthetic loop, although analysis of Diary Entries 6, 9 and 10 certainly suggests that the idea could be applied to interactions between players as well as to the experience of one musician.

This is among a number of promising future directions for further inquiry that have arisen in the course of the present research. Some of these possibilities will be examined briefly after the remarks with which I now outline the findings of this study.

7 CONCLUSIONS

The primary aim of this study is, by adding to our knowledge of coordination and control in the orchestra, to increase our understanding of orchestral work practices.

This endeavour was undertaken through an interrogation of my own work experiences as the second chair second violin in professional symphony orchestra; in so doing I also sought to complement outside examinations of orchestral work with a perspective from inside the orchestra.

A survey of the literature relating to orchestras showed that literature to be concerned mainly with offstage orchestral activity, or, when discussing onstage practices, to be focused on relations between the conductor and the orchestra as a group, not as a collection of individuals. Little study has been undertaken of interactions within the orchestral group, whether horizontally among players of the same hierarchical level, or vertically between superiors and subordinates; this is despite an acknowledgement across a wide range of the literature on orchestras of the importance not only of relations between players but also of the internal orchestral hierarchy in successful orchestral performance.

In order to at least begin to address this imbalance while unpacking what have proven in many cases to be complex, tacit and taken-for-granted work practices – and, further, to explicitly acknowledge the personal nature of this inquiry – I have employed an autoethnographic research orientation underpinned by the phenomenology of Merleau-Ponty (2002, 2004) and an analytical framework which draws on the sensemaking ideas of Weick (1995, 2001).

The intent here was first to allow the events recorded in the Field Diary to speak, as it were, for themselves and then to understand how I made sense of those events in a way that provided the basis for action. This in turn provided a basis for interrogating how I contribute to orchestral activity, particularly with regard to the closely related notions of coordination and control.

This approach has yielded a number of implications for orchestral work practice which I now outline:

7.1 Sensemaking

- Sensemaking activity, for the second chair second violin, occurs in an ongoing kinaesthetic loop, based on creative empathy with my colleagues, which draws on and is generated by auditory, visual and physical elements virtually simultaneously. This loop can therefore be viewed, in my case, as providing the sensemaking and sensegiving framework for the orchestral musician's activity.
- These elements are ultimately inseparable as each generates, and is generated by, the others. They are also underpinned by my relationship with my instrument, as in touching my violin and holding my bow I am also feeling and responding not just to the vibration and sound of the instrument and strings as I play but also to the tension of the strings and the bow stick under my fingers and in my hand.
- Aural, visual and physical elements, either alone or in combination, may be privileged according to the activity and the situation. This is especially true at non-routine moments such as the loss of cohesion described in Diary Entry 5.
- Such privileging had a qualitative impact on the nature of my music-making. In recording for film, for instance, the primacy of aural information from one source in particular – the click track – led to a musical result which I found to emphasize formula at the expense of creativity.

- The recording environment subtly alters my spatial perception and awareness, which is exacerbated by the presence of the click track and headphones in recording for film; this results, initially at least, in some discomfort and loss of musical confidence.
- In concert, the underlying logic of performance derived from the music itself is manifested primarily through aural information. In general, this is then contextualized firstly by visual communication, especially where direct eye contact is employed, and then by physical communication through specific gestures.
- This combined information underpins my sensemaking activity and is therefore central to the nature of my contribution. In order to be effective rather than disruptive, this contribution must be heedful, balancing support and engagement with appropriately subordinate activity.

7.2 Coordination and control

- In hearing I am also making sound which is heard, in making eye contact with others they also make contact with me, and in empathetically engaging with the gestures of my colleagues I, too, make a gestural response; these are outward manifestations of the empathetic nature of orchestral music-making. This is an extension of Merleau-Ponty's suggestion that, "since the same body sees and touches, visible and tangible belong to the same world" (2002, p. 252). While the exact nature of this empathy has proven difficult to extract and to analyse, Diary Entry 10 illustrates the negative impact on performance, whether in concert or recording, when empathetic interaction is diminished or absent.

- My *sensegiving* activity is perhaps the clearest manifestation of a heedful contribution; here I must carefully balance my gestures and playing style between supporting the principal, especially in non-routine moments, and remaining subordinate to him. My response to his direction, and hence my sensegiving gestures to the members of the second violin section, is based on active engagement and kinaesthetic empathy with the principal, and, further is grounded in my previous training and experience in comparable situations. Gestural activity can therefore be seen as an external manifestation not only of my sensemaking activity, but also as a driver of my sensegiving, with the section principal, to the members of the second violins.
- Musical direction frequently comes from within the orchestra as well as from the conductor, as shown in Diary Entries 6 and 9; in these instances empathy among colleagues, as opposed to dictation by one pre-eminent authority, becomes the central guiding quality around which orchestral activity coheres. When this occurs I tend to consciously privilege visual information, seeking guidance from the principal in particular, in order to help generate a unified response from the second violin section.
- Rhythm is a pre-eminent organizing, as well as musical, feature in orchestral activity, as demonstrated by the rhythmic figure played by the cello section in Diary Entry 6; in this instance rhythmic impetus was clearly manifested in bodily gestures as well as musical pulse. The inherently forceful nature of these gestures, as well as the powerful drive from the music itself, elicited an equally energetic response from me.

- Coordination and hierarchy are closely linked and mutually supportive; my sensegiving contribution, as required by my position, must align with the direction from the conductor, concertmaster and, in particular, the principal second violin if that contribution is to be effective. This also requires that I make sense of general direction from the conductor and specific contextual direction from the concertmaster and principal at the same time. Empathy with “the other person’s experience” (Koivunen, 2003, p. 211), both kinaesthetic and creative, is therefore an essential ingredient in successful interrelating with my colleagues.

8 FUTURE DIRECTIONS

The ideas presented in this research provide some insight into the work experience of a professional orchestral violinist. Equally importantly, however, this study offers a number of opportunities for further contributions to be made.

Among the most important areas are:

8.1 The kinaesthetic loop

Of the findings that have emerged from this study, the concept of the kinaesthetic loop is perhaps the most important. As the present research was limited to an exploration of the experience of one individual, there remains considerable scope for investigation of how this process is manifest in a larger group and, consequently, within a wider organizational context.

Auditory, visual and physical elements were identified in this research as key components of the kinaesthetic loop; the balance between these constituent parts reflects, however, my own personality. Having analysed one perspective in some depth, examination of the experience of musicians across and between orchestras is therefore necessary in order to develop the idea further.

8.2 Power relations

The power that the conductor on stage has over the musicians of the orchestra has been extensively discussed from a range of viewpoints which focus primarily on the role of the conductor (e.g., Atik, 1994; Attali, 1995; Canetti, 1962; Hunt et al., 2004; Lebrecht, 1991; Ropo & Sauer, 2007). As the present research is an autoethnography concerned with the contribution of the second chair second violin, extensive analysis of this key area of orchestral life was beyond the scope of this study.

Little mention has, however, been made in the literature of the extent – touched upon in Diary Entry 8 – to which podium-related power is vested in the conductor by the musicians themselves, both individually and collectively, as they seek to understand and interpret his or her directions.

An awareness of how this power is constituted is central to understanding the collective discipline and submission to the creative direction of the conductor on which orchestral performance depends (Lebrecht, 1991; Matheopoulos, 1982); conductor-centric discussion, in my view, tells only part of this aspect of the wider orchestral story and so could usefully be enhanced by analysis from other perspectives.

8.3 Communication practices

In most work environments aural information plays a secondary role to the visual and the physical (Koivunen, 2002; Prichard et al., 2007). In the orchestra this position is reversed; activity coheres around the organizing logic of the audible music, with visual and physical information supporting and supplementing what the musicians hear (Koivunen 2002; Matheopoulos, 1982).

The auditory communication that occurs during orchestral activity other than rehearsal is, furthermore, non-verbal. This, as the Field Diary indicates, increased the attention I paid to eye contact and gestures from colleagues. As in this study I was limited to interrogating these practices firstly with regard to my own experience and secondly *vis-à-vis* my contribution to coordination and control in the orchestra, further investigation of communication practices within the orchestra represents a potentially fruitful line of inquiry.

8.4 Organizing processes

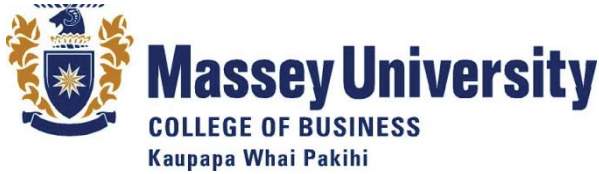
Examining my own work experience and practice revealed a number of research possibilities centred on organizing processes in the orchestra. For example the empathy among musicians on the front stands of the various string sections that was evident in Diary Entry 9 suggests that the kinaesthetic loop – and its concomitant constituent quality, creative empathy – is a sensemaking form which is not unique to me, and which is also closely linked to empathetic interaction among players. This may also be true of other organizational forms, particularly where close working relations are the norm.

In addition, the “rhythm, flow and synchrony” (Prichard et al., 2007, p. 17) of organizational work processes is at the heart of orchestral activity. Consider, for example, Diary Entry 6: here the driving rhythm from one section of the orchestra provided the organizational, as well as the musical, logic for my activity not only through aural but also through visual and physical means.

Diary Entry 10, on the other hand, provides an illustration of the effect on musicians of the absence of this collective organizational momentum; further scrutiny of the impact on the orchestra of the inherent rhythmicity, both musically and organizationally, of orchestral activity could therefore improve our understanding of the organizing processes at work in orchestral music-making.

Although in this research I have sought to investigate my own experience and practice and in so doing to focus on issues of coordination and control, this brief outline of possibilities generated by the study demonstrates that the orchestra represents an environment where “the soundscapes of work and organizations” (Prichard et al., 2007, p. 16) warrants continued exploration.

9 APPENDIX A



DEPARTMENT OF MANAGEMENT

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Paradox of Perception: The role of the second chair second violin in a symphony orchestra.

INFORMATION SHEET: David Gilling, Masters of Management Thesis

In this research I intend to examine coordination within the symphony orchestra by investigating my own work practices both as a violinist and as a longstanding member of a professional orchestra. This study will focus on taken-for-granted aspects of orchestral music-making in order to add to our knowledge of the organizing processes involved in orchestral work.

The raw material for this analysis will be drawn from a Field Diary kept during the upcoming concert season. Data contained in the Field Diary will only be accessible to me and my supervisor and will remain locked in my, and, after analysis is completed, my supervisor's filing cabinet. Any type-written notes will be stored on my password-protected computer. After 5 years, all data will be destroyed using a document shredder and all digital data will be deleted. The Field Diary will in turn form the basis of my research report. A draft copy of the substantive chapters of this report will be made available for comment to those colleagues who may be interested or in any way concerned. Throughout the research every effort will be made to preserve the anonymity of members of the orchestra; no audio or visual recordings of the activity which constitutes my raw material will take place and I will maintain strict control over my field diaries and the preliminary draft.

If you have any questions at all regarding this research, please contact either me, through the NZSO, or my supervisor. My research supervisor's contact details are:

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Committee Approval Statement This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 08/65. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B. Ph: 04 801 5799 ext 6929. Email: humanethicsouthb@massey.ac.nz

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