

**‘Dynamic Structure’ in the Performance of
Symphonic Music: An Examination of Wilhelm
Furtwängler’s Recordings**

VOLUME I

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Declaration

I hereby declare that this thesis is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the preface and specified in the text. I further state that no substantial part of my thesis has already been submitted, or, is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. It does not exceed the prescribed word limit for the Degree Committee of the Faculty of Music.

Abstract

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Martin Elek

Recent theoretical and critical re-evaluations of musical structure have fostered a new understanding of the concept: it has been argued that structure is best understood as a pluralistic and diachronic phenomenon emerging from structural relationships inferred individually by analysts, performers and listeners through the media of scores and performances. Contrary to conventional definitions, it has also been shown that musicians themselves – and conductors in particular – tend to conceptualise large-scale structure dynamically, that is, in terms of such properties as shape, motion, goal-directedness and climax. To date, however, the implications of this concept of structure have not been fully explored in analyses of performances of large-scale symphonic music. This thesis examines the ways in which given conductors conceptualise and project representations of structure in performance, and it utilises a range of analytical approaches suited for the study of those representations. The work centres around Wilhelm Furtwängler (1886–1954), a prominent conductor for whom musical structure and the aforementioned dynamic features of form were primary performative considerations. After examining the concept of musical structure and the conducting style of Furtwängler, the thesis explores the latter’s shaping of symphonic music through three contrasting examples: two movements commonly interpreted as being in sonata form and variation form (respectively, the first and fourth movements of Brahms’s Fourth Symphony), and a symphony in its entirety (Beethoven’s Fifth Symphony). In each case, judicious comparison with select recordings of other conductors is also undertaken for the sake of contextualisation. Alongside established quantitative techniques, the project utilises experimental qualitative methods based on the perception of intensity and motion in performance in order to develop an innovative multi-parametric approach to the representation and thus to the understanding of musical structure in performance.

Acknowledgments

I began work on this thesis in 2019 – a time that now seems extremely distant. Then, I had just moved to the UK, leaving behind family, friends and colleagues, and I felt excitement but also apprehension in the face of the unknown. It is no exaggeration to say that my life has transformed since then: I have gotten married, I have learned about and have adjusted to life in the UK, I have developed as a researcher and teacher, and I have gained some much-needed perspective. Doing this research has truly been life-changing, and my experiences will undoubtedly shape my path in the future. I would like to briefly thank some of the people that have been by my side and have supported me in completing this gargantuan undertaking.

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Note on the Text

All translations in this thesis are mine unless otherwise stated. The originals of translated quotations are included in the relevant footnotes and, in the case of concert reviews, the Apparatus in Volume II, with original spellings preserved. All figures, tables and musical examples discussed in the text are found in the Apparatus and are organised according to chapters to facilitate simultaneous use of both volumes.

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Introduction

Musical structure is a concept familiar to most musicians and musicologists. Whether through musical education or by simply reading books on music published in the past hundred years, one is bound to have encountered this notion in one way or another. Indeed, structure occupied a central position in the writings of music analysts and theorists for the bulk of the twentieth century. Arising from a positivistic need for ‘objective’ analytical concepts in the early decades of the century, structure was made a focal point of post-war, institutionalised music analysis, especially within anglophone countries.¹ In this way, the concept went on to dominate the music theoretical discourse for the following decades. At the height of this preoccupation with structure, it was seen as the ultimate source of musical meaning and even expression.²

Due to its profound impact on musical thought, the notion of structure also exerted considerable influence on the understanding of musical performance, the purpose of which came to be viewed as the reproduction of structure as identified through music analysis.³ This aligned perfectly with the traditional work concept, which led people to see the essence of music embedded in the score and view performers as either fully subservient to the creators and explicators of musical meaning (composers and analysts, respectively) or, in extreme cases, completely unnecessary to the full appreciation of music.⁴ Accordingly, in discussions about music, performers were generally denied agency, and their potential for creative contribution was, for the most part, disregarded.

From the 1990s onwards, however, the discourse began to change in fundamental ways. Under the banner of the so-called ‘performative turn’, performances finally started to be acknowledged as sources of musical meaning and musicians themselves as co-creators of the musical work.⁵ This change of perspective led to the emergence of ‘Performance Studies’ as a subdiscipline of musicology – a framework within which the present thesis is conceived.

This change of perspective directly affected musical structure, the interpretation of which as a singular and fixed entity, inherent in the score, became increasingly untenable. Instead,

¹ This was inextricably linked to the growing popularity of Schenkerian theory, which – after taking root in North America in the late 1930s – was adopted in much of the English-speaking world (Cook 2013: 34).

² Expression and structure were linked primarily by music psychologists in the 1980s. Eric Clarke, for one, asserted that ‘There is no plausible alternative ... to the idea that expression is derived from structure’ (1988: 11).

³ This view is reflected in works such as Stein 1962; Cone 1968; and Berry 1989.

⁴ This viewpoint is reflected in Arnold Schoenberg’s assertion, which was relayed by Dika Newlin: ‘the performer, for all his intolerable arrogance, is totally unnecessary except as his interpretations make the music understandable to an audience unfortunate enough not to be able to read in in print’ (Newlin 1980: 164). For a discussion, see Cook 2013: 8–9, 13–17, 33–38.

⁵ See Cook 2013: 22–32.

writers proposed a concept of structure as a dynamic and pluralistic phenomenon emerging through the variable inference of structural relations, leading to multiple and unique structural representations created by musicians, analysts and listeners.⁶ Most importantly, this view acknowledges the role of musicians in the creation of structure.

At the same time, further facets of the traditional notion of musical structure came under criticism. ‘Structural hearing’ – the previously prominent idea according to which the supreme experience of music was through discerning structural patterns in listening – was increasingly shown to be an unrealistic expectation, with a string of empirical studies demonstrating that traditional features of structure, such as tonal unity, had little to no effect on listeners’ perception of music.⁷ Besides helping to dispel the notion that performers’ contribution is limited to reproducing theoretical structures, these changes led some writers to question the very relevance of the concept of structure to the experience of performance and listening.⁸

However, even nowadays, most performers and listeners would probably push back against the idea that large-scale musical processes and patterns are completely irrelevant for the experience of music in performance.⁹ Arguably, these indeed play an important role in the performance and perception of music, albeit in different ways than previously assumed. Examinations of listeners’ and musicians’ testimonies and responses to listening exercises show that dynamic concepts of structure are indeed relevant to their conceptualisation of music. Indeed, an examination of this ‘dynamic structure’¹⁰ – that is, structure as a flexible and pluralistic entity, primarily experienced diachronically and emerging through individuals’ unique inference of potential structural relations – can reinvigorate the notion and can shed light on hitherto neglected features of performance.

However, the study of dynamic structure is still in its infancy. Many have written about its conceptual basis: diachronicity, or the view of music as process rather than static architecture.¹¹ However, only few have examined the possible application of the concept in performance analysis. The most relevant amongst these writings is Ana Llorens’ 2018 thesis ‘Creating Musical Structure through Performance: A Re-interpretation of Brahms’s Cello Sonatas’,¹² in which she explored the musical parameters relevant to the diachronic experience of musical structure in the context of romantic chamber music. Although her work has made inroads into the study of

⁶ See Gottschewski 1998 and Rink 2015.

⁷ See pages 28–30 in Chapter 1.

⁸ See Leech-Wilkinson 2012: ¶ 4.10.

⁹ See, for example, Doğantan-Dack 2008: 305.

¹⁰ Llorens (2018) instead opts for the term ‘diachronic structure’.

¹¹ See pages 18–20 in Chapter 1.

¹² Llorens 2018.

dynamic structure, it by no means provides a comprehensive overview of the phenomenon, important aspects of which are still in need of investigation.

The Thesis

In this thesis, I aim to shed more light on the phenomenon of dynamic structure by examining the large-scale structural shaping of symphonic music in Wilhelm Furtwängler's recordings. In doing so, I address the following research questions:

- To what extent are standard definitions of musical structure relevant to the ways in which a conductor might approach the performance of symphonic works?
- How might musical structure be created by those conducting large-scale symphonic works?
- What types of structural representations might a conductor project when conducting large-scale symphonic movements and entire symphonies, and how do these representations vary across multiple performances?
- How can the dynamic qualities of symphonic structure in performance be captured and used for the purpose of analysis?

Symphonic music has been generally neglected in performance analysis.¹³ This is primarily due to the methodological difficulties that it poses. Performance on solo instruments or small groups of instruments provides an ideal subject for quantitative analysis: in the case of tempo analysis, the clear soundscape and precise attack of a piano, for example, allow for automatic note-onset detection or, at the very least, greatly facilitate manual analysis. By contrast, the sound of a symphonic performance – especially on early recordings – presents a much more complex situation due to its high number of individual voices and the unavoidable imperfections of ensemble. This all but eliminates the possibility of note-onset detection through software, but it also makes manual identification challenging as the diffused soundscape of the orchestra results in an unclear spectrogram (a visual representation of the sound frequencies used in analysis). Further complications arise from the great length of symphonic works. While short character

¹³ This is true of Performance Studies at large, but it is worth mentioning that some early works, including Philip 1992 and Bowen 1996, focused specifically on symphonic music, albeit using a rather rudimentary analytical methodology.

pieces, which formed the basis of early performance studies,¹⁴ typically have a length of a couple of minutes, symphonic movements can last anywhere between three and thirty minutes, to say nothing of entire symphonies. This naturally extends the time investment needed for the production of analytical data and it also makes aural analysis difficult. These issues notwithstanding, symphonic music has historically been the primary testing ground for large-scale musical structures, and our understanding of dynamic structure cannot be complete without an examination of this genre. Accordingly, the analytical chapters of this thesis address this hiatus by focusing on various styles of symphonic movements (Chapter 3 and 4) and a complete symphony (Chapter 5).

At the centre of the analysis lies the German conductor Wilhelm Furtwängler (1886–1954). He was chosen for this purpose for several reasons. To begin with, he left behind a vast discography, with his performances of certain pieces having been preserved in up to a dozen recordings. This allows for a comparison of a wide range of recorded performances. Moreover, some of these recordings were produced merely a few days apart and with the same orchestra, which affords an excellent opportunity to examine how his structural representation varied from performance to performance. Furthermore, there is at least one aspect of Furtwängler’s discography that provides a direct advantage over recordings of more recent conductors for the purpose of analysis: the fact that most of his recordings originate from live radio broadcasts renders the issues of disjointed recording sessions and subsequent edits – the unavoidable facts of modern commercial recordings – mostly irrelevant, preserving the integrity of the performance event and its coherence in terms of structural shaping.

A further advantage of studying Furtwängler is the large array of additional sources that help contextualise his performances. These include the conductor’s own writings, annotated scores and performance materials, concert and recording reviews, personal reminiscences, and the scholarly literature – all of which was considered in this thesis. Furtwängler shared his thoughts about music and musical life in a large body of articles, letters, interviews and miscellaneous notes. Most of these writings have been published in collected volumes, while some are also available in translation. Although Furtwängler rarely broached the subject of his personal conducting style, his writing reveals a life-long preoccupation with questions of structure. Perhaps less commonly known are the various annotated conducting scores and orchestral parts that have been preserved as part of Furtwängler’s estate. These sources have not yet been fully examined but can provide valuable information about the conductor’s performance

¹⁴ See the ‘Mazurka Project’ of the UK-based AHRC Research Centre for the History and Analysis of Recorded Music (hereafter CHARM), which was active between 2004 and 2009: <<http://www.mazurka.org.uk/>> (accessed 8 June 2023).

practices. As one of the most prominent conductors of the century, Furtwängler's conducting activity was also regularly reported in the press. Despite the undeniable value that these reviews offer in contextualising Furtwängler's performance style and shedding light on his contemporary reception, this group of sources has been mostly neglected in scholarly discussions of the conductor. This thesis is one of the first studies to incorporate a significant body of reviews into its analysis of Furtwängler's conducting style. Recording reviews and personal recollections can also be used to highlight Furtwängler's posthumous evaluation. Finally, the scholarly literature on Furtwängler can be considered outstanding in comparison with other twentieth-century conductors. Besides the numerous biographical works, there is also a modest, albeit comparatively significant, body of writings that directly address the conductor's style, sometimes even through computer-assisted performance analysis. Over the course of this thesis, I argue that despite their valuable contributions, these studies have failed to identify crucial features of Furtwängler's structural shaping which come to light when seen through the lens of dynamic structure.

In the case of orchestral performance, the issue of agency also needs to be considered. Crucially, conductors alone do not create performances in a technical sense; it is the orchestral players that generate sound, and it is through their skills and musicality that a performance truly emerges. How can then one talk about a conductor's performance style? It is generally assumed that an orchestra does what a conductor wishes. However, there are many circumstances where this does not apply. First of all, a conductor cannot control every aspect of a performance: even the most detail-oriented and iron-fisted conductor cannot specify every facet of the sound, especially during a live performance. Secondly, a conductor might intentionally avoid giving specific instructions, instead opting for suggestive or purposefully vague guidance. Thirdly, an orchestra might simply not have the technical skill to execute the ideas of a conductor. Finally, for better or worse, orchestral players might simply ignore a conductor's direction. Once again, this issue is mostly minimised in the case of Furtwängler's recordings. The conductor led the Berlin Philharmonic for over 25 years and had a similarly close relationship with the Vienna Philharmonic.¹⁵ By the time he started producing the majority of his recordings in the early 1940s, he had been working with these orchestras for some twenty years, resulting in a mutual

¹⁵ He took over the direction of the Berlin ensemble in 1922 after the death of Arthur Nikisch and held this post until 1945 (from 1934 onwards without the official title of principal conductor). From 1947, he resumed his conducting activity, regularly appearing with the Berlin Philharmonic. In 1952, he was once again elected the principal conductor of the orchestra, which he led until his death in 1954. At the same time, Furtwängler was also deeply involved with the Vienna Philharmonic. From his first concert with the orchestra in 1922, he conducted the ensemble regularly, in most years directing at least one concert and occasionally taking over most of the orchestra's seasonal programme.

understanding of the needs and processes of conductor and ensemble.¹⁶ Accordingly, although there can be no guarantee that the performances mirrored his intentions exactly, one can cautiously assume that most things on record reflected his interpretation of the music in some capacity.¹⁷

Finally, but perhaps most importantly, Furtwängler was chosen for this study because his recordings convey an impression that there is more to his performances than what traditional analytical terminology and concepts could explain. It seems that there is something inherently dynamic about his approach to music, dominated by a continuous and goal-oriented shaping of what could be best described as energy or intensity. This entire thesis grew out of a desire to shed light on this phenomenon.

The analytical methodology was also developed with Furtwängler's recordings in mind. Since the dynamic qualities of structure emerge through the processual unfolding of the performance and since they cannot be captured using traditional quantitative techniques, the main tool used in this thesis is aural analysis. Therefore, listening impressions gained through repeated listening sessions form the basis of the investigation, and it is from this that the main representational tools of the analyses – visualisations of intensity, motion and groupings – emerged. This ensures that the structures identified are not purely intellectual constructs based on data but rather phenomena directly perceptible in listening.

However, quantitative analysis proved to be useful in explaining and contextualising the listening impressions. In this thesis, this included the analysis of tempo and loudness data in the form of tempo and dynamics curves, Pearson correlation analysis and arch correlation plots. It should be noted, however, that tempo and loudness by no means represent the only musical parameters that play a part in the creation of structure in performance.¹⁸ The reasons for examining this limited range of parameters in this thesis are manifold. First of all, since the basis of my analyses is listening impressions, it stood to reason to analyse features that appeared most salient to the structural shaping of the performances, and in Furtwängler's recordings these undoubtedly take the form of tempo and dynamics. Also, since quantitative analysis was used in a complementary function, limitations had to be made in the amount of time invested in computer analysis, especially since – as described above – I also had to tackle the unique challenges posed by symphonic music. Furthermore, certain parameters are much more difficult – if not

¹⁶ Werner Thärichen, timpanist of the Berlin Philharmonic during Furtwängler's final years, recalled multiple examples of the orchestra adapting to Furtwängler's unique requirements and conducting techniques ([1987] 1991: 17–25).

¹⁷ Naturally, this situation is made yet more complex with the addition of the recording technology itself, which added one further barrier between Furtwängler and his audience. See pages 74–76 in Chapter 2.

¹⁸ Llorens 2018, for example, showed that articulation, timbre, asynchrony, balance and intonation can also be structurally significant.

impossible – to study in orchestral music than in solo or chamber repertoires. While articulation and elements of timbre might be discerned from the spectrogram of a solo instrument's recording, this becomes impractical in symphonic music due to the sheer number of individual sources of sound. Moreover, one needs to consider the variances in the playing of individuals within groups of instruments, which further complicates matters. Finally, early recordings of symphonic music present additional challenges in this regard. Parameters such as intonation and timbre simply cannot be reliably studied in these sources due to the limitations of early recording technology: the limited frequency response inevitably distorts timbre, while the issue of recording and playback speed (which plagues not only wax cylinders and shellac discs but also early tape recordings) renders intonation unreliable.

The thesis falls into two main parts: Part I (Chapters 1–2) sets out the context and framework for the analyses, and Part II (Chapters 3–5) provides three analytical case studies. Chapter 1 explores the concept of musical structure and the analytical methods used to study it. The section 'Notions of Musical Structure' explores the traditional and the recently proposed definitions of structure while also identifying and examining the types of structures most relevant to conductors and listeners. The subchapter 'Inferring Musical Structure in and from Performance' discusses the perceptual and cognitive aspects of structure. Finally, the chapter concludes with a description of the analytical techniques used in the thesis.

Chapter 2 is dedicated to Furtwängler and his approach to structure, in both theory and practice. After situating Furtwängler in twentieth-century performance history, the relevant primary and secondary sources are described ('Sources'). Then follows a discussion of Furtwängler's thoughts on musical structure through an examination of his writings ('Furtwängler on Musical Structure'). The rest of the chapter is dedicated to an exploration of Furtwängler's conducting style, with a particular focus on its relation to the creation and experience of musical structure.

The three case studies of Part II examine Furtwängler's shaping of structure in three contrasting pieces of music: Chapter 3 explores the conductor's approach to variation form, Chapter 4 focuses on sonata form, and Chapter 5 investigates the creation of structure over an entire symphony. In each chapter, judicious comparison with select recordings of other conductors is also undertaken for the sake of contextualisation: these include recordings by Karl Böhm (1894–1981), Arturo Toscanini (1867–1957) and Willem Mengelberg (1871–1951).

Chapter 3 analyses Furtwängler's five live recordings of the finale of Brahms's Fourth Symphony, op. 98. This movement is generally interpreted as a variational chaconne form; however, due to the rich web of structural interrelations that it contains, the movement's

structure has been interpreted in various ways. This creates an opportunity to examine Furtwängler's approach to a piece of music that affords a wide range of possible interpretations, providing fertile ground for potentially highlighting the conductor's structural tendencies.

Chapter 4 includes an analysis of Furtwängler's recordings of the first movement of Brahms's Fourth Symphony. This movement is interpreted almost exclusively as sonata form. Therefore, after the more ambiguous structure seen in Chapter 3, this case study provides an insight into Furtwängler's approach to a piece of music that enjoys greater consensus in terms of its formal understanding. Furthermore, sonata form lay at the centre of the conductor's organicist views on musical structure, which warrants discussion of the form in this investigation. The selection of two movements from the same symphony also allows an investigation of the ways in which Furtwängler integrated individual movements into a larger whole.

Finally, Chapter 5 expands upon this line of enquiry by examining the entirety of Beethoven's Fifth Symphony in two recordings by Furtwängler and one recording by Willem Mengelberg. In previous works, the study of inter-movement structural construction in performance has rarely gone beyond the identification of tempo parallels between movements. This chapter is one of the first studies to investigate the creation of dynamic structure across a symphony as a whole.

Overall, this thesis demonstrates that a dynamic notion of structure is crucial to the creation and experience of musical performance, the full appreciation of which requires the examination of the dynamic and diachronic processes in music. In order to capture these previously neglected aspects of performance, a unique analytical apparatus has been developed in this thesis, featuring a wide range of qualitative and quantitative techniques. This methodology provides an experience-based and arguably holistic way in which to capture and study the large-scale musical processes in performance, creating a potential template for future work. The recording analyses reveal new insights into the nature and variability of conductors' structural representations, while the examination of Furtwängler's style through previously neglected source materials sheds new light on the conductor's approach to music.

PART I

Chapter 1

Approaches to Musical Structure

Introduction

Musical structure has been variously and extensively theorised in the twentieth century and beyond, establishing elaborate systems of analysis.¹ Despite this wealth of works on the subject, the views of one group remain underrepresented: those of the practitioners themselves. In this thesis, I argue that a study of practising musicians' understandings of musical structure provides purchase on pragmatic notions of structure on the one hand, and could highlight certain intriguing – and as yet undertheorised – aspects of structure on the other hand, the exploration of which might enrich the analytical apparatus of performance analysis.

Furthermore, the study of musical structure in performance has so far focused on repertoire written for solo instruments (especially piano) and chamber ensembles. Symphonic music has been largely neglected in this regard despite its importance to the development of large musical forms. In order to address this hiatus and to broaden our understanding of the creation of structure in performance, this thesis focuses on symphonic music. Accordingly, close attention is given to conductors and their conceptualisations of structure, which form the basis of the first section of this chapter. Following this, I set out the theoretical background to current discussions of structure, and finally, I examine the questions of inferring and analysing musical structure in performance.

¹ In this thesis, the term 'form' refers specifically to formal schemata (sonata form, rondo form, etc.), while 'structure' is used to describe the much broader concept of shaping and organising the musical material – in other words, a notion that can include 'everything that makes for a meaningful shape, or dynamic trajectory, anything that promotes or undermines the coherence of the whole', as Kofi Agawu (1999: 134) describes it. The literature is abundant in contrasting definitions of these terms: some writers differentiate between them based on hierarchical level or function within the whole (Salzer 1952: 223–24; Berry [1976] 1987: 9), while others assign the broader definition to the term 'form' (Kühn 1995; Whittall 2001). In my usage, I broadly align myself with writers whose work formed the basis of this thesis (especially Rink 2015; Llorens 2018).

Notions of Musical Structure

Conductors on Musical Structure²

In a broad survey of conducting manuals and conductors' testimonies, David Baltuch established that descriptions of conductors' 'preparation' – which would include any structural analysis – occupy a minor position in writings on and by conductors, although the authors agree on the necessity of score study.³ Furthermore, discussions of conductors' mental representation of pieces, which may shed light on their notion of structure, appear with similar infrequency in their writings.⁴ However, when conductors do comment on large-scale structure, they tend to

[use] expressions such as *large picture*, *organic form*, *general shape* ... or *general goals*... With more dynamic overtones, conductors also speak about defining clearly the *direction of the music*, establishing the *climaxes and anti-climaxes* of a work, and identifying the *general tension* of a piece...⁵

From this it emerges that the notions of shape, goal-directedness, climax and intensity (or tension)⁶ are closely related to conductors' notion of large-scale structure. This tendency is reflected in the writings of many conductors. Leonard Bernstein, for instance, claimed that

[The conductor] must conquer the form of a piece not only in the sense of form as a mold, but form in its deepest sense, knowing and controlling where the music relaxes, where it begins to accumulate tension, where the greatest tension is reached, where it must ease up to gather strength for the next lap, where it unloads that strength.⁷

The conductor Donald Barra explained in a similar vein that

The central act of musical expression and interpretation lies in the performer's ability to adjust the energy elements of the tonal impulse in a way that enhances and reinforces the patterns of tension that are inherent part of every musical structure. ... the tonal thrust must be carefully developed through a series of overlapping impulses, each containing its own pattern of growth, culmination, and release.⁸

² The following discussion on conductors is inevitably limited in its extent. Across successive eras and amongst individuals, a highly diverse picture emerges when conductors' structural notions are concerned, meaning that no definitive set of conclusions can be drawn. For the present purposes, I have concentrated on practical approaches to structure, that is, the ways in which conductors might use pragmatic notions of structure to devise performance strategies.

³ Baltuch 2014: 56–60, 66. For a summary of his findings, see Baltuch 2016. Baltuch (2014: 31) defined 'preparation' as 'analysing scores, rehearsing beat patterns or engaging with musicological research'. For conductors, 'attitude' ('attitude towards the orchestra, the composer, the audience, or towards themselves') and 'aptitude' (in terms of 'absolute pitch or good memory ... communication ... leadership') seem to be the most pressing concerns (2016: 5–6). Baltuch, however, acknowledges that the apparent low importance of preparation may partly be the result of a general reluctance amongst practitioners to publicly discuss the intimate aspects of their art (2014: 58).

⁴ Baltuch 2014: 77, 112.

⁵ Ibid.: 173 (emphasis in original).

⁶ For discussion of terminology, see footnote 86 in this chapter.

⁷ Bernstein [1955] 1974: 149.

⁸ Barra 1983: 2, 19 (emphasis removed).

Amongst the conductors questioned in Jo Poston's study on practitioners' score analysis, all of those who regularly carried out some kind of structural analysis expressed a desire to know 'where they are going' in the music.⁹ Furthermore, most of the conductors stated that their approach to large multi-movement works was predicated on recognising 'relationships between varied movements and pacing'.¹⁰

Anton Armstrong, in particular, sees the goal of score study as gaining a 'general roadmap direction', which he equates with 'the large form, the pacing of the piece' and the 'drama' of the work. He acknowledges that he tends to look for an 'overall arch' in pieces, which affects the way in which he 'shap[es] the pacing'.¹¹ Pacing emerges as an important parameter for Eugene Ormandy as well, who stated that studying a work's structure consists in 'pacing its progress, spacing its climaxes'.¹²

JoAnn Falletta likewise sees the benefit of identifying the 'overall shape' of pieces in gaining a 'sure sense of direction'. Similarly to Armstrong, she searches for a 'sense of an arch', which emerges when '[a] piece moves to a certain point of intensity, or conflict, and then resolves itself'.¹³

Diane Lewis argues that the notion of shape plays a central role in grasping a piece's structure:

Conductors imaginatively bring shape to a score by interpretation on both macro and micro levels, with smaller shapes existing in tandem within larger shapes and all shapes, whether they are archlike, wavelike, static, disjointed, angular, etc. evolving into an actual interpreted shape for the entire composition – an overall aural image. ... [A]ll aspects of the music are a part of shape ... [including] tempo, dynamics, articulation, form, harmonic rhythm, key centers, and textual expression...¹⁴

Moreover, when devising the shape of a piece, Lewis explains, the conductor must 'understand the basic psychology of the piece, such as the peaks and valleys or tensions and stabilities'.¹⁵

Frederik Prausnitz similarly equates large-scale structure with 'large, articulated shape', which is

⁹ Poston 2003: 56.

¹⁰ Ibid.: 64. At this point, it is important to clarify my usage of the term 'work' and its synonyms. Since the Performative Turn, traditional notions of the musical 'work' have been criticised for their exclusive and rigid nature. It has been argued by many (for a summary, see Cook 2013) that scores alone cannot be considered 'works', and that the latter emerge only through performances (whether real or imagined; see Leech-Wilkinson 2012), leading to the conclusion that every work is a dynamically changing, fluid phenomenon, resisting conceptualisation as a singular and fixed entity. This is the sense in which works are understood and discussed in this thesis.

¹¹ Ibid.: 93–94.

¹² Bamberger 1965: 253.

¹³ Poston 2003: 105–06.

¹⁴ Lewis 1999: 1.

¹⁵ Ibid.: 4.

created by ‘melodic, harmonic, rhythmic, and dynamic elements’, the combination and implications of which for the ‘musical momentum’ are determined by the conductor.¹⁶

Let us now examine how conductors might arrive at their mental representation of musical structures through structural analysis.¹⁷ Perhaps the most telling source of information is conductors’ graphic representations of structure. In this regard, interesting patterns emerge: for instance, dynamics¹⁸ – a musical parameter usually neglected in traditional structural analyses – arguably lie at the centre of conductors’ attention. Joseph Labuta’s structural representation (see Figure 1.1 in the Apparatus), for example, registers the large-scale shaping of dynamics within the piece alongside a general outline of formal sections and of broad metric and harmonic changes.¹⁹ The conductor Ann Howard Jones also prepares structural charts, which include structural segmentation, harmonic analysis, segments of the text (in choral works) and a depiction of the ‘general dynamic thrust’.²⁰ Amongst the conductors in Jo Poston’s study, those who mark their scores tend to highlight aspects such as form, dynamics, entrances, phrasing and text.²¹ Hermann Dechant similarly advocates the preparation of graphic representations which would include structural segmentation, harmony, dynamics and instrumentation.²² André Thomas argues in similar fashion that gaining an overview of the changes in dynamics provides one with ‘a structure of the piece in general’.²³

¹⁶ Prausnitz 1983: 272.

¹⁷ It is important to reiterate that in writings on and by conductors the process of score study occupies a minor position. Furthermore, most writings of this type are relatively recent, since before the Second World War there was no established tradition yet of conductors preparing structural analyses (see Poston 2003: 1–5, 35–39). Studies on the subject, moreover, imply that conductors’ pre-concert preparation may not even include analysis – at least not in the traditional sense of the word: only seven out of Jo Poston’s twelve interviewees reported to be doing some kind of structural analysis on a regular basis, and only two of them said that they prepared structural charts (Poston 2003: 56). This by no means suggests that the performances of these conductors were necessarily inferior. As Rink (1990: 325) suggested, ‘explicit cognitive awareness of the music’s structural foundation is not always essential to understanding at some level, and to clear, cogent projection’. In other words, the performative strategies devised by these musicians through some kind of ‘informed intuition’, as Rink calls it, may be no less cohesive and convincing as the performances by those employing structural analysis (: 327–28).

¹⁸ In this thesis, I make a distinction between the terms ‘dynamics’ and ‘dynamic’. I use the word ‘dynamics’ in the musical sense of loudness, and I employ it as an umbrella term to refer to the following phenomena and concepts: traditional notational indications of musical loudness (*forte*, *piano*, etc.); subjectively perceived loudness, as discussed in the analyses of sound recordings; and computationally measured levels of sound intensity, expressed in decibels (dB).

By contrast, the word ‘dynamic’ is used in this thesis ‘in the more multifaceted sense of changing quantities – speeds, densities, directions, energy – that lead us to perceive music as in motion, alive’, as Daniel Leech-Wilkinson (2020: ¶22.1.2) describes it (see also Stern 2010: 7). In other words, I reserve the term for general musical processes centred around change, force and motion, and therefore my usage relates to the definition of ‘dynamics’ used in physics. See ‘dynamics, n.’, in *Oxford English Dictionary Online* (December 2020) <<https://www.oed.com/view/Entry/58824?result=2&rskey=rCIDIR&>> (accessed 14 June 2021).

¹⁹ Labuta [2010] 2016: 92.

²⁰ Poston 2003: 60.

²¹ *Ibid.*: 63.

²² Dechant 1985: 336.

²³ Poston 2003: 167.

A further group of graphic representations broadens the above-mentioned range of parameters by encompassing intensity. The time chart presented in Frederik Prausnitz's book, for example, includes a contour of the 'waxing and waning of affective intensity' (see Figure 1.2), alongside structural designations, dynamics, harmony and instrumentation.²⁴ Diane Lewis's summarising charts, too, include intensity curves, which she equates with the shape of pieces (see Figure 1.3).²⁵

The presence of intensity curves in conductors' formal charts is not surprising in light of the parameter's importance to conductors, which has been established in the previous section. What is more unexpected is the centrality of dynamics to conductors' analytical endeavours. An obvious explanation would be that conductors simply need to be aware of the broad shaping of dynamics within a piece. A further possible explanation would be that dynamics are also used as a shorthand for intensity. As the parameter that is perhaps the most directly related to the sense of intensity, dynamics therefore could also chart the large-scale shaping of a piece in a broader sense.

From this discussion it has emerged that the notions of shape, goal-directedness, climax and intensity, and the parameter of dynamics are commonly incorporated into conductors' understanding of structure. The main conclusion to draw from this is that conductors tend to adopt a processual or diachronic concept of structure. For them, it appears to be of considerable concern to identify the trajectories of intensity in a piece by recognising goals (climax points) for the musical momentum. Below, I examine the potential analytical application of these dynamic notions, but first, I provide an overview of the general discussion surrounding the concept of structure.

'Immanent Structure' and 'Emergent Structures'

In order to establish the theoretical background to the concepts identified above, it is necessary to examine some of the prevailing notions of musical structure. Specifically, I begin by introducing two conceptual dichotomies that underlie recent discussions of structure. The first dichotomy differentiates between musical structure as an immanent entity, inherent in the score, and structure as something created in and through performance. I refer to these notions as 'immanent structure' and 'emergent structures', respectively.

²⁴ Prausnitz 1983: 385.

²⁵ Lewis 1999: 139. By intensity curve, I refer to the graph-like representation of the varying level of perceived intensity, where the fluctuating line's vertical position depicts the degree of intensity (the higher the more intense) and the horizontal axis represents time (see, for example, Figure 3.1a). I borrow the term from Berry [1976] 1987 and Rink 1999, amongst others.

First, let us examine the concept of immanent structure. According to this, a piece's structure is a singular, unchanging entity, which is created by the composer and is reflected in the score. The analyst's task is to uncover this structure, which the performer then projects in performance. According to Edward Cone, for example, the validity and effectiveness of a performance depend on 'discovering and making clear the rhythmic life of a composition'²⁶ (a notion which he proposed as a possible interpretation of musical structure).²⁷ Erwin Stein explains in a similar vein that 'performance is a function of musical form ... The composer gives his ideas defined form by shaping and organising the material of music. The performer reproduces that form in order to convey the composer's ideas...'²⁸

This traditional perspective underlies much twentieth-century writing about music, especially that of music theorists. For instance, this is reflected in a large portion of the analytical literature on structure and performance.²⁹ The notion carries strong overtones of *Werktreue* ('truth to the work') and the romantic work concept since it relies on the score-based notion of predetermined and unchanging musical meaning.³⁰

As a result of fundamental changes in music studies at large, recent decades have witnessed a fundamental reconceptualisation of the notion of musical structure.³¹ Gradually, a new concept of structure has emerged, which I term 'emergent structures'.³² This approach takes into consideration the critical role that performers and listeners play in the creation and inference of structural meanings. As Mitchell Ohriner explained, 'Performers do not passively transmit structure in a one-to-one mapping ... [they] create structure much the same way as readers create poems'.³³ Musical structure is no longer solely regarded as being encoded in the musical score, but is instead viewed as emerging in and through the act of performance itself. As a result of this, emergent structures are pluralistic: they are created and inferred each time anew in the process of performing and listening.³⁴

²⁶ Cone 1968: 31.

²⁷ Ibid.: 38–39.

²⁸ Stein 1962: 14, 69. The use of terms such as 'discover', 'reproduce' and 'convey' casts light on the limited role to which musicians are relegated in this view.

²⁹ This includes Cone 1968; Stein 1962; Berry 1989. For discussion, see Cook 1999a: 239–49; 1999b: 15–16; Rink 2015: 127–28; Subotnik 1996: 152–58.

³⁰ For discussion, see Cook 2013: 8–24.

³¹ This transformation of the discipline is customarily termed the 'performative turn'. Behind these changes lay the still larger reshaping of the humanities by postmodernism and poststructuralism. See Cook 2013: 24–32; Whittall 2001: ¶ 6, 8–10.

³² Ana Llorens' notion of 'diachronic structure' is largely analogous with this concept. For discussion, see Llorens 2018: 51, 80–81, 91–93, 202–03, 241–44.

³³ Ohriner 2012: ¶ 38. See also Rink 2013: 120–22.

³⁴ See Friedman 2020: 149–51; Doğantan-Dack 2008: 305; Delalande 1995: 149–67. Writing about the experience of structure in performance, Carl Dahlhaus argues that there is a 'need to stress the subject, which "creates" the meaning, instead of the object, which "has" meaning...' ('die Notwendigkeit, statt des Objekts, das Bedeutung "hat",

An early formulation of the notion comes from Hermann Gottschewski, who wrote:

Instead of viewing performance as the manifestation, representation, reflection or clarification of a compositional structure, in short, as *the performance* of a structure, we might want to regard *performance itself as structure*. ... Structure is therefore part of the recipient's image of the piece. In this respect, it would be more correct to say that the musical text can be *viewed as structure*, rather than that it *has a structure*.³⁵

The most developed theorisation of the concept is found in an article by John Rink.³⁶ In this study, Rink identifies a number of principles that underpin this new notion of structure:

1. Affordance: 'Musical materials do not in themselves constitute structure(s): they *afford* the inference of structural relationships.'
2. Inference: 'Inference of this kind will be individually and uniquely carried out whenever it is attempted, even if shared criteria result in commonalities between discrete structural representations.'
3. Multiplicity: 'Musical structure should therefore be seen as constructed, not immanent; as pluralistic, not singular.'³⁷

The notion of emergent structures therefore offers a flexible and productive approach to structure, which takes into account the experience of performance and listening. For this reason, it provides an ideal basis for a study of structure in performance, and it will form the basis of the analyses in this thesis.

Architecture and Process: Synchronic and Diachronic Structures

The second major dichotomy lies between conceptualisations of structure as a synoptic and spatial representation of a whole piece, viewed simultaneously, and those regarding it as the processual unfolding of a composition in time; in other words, between architecture and process – or synchrony and diachrony, to use more recent terminology.³⁸

das Subjekt, das Bedeutung "konstituiert", zu akzentuieren...) (Dahlhaus [1987] 2003: 132; translation from Dahlhaus 1991: 116; translation modified).

³⁵ ('[S]tatt die Interpretation als Manifestation, Darstellung, Abbild oder Präzisierung einer kompositorischen Struktur, kurz als *die Interpretation* einer Struktur zu betrachten, wollen wir *die Interpretation selbst als Struktur* betrachten. ... Struktur ist somit ein Aspekt des Bildes, das sich der Rezipient von dem Werke macht. Insofern sollte man korrekterweise nicht davon sprechen, daß der musikalische Text *eine Struktur habe*, sondern daß er *als Struktur betrachtet werden könne*.) Gottschewski 1998: 155 (emphasis in original). See also Cook 2013: 86–87.

³⁶ Rink 2015.

³⁷ Ibid.: 129 (emphasis in original).

³⁸ The terms synchrony and diachrony are borrowed from linguistics, where they refer to 'language as a system existing at a given moment' and 'language as an entity constantly changing through time', respectively, as Derek Attridge (1987: 183) put it. John Parkany (1989) was one of the first to adopt the terms to distinguish between synoptic structure and processual structure in the sense presented here. Llorens (2018) later adopted this terminology and used the distinction as the core idea of her thesis.

To view a piece's structure synchronically, the music needs to become a static object. As Edward Cone writes, 'The synoptic mode, for its part, is essential to the perception of esthetic objects as *objects* ... [which is] to perceive its unity, that is, to understand its structure',³⁹ it is therefore the goal of this approach to regard a piece as 'a static art-object that can be contemplated timelessly'.⁴⁰ Erwin Stein similarly explained that 'architecture has been described as frozen music; as if musical patterns, moving in time, were suddenly to become fixed and visible, revealing a single well-proportioned form'.⁴¹ Architectonic structure is also characterised by 'clear segmentation and form-shaping proportions', as Clemens Kühn noted,⁴² and it is in this sense that we can talk of formal schemata.

Furthermore, some writers argue that it is only through synchronicity that we can experience a piece's structure as a whole. Rudolf Arnheim, for instance, claims that the successively experienced moments eventually form a simultaneity through a '[t]ransposition of the temporal into the spatial'.⁴³ As Carl Dahlhaus formulated it:

Insofar as music is form, it attains its real existence, paradoxically expressed, in the very moment when it is past. Still held firm in memory, it moves to a distance, which did not exist during its immediate presence; and at this distance it constitutes itself as a surveyable plastic form. Spatialization and form, reconsideration and objectivity, are interdependent: one is the support or precondition of the other.⁴⁴

The concept of synchronic structure is associated mainly with traditional analytical writings, which tended to adopt a solely score-based approach.⁴⁵ Analysts, as Jonathan Dunsby explained, traditionally preferred to work within a 'synchronic kind of landscape', distancing themselves from the real-time experience of practising musicians.⁴⁶ In a sense, this is understandable since static objects – including the score itself – lend themselves to analysis more than the ephemeral experience of performance.⁴⁷

³⁹ Cone 1968: 90 (emphasis in original).

⁴⁰ Cone 1977: 557.

⁴¹ Stein 1962: 18.

⁴² ('*Architektonischer Form*' ... die gekennzeichnet ist durch klare Gliederung und formprägende Proportionen...') Kühn 1995: section III/2.

⁴³ Arnheim 1978: 646. See also Snyder 2000: 222.

⁴⁴ ('Sofern sie [Musik] Form ist, erreicht sie, paradox ausgedrückt, ihr eigentliches Dasein gerade in dem Moment, in dem sie vergangen ist. Vom Gedächtnis noch festgehalten, rückt sie in einen Abstand, den sie in ihrer unmittelbaren Gegenwart nicht hatte: und in der Distanz konstituiert sie sich als überblickbare, plastische Form. Verräumlichung und Form. Rückwendung und Gegenständlichkeit sind korrelativ aufeinander bezogen: das eine ist die Stütze oder Voraussetzung des anderen.') Dahlhaus [1967] 2000: 456; translation from Dahlhaus 1982: 12 (translation modified). This idea is adopted in some of Nicholas Cook's work as well: see Cook 1987: 24–25; 1990: 38–39. See also Small 1998: 163.

⁴⁵ As Rink (2015: 128, note 5) notes, before the performative turn, 'the meaning of "musical structure" ... had more to do with music as notation than with music as process'. See also Samson 1977: 21.

⁴⁶ Dunsby [2008] 2009: 13.

⁴⁷ As Friedman (2020: 148) put it: 'it is much harder to talk about flow than form, time than space'.

The problem with the synchronic notion of structure, however, is that it turns into a spatial and static object what is in reality an aural and dynamic phenomenon.⁴⁸ Christopher Small, for instance, argued that this notion has ‘misled musicians into viewing synoptically ... what is actually a series of events in time’, and therefore it is ‘hopelessly at variance with the way in which we actually perceive a musical performance’.⁴⁹

Gradually, as performance assumed growing importance in musicological work, the real-time experience of diachronic structures came into the spotlight.⁵⁰ Having extended his previous, narrow definition of structure, Carl Dahlhaus acknowledged that when musical hearing is concerned, musical structure represents a process.⁵¹ Instead of limiting it to the synchronic end result, our notion of structure should, argued Dahlhaus, also incorporate the ‘dialectics of assertions and retractions, contrasts and mediations’, which arise from the processual experience of music.⁵² In other words,

The formal sense of a work is not constituted by the final shape alone, in which all the events have conjoined: the totality of the provisional structures – as they have been suggested and revoked, have complemented or contradicted each other – is also part of it.⁵³

Similarly, Anthony Newcomb considers the diachronic experience of structure to be a source of musical meaning, emphasising the importance of the ‘formal interpretation we place upon the music as it unfolds in time’.⁵⁴ Furthermore, he sees diachronicity as the resolution of apparent contradictions which arise when a piece’s structure is viewed as a synchronic schema.⁵⁵ Alan Smith explained in a similar vein that the goal of structure-oriented listening should not be the experience of a ‘work as a static whole but rather of experiencing its becoming whole’.⁵⁶

⁴⁸ Cone (1977: 565) himself recognises that this is a concern. See also Small 1998: 163–64.

⁴⁹ Small 1998: 163.

⁵⁰ The relation between performance and diachronicity is strengthened by the fact that musicians tend to conceptualise musical structure in terms of dynamism and gesture. See Rink, Spiro and Gold [2011] 2016: 271. For discussion of diachronic structures, see Llorens 2018: 19–50, 75–86, 250–51.

⁵¹ Dahlhaus [1987] 2003: 130. Janet Schmalfeldt (2011: 10), too, recognises that the notion of ‘becoming’ (*Werden*) has been associated with the temporal experience of music.

⁵² (‘Die Bedeutung ... liegt ... in der Dialektik von Behauptungen und Zurücknahmen, Entgegensetzungen und Vermittlungen.’) Dahlhaus [1987] 2003: 131; translation from Dahlhaus 1991: 114 (translation modified).

⁵³ (‘Nicht allein die letzte Gestalt, zu der sich die Ereignisse zusammenfügen, sondern auch die Gesamtheit der vorläufigen Strukturen – der vermuteten, widerrufenen, sich ergänzenden oder durchkreuzenden Ordnungen – macht den Formsinn eines Werkes aus.’) Dahlhaus [1987] 2003: 134; translation from Dahlhaus 1991: 118. A similar stance is taken by Kühn (1995: section I/1).

⁵⁴ Newcomb 1983: 232, see also 234.

⁵⁵ Ibid.: 234. Newcomb presents multiple examples from Wagner’s oeuvre of musical formations that appear unusual from a formal perspective when viewed synoptically but which reveal an inner logic when experienced in their unfolding, revealing a web of emerging and subsequently contradicted formal expectations used to create ‘the impression of dramatic and emotional reality’ (: 236).

⁵⁶ Smith 1973: 202.

In a compositional sense, diachronicity has also been associated with ‘logical’ structure, that is, the thematic development of a piece.⁵⁷ Dahlhaus, for instance, explained that ‘Processuality ... manifests itself in the development of a theme or that of the interaction of themes’.⁵⁸ Extrapolating this to performance, one could argue that the evolving shaping of thematic materials throughout a piece could also engender a sense of diachronic process.

All in all, diachronic structure emerges as a notion that is performer- and listener-centred, and which offers the discovery of new layers of structural meaning. It provides an approach through which the notion of musical structure might be rekindled and whereby the real-time experience of performance and listening might be understood more accurately. Accordingly, the analyses in this thesis examine the structural formations in the relevant recordings primarily in their processual unfolding.

However, a distinction between synchronic and diachronic structures is not as clear-cut as it might first seem. Analysts from Schenker to Berry (whose work has been associated primarily with the synoptic approach) incorporated diachronic notions into their work;⁵⁹ at the same time, advocates of the diachronic approach, too, make use of synchronicity – at the very least as an analytical tool.⁶⁰ Some writers even argue that these two notions of structure are actually complementary ways of experiencing a work. For example, John Rink opines that the performer ‘engages in a continual dialogue between the comprehensive architecture and the “here-and-now”’.⁶¹ Edward Cone also explains that an ‘ideal hearing’ of a piece involves both approaches (which he terms ‘synoptic’ and ‘immediate’), as a result of which the listener ‘savors each detail all the more for realising its role in the form of the whole’.⁶² Furthermore, Daniel Leech-Wilkinson explains that the apparent contradiction between experiencing music as a static object and as movement is resolved by the fact that both are related to deeply embodied human experiences and therefore there is no functional conflict between them.⁶³

Overall, we may conclude that in order to avoid the pitfalls of a purely synchronic approach focusing on structures immanent in the score, we could instead examine structures that emerge diachronically in performance through the processes of affordance and inference, and which may or may not merge into synoptic shapes in the listener’s mind. In this thesis, I refer to

⁵⁷ See Kühn 1995: section III/2.

⁵⁸ (‘Die Prozessualität ... manifestiert sich in der Entwicklung eines Themas oder eines Gegensatzes von Themen.’) Dahlhaus [1987] 2003: 101; translation from Dahlhaus 1991: 81.

⁵⁹ See Schmalfeldt 2011: 12; Berry [1976] 1987. Also, we should remember that the energeticist analytical tradition of the early twentieth century took diachronicity as its basis. For an overview, see Rothfarb 2002.

⁶⁰ Even Llorens (2018: 11), who otherwise champions the diachronic approach, acknowledges that ‘synchronicity can be helpful, and perhaps unavoidable, as an analytical tenet’.

⁶¹ Rink 1999: 218.

⁶² Cone 1968: 96–97.

⁶³ Leech-Wilkinson 2017: 371–72.

this notion as ‘dynamic structure’, and this forms the basis of the analyses in Chapters 3–5. In the following sections, I present a theorisation of the dynamic concepts that emerge as central to many conductors’ understanding of structure, as shown above: shape, intensity, motion and goal-orientation.

Shape

Writers have long been experimenting with alternative terms to replace the word ‘structure’, which has increasingly been seen as overly limiting and static.⁶⁴ Words like ‘design’⁶⁵ and ‘contour’⁶⁶ have been introduced, but ‘shape’ has gained the most traction. Despite (or perhaps due to) its nebulous nature as a concept, shape is so widespread that it emerges as a metaphor used almost universally by musicians. In Helen Prior’s survey, which included over 200 musicians, 90 percent of the participants reported to be conceptualising at least some elements of music in terms of shapes.⁶⁷ According to Prior, musicians employ the concept in the contexts of practising, rehearsing and teaching, irrespective of musical genre, and apply it to a broad range of musical parameters: ‘from musical structure to musical expression, emotion, and tension; and in relation to specific musical features such as phrasing, the melodic line, and dynamics’.⁶⁸ Prior’s findings also suggest that the term is rooted in practice rather than in discussions about music.⁶⁹

Most relevant to this investigation is that 74.7 percent of Prior’s interviewees agreed that the shape of a piece reflects its musical structure.⁷⁰ There seems to be a consensus that shape refers mainly to musical phrases, melodic patterns and – most importantly – a piece of music as a

⁶⁴ See, for example, Dubiel 2004: 174–75. See footnote 1 in this chapter for discussion of the broad sense of ‘structure’ used in this thesis.

⁶⁵ Dunsby 1995: 81.

⁶⁶ Rink 1999: 230, 234–35.

⁶⁷ Prior 2012: 3.

⁶⁸ Ibid.: 1.

⁶⁹ Ibid.: 4. It is also worth mentioning that there is a distinct analytical tradition of writing about shape. This trend gained momentum with the introduction by Arnold Schoenberg of the concept of *Grundgestalt* (‘basic shape’), which became a subject of extensive analytical discussion in the decades following the composer’s death (see, for instance, Epstein 1979). Notably, the shapes used to describe a piece’s structure by performers and in performance-centred theoretical writings are not equivalent to Schoenberg’s *Grundgestalt*. In the definition of Josef Rufer, Schoenberg’s pupil and assistant, *Grundgestalt* refers to a typically phrase-long, initial musical ‘idea’ which contains the ‘characteristics of the whole piece’ and from which the thematic material of the work emerges through ‘developing variation’ (Rufer [1954] 1969: 29). Therefore, it refers not to the representation of a whole piece’s structure or contour, but rather to an embryonic compositional idea from which an organic composition is thought to derive. This distinction holds even when performance-oriented writers refer specifically to ‘basic shape’, as John Rink did when describing performers’ conception of complete pieces (Rink 2017: 355). One exception can be found in Prausnitz 1983, where – alongside shapes in the other sense of the word – a fundamental pattern in ‘tension and release’ (an ‘Ur-shape’) is identified, much in the sense of a *Grundgestalt* (: 266–67). For overviews of *Grundgestalt*, see Schiano 2001; Rufer [1954] 1969: v–viii, 24–30.

⁷⁰ Also, almost half of the participants selected ‘form’ or ‘structure’ when asked to provide synonyms for ‘shape’ (Prior 2012: 8).

whole.⁷¹ Some musicians reportedly conceive of the structure of entire pieces as shapes, while others describe shape as the ‘realizing [of] the musical structure in an expressive way’. A number of them also define shape in terms of an ‘underlying narrative involving climactic moments, direction, and energy’.⁷² Furthermore, it appears that a slight majority of musicians regard shape as their own addition to the music rather than considering it an intrinsic part of a piece.⁷³ Additionally, in a follow-up study, Prior established that when shape is expressed gesturally, musicians use ‘larger arches, wave patterns or circular gestures to indicate the shape of an overall piece’.⁷⁴

In comparison with the analytical notion of structure, shape is seemingly better suited to describe the diachronic experience of musical performance. John Rink, for instance, observes that

Whereas analysts concentrate on musical structure, performers attend primarily to musical ‘shape’, which is analogous to structure but tends to be more dynamic through its sensitivity to momentum, climax, and ebb and flow, comprising an outline, a general plan, a set of gestures unfolding in time.⁷⁵

A similar picture emerges from Prior’s survey, in which a number of participants paired the notion of ‘direction’ with shape, especially in the context of structure.⁷⁶ This is further supported by Daniel Leech-Wilkinson’s proposition that the sense of shape is analogous to our perception of the ‘changing dynamics of an event’, from which he concludes that ‘shape can apply to anything that changes’.⁷⁷

The appeal of shape may lie in the fact that shape perception constitutes a flexible cognitive process that covers multiple modalities. Leech-Wilkinson, for instance, calls it a ‘quasi-submodal concept’, which is shared by all senses.⁷⁸ He argues that the notion can go beyond visual shapes, being part of ‘much broader metaphorical work’ and ‘transferring into different, less tangible domains including time, quantity, intensity, complexity, speed and emotional response, at least’. Due to its universality, then, shape functions as a ‘highly efficient synthesizing tool for musicians’.⁷⁹ Rolf Godøy, furthermore, argues that shape is a ‘fundamental cognitive strategy’ and is therefore suitable to represent most acoustic features of music.⁸⁰ Similar ideas are

⁷¹ Ibid.: 4; see also Prior 2017: 231–32.

⁷² Prior 2012: 3.

⁷³ Ibid.: 5.

⁷⁴ Prior 2017: 229.

⁷⁵ Rink 1990: 323.

⁷⁶ Prior 2012: 8–9; see also Prior 2017: 229, 231.

⁷⁷ Leech-Wilkinson 2017: 362, 377.

⁷⁸ Ibid.: 359.

⁷⁹ Leech-Wilkinson and Prior 2017: xxv, xxix.

⁸⁰ Godøy 2017: 17. Godøy also hypothesised that our spatial mapping of music may be rooted in our embodied experiences. More specifically, he claimed that ‘body postures at salient moments in sound production ... and body

suggested by Gestalt psychologists as well: specifically, that our perception of structures (or *Gestalten*) ‘in any sensory modality is cognised as structurally analogous to the experience of a spatial shape’, as a result of which ‘spatial shapes can be applied to shapes extended in time’.⁸¹ The popularity of the notion may also be explained by its ability to represent musical experiences that defy verbal description. Due to its generality and flexibility, shape can function as a highly effective heuristic that helps performers grasp and convey the more inexplicable aspects of their music-making.⁸²

Despite its apparent universality in musicians’ conceptualisation of music, shape has not yet been fully explored in the context of performance analysis. The main stumbling block of such an endeavour is of course the ambiguous nature of the concept: what is the shape of music and how can it be captured? One potential answer to this might lie in intensity and its representation in the form of curves. As shown above, musicians – including conductors – readily associate shape with notions of tension or intensity. Diane Lewis, for example, explained that ‘Shape can also refer to ... the way the energy of the piece is controlled over time; the way in which varying degrees of intensity “pan out”’.⁸³ This link is rooted in our cognition: Leech-Wilkinson, for example, argues that ‘shape describes the changing intensities that model one kind of experience in the domain of another’.⁸⁴ Therefore, intensity curves might be used as a way in which to capture and represent the structural shape of performances – an approach that the analyses in Chapter 3–5 demonstrate.⁸⁵

Intensity/Tension⁸⁶

Similarly to shape, intensity appears to be a widespread notion. As noted above, references to energy and tension abound in the writings of musicians. Furthermore, several twentieth-century

motion *trajectories* between these key-postures, relate to subjectively perceived *sonic shapes*’ (: 5; emphasis in original). Cf. Leech-Wilkinson 2017: 370–71.

⁸¹ Doğantan-Dack 2013: 214 (emphasis removed). For an overview of Gestalt psychology’s relation to music, see Gjerdingen 2002: 967–69.

⁸² See Leech-Wilkinson and Prior 2014. In psychology, ‘heuristic’ refers to ‘A rule of thumb for making decisions of a particular kind which usually works but does not guarantee a correct solution’ (Matsumoto 2009: 233).

⁸³ Lewis 1999: 2. Some writers even employ intensity curves to illustrate the shapes of pieces: Lewis 1999: 111, 125–30, 139–40; Prausnitz 1983: 258, 262, 385, 399; Rink 1999: 236.

⁸⁴ Leech-Wilkinson 2017: 369.

⁸⁵ See pages 42–51 in this thesis.

⁸⁶ Although seemingly describing contrasting notions, the terms ‘tension’ and ‘intensity’ are generally used synonymously in the literature (see Eitan and Granot 2006: 225; 2007: 40–46). While there are certain tendencies in the usage of the terms (musicians tend to talk about ‘tension’, and theorists prefer the word ‘intensity’), it appears that tension arousal and energy arousal (or intensity) are closely related in people’s conceptualisation of the notion; as Morwaread Farbood (2012: 388) writes: ‘it is likely that listeners instinctively use both percepts to define what tension is’. Indeed, in a discussion about human emotion, Tuomas Eerola and Jonna Vuoskoski (2011) found that there is a strong correlation between tension and energy in listeners’ perception, ultimately suggesting that these could be interpreted as forming one singular dimension. In this thesis, I primarily use the term ‘intensity’.

music theorists based their understanding of musical structure on these notions.⁸⁷ While tension can be experienced by performers in a physical sense during performance, which in turn can inform an embodied analysis,⁸⁸ the type of tension under discussion here concerns the perceived sensation engendered by sound.

In a psychoacoustic sense, the level of intensity is experienced in proportion to the ‘perceived sensory magnitude’, as Zohar Eitan and Roni Granot explained in their comprehensive study on the subject.⁸⁹ For instance, intensity is experienced in relation to changing degrees of brightness or loudness. In the context of music, it has been established that a broad range of musical parameters can contribute to changes in the perceived level of intensity: loudness, tempo, harmonic dissonance, temporal density of sound events, timbral density, pitch direction and pitch intervals are all associated with variations in intensity.⁹⁰ Furthermore, the sense of intensity is not necessarily connected with changes in acoustic energy, but can originate in more complex sources, such as harmonic dissonance or the pace with which motives appear or are developed.⁹¹ It has also been demonstrated that ‘neutralising’ one or more parameters – even dominant features like loudness or tempo – does not affect the experienced general tension contour if there are enough remaining parameters delineating it.⁹²

The widespread use of intensity may lie in the fact that it is a cross-modal phenomenon, meaning that it can be associated with changes perceived in different modalities. For instance, variation in loudness is mapped onto an analogous change in brightness. The alteration of the intensity level in one modality may also affect the perception of another even if the latter remains unchanged.⁹³ Intensity, therefore, emerges as a holistic property, the perception of which appears to be an innate human ability.⁹⁴

The associative capacity of intensity is effective not only across sensory modes but also within the auditory modality. It has been shown, for instance, that changes in loudness can influence the perception of inter-onset intervals, while pitch changes are sometimes mentally

Importantly, however, I use only this sense of intensity, and not the meaning used in acoustics to measure loudness: ‘energy transmitted by the sound wave across unit area per second’. Campbell and Greated 2001: ¶ 1.

⁸⁷ Some writers even propose a pedagogical application of the notion due to its general comprehensibility. See Berg 2014a, 2014b.

⁸⁸ See Duguay 2019.

⁸⁹ Eitan and Granot 2007: 41. Similarly, Snyder (2000: 62) defines intensity as ‘any change in a stimulus that causes an increase in neural activity’.

⁹⁰ Eitan and Granot 2007: 40, 44–46, 63.

⁹¹ *Ibid.*: 61.

⁹² Krumhansl 1996: 426, 428–29; Lehne et al. 2013. What is meant by neutralising is the maintaining of unvarying levels of the relevant parameter (in this case, dynamics or tempo).

⁹³ Eitan and Granot 2007: 41.

⁹⁴ *Ibid.*: 41. See also Leech-Wilkinson 2017: 363, 374. The accessibility of the notion of musical tension is highlighted in experimental studies, several of which comment on the surprisingly low number of subjects (irrespective of age or musical background) that expressed difficulty understanding the concept. See Fredrickson 1997: 630; Madsen and Fredrickson 1993: 56.

registered as synchronous variation in dynamics.⁹⁵ A listener's sense of tempo is also related to that of pitch: in higher registers, acceleration is experienced as faster than in lower registers.⁹⁶ Similar analogies have been found between pitch, loudness and timbre.⁹⁷ These associations, however, play roles of varying importance in our perception: the most robust analogy is between pitch direction and loudness, while perceived similarities between pitch intervals and dynamics appear only in conjunction with stronger analogies. At any rate, these elements can combine to create an integrated 'energy flux', to use Neil Todd's term, resulting in a stronger sense of intensity direction.⁹⁸

The relative salience of the components of musical intensity is difficult, if not impossible, to quantify. When studied in isolation, the parameters of dynamics, pitch height and, to a lesser extent, tempo appear to exert the most influence on the perception of intensity.⁹⁹ However, examining these features in combination and in real musical contexts poses a considerable methodological challenge since it requires the quantification of parameters and mutual calibration, which is especially problematic in the case of complex issues such as harmony and texture. Nevertheless, following this method, Morwaread Farbood's study yielded ambivalent results in the evaluation of multiple parameters and demonstrated the variability of parametric salience in different musical contexts.¹⁰⁰ Frede Nielsen likewise emphasised that intensity is a result of a variety of parameters working together or against each other, and that there is no single aspect that emerges as universally dominant.¹⁰¹

Furthermore, there is growing evidence for the consistency of intensity perception. It has been established, for example, that different listeners' perceived intensity profiles of a piece of music are remarkably similar and are generally unaffected by their varying degree of familiarity with the music.¹⁰² Moreover, William Fredrickson showed that this uniformity is barely affected by differences in the listeners' age and musical education.¹⁰³ Fredrickson also established that no notable difference can be discerned in this regard between those performing and those listening

⁹⁵ Tekman 1997: 292.

⁹⁶ Eitan and Granot 2007: 42, 61.

⁹⁷ Melara and Marks 1990: 176.

⁹⁸ Eitan and Granot 2007: 63; Todd 1994: 48.

⁹⁹ Farbood 2012: 401–04.

¹⁰⁰ *Ibid.*: 408–15.

¹⁰¹ Nielsen 1987: 506–07. Moritz Lehne and his colleagues also concluded that musical context is decisive in this regard (Lehne et al. 2013: 178–79).

¹⁰² Krumhansl 1996: 412, 419. In 1993, Clifford Madsen and William Fredrickson reproduced Frede Nielsen's 1983 experiments using different measuring techniques and concluded that the resulting graphs were highly consistent with those in Nielsen's study (Madsen and Fredrickson 1993: 56). Nielsen himself, however, found that in some circumstances repeated listening to a piece of music can yield slightly different curves, with subjects initially focusing more on surface features and during repeated listening taking notice of broader tendencies (Nielsen 1987: 504).

¹⁰³ Fredrickson 1997: 626–35; 2000: 40–50.

to a piece of music.¹⁰⁴ Furthermore, it has been demonstrated that the intensity perceptions of musicians and non-musicians seem to differ only in the contrasting magnitudes of their generated curves (non-musicians used broader gestures in real-time measuring)¹⁰⁵ and in the perceived salience of individual parameters: non-musicians responded to changes in pitch height more than musicians did but were slightly less sensitive to other features, such as harmony, tempo, onset frequency and dynamics.¹⁰⁶

Intensity has direct relevance to listeners' perception of musical structure since similarities between intensity contours might be perceived by them as patterns – indeed, as motivic prototypes – and therefore could help identify structural relations.¹⁰⁷ Also, since patterns of intensity are concurrently active at all levels of structure (from motives to the whole piece), intensity contours can inform listeners' formal understanding at all hierarchical levels.¹⁰⁸ Furthermore, it has been demonstrated that the perceived tension contours closely reflect the large-scale segmentations of the pieces in question.¹⁰⁹ Leech-Wilkinson proposes a similar view of intensity's role in the structural shaping of pieces:

Performers seem to outline structures, and feel that they are, but in fact all they are doing is working from moment to moment while keeping a sense of longer-term intensity modulation: a little more here, a little less there, and so on.¹¹⁰

Due to its importance to performers' and listeners' experience of musical structure, intensity is placed at the centre of this examination of dynamic structure in performance. As discussed in the section 'Intensity Curves' below, I visualise perceived intensity in the form of curves, thereby representing the broad structural processes – and arguably the overall shape – of performances.

Motion and Goal-Orientation

The two further notions that emerged as relevant to conductors' understanding of structure are motion and goal-orientation. The concept of motion is strongly associated with the way in which

¹⁰⁴ Fredrickson 1999: 44–52.

¹⁰⁵ Fredrickson 2000: 49.

¹⁰⁶ Farbood 2012: 401–03.

¹⁰⁷ Eitan and Granot 2007: 64–66. Describing her perception of structure as a listener, Ana Llorens (2018: 202), furthermore, claimed that 'Forces of various directions and degrees of intensity operate structurally... [They] are at the origins of the delineation of musical shapes and, ultimately, of the perceptual creation of musical structures through performance' (emphasis removed).

¹⁰⁸ Krumhansl 1996: 403–04.

¹⁰⁹ Ibid.: 428, 430; see also Lehne et al. 2013: 179; Nielsen 1987: 503. However, Addessi and Caterina (2000) established that the strength of this connection varies according to the style of the music.

¹¹⁰ Leech-Wilkinson 2012: ¶ 4.9.

musical events and processes are perceived and described.¹¹¹ This ubiquity of kinetic imagery has multiple sources. First of all, there is neurological evidence that the brain's processing of visual, auditory and somatosensory information is interlinked.¹¹² This provides humans with the evolutionary benefit of recognising the motional characteristics of sounds, facilitating survival in unfamiliar environments.¹¹³ The consequence of this is that every sound – including music – ‘has the capacity to specify *some* kind of motion’, as Eric Clarke put it.¹¹⁴

Musical motion can also be interpreted as a metaphor facilitating the comprehension of the abstract concept of musical time. Based on George Lakoff and Mark Johnson's notion of ‘conceptual metaphor’,¹¹⁵ many writers have proposed that spatiality and motion are metaphors aiding the conceptualisation of temporal musical events.¹¹⁶ Accordingly, musical motion can be defined, in Arnie Cox's words, as ‘a metaphoric conceptualization of nonspatial change in the auditory stimulus in terms of spatial change (i.e., motion)’.¹¹⁷ Writers on the subject have identified two primary ways of categorising variants of this metaphor. First, a distinction is made between the images of the music moving in relation to a static observer (‘moving music’ or ‘stationary observer’ metaphor) and of the observer moving across the landscape of the music (‘musical landscape’ or ‘moving observer’ metaphor).¹¹⁸ Second, a differentiation can be made between listeners themselves participating in this process (‘participant’ or ‘internal’ perspective) and simply observing it from a distance (‘observer’ or ‘exterior’ perspective).¹¹⁹ While these metaphors focus on a general forward or horizontal motion, the direction of the perceived motion can be much more varied and could include the vertical dimension as well.¹²⁰

Zohar Eitan and Roni Granot examined the effect of individual musical parameters on the perception of motion in music and found that ‘musical abatements are strongly associated with spatial descents, while musical intensifications are generally associated with increasing speed rather than ascent’.¹²¹ In particular, they found the following links between musical parameters

¹¹¹ One can think of common descriptions such as ‘as we *approach* the recapitulation’, ‘the subject *moves* to the low strings’ or ‘the horns *enter* in bar 10’.

¹¹² Zohar and Granot 2006: 222.

¹¹³ Clarke 2005: 74–75.

¹¹⁴ *Ibid.*: 75 (emphasis in original). In the context of music, the most direct source of motion is the performers' bodily movement (see Shove and Repp 1995), but the experience of motion is by no means limited to this.

¹¹⁵ See Lakoff and Johnson 1980.

¹¹⁶ See, amongst others, Larson 2012 and Cox 2016.

¹¹⁷ Cox 2016: 132.

¹¹⁸ Larson 2012: 64–70; Cox 2016: 116–17.

¹¹⁹ Larson 2012: 71–73; Cox 2016: 139–43. In the case of the ‘participant’ perspective, it is the listeners themselves who traverse the musical landscape or who form the point of reference in the ‘moving music’ metaphor. From the perspective of the ‘observer’, these roles are fulfilled by an imagined third party or external object. Note that the exact relation between the ‘moving music’/‘musical landscape’ metaphors and the ‘participant’/‘observer’ perspectives is defined in slightly contrasting ways by Larson (2012) and Cox (2016).

¹²⁰ See Adlington 2003.

¹²¹ Eitan and Granot 2006: 221.

and motion: changes in loudness and pitch affect the sense of distance, verticality, speed and level of energy of the motion;¹²² changes in inter-onset intervals (acceleration and deceleration) suggest changes in speed and descending motion;¹²³ and articulation affects the sense of distance.¹²⁴ Overall, they found that the perception of motion is rather complex, which is reflected in the various asymmetries in the motional associations of musical parameters as well as the inter-parametric influences resulting from similar intensity profiles.¹²⁵ Furthermore, they demonstrated that musicians and non-musicians generally perceive musical motion similarly, with trained musicians exhibiting a stronger association of some musical parameters with kinetic tendencies.¹²⁶ As discussed above, motion emerges as an important way in which conductors conceptualise structure, and therefore the parameter of motion is incorporated into the analyses of this thesis.¹²⁷

The notion of goal-orientation in music is inextricably linked to the sense of motion since moving towards a goal, as the verb suggests, involves spatial and motional imagery. As Arnie Cox writes: ‘the experience of change will motivate a sense of motion, while a desire for a more or less specific state will motivate a sense of motion along a path toward a goal’.¹²⁸ This metaphor is sometimes described as the source-path-goal image schema.¹²⁹ Music analysts typically define ‘goals’ in tonal or functional terms, with the music generally striving towards resolution and stability. However, as the overview of conductors’ writings has shown, goals in performance are often experienced in relation to intensity and motion: in particular, as points of high intensity (climaxes) or points towards which the motion is directed. In the analyses of Chapters 3–5, goal-

¹²² Crescendos evoke approaching and accelerating motion, while diminuendos create a sense of moving away and descending. Pitch rises are associated with ascending motion, increasing distance, speeding up and higher energy of motion. Pitch fall creates a sense of vertical descent, deceleration, lower energy and also motion to the left. Decreasing pitch intervals also resulted in a sense of moving further away (ibid.: 232–33).

¹²³ Increasing inter-onset intervals create a sense of acceleration, while decreasing inter-onset intervals evoke deceleration. However, both increasing and decreasing inter-onset intervals suggest descending motion (ibid.: 234).

¹²⁴ A move from tenuto articulation to staccato articulation creates a sense of increasing distance from the listener (ibid.: 234). Eitan and Granot also identified further – albeit conditional or less significant – relations.

¹²⁵ Eitan and Granot (2006: 235) showed that changes in loudness, tempo and pitch exhibit asymmetries in their perceived motional characteristics: while diminuendo strongly evokes spatial descent, crescendo is not associated with ascent; while pitch rise is linked to acceleration and moving closer to the listener, pitch fall does not suggest deceleration or moving away from the listener; finally, both increasing and decreasing inter-onset intervals create a sense of descending motion. Eitan and Granot also demonstrated that correlations in the intensity profiles of individual parameters sometimes result in the motional characteristics of one parameter being transferred to other parameters as well. For instance, they found that a rise in pitch suggests an increase in speed even though the musical stimulus included no change in inter-onset intervals (: 237).

¹²⁶ Ibid.: 235.

¹²⁷ For details of this analytical application, see pages 51–52 in this thesis.

¹²⁸ See Cox 2016: 147–48 (emphasis removed).

¹²⁹ See ibid.: 148; Lakoff 1993: 223; Arnheim 1978: 654. Image schemas are basic patterns of human experience used in our cognitive processes to facilitate understanding of the world. In Mark Johnson’s definition, an image schema is ‘a recurring, dynamic pattern of our perceptual interactions and motor programs that gives coherence and structure to our experience’ (1987: xiv).

orientation is described primarily in these terms, and as such the notion is inherent in the analytical representations of these parameters.¹³⁰

Inferring Musical Structure in and from Performance

‘Structural Hearing’

The traditional notion of ‘structural hearing’ (or ‘structural listening’) – that is, the hearing of synchronically conceived, compositional structures – underlies much of the music-theoretical discourse of the twentieth century. Posited by some as the ‘superior’ mode of musical experience, the concept has been held up as a major criterion for the aesthetic evaluation of performing and listening practices.¹³¹ By placing the focus on formal relationships, structural listening is based on the assumption that structural patterns somehow work on an ‘attentive’ listener both consciously and unconsciously to create a sense of cohesion.¹³²

With the performative turn came a barrage of criticism against structural hearing. One line of attack was directed against the limited nature of the notion: writers argued that structure represents only one aspect of a composition, and that fixating on it excludes a whole range of potential meanings and experiences, such as metaphorical, cultural and historical associations, and emotional responses.¹³³

A further challenge to the notion came from those contending that structural listening is at variance with the actual perception of musical performances.¹³⁴ Nicholas Cook, for instance, criticised the traditional exhortation that a performance must somehow reflect the mathematically conceived proportions of a composition: he argued that due to their subjective experience of musical time, listeners’ sense of a piece being ‘well-proportioned’ means that ‘the duration of each of its sections is appropriate to its particular experienced qualities’, rather than reflecting a precisely calibrated set of seconds or bars.¹³⁵

Cook, furthermore, conducted a string of empirical studies challenging the ecological validity of the concept of structural hearing. In an experiment, listeners reportedly experienced

¹³⁰ See the sections ‘Intensity Curves’ and ‘Representation of Motion’ in this chapter.

¹³¹ See, for example, Erwin Stein’s value-laden characterisation: ‘The average listener enjoys music’s physical sensation. ... The performer is tempted to supply in abundance what is most in demand, to the neglect of the formal proportions which, anyhow, only comparatively few listeners are capable of appreciating’ (1962: 13).

¹³² Dubiel 2004: 175. This view is reflected in most traditional analytical writings such as Stein 1962; Berry 1989; Cone 1968. For overviews, see Subotnik 1996: 148–76; Dell’Antonio 2004: 1–3.

¹³³ Subotnik 1996: 170. See also Dunsby [2008] 2009: 9–10.

¹³⁴ See, amongst others, Small 1998: 163–66.

¹³⁵ Cook 1987a: 23. Our perception of durations is event-based rather than chronometric, meaning that a section’s density of musical ‘events’ or ‘mental content’ would determine its duration experience (Ornstein 1969: 34–43).

sonata form not as the tonality-based hierarchical structure that analysts posit but rather as a linear sequence of discrete units, some participants emphasising contrasts between the thematic material and transitions rather than differences between the first and second subjects themselves.¹³⁶ Cook has also demonstrated that large-scale tonal unity has no significant impact on listeners' perception.¹³⁷ In a further experiment, Cook established that listeners experience the structure of dodecaphonic works not in terms of their motivic and serial organisation but rather in the sense of a 'common temporal pattern of high points and low points, static moments and dynamic ones, moments experienced as being critical and moments of indifference', resembling a 'pattern of "nows" and "thens"' rather than the relationships typically revealed in a traditional analysis.¹³⁸ Cook concludes:

It does seem, then, as if there is a rather glaring disparity between the way in which the arbiters of musical taste approach musical structure and the way in which listeners generally respond to it. For the theorist ... musical forms are to be understood in terms of unitary, integrated structure, whether this unity is realized through tonal closure, serialism, or some other type of hierarchical organization. But it appears that such integrated structure passes over the heads of most listeners most of the time...¹³⁹

Siu-Lan Tan and Megan Kelly made similar observations in their study. When sixty university students were asked to listen to short orchestral pieces and 'get a sense of the composition as a whole', they tended to focus on surface elements, on change and contrast (as opposed to similarity and repetition), and on moment-to-moment events.¹⁴⁰ In their studies, Vladimir Konečni and Heidi Gotlieb furthermore found that changing the order of movements in Beethoven sonatas and string quartets and altering the sequence of variations in J. S. Bach's *Goldberg Variations* have no apparent effect on listeners' enjoyment of the works.¹⁴¹

These findings have led some to question the very validity of the notion of large-scale structure as anything other than a compositional device with little, if any, bearing on actual listening experience. Daniel Leech-Wilkinson, for instance, argued that

¹³⁶ Cook 1987a: 24. In the experiment, musically literate listeners were asked to chart the formal plan of Beethoven's Sonata op. 49, no. 2.

¹³⁷ Cook 1987b. In the experiment, Cook presented listeners with a selection of pieces of varying lengths, some of which were modified to test whether a discrepancy between initial and closing tonalities affects the experience of listeners. He found that tonal unity's effect on the aesthetic enjoyment of music is in inverse proportion to duration: beyond the timeframe of roughly one minute, its influence is significantly diminished.

¹³⁸ Cook 1987a: 25.

¹³⁹ Cook 1990: 68.

¹⁴⁰ Tan and Kelly 2004: 195, 208 (emphasis removed).

¹⁴¹ Konečni 1984; Gotlieb and Konečni 1985.

[M]usic is controlled and perceived from moment to moment: long-term structures are theoretical, useful for composers, an invitation from analysts to imagine music in a particular way, but apparently not perceptible (save in the vaguest outline via memory).¹⁴²

However, writers generally agree that these findings do not necessarily mean that traditionally conceived structure is completely irrelevant to performers and listeners. Alan Smith demonstrated that, at the very least, listeners can be taught to listen for traditionally conceived musical schemata, even if this might not be their natural way of experiencing music.¹⁴³

Understandably, empirical studies of the sort discussed above have posed significant challenges to writers on music. Spearheaded by music analysts, some have defended traditional notions by criticising the way in which these investigations were conducted, notably with regard to the selection of subject groups. For example, many experimental studies of this nature include undergraduate and graduate students in music, a tendency that has caused Joseph Swain, for one, to argue that this is misleading since there must be other (admittedly small) groups for whom tonal unity or traditionally conceived large-scale structure is indeed a perceptual reality.¹⁴⁴

Although Swain's claim is in need of empirical substantiation, it nevertheless raises a crucial question: whose perception should be taken as a benchmark – that of an average concertgoer, a music student, a professional musician or an idealised 'perfect' listener? In the work presented here, I adopt the following approach: I use aural perceptibility as a criterion for identifying structural features in performance, and I base my observations on my own perception – a perception informed by both practical and theoretical musical training.¹⁴⁵ As such, while my observations cannot claim universal applicability, they reflect real experiences of musical listening – something that is not necessarily true of data-driven quantitative analyses, which have dominated discussions of musical structure in the context of performance analysis.

Coherence in Performance

Another notion common in discussions of musical structure is that of coherence.¹⁴⁶ The quality of formal cohesion has long been regarded as the touchstone of a successful performance.

¹⁴² Leech-Wilkinson 2012: ¶ 4.10. Cook (1987a: 27) articulated a similar view in relation to tonal unity: 'From the listener's point of view, then, overall tonal form may mean simply the totality of experienced relationships between local events within a composition'. See also Cook 1987b: 204; Friedman 2020: 149.

¹⁴³ Smith 1973: 200–13. See also Cook 1987a: 24, 28.

¹⁴⁴ Swain 1994.

¹⁴⁵ In order to contextualise the findings of my aural analysis, it is important to outline the training and experiences that informed my perception: I have been taught to play the flute and the piano (at an advanced and at an intermediate level, respectively), and I have studied music theory and music history extensively within musicology programmes at a university level, while also working as a music critic for a number of years.

¹⁴⁶ As John Rink pointed it out, 'coherence' has the dual meaning of cohesion and comprehensibility (Rink, Spiro and Gold [2011] 2016: 283). In this discussion, I use the term primarily in the sense of cohesion.

Whether inspired by or simply consonant with Gestalt psychology, references to a piece's unity and a whole affecting the shaping of parts are all-pervasive. We find these both in traditional analytical works and in performance-oriented writings as well. Erwin Stein, for example, claimed that

[T]he performer's first task is to put the notes together so that they make sense. They must cohere. ... The performer must aim at coherence, clarity and distinction of both the details and the whole of a piece.¹⁴⁷

John Rink, furthermore, stated that

The success of a performance will be measured ... by the degree to which 'resonance' is achieved in drawing together the constituent elements into something greater than the sum of those parts, into a musically cogent and coherent synthesis.¹⁴⁸

However, musical coherence as a concept is as elusive as it is prevalent. In the analytic literature, cohesion is most often described in terms of the compositional strategy of organic development: that is, having certain underlying similarities between sections that in some way make those sections cohere.¹⁴⁹ On a broader level, tonality – or serial organisation, alternatively – is thought to endow a work with the quality of coherence. When analysts turn to performances, they customarily argue for the faithful execution of the score's instructions or for the accurate realisation of formal proportions, claiming that deviations from the score (or performative 'interventions', as they are often called) only serve to undermine the presumed unity of compositions.¹⁵⁰ From this emerges the widespread idea that steady tempo somehow preserves unity, while tempo changes (especially 'wilful' ones) are destructive of a piece's coherence.¹⁵¹

However, as we have seen, there are significant discrepancies between theorists' presumptions regarding listening and the actual listening experience. Since large-scale structures are not universally perceived in the sense that theorists suggest, the concept of performance cohesion, too, requires reconsideration. First of all, there exists a sense of cohesion which is applicable specifically to performances. Nicholas Cook, for instance, claims that listeners do experience coherence but not in the sense of 'unitary organization', as theorists explain it.¹⁵²

¹⁴⁷ Stein 1962: 19–20. See also Berry 1989; Cone 1968.

¹⁴⁸ Rink 2002: 56. See also Rink 1999: 235–36; Cook 1987a: 25–27; Gottschewski 1998: 155–58; Lewis 1999: 3–4, 19. Note that Rink subsequently tweaked his phrasing: in a revised version of his chapter, he wrote that 'the success of a performance will be measured ... by the degree to which "resonance" is achieved in drawing together the constituent elements into something greater than the sum of those parts, *into a synthesis of some sort*' (Rink [forthcoming]: 158; emphasis added).

¹⁴⁹ See Whittall 2001: ¶ 3.

¹⁵⁰ See, for instance, Epstein 1990: 198, 204–06.

¹⁵¹ Stein (1962: 48), for instance, claimed that 'The tempo is one of the performer's most important means for holding the form together, and should make a piece of music ... a well-balanced whole. ... Maintenance of the same tempo provides unity...'

¹⁵² Cook 1990: 68.

Christopher Small maintains that a more performance-oriented notion of structural cohesion may be one based on ‘dramatic effectiveness’.¹⁵³ Andrew Friedman argues in a similar vein:

[W]hen people speak of a performance’s long-range, structural integrity, its fidelity to the organic unity of the piece, etc., what they are referring to (if anything) is rather a performance’s dramatic cohesion and convincing shape, the cogency of its flow, the consistency of its expression, the way it connects moment to moment to moment in a way that amasses rather than dissipates meaning.¹⁵⁴

In a more general sense, cohesion in performance can simply mean the implementation of an overarching performance strategy. John Rink, for example, argues that a ‘broader interpretative vision’, in other words a ‘unifying thread’ (or *grande ligne*), lies behind coherent performances.¹⁵⁵

Whether we define it as ‘dramatic effectiveness’, as ‘convincing shape’ or as a broad performance strategy, coherence in performance is likely to be intrinsic to our experience of structure and is therefore a concept worth investigating. Consequently, in the performance analyses presented in this thesis, I explore the ways in which structural cohesion may take effect.

Related Theories from Psychology and the Cognitive Sciences

At the time of writing this thesis, there are no comprehensive empirical investigations that would provide a definitive account of the ways in which listeners perceive large-scale musical structure. Although the above-mentioned studies hint at the limitations of perceiving theoretically conceived structures, there is a need for exhaustive and ecologically valid investigations into the experience of large-scale structure in performance – the prospect of which, however, are limited.¹⁵⁶

What exists instead is a number of theories – such as generative theory,¹⁵⁷ phrase-arch theory¹⁵⁸ or the theory of cues and imprints¹⁵⁹ – which provide alternative approaches to the mechanisms of structural perception, but which have only limited empirical basis. In the following discussion, I outline some of the theories that I incorporate into my analyses.

¹⁵³ Small 1998: 163.

¹⁵⁴ Friedman 2020: 149.

¹⁵⁵ Rink 1999: 218, 225, 235. For discussion of the concept of *grande ligne*, see pages 46–47 in this thesis.

¹⁵⁶ Experimental studies of this nature tend to focus on short, and often artificial, musical materials, which cannot account for the experience of larger pieces, say symphonic movements. The examination of listeners’ responses to real pieces of music (as opposed to excerpts specifically created for the experiment) and to works of longer length poses significant, if not insurmountable, difficulties as to the setting up of experiments and the evaluation of results. See Deliège et al. 1996: 117–20, 125.

¹⁵⁷ Fred Lerdahl and Ray Jackendoff’s (1983) generative theory has exerted considerable influence on the discipline, but its linguistic basis and its relevance for the real-life perception of large-scale structures have been contested. For discussions, see Rosner and Meyer 1986: 37; Cook 1990: 71–73; Llorens 2018: 41–43; Deliège et al. 1996: 125, 153–54; Deliège and Mélen 1997: 359–60.

¹⁵⁸ See pages 53–54 in this thesis.

¹⁵⁹ See pages 34–35 in this thesis.

First, it would be useful to consider how the mechanisms of memory relate to the perception of musical structures in performance. In his book on the subject, Bob Snyder established the following relationships between memory and the inference of structure:¹⁶⁰

- The structures of pieces or performances that exhibit clear groupings and which create hierarchically organised levels of closure are more easily retained in memory.¹⁶¹
- Events that are similar and temporally proximate tend to be grouped together in memory. These will then become associated memories, functioning as cues for one another.¹⁶²
- It takes considerable mental effort to reconstruct large-scale temporal patterns in memory, which means that they cannot occur during listening when the short-term memory is stimulated first and foremost. A complete mental representation of structure consequently can be attained only after listening.¹⁶³
- New long-term memories are created through association to already existing memories. A lack of pre-existing references, therefore, could inhibit the retention of the incoming stimuli.¹⁶⁴ In musical terms, this means that listeners are more likely to infer certain structural relations or shapes when they are familiar with them.
- The episodic memory – recollections of specific events, such as performances – is conditioned by the individual's value systems, highlighting and downplaying certain details. These memories are therefore dependent on 'what we know, feel, and want'.¹⁶⁵ Listeners' perception of structure in performance then will be conditioned by their values and expectations.
- Episodic memories are initially categorised according to memory prototypes (or semantic memories), and these categorisations will define the memory even when the prototypes themselves change.¹⁶⁶
- The experience of music and structure in performance varies from listener to listener since the individual memory schemata – referential frameworks – are different.¹⁶⁷

¹⁶⁰ Snyder 2000.

¹⁶¹ Ibid.: 66.

¹⁶² Ibid.: 69.

¹⁶³ Ibid.: 71, 222. This has clear implications for the idea of synchronic structure, as discussed earlier in this chapter.

¹⁶⁴ Ibid.: 72.

¹⁶⁵ Ibid.: 75. Further distortion will result from repeated recollections, which progressively alter the memory itself (ibid.)

¹⁶⁶ For instance, one might perceive a recording as loud and fast on first hearing it, and it will be remembered as such, even though the individual's notion of loud and fast – the reference framework – may change in the meantime, resulting in a situation where the static categorisation of the episodic memory no longer fits the 'revised' memory prototypes (ibid.: 75–76). This might have a direct effect on the way in which one infers musical structure.

¹⁶⁷ Ibid.: 103–04. This corroborates John's Rink's principle of structural 'inference', discussed on page 16 in this thesis.

- It is likely that while forming a mental representation, a listener's segmentation of a piece will be based (at least partly) on musical features that are particularly striking. According to Snyder,

Even though the locations of the chunk boundaries would be relatively fixed by the musical material itself, *which* chunk boundaries we retained in our initial memory of a piece would be powerfully influenced by their salience for us. Some chunk boundaries would immediately stand out more than others. ... In fact the events that stand out for us would be likely to be high-information events, that is, events that were unexpected.¹⁶⁸

This last point leads to a crucial conclusion: structural inference by listeners is closely related to their perception of salience.

An approach that productively incorporates the concept of salience into a theory of large-scale structural perception is Irène Deliège's theory of cues and imprints.¹⁶⁹ According to her, 'attentive listening'¹⁷⁰ involves a 'cue-abstraction' process, whereby the listener identifies striking or salient features of the musical surface that will then represent – act as a cue for – the particular section within which it is situated;¹⁷¹ this process therefore aims at reducing the amount of information stored in memory.¹⁷² The temporal unfolding of a piece, furthermore, could be represented in the form of a 'mental line', along which the structures represented by cues would take place progressively.¹⁷³

Deliège argues that in compositions of the common practice period, cues would mainly take the form of musical motifs, while in other styles, further aspects (such as acoustic or temporal parameters) could fulfil this role.¹⁷⁴ In any case, cues of this sort would be extracted from the musical surface, where 'the most immediately identifiable reference points lie'.¹⁷⁵ Once enough iterations of these cues are heard, they are reduced down in a person's memory to prototypes ('imprints'), which encapsulate the fundamental characteristics of the cues.¹⁷⁶

Michel Imberty further developed Deliège's concept by proposing that two types of cues underlie the large-scale perception of structure: 'objective' cues, which are identifiable in the

¹⁶⁸ Snyder 2000: 221–22 (emphasis in original).

¹⁶⁹ For a summary, see Deliège [2006] 2019: 153–74.

¹⁷⁰ Deliège and Mélen (1997: 360) define 'attentive listening' as 'the situation in which the listener is devoting maximal cognitive resources to engage with the structure of the piece in an active listening process'.

¹⁷¹ Deliège and Mélen (*ibid.*: 366) describe cue as 'an encodable label which summarises and gives access to the whole group'. According to them, cues 'act primarily as reference points which help subjects to represent the time course of the piece' (*ibid.*).

¹⁷² See Deliège et al. 1996: 122; Deliège and Mélen 1997: 366.

¹⁷³ Deliège and Mélen 1997: 366–67.

¹⁷⁴ Deliège et al. 1996: 123; Deliège and Mélen 1997: 362.

¹⁷⁵ Deliège and Mélen 1997: 361. Through experimental investigations, Deliège established that listeners' perception of musical segmentation is closely related to contrasts in the perceived cues (Deliège et al. 1996: 127).

¹⁷⁶ Deliège et al. 1996: 123; Deliège and Mélen 1997: 373.

score (themes, changes in register, orchestration, etc.), and ‘subjective’ cues, which are related to the psychodynamic experience of the listener (sense of beginning, development, etc.).¹⁷⁷ Imberty emphasised that any musical feature can function as a cue, thereby broadening Deliège’s focus on motifs.¹⁷⁸ He also proposed that a ‘hierarchy of saliences’, alongside our schematic reference models, can shape our perception of structure.¹⁷⁹ Related to saliences, ‘dynamic vectors’ can be identified, which ‘convey the temporal significance of orientation, progression, diminution or growth, of repetition or reversal’, and which consequently account for the processual experience of musical structure.¹⁸⁰

If perceptual saliences do play an important role in listeners’ experience of structure in performance, it is worth considering how these saliences operate. Bruno Repp’s study on the perception of expressive timing is enlightening in this regard.¹⁸¹ He established that listeners tend to accurately identify lengthening and hesitation at points in the music where these are unexpected, while changes in timing that are typical in expressive playing (phrase-final lengthening, for instance) are likely to go unnoticed.¹⁸² This finding may have significant ramifications: since the quality of salience arises in relation to unexpected events, it follows that the inference of structure will indeed vary amongst listeners because these expectations – even when presupposing a common musical background – will differ according to their individual prior experiences. A further implication is that caution is required when evaluating the results of quantitative performance analyses: while a tempo graph, for instance, might objectively register the timing patterns of a performance, the listener’s experience may not correspond to that; in other words, the listener – based on their referential framework and expectations – may perceive as salient different aspects from those shown by a putatively objective analysis. This potentially creates the need for more listener-oriented, qualitative approaches to performance analysis. The analyses in Chapters 3–5 examine the role of salience in the experience of structure and shed light on the limitations of quantitative analytical techniques.

Analysing Musical Structure in Performance: A Brief Overview

The analysis of structure in performance emerged hand in hand with performance analysis in general. Especially in the early years of computer-assisted analysis, the goal was often to discover

¹⁷⁷ Deliège et al. 1996: 124.

¹⁷⁸ Imberty 1993: 334.

¹⁷⁹ *Ibid.*: 330–31, 333.

¹⁸⁰ *Ibid.*: 334.

¹⁸¹ Repp 1992.

¹⁸² *Ibid.*

underlying structures in the synchronic sense, which risked turning performances into synchronic objects or ‘acoustic texts’¹⁸³ – the very approach which those in the field of performance studies ostensibly wished to transcend.¹⁸⁴ A further problematic trend of early performance studies consisted in approaching structure in performance through score-based analysis, thereby testing, as it were, pre-existing structural interpretations on performances.¹⁸⁵ Closely related to the notion of embedded structure, this approach effectively filtered performance data to match score-based analyses, thus limiting the possible range of structural readings in performances.¹⁸⁶

More recent performance analyses have adopted a more inclusive approach, leaving behind preconceived analytical expectations and instead celebrating the diversity of structural interpretations that performances create – sometimes emphasising, sometimes going against supposedly immanent compositional structures, but always broadening the range of possible meanings.¹⁸⁷ Even these studies, however, tend to focus on select details of performances rather than the complete structural shaping of pieces.

At the time of writing this thesis, two major (and roughly concurrent) research projects have been conducted to directly address the question of large-scale structural shaping in performance. The first is the Graz-based project *Performing, Experiencing and Theorizing Augmented Listening (PETAL)*, led by Christian Utz,¹⁸⁸ the conceptual basis and stated goals of

¹⁸³ Nicholas Cook’s expression (2007: 184).

¹⁸⁴ See Hinrichsen 2013: 185; Friedman 2020: 146; Cook 2009a: 780–81.

¹⁸⁵ See, for instance, Shaffer and Todd 1987; Shaffer 1995. For discussion, see Cook 2013: 53–55.

¹⁸⁶ Cook 2009a: 780–81; 2009b: 233; 2013: 50–53.

¹⁸⁷ See, for instance, Barolsky and Martens 2012.

¹⁸⁸ The project was based at the University of Music and Performing Arts Graz and ran between 2017 and 2020. Utz’s collaborators included Thomas Glaser, Majid Motavasseli and Laurence Willis. See <<https://musiktheorie.kug.ac.at/petal.html>> (accessed 21 April 2021). Their project-related publications included, amongst others: Utz 2017a, 2017b, 2018; Utz and Glaser 2020.

which were highly promising.¹⁸⁹ However, the project was arguably unsuccessful in overcoming traditional notions of structure¹⁹⁰ or in introducing novel analytical approaches.¹⁹¹

The most comprehensive investigation yet into the question of diachronic structure in performance has been undertaken by Ana Llorens.¹⁹² The purpose of Llorens' research was to explore the ways in which performed diachronic structure may be conceived and analysed. Following a detailed examination of the origins and context of the diachronic notion of structure, Llorens presented a string of analyses of chamber music (cello and piano) performances, employing a large variety of quantitative and qualitative analytical techniques.

Llorens found that a wide range of musical parameters can play a role in the projection and inference of structural representations. She demonstrated that besides the commonly analysed timing and dynamics, parameters such as articulation, timbre, asynchrony, balance and intonation can also contribute to the structural shaping of a piece – a finding which underscores the importance of surface-level features in the context of structure.¹⁹³ Extending her conclusion to potentially all elements of music, she asserted that dynamic structures are created by '[a]ll of the transformations in musical parameters'.¹⁹⁴ Llorens likewise established that specific performance strategies are not necessarily correlated with certain structural constructions: similar

¹⁸⁹ Focusing on cyclic works (Bach's *Goldberg Variations*, Schönberg's op. 19 and Mahler's *Lied von der Erde*), the project team acknowledged the role that performers play in creating or inflecting musical structure, accepted the plurality of structural meanings that a listener may infer from a performance (Utz and Glaser 2020: 160; Utz 2017a: 6; Utz 2017b: 217–19, 233, 236; Utz 2018: Section 2.), and set out to concentrate on the temporal experience of music (Utz 2017b: 216; Utz 2017a: 7) – therefore adopting the notions of what I termed emergent structures and diachronic structure. Furthermore, PETAL proposed the adoption of a broad range of analytical approaches: historical, score-based and quantitative analysis, as well as close and distant listening (<<https://musiktheorie.kug.ac.at/petal.html>>; accessed 21 April 2021).

¹⁹⁰ Despite their acknowledgements of the importance of perceptibility, their arguments still suggest that compositional structures somehow subconsciously control performers' and listeners' thinking regardless of cognitive and perceptual limitations; as Utz claimed: 'The implications of compositional structure on performance and perception cannot be limited to what is performable or perceivable...' (Utz 2017b: 244). Furthermore, despite their apparent acceptance of performances as autonomous entities, in some cases they base their evaluations on the variable conformity between recordings and score-based analytical exegeses (Utz 2017a: 18–20), at one point describing performance strategies with no discernible 'analytical basis' ('analytische Begründung') as 'irrational' (Utz and Glaser 2020: 209). Finally, they seemingly subscribe to a score-based notion of coherence, emphasising 'analogous tempi', the maintenance of 'sound quality and timbre', and the highlighting of 'motivic and timbral connections' (Utz 2018: Section 6; Utz 2017b: 236).

¹⁹¹ The emergent analyses include almost exclusively tables of duration and tempo curves (and dynamics curves to a limited extent), and the researchers' interpretation of large-scale shaping was based almost exclusively on these datasets (see Utz and Glaser 2020).

¹⁹² Llorens 2018.

¹⁹³ Ibid.: 201–03, 240, 249–50.

¹⁹⁴ Ibid.: 239.

strategies may result in disparate structural formations,¹⁹⁵ and different performative techniques may create analogous structural impressions.¹⁹⁶

Moreover, Llorens asserted that the notions of motion, intensity and goal-directedness are fundamental to the diachronic experience of structure:

[F]orm emerges as a process in which the intensifications and releases in the dynamic, changing relations between sounds might be construed as delineating, as it were, progressive and recessive movements. ... 'forms' [manifest themselves] as processes in which energy, tension, relaxation, expectations, and realisations play with one another... musical form is more clearly experienced as a potentially hierarchical organisation of musical sounds that emerges diachronically, ostensibly as motional, energetic 'shapes' and contours.¹⁹⁷

Llorens also devised a novel representational technique in order to 'globally represent the dynamic, processual perception of musical structure' (see Figure 1.4).¹⁹⁸ In her charts, green lines and arrows respectively denote the senses of stillness and forward impulse.¹⁹⁹ Arches above the bar numbers represent grouping units and 'intensity waves' in performance, while hairpins indicate the changing levels of intensity experienced by the listener.²⁰⁰

Although it makes significant inroads into the study of structure in performance, Llorens' work does not answer all questions regarding structure. As a result of its focus on individual movements from the chamber music repertory, her research does not consider, for example, the potential applicability of her conclusions to symphonic music or to multi-movement works. Furthermore, despite her acknowledgement of the crucial role of intensity in formal shaping, she arguably does not go far enough in capturing these tendencies, hence requiring additional research of the type pursued in this thesis.

Analytical Methodology

In this thesis, I employ a combination of quantitative (computer-assisted) and qualitative analytical techniques. Both of these are essential for a comprehensive study of musical

¹⁹⁵ Specifically, Llorens (ibid.: 246) concluded that '[s]ectional repetition does not necessarily imply intensification'; '[d]ecreases in tempo and dynamics might or might not emphasise the entrance of the following materials'; '[c]oordinated decreases in tempo and dynamics might or might not punctuate structural boundaries'.

¹⁹⁶ Llorens (ibid.: 246–47) demonstrated that various performance techniques may create the same sense of motionlessness, movement, forward motion, resolution or integration.

¹⁹⁷ Ibid.: 243–44, 251 (emphasis removed).

¹⁹⁸ Ibid.: 245.

¹⁹⁹ In this sense, Llorens' approach is redolent of Jürgen Uhde and Renate Wieland's work, which included arrows representing intensity: they used right-facing arrows to signal 'Spannungsphase', or 'phase of tension', and left-facing arrows to designate 'Gegenspannungsphase', or 'phase of counter-tension' (Uhde and Wieland 1989: 163).

²⁰⁰ Llorens 2018: 98–99.

performance.²⁰¹ Aural techniques in particular help identify phenomena that are clear from listening to a recording but which might not emerge from the data alone. At the same time, quantitative analysis allows an examination of the ‘facts’ of a performance, such as timing and loudness,²⁰² which could put in context the impressions gained from listening, and it allows for corpus analysis of large groups of recordings, which would otherwise be unfeasible using qualitative analysis.

Analytical examinations of performances have traditionally focused on the data drawn from recordings and have made assertions about structure based on an analysis of that data. Very few works have considered the aural experience of structure in earnest, which is mainly due to the fact that subjective techniques have been largely viewed as inferior to ‘objective’ quantitative methods.²⁰³ However, data analysis has severe limitations: in general, only tempo and loudness can be measured and analysed in a relatively accurate and consistent manner, leaving a vast array of musical parameters unexamined. Furthermore, focusing on patterns in data can lead to conclusions that have little bearing on or, in some cases, go directly against the listening experience.²⁰⁴

Naturally, a purely qualitative approach would run the risk of producing mostly unverifiable results, being ‘true’ only in the very specific conditions under which they emerged (including the analyst’s prior listening experience, their expectations and attentiveness during listening, the equipment used for playback, etc.). As Dorottya Fabian puts it: ‘without data all we have is opinion’.²⁰⁵ However, if one is to gain any meaningful insight into the ways in which large-scale musical processes are created and experienced in performance, the use of qualitative techniques is necessary.

In the analyses of Chapters 3–5, I prioritise qualitative analysis over quantitative methods. Despite the potential pitfalls discussed above, aural analysis provides the most direct access to the experience of dynamic structure in performance. The dynamic parameters of shape, intensity, motion and goal-orientation, which have been identified as crucial to conductors’ and listeners’ understanding of structure, cannot be examined through quantitative techniques alone, or at least not without fundamental methodological concerns,²⁰⁶ and this also explains why these fundamental facets of the musical experience have been mostly neglected in performance analysis. Therefore, in order to gain insight into this phenomenon, I use aural analysis as my

²⁰¹ See Fabian 2015: 13–16.

²⁰² See Rink 2002: 46.

²⁰³ Friedman 2020: 145–46.

²⁰⁴ Desain and Honing 1993: 123, 132, 136. Numerous examples of this are highlighted in the analyses of Chapters 3–5.

²⁰⁵ Fabian 2015: 13.

²⁰⁶ See pages 50–51 in this thesis.

primary analytical technique, and quantitative methods are employed to help explain my findings and to ground them in verifiable information.²⁰⁷

As part of the analyses, judicious comparisons are made between Furtwängler's recordings and the recordings of three other conductors (Karl Böhm, Arturo Toscanini and Willem Mengelberg). The purpose of these juxtapositions is to contextualise Furtwängler's performances and to test the broader viability of the analytical methodology. Accordingly, the analyses should not be viewed as overall comparisons between musicians (and even less so as value judgments) but instead as a focused yet duly contextualised examination of one specific conductor.

Throughout Chapters 3–5, I also provide an overview of the analytical literature on the works in question and a brief outline of each piece based on a score-based analysis. This serves to set up the recording analyses by outlining some potential structural patterns in the works (especially tonal and thematic processes) and the ways in which these have been interpreted generally. Crucially, however, this does not serve as a basis of comparison for the recording analyses. The recordings are examined as unique entities, and structural processes are identified based purely on the performances themselves. This is true even in cases where a piece is unanimously interpreted as falling into one particular formal tradition (for example the first movement of Brahms's Fourth Symphony, as discussed in Chapter 4): here the performances are not automatically assumed to create the relevant form but are analysed on their own terms.

Related to this, it is important to note that the use of traditional formal designations such as 'exposition', 'trio' or 'variation' throughout the recording analyses does not mean an automatic interpretation of the relevant performances within the formal paradigms suggested by those designations. Ideally, each recording would be discussed in the terms most relevant to the individual performance; however, this makes juxtaposition difficult and the discussion hard to penetrate by readers. Therefore, traditional designations are used in this thesis, but only as tools of navigation, and not as indications of formal interpretation.²⁰⁸

Finally, it is worth clarifying how the issues of agency and intentions are handled in the following analyses. Few, if any, would argue that performances are one-to-one mappings of performers' intentions, however those are defined. Myriad factors can and will influence a

²⁰⁷ Because of this focus on listening experience, my approach might be considered phenomenological, at least in broad characteristics. Although I make no attempts to situate my work in phenomenological philosophy, the experience-based analyses shown in this thesis have some correspondences with phenomenology, especially the works of F. Joseph Smith and Thomas Clifton. Although an exploration of this potential connection might not be crucial for the present purposes, future research could evaluate the methodologies proposed here as potential phenomenological analytical tools.

²⁰⁸ This applies to the discussion itself as well as the analytical representations in the Apparatus, which contain formal overviews derived from general score-based analysis to facilitate navigation within recordings.

performance, from the concert hall and the available instruments to the preparedness or even the general disposition of the musicians, and this issue is further complicated in the context of orchestral music and sound recording. This, in itself, makes an attempt to pin down performative intentions problematic. Fundamentally, however, performance analysis – or any analysis for that matter – does not need to uncover intentions in order to make meaningful observations about its subject. This issue has been explored in depth in the context of composers' intentions,²⁰⁹ and those lessons can be applied here as well. Accordingly, the analyses in this thesis take as their primary subject the sound recordings, which are treated as autonomous artistic products, and no attempts have been made to fully reconstruct the possible intentions of performers. Furthermore, the claims made about the potential structural representations motivating the performances should be seen as informed hypotheses instead of definitive conclusions. In the following, I provide an overview of the specific analytical techniques used in this thesis.

Qualitative Techniques

As discussed above, the primary analytical technique employed in this thesis is aural analysis. This involved listening to the recordings repeatedly both in full and in sections.²¹⁰ In order to gain a sense of the large-scale structural shaping within the pieces in question, uninterrupted listening to the entire work was prioritised. At the same time, more focused examination of shorter segments was also carried out to attain a more detailed understanding of the performance. Finally, in order to better understand the results of the quantitative analysis, I also employed what Nicholas Cook termed 'augmented listening':²¹¹ in the final phase of the analysis, I followed the corresponding tempo and dynamics curves in real time while listening to the recordings, using Sonic Visualiser.

Importantly, the qualitative analysis was prepared before the quantitative analysis. This ensured that the results of the aural analysis, including the representations discussed below, were not influenced by the results of the computer analysis – this also includes 'augmented listening', which was carried out after the qualitative representations were finalised. This means, for example, that the similarities between the intensity and tempo curves are not the result of the latter's influence on my conceptualisation of the former, but they are instead the demonstration of a genuine correspondence between the parameters.

²⁰⁹ See Cook 2013: 8–32.

²¹⁰ The listening sessions were done using high-quality headphones.

²¹¹ Cook 2017: 207

*Intensity Curves*²¹²

I have argued above that the notions of shape and intensity can form an integral part of conductors' and listeners' mental representation of musical structure. Indeed, the presentation of perceived intensity in the form of curves can potentially serve as a visualisation of the general structural 'shape' of performances.²¹³ As John Rink put it, the intensity curve is

a graphic representation of the music's ebb and flow, its '*contour*' in time, determined by all active elements ... working either independently, in sync, or out of phase with one another to create the changing degrees of energy and thus the *overall shape*.²¹⁴

In the following, I demonstrate that this representation has a long history in analytical writings and that it has potential value as a tool in performance analysis. Since intensity curves are the most experimental and probably least known analytical technique used in this thesis, they merit an extended discussion.

There is a distinct line of music analysis that emerges as a precursor to the technique proposed here. The so-called 'energeticist' branch of music theory, from its conception around 1900 until quite recently, examined music through the fluctuation of its internal 'energy' (generated by various musical parameters), which gives rise to the 'dynamic curve', or shape, of the integrated musical work.²¹⁵ Building on Eduard Hanslick's formalist aesthetics, but at the same time rejecting analytical schematism, energeticists worked to uncover the 'objective', intramusical content of music, that is, excluding all extramusical associations as well as historical and social factors, and thereby providing an alternative to musical hermeneutics.²¹⁶ The main relevance of this school of thought to our discussion lies in the fact that the relevant writers often experimented with various forms of intensity curves to visualise their analytical findings.

Writing in the 1920s, Hans Mersmann was one of the first energeticists to employ intensity curves as a visual aid in analysis. Mersmann's phenomenological approach, as he called it, aimed at exploring the music with the 'greatest possible objectivity', whereby it reveals itself as 'a unity of intertwining and interdependent forces'.²¹⁷ In his publications, Mersmann illustrated the dynamic formal processes with 'Ablaufskurven' ('processual curves'; Figure 1.5), which

²¹² An expanded version of this subchapter, containing an analytical case study on Furtwängler's 1952 recording of Beethoven's Third Symphony, has been published as an article: Elek 2023.

²¹³ In fact, when experimenting with representational techniques to capture the formal processes experienced in Furtwängler's recording at the beginning of this research, I intuitively began drawing what were in effect intensity curves without initially realising what they represented.

²¹⁴ Rink 1999: 234 (emphasis added).

²¹⁵ Rothfarb 2002: 927–28. The term 'dynamic curve' appears in Agawu 1982: 8; and Meyer 1989: 311.

²¹⁶ See Rothfarb 1992: 44–45, 55–56; Kurth 1991: 17.

²¹⁷ ('eine möglichst große Objektivität ... Bei näherem Eindringen stellt sich dieser Organismus dem suchenden Auge als Einheit vieler ineinander verschlungener und durcheinander bedingter Kräfte dar.') Mersmann 1925: 374, 376.

broadly correspond to what I call intensity curves.²¹⁸ Mersmann is particularly relevant for this discussion as the theorist had a personal relation with Furtwängler,²¹⁹ and in a letter to the conductor, Mersmann even commented on the affinity between his analytical approach and Furtwängler's performance style:

Would you allow me to hand to you – with the greatest admiration – two small writings of mine today? They emerged, especially the Beethoven book, from a feeling I had every time I heard you conduct: that your interpretation and my analysis seem to have something in common.²²⁰

The musicologist-composer Hugo Leichtentritt and the composer Ernst Toch also produced music theoretical works in the 1920s that were fundamentally influenced by energeticism. In his analysis of Wagner's Prelude to *Tristan und Isolde*, Leichtentritt argued that Wagner's piece is best understood in terms of 'difference[s] in intensity, in color, in accumulation of sound',²²¹ and that the 'surging and ebbing motion ... is the real dominating motif of the entire structure'.²²² His representation of the piece's intensity curve, which he called as such, can be seen in Figure 1.6. Ernst Toch similarly defined 'form' as the 'balance between tension and relaxation', the main manifestation of which is the 'wave line' (Figure 1.7).²²³ According to Toch's explanation, these waves 'have the tendency to drive upwards their several highest tones (climaxes) until, after reaching the highest of these climaxes, the wave "breaks"'.²²⁴ He argued that this continuous ramping of tension 'respond[s] in the highest degree to the shaping forces in music'.²²⁵

From the 1950s onwards, anglophone writers picked up the threads of energeticist music analysis, some even adopting the use of what I refer to as intensity curves. In his 1955 thesis,

²¹⁸ Mersmann 1923: 261; 1925: 387. Mersmann (1923: 261–62) praised the accessibility of this visualisation, which he apparently developed during educational workshops offered to musically untrained participants.

²¹⁹ Their correspondence reveals that Mersmann visited Furtwängler at least on one occasion, during which they spent a few 'stimulating and productive hours' ('anregenden und fruchtbaren Stunden') discussing music (letter from Mersmann to Furtwängler, 9 November 1927, Staatsbibliothek zu Berlin, 55 Nachl 13 A, Kasten 24). See also the letter from Furtwängler to Mersmann, 13 November 1928 (Staatsbibliothek zu Berlin, 55 Nachl 13 A, Kasten 24); letter from Furtwängler to Mersmann, 22 September 1932 (Zentralbibliothek Zürich, Nachl. W. Furtwängler, B I: 023).

²²⁰ ('Wollen Sie mir erlauben, Ihnen heute noch zwei kleine Schriften von mir mit dem Ausdruck größter Verehrung zu überreichen? Sie kommen, besonders das Beethovenbuch, aus dem Gefühl heraus, das ich immer wieder hatte, wenn ich Sie musizieren hörte: daß in Ihrer Interpretation und meiner Analyse irgend ein Gemeinsames sein müsse.') Letter from Mersmann to Furtwängler, 9 November 1927 (Staatsbibliothek zu Berlin, 55 Nachl 13 A, Kasten 24). The Beethoven book in question is Mersmann [1922]. Although this work does not contain intensity curves, the discussion is couched entirely in energeticist language. The identity of the second work is unknown, but it is entirely possible, and indeed likely, that it was either Mersmann 1923 or Mersmann 1925. Unfortunately, Furtwängler's reply has not been preserved.

²²¹ Leichtentritt 1951: 355. The work referenced here is the English translation of Leichtentritt's original work, which was published in segments in the 1910s and 1920s in German.

²²² Ibid.: 357.

²²³ Toch 1948: 78, 157 (emphasis removed). The work was originally published in German in 1923.

²²⁴ Ibid.: 79.

²²⁵ Ibid.: 163 (emphasis removed).

George Muns, for instance, examined the ways in which tensional climax played a part in the structural organisation of Western art music throughout its notated history.²²⁶ He argued that the ‘system of risings and recedings of tension ... [is] the key to the master plan of the design’, and that in some styles it emerges as the ‘integrating factor around which musical structures are built’.²²⁷ In his study, Muns made ample use of intensity curves to illustrate the dynamic processes active at all levels of the music, from melodies through movements to complete symphonies and operas (see Figure 1.8).

Directly inspired by the writings of Muns and Toch, Walter Westafer and Kofi Agawu also incorporated representations of intensity into their respective doctoral theses. Westafer employed a diagram of ‘climax structure’ to illustrate the ‘*Gestalt* experience’ of Brahms’s *Ein deutsches Requiem* (Figure 1.9).²²⁸ He also emphasised the climax structure’s role in the cohesion of the piece, claiming that it ‘assists greatly in binding together the individual movements in a cyclic work’, and is therefore ‘an essential ingredient in unification’.²²⁹ In a similar vein, Agawu examined the ‘internal dynamic processes’ through the concept of the ‘structural highpoint’.²³⁰ According to him, such a highpoint – defined as ‘the point of maximum tension’ – functions as the unifying and ‘critical articulating device’, in other words the ‘fundamental form-generating archetype’, in nineteenth-century music.²³¹ He represented these processes through a so-called ‘dynamic curve’, claiming that its ‘basic shape’ acts as the ‘background structuring device’.²³² Besides these skeletal representations, Agawu also prepared an elaborate analytical curve (see Figure 1.10).²³³

A further example of such an approach is found, perhaps surprisingly, in Wallace Berry’s book *Structural Functions in Music*.²³⁴ Berry, too, employed an intensity curve to represent his understanding of musical structure (see Figure 1.11), which he defined as the ‘confluence of shaped lines of element-succession which either agree (are complementary) in intensity direction or disagree (are mutually counteractive, or compensatory) in direction’.²³⁵ He differentiated

²²⁶ Muns 1955.

²²⁷ Ibid.: 57, 339.

²²⁸ Westafer 1973: 226.

²²⁹ Ibid.: 227.

²³⁰ Agawu 1982: 3–5.

²³¹ Ibid.: 44, 195, 208.

²³² Ibid.: 8–9, 15, 199.

²³³ Closely related to Agawu’s work is Leonard Meyer’s discussion and use of the ‘dynamic curve’, which he introduced to shed light on historical changes in compositional styles (Meyer 1989: 310–11). Similarly to Agawu, Meyer explained that one of the stylistic changes that romanticism introduced was the increasing importance in the shaping of musical structure of ‘statistical climaxes’, which he defined as the ‘place[s] at which the secondary parameters reach their greatest degree of intensity’ (: 306).

²³⁴ Berry [1976] 1987.

²³⁵ Ibid.: 9 (emphasis removed).

between three formal functions related to intensity: progression (increase in intensity), recession (decrease in intensity) and stasis (unchanging intensity).²³⁶

The latest examples of intensity curves come from writers who found unique applications of the method. Martin Kirschbaum, for example, employed the technique to analyse post-tonal music: he placed tensional ‘highpoints’ (‘Höhepunkte’) at the centre of his search for ‘superordinate formal elements’ (‘übergeordnete formale Elemente’) in post-tonal music.²³⁷ Kirschbaum experimented with visually representing the ‘tensional process’ (‘Spannungsverlauf’) in the form of ‘Hüllkurven’ (‘envelope curves’), which present ‘a sufficiently accurate representation of the piece in its continuous unfolding’ and of the ‘composition as a whole’ (see Figure 1.12).²³⁸ Ingrid Monson, by contrast, created a ‘diagram of ... intensification’ in order to capture the ‘large-scale development’ and ‘structural shapes’ within jazz performances (Figure 1.13).²³⁹ Monson defined ‘intensification’ as a combination of purely musical events such as ‘changes in dynamics, rhythmic density, register, timbre, melody, harmony, interaction, and style of groove’ and ‘intermusical aspects of performance (such as quotation, irony, and parody)’.²⁴⁰ Coming from a background of music analysis as well as performance studies, John Rink experimented with intensity curves to offer a holistic method whereby a musician might create or, alternatively, notate a mental representation of a complete piece (see Figure 1.14).²⁴¹ Having defined intensity curves as ‘the music’s ebb and flow, its “contour” in time’ (quoted above), Rink considered them the representation of the highest hierarchic level of a piece’s structure – at least how a musician might understand it.²⁴² In addition to providing a unique perspective on intensity curves, Rink’s study also prompted a discussion on the technique’s viability as an analytical tool, which I discuss below.²⁴³

However, intensity curves are not only a method that analysts might use to capture the course of musical compositions over time. In an experimental study, Siu-Lan Tan and Megan Kelly demonstrated that intensity curves appear to be one of the ways in which listeners (both

²³⁶ Ibid.: 7.

²³⁷ Kirschbaum 2001: 7.

²³⁸ ([Die Hüllkurve] ermöglicht aber eine hinreichend genaue Darstellung des Werkes in seinem kontinuierlichen Verlauf. ... Die graphische Darstellung solle als (optisches) Hilfsmittel dienen, den Verlauf der Komposition als Gesamtheit leichter zu erfassen.) Ibid.: 22, 81. A similar approach is taken by Gerhard Lock (Lock and Kotta 2012; Lock 2020).

²³⁹ Monson 1996: 138–39 (emphasis removed).

²⁴⁰ Ibid.: 139.

²⁴¹ Rink 1999.

²⁴² Ibid.: 234–35.

²⁴³ To this group of writers one could add the neurophysiologist Manfred Clynes ([1977] 1989). Clynes based his notion of ‘essentic forms’ on the hypothesis that computationally registered pressure curves track the emotional progression of music. By asking subjects to tap rhythmically on a pressure-sensitive device (a ‘sentograph’) and by averaging these impulses he created what in effect are intensity curves. For discussion, see Shove and Repp 1995: 72–73.

musically trained and untrained) might conceptualise whole musical compositions.²⁴⁴ In their study, subjects were asked to graphically portray short orchestral pieces. The majority of the participants fulfilled the task by drawing linear curves (see Figure 1.15), and they identified intensity as one of the parameters that was tracked.²⁴⁵

Now let us consider two possible approaches to the broader conceptualisation of intensity curves. According to Rink, intensity curves might be either conceptually or practically linked with the notion of *la grande ligne*, advocated by the pedagogue Nadia Boulanger and others.²⁴⁶ As Jeanice Brooks explains, Boulanger used the term in her teaching and criticism to depict the ‘structural unfolding of music over time’ and to shift the focus from small units of music to ‘large-scale continuity’ and ‘long-range goals’.²⁴⁷ A pupil of hers, Annette Dieudonné, described *la grande ligne* as ‘appl[ying] to both small and larger sections and to the whole shape or form of a work’.²⁴⁸ The composer Aaron Copland (another student of Boulanger’s) emphasised furthermore that the concept also incorporates the senses of forward motion, flow, continuity and goal-directedness, which together transform the piece of music into a coherent, ‘functioning entity’.²⁴⁹ Boulanger reportedly used the notion as an analytical tool, a compositional device and – most importantly for our discussion – as a benchmark for performance. In 1919, she wrote:

The work, short or long, unfolds itself between two determined points; the interpreter must – through analysis and intuition – choose the general curve according to the overall proportion determined by these two points...²⁵⁰

Furthermore, during a course on interpretation in 1936, she reportedly made the following point:

What is usually missing in performance is the establishment of the *grandes lignes* and yet that is the essential thing, it’s that which should be most perfect. So find the great elements of the architecture, give them all their value.²⁵¹

²⁴⁴ Tan and Kelly 2004.

²⁴⁵ Ibid.: 200.

²⁴⁶ Rink 1999: 235.

²⁴⁷ Brooks 2013: 45, see also 46.

²⁴⁸ Teresa Walters’s interview of 6 February 1978 in Walters 1981: 98.

²⁴⁹ Copland and Perlis 1984: 67. See also Copland 2011: 26–27.

²⁵⁰ (‘L’oeuvre, courte ou longue, se déroule entre deux points déterminés; l’interprète doit par analyse, par intuition, choisir la courbe générale d’après la proportion d’ensemble fixée par ces deux points...’) *Le Monde Musical*, November 1919, 350; quoted in Walters 1981: 397; translation from Walters 1981: 99 (translation modified).

²⁵¹ (‘Ce qui manque en générale dans l’exécution, c’est l’établissement des grandes lignes et pourtant cela est la chose essentielle, c’est ce qui devrait être le plus parfait. Trouvez donc les grandes phrases d’architecture, donnez-leur toute la valeur.’) [Anon.], ‘Le Piano, Cours d’Interprétation de Mlle. Nadia Boulanger – Mozart’, *Le Monde Musical*, July 1936, 212; quoted in Walters 1981: 397; translation from Boulanger 2020: 59.

Although Boulanger's descriptions of *la grande ligne* did not specifically incorporate intensity, the concept – if understood broadly as a 'general curve' or a 'unifying thread', as Rink put it – seems compatible with or analogous to intensity curves.²⁵²

The concept of 'dynamic forms of vitality' of the psychologist Daniel Stern provides an even broader basis for our discussion of intensity curves. Stern argues that every human experience leaves behind a temporal mental shape, one dimension of which is the perceived intensity contour of the felt experience. This shape 'traces a profile of its rising and falling strength as it is contoured in time', acting as a 'temporal and intensity contour' to the experience (see Figure 1.16).²⁵³ Stern observes that this process is active even during musical performance, in which

Tensions, forces, and excitement rise and fall. ... The vitality forms arise in the mind of the audience...
[W]hile any gesture or musical line is unfolding, it creates expectations of how it will resolve itself.
Implications appear, and with them arousal shifts and vitality forms emerge.²⁵⁴

The perceived form of vitality in a performance might be experienced by some as its structural shape, its overall contour, and this might be directly conceptualised in the form of an intensity curve.

Let us now turn to the potential benefits of using intensity curves in analysis. The general prioritisation of quantitative analysis – which stems partly from its aura of objectivity – has led to the marginalisation of purely descriptive approaches.²⁵⁵ However, if we are to move away in earnest from a synchronic understanding of musical structure and from the concept of embedded structure, we need to place more emphasis on the diachronic, real-time experience of music, which calls for listener-centred qualitative techniques. Intensity curves offer one such technique. To my knowledge, the drawing of intensity curves has not yet been used to study recorded performances of Western art music – an approach that I am pioneering in my research.²⁵⁶ I suggest that the introduction of this technique could productively broaden our analytical apparatus.

Perhaps one of the main advantages of intensity curves is that they could help to overcome the parametric isolation that still dogs performance analysis. Instead of singling out individual aspects such as tempo or dynamics, intensity curves potentially provide a more holistic

²⁵² Rink 1999: 218, 235. It is worth mentioning that the term *la grande ligne* is sometimes used in relation to nineteenth-century performance aesthetics. See, for instance, Malengreau 2001.

²⁵³ Stern 2010: 21, 23.

²⁵⁴ Ibid.: 75–76.

²⁵⁵ Friedman 2020: 146.

²⁵⁶ Monson (1996) seems to be the only writer who has analysed recorded performances with this technique; however, her subject was jazz improvisation.

representation of the listening experience. They are also intrinsically diachronic, since they emerge through the processual experience of musical listening, and they therefore fit well into the diachronic concept of dynamic structure that I have been discussing.

Another crucial advantage of intensity curves is that they provide an ideal vehicle for representing the plurality of perceivable musical structures in a performance. As we have established, musical structure is perhaps best viewed as emerging through performance and as being variably inferred by listeners. Since the experience of structure varies from listener to listener, and even from listening experience to listening experience, a flexible qualitative technique, such as intensity curves, might offer better prospects of grasping the experience of structural inference. The subjective nature of drawing these curves therefore should not be seen as a drawback but rather as an opportunity to grasp the no-less subjective process of structural inference. In this respect, the technique points to the potential development of ‘listener’s analysis’ as an autonomous approach, one which would use listeners’ responses to music as its basis, and which may be a complement to the established concepts of ‘theorist’s analysis’ and ‘performer’s analysis’.²⁵⁷

Furthermore, since it can be argued that they emerge from the listening experience itself, intensity curves circumvent the problem of perceptibility, which otherwise arises in the context of quantitative techniques. Intensity curves or similar modes of depiction are also widely recognised. As we have seen, intensity curves are considered by analysts, performers and listeners alike to be a useful way of representing whole compositions and their forms-as-process. Finally, the simplicity of the image and its similarity to established analytical visualisations such as tempo curves mean that they can be easily comprehended.

However, the use of intensity curves as an analytical tool raises certain concerns. First of all, intensity is not a tangible phenomenon, meaning that it cannot be measured quantitatively, or at least not in the holistic way in which a listener perceives it. In this way, the technique reflects musical listening itself as both are an inherently subjective exercise. In the analyses presented in this thesis, quantitative analysis is employed to help explain the impressions created by intensity.

Furthermore, it is worth considering whether intensity curves are a viable representational tool when detached from musical experience. The ontological critique of tempo curves presented by Peter Desain and Henkjan Honing seems relevant to intensity curves as well:

²⁵⁷ For discussion of the concepts of ‘theorist’s analysis’ and ‘performer’s analysis’, see Cook 2013: 33–49.

[O]ne cannot perceive timing without events carrying it. ... [T]he Tempo Curve ... lulls its users into the false impression that it has a musical and psychological reality. There is no abstract tempo curve in the music nor is there a mental tempo curve in the head of a performer or listener.²⁵⁸

Intensity curves are arguably less vulnerable to this criticism in that they do indeed have a psychological reality: as demonstrated above, musicians, theorists and listeners can all conceptualise musical processes through intensity curves. However, it is true that intensity curves – as with most analytical representations – lose relevance when removed from the unique musical context that gave rise to them. Accordingly, they seem to hold the most value for the close study of individual performances.

A further issue concerns the fact that intensity curves cannot be decomposed into their constituent parts. In 1999, Nicholas Cook wrote the following in relation to the intensity curve defined and depicted by John Rink, also in 1999 (see again Figure 1.14):

[T]here is no way in which the reader, or performer, can disassemble the contribution of the various musical parameters to the summary graph and so reconstruct the experience of the music that motivates it. As a result the analysis has no greater explanatory value than would a performance that embodied it.²⁵⁹

Cook's argument boils down to two main points of criticism, the first being that intensity curves provide information that, in itself, is arcane or cannot be interpreted consistently, the result of which is that readers cannot grasp, or 'reconstruct', the particular interpretation that Rink's diagram and other such curves are meant to convey. Nevertheless, as we have seen, the experience of intensity is seemingly universal and its representation in the form of curves appears to come naturally to listeners and performers, as a result of which readers are likely to be able to understand the information presented in this way. As for inter-subject consistency in interpreting such curves, there is evidence of strong agreement amongst listeners regarding the perception and representation of intensity in performance.²⁶⁰ Therefore, if intensity curves are indeed directly comprehensible, as I contend they are, it is not necessary to disassemble them – at least not for this reason.

Cook's second point revolves around the need for decomposition as a way in which to gain an understanding of the causes of the perceived intensity and the interaction between the constituent elements.²⁶¹ Although some features, such as tempo and dynamics, can indeed be measured and visualised individually, it is true that not all of the components can be objectively quantified. However, the fact that currently available quantitative techniques are ill suited to

²⁵⁸ Desain and Honing 1993: 132, 136.

²⁵⁹ Cook 1999b: 15.

²⁶⁰ See pages 24–25 in this thesis.

²⁶¹ Ana Llorens (2018: 46) similarly noted that a single intensity curve 'does not represent the interactions between the components' tendencies and levels of energetic charge'.

reflect all aspects of a performance should not mean that those aspects should be neglected. If there is a technique that can reflect the multifaceted experience of listening and of structural inference more ‘completely’ and cogently than other established methods can, we should not reject it purely because it cannot be modelled or developed on a quantitative basis. Also, it should be noted that intensity curves, like every representational method, need to be accompanied by analytical commentary, which would inevitably shed light on the constituent elements.²⁶²

Finally, let us consider the technical aspects of producing intensity curves. As I have argued, intensity cannot be objectively quantified as a holistic phenomenon, and this creates the need for alternative methods. Three such techniques can be identified. The first and perhaps most obvious option is simply to draw the curves by hand, which is the approach taken by most writers, especially those employing the curves for the purpose of music analysis.²⁶³ The second method comprises the real-time computational recording of listeners’ perception of intensity. Used primarily in psychological studies, this technique involves subjects listening to a piece of music while a computational device (e.g. pressure-sensitive tongs,²⁶⁴ dials²⁶⁵ or virtual sliders)²⁶⁶ captures their perception of intensity, the results of which are then converted into a graph by the software. Finally, an intensity curve might also be created through an attempt to quantify the contributing elements of intensity and to evaluate their relative importance by using a mathematical formula. Through various quantification techniques (for instance, Fred Lerdahl’s theory of tonal pitch space),²⁶⁷ an intensity curve can thereby be made without input from listeners.²⁶⁸

In this thesis, I rely exclusively on the first technique. Not only does this allow for the most flexibility in illustrating structural shaping at all levels but, I would argue, it also reflects most accurately the mental representation of structure amongst these options. While a real-time computational approach offers the most accurate method of capturing moment-to-moment perception of tension, the inflexibility of such a procedure means that it fails to reflect the dynamic mental processes involved in the creation of one’s mental image of the music. Furthermore, although the third technique seemingly provides an objective way of measuring intensity, it falls short of reaching ecological validity due to the impossibility of quantitatively

²⁶² Cook later qualified his criticism by acknowledging that Rink’s intensity curve was an example of what came to be known as ‘performer’s analysis’, which, instead of providing a rigorously and theoretically grounded analysis, was meant to demonstrate a potential ‘handle on knowledge’ for performers (Cook 2013: 46–47). However, the implications of his criticism for the analytical application of intensity curves remains pertinent.

²⁶³ See Figures 1.3, 1.5–1.14.

²⁶⁴ See Nielsen 1987.

²⁶⁵ See Madsen and Fredrickson 1993; Fredrickson 1997, 1999, 2000.

²⁶⁶ See Krumhansl 1996; Farbood 2012; Lehne et al. 2013; Lock 2020; Sun et al. 2020.

²⁶⁷ Lerdahl 1996.

²⁶⁸ See Yoo and Lee 2006; Farbood 2012.

recreating the mental processes of the perception of musical parameters and their fusion into the sense of tension.

Accordingly, the intensity curves presented in Chapters 3–5 were created by initially drawing them by hand while listening to the recordings. This initial image was refined during multiple repeated listening sessions. Comparisons were also made between recordings at select points within the pieces to ensure that the graphs are calibrated in a way so as to allow direct juxtaposition.²⁶⁹ Finally, the images were digitised using Adobe Illustrator.

Representation of Motion

Similarly to intensity curves, the representation of musical motion was a subject pursued by numerous early twentieth-century German writers. In his 1928 book *Der musikalische Rhythmus als Erkenntnisquelle*, Gustav Becking experimented with capturing the ‘dynamic rhythmic flow’ of music with motion curves imitating conducting movements.²⁷⁰ Becking’s goal with this technique was to identify composers’ individual preferences, to create a sort of typology of their personal curves. In 1938, Alexander Truslit published his book *Gestaltung und Bewegung in der Musik*, in which he also proposed a visual representation of musical motion (Figure 1.17).²⁷¹ In contrast to Becking, however, Truslit focused on individual works, and his motion curves denoted movements by outstretched parallel arms, representing melodic motion, speed, dynamics and tension.²⁷²

Most recently, representations of perceived motion were used as a performance analytical tool by Ana Llorens.²⁷³ In her structural representations (see again Figure 1.4), she used straight lines and arrows to capture the ‘musical direction at broad structural levels’, differentiating between three movement types: stillness (lines), forward impulse (arrows pointing to the right) and restraint (arrows pointing to the left).²⁷⁴

In the recordings analysed in this thesis, variances in the perceived forward motion appeared to be the most salient for the large-scale structural shaping of the music. Therefore, I have decided to represent this one direction of musical motion, but with more detail than seen in Llorens’ graphs. I differentiate between five degrees of forward momentum using various lines and arrows, and I visualised these at multiple hierarchical levels (see, for instance, Figure 3.1a). It is clear from a comparison of these representations with the intensity curve that an active sense

²⁶⁹ For this, I used the software Sonic Lineup. See <<https://www.sonicvisualiser.org/sonic-lineup/>> (accessed 19 June 2023).

²⁷⁰ Becking 1928. For discussion, see Shove and Repp 1995: 67–71.

²⁷¹ Truslit 1938.

²⁷² For discussion, see Shove and Repp 1995: 71–72; Brandner 2012.

²⁷³ Llorens 2018.

²⁷⁴ *Ibid.*: 98–99.

of motion is almost always linked to an increase in intensity. However, the perceived sense of drive is not always equivalent in degree to the gradient of intensity changes (as visualised on a curve), and therefore a separate indication of motion seemed necessary. In terms of the metaphorical participants of the perceived motion, I conceptualised the music itself as the subject of the motion ('moving music' or 'stationary observer' metaphor) and myself as an observer of this motion ('observer' or 'exterior' perspective).²⁷⁵ The representations were created in Adobe Illustrator.

Groupings

Visualisation of structural segmentations has been the primary way of representing structure in written analyses. This can take the form of arches, brackets, lines or other symbols of grouping. In this thesis, I use arches to represent structural segmentation at multiple hierarchical levels (moving from most detailed at the top to more general at the bottom).²⁷⁶ Similarly to the other qualitative techniques discussed above, these representations were created based only on listening impressions and were not influenced by the results of software analysis. The structural segmentations derived from the latter (especially tempo and dynamics curves and arch-correlation analysis) are discussed separately.

Quantitative Techniques

Tempo and Dynamics Curves

Tempo and dynamics curves are the most commonly used techniques in performance analysis, and for good reason: they are easily produced, and the resulting graphs are informative and easy to read (see Figure 3.1b). With the help of computer software, tempo and loudness data is generated, which then can be used to create various visual representations, curves being the most common.

However, the technique is not without drawbacks. Above, I quoted Peter Desain and Henkjan Honing's critique of tempo curves, arguing that it is impossible to conceive of timing independently of the musical events carrying it, and that tempo curves therefore do not have a psychological reality.²⁷⁷ Furthermore, the overreliance on tempo curves in the discipline in general has led to a problematic situation where most facets of musical performance are largely

²⁷⁵ The terms are taken from Larson 2012 and Cox 2016, respectively (see page 26 in this thesis). Note that the distinction between the 'participant' and 'observer' perspectives is unclear when applied to the 'moving music' metaphorical framework.

²⁷⁶ See, for instance, Figure 3.1a.

²⁷⁷ Desain and Honing 1993: 132, 136. See pages 48–49 in this chapter. For discussion, see Cook 2009b: 234.

disregarded in favour of tempo. This underscores the importance of interpreting quantitative data in the context of a more comprehensive range of parameters and, in principle, on the basis of aural examination.

The tempo and dynamics curves used in this thesis were created with the use of Sonic Visualiser and Microsoft Excel. The tempo and loudness data is generated in Sonic Visualiser.²⁷⁸ Once the sound recording is loaded in, a 'Time Instants Layer' is created: here the beat can be marked by tapping a button while playing back the recording, and these time instants can then be corrected by editing the markings manually.²⁷⁹ The timing information is then copied into a 'Time Values Layer', which creates tempo data by associating the beat markings with metronomic units (hereafter MM). Loudness data was generated first by using the 'Smoothed Power' functionality of the PowerCurve plugin in Sonic Visualiser with a smoothing value of 0.02 for better visibility.²⁸⁰ In order to create combined tempo and dynamics curves, the loudness data was then filtered using the tool Dyn-a-matic.²⁸¹ Finally, both tempo and loudness data was imported into Excel, where it was visualised in the form of graphs.

Arch Correlation Plots

Developed by Craig Sapp with advice from Nicholas Cook, this method is used to highlight the hierarchical segmentations within recordings.²⁸² The technique is based on Neil Todd's phrase-arch theory, according to which musicians segment pieces into hierarchically organised sections by increasing the tempo and dynamics at the beginning of phrases and decreasing them at the end of phrases.²⁸³ According to Todd, the degree of these changes determines the hierarchical order of the phrase arches, which can then function simultaneously at different levels – for example, at the four-, eight-, sixteen- or thirty-two-bar levels. Sapp's arch correlation plots compare the timing and loudness data of a recording with an archetypal arch-shape using Pearson correlation,²⁸⁴ and present the similarities in the form of coloured flags (see Figures 1.18–1.19).²⁸⁵

²⁷⁸ See the software's homepage: < <https://www.sonicvisualiser.org/> > (accessed 16 June 2023).

²⁷⁹ A spectrogram was also generated to aid the identification of beat onsets.

²⁸⁰ The plugin was developed as part of the Mazurka project at CHARM: <<http://sv.mazurka.org.uk/download/>> (accessed 16 June 2023).

²⁸¹ This was developed as part of the Mazurka project at CHARM: <<http://mazurka.org.uk/cgi-bin/dynamic>> (accessed 16 June 2023).

²⁸² See Sapp 2011: 22–41, 110–122; Cook 2009c; 2009b: 236–41.

²⁸³ Todd 1985: 33–57; 1992: 3540–50.

²⁸⁴ See below.

²⁸⁵ Orange and blue flags in the arch correlation plots represent conformity with the arch shape: an orange flag depicts an increase in tempo and dynamics, while blue represents a decrease. Therefore, an orange flag and a blue flag together make up a phrase arch. Furthermore, the height of the flags provides information about the hierarchical weight of the arches, as visualised in Figure 1.18.

By providing a representation of a piece's hierarchical segmentation, arch correlation plots can serve as a useful tool in the study of performed musical structures. However, the technique suffers from some drawbacks. First of all, Todd's phrase-arch theory is limited in its applicability mainly to pieces with short and symmetrical phrases and to performances after the Second World War, when phrase arching assumed a dominant position in the general performance style.²⁸⁶ Also, it is important to keep in mind that certain performance techniques, such as phrase-final decelerations, may be caused by factors unrelated to phrase arching: by fermatas, for instance.²⁸⁷ Despite their potential, correlation plots remain relatively unpopular, the reason for which may lie partly in the difficulty of reading the images.

The scape plots in this thesis were created by uploading the tempo and loudness data gained from Sonic Visualiser to the online 'Scape Plot Generator'.²⁸⁸ This resulted in two separate triangles corresponding to the two datasets. In order to create a 'combispace'²⁸⁹ – that is, a combined representation of tempo and loudness – I have mirrored the image for loudness along the vertical axis using Microsoft Paint 3D and have attached the two triangles along the base.

Correlation Analysis

Similarities between the tempo and loudness profile of recordings can be examined using Pearson correlation analysis. Pearson correlation is a mathematical formula which allows the linear comparison of two datasets. It provides a correlation value between -1 and 1, where -1 represents the lowest correlation, and 1 the highest correlation.²⁹⁰ For the purposes of performance analysis, this can be used to carry out a statistical comparison of the contour of the recordings' tempo and loudness data. Craig Sapp has demonstrated that this can also be used to create a hierarchical correlation plot between multiple recordings.²⁹¹ Note, however, that the publicly available scape plot generator can handle only two recordings at a time, which limits the usefulness of the tool in the analysis of a larger number of recordings.

The correlation analyses presented in Chapters 3–5 were created using the online tool 'Correlation Network Diagram Generator'.²⁹² I uploaded the tempo and loudness data of the

²⁸⁶ Cook 2009c.

²⁸⁷ Llorens 2018: 71–72.

²⁸⁸ This tool was developed as part of the Mazurka Project at CHARM:

<<http://www.mazurka.org.uk/software/online/scape/>> (accessed 16 June 2023). The settings were as follows: type: arch correlation; smoothing: 0.0; gradient: no; shape: triangle; flip: no; color: color; height: 0; gridlines: 0; data graph: 0.

²⁸⁹ Cook 2009b: 238.

²⁹⁰ Sapp 2011: 114–15; see also the description on the webpage of the Mazurka project:

<<http://www.mazurka.org.uk/ana/timescape/>> (accessed 16 June 2023).

²⁹¹ Sapp 2011: 114–21.

²⁹² This tool was developed as part of the Mazurka Project at CHARM: <<http://mazurka.org.uk/cgi-bin/coronet>> (accessed 16 June 2023).

recordings to be analysed, and the software calculated the correlation value. In order to gain more detailed results, the analysis was repeated over various structural levels of the recordings, the results of which can be seen in the Apparatus (see Table 3.4 for instance). Here, the values were colour-coded with different shades of grey for the sake of clearer visualisation.

Summary

This chapter has provided an overview of the discourse on musical structure, and it has proposed multiple ways in which the concept might be reinvigorated. Traditional notions of structure have increasingly come under fire for their limiting nature, neglect of performers' creative contributions and their unrealistic expectations for listener perception. Recently, it has been proposed that the concept could be productively reimagined as a dynamic and pluralistic entity, which is created uniquely through the processes of affordance and inference in the media of scores and performances, and which emerges diachronically in the context of musical performance – this notion is what I refer to as 'dynamic structure'. Furthermore, a focus on musicians' pragmatic notions of structure could shed further light on the relevance of the concept to the experience of musical performance.

It emerges that conductors tend to focus on dynamic notions of structure: shape, intensity, motion and goal-orientation. However, these phenomena are not yet fully understood, and their integration into a methodology of performance analysis is challenging since these aspects of structure arguably cannot be captured or analysed using traditional techniques. In this chapter, I have proposed a potential approach to these phenomena through qualitative analysis and various representational techniques. However, due to the experimental nature of this approach, its effectiveness and possible limitations need to be examined – a task that Chapters 3–5 fulfil.

One generally neglected feature of structure is listeners' experience thereof. As a way in which to address this issue, the analyses in this thesis follow a listener-centred approach and take aural perception as a criterion for identifying structural constructs. This also provides the opportunity to examine the intangible, and mostly unquantifiable, dynamic features of structure discussed above. An exclusively qualitative approach, however, would run the risk of reaching purely subjective findings – in the following analyses, therefore aural analysis is complemented by quantitative techniques, which help ground the observations in verifiable data.

A further hiatus in the literature concerns the examination of structure in the performance of large-scale symphonic music, especially that of entire symphonies. The study of

this repertoire poses considerable methodological challenges, some of which derive from the issue of shared agency, and some from the issues of recording. The subject of the following case studies was selected with an intent to minimise these concerns. Chapters 3–5 examine the creation of structure in symphonic music from various perspectives: Chapters 3–4 focus on individual movements, while Chapter 5 explores recordings of an entire symphony.

In order to gain a deeper understanding of how conductors might approach musical structure in symphonic music, an examination of individual conductors is necessary. For this reason, the rest of the thesis concentrates on one particular conductor: Wilhelm Furtwängler. Furthermore, thanks to the conductor's importance – and controversial status – in performance history, a significant body of writings has been dedicated to him and his style of interpretation. These works, coupled with a rich variety of sources, including sound recordings and annotated performance materials, provide an ideal foundation for an in-depth study such as that which follows. The following chapter provides an overview of Furtwängler's understanding of structure and his supposedly 'structural' conducting style.

Chapter 2

Furtwängler and Musical Structure

Introduction: Furtwängler's Position in Performance History

In order to provide a basis for the analyses that follow, it is necessary to outline the background of Furtwängler's recordings and to consider his conducting style in the light of musical structure. As the following discussion shows, a comprehensive overview of the literature (including both scholarship and music criticism) casts light on the controversial reception of the conductor and offers insights into his musical style.

As one of the most significant and controversial conductors of the twentieth century, Wilhelm Furtwängler and his performance style have long been an object of fascination, resulting in a large corpus of writings. This keen interest might lead one to assume that by now his style has been clearly grasped or at the very least adequately positioned in performance history. In reality, however, the literature paints a rather confusing picture. As shown below, the conductor has been depicted as both a romantic and a classicist, and as both a subjectivist and an objectivist.¹ Some view him as the remnant of a bygone age,² while others consider him the representative of a modern style.³ Certain writers regard him as an improvising musician who lost himself in the emotional content of musical details, while yet others depict him as a calculating structuralist who highlighted the overarching relationships within a piece.

This clash of opinions has various roots. One factor concerns Furtwängler himself, whose musical thinking and style ostensibly embrace both traditional and progressive elements. Certain aspects of his performance style (first and foremost his elastic tempo) and his staunchly conservative view of musical life (including his life-long rejection of atonality) betray the influence of nineteenth-century practices and perspectives, while the progressive elements of his 'retrograde modernity' ('rückwärtsgewandte Modernität'), as Hans-Joachim Hinrichsen calls it, are said to reside in his insistence on objective standards in musical interpretation and in his use of

¹ See below.

² See Stenzl 1996: 29.

³ For discussions of Furtwängler's supposed modernity, see Taruskin 1989: 244; Hinrichsen 2005: 10–11; RW3 (this abbreviation, which stands for 'review', refers to the list of historical concert reviews included in the Apparatus in Volume 2).

the increasingly anachronistic technique of tempo modification for modern purposes: the clarification of ‘structure’.⁴

Complicating matters further is that twentieth-century performance history has not yet been exhaustively investigated, which renders categorisation difficult. The very notion that early twentieth-century performance styles form a distinct stylistic entity worth investigating (as opposed to viewing them simply as ‘old-fashioned’ practices)⁵ surfaced only in the late 1980s and early 1990s. Although some pioneering studies in the 1990s charted a tentative path for the historical study of recorded performances,⁶ their successors have not yet achieved a comprehensive documentation of the history of twentieth-century performance practices.⁷ As a result, today there are only a handful of rudimentary categorisations to consider, all of which offer certain advantages and disadvantages. Particularly common are the various stylistic dichotomies that roughly map onto a distinction between the general performance styles of the periods before and after the Second World War. These include taxonomies such as romantic/classical, subjective/objective,⁸ rhetorical/structural,⁹ vitalist/geometrical,¹⁰ interventionist/restrained,¹¹ and ‘espressivo’/neo-objective.¹² While these differentiations might be useful as rough guides, their uncritical use can lead to problematic assumptions.¹³ Another approach is to base categorisations on time periods, as shown in Daniel Leech-Wilkinson’s and Dorottya Fabian’s respective studies.¹⁴ They agree on a three-part segmentation of the century’s performance styles: the first one occurring between 1900 and the Second World War (or the 1930s in Fabian’s case), the second between the war and the 1980s, and the most recent period, commencing in the 1980s.

⁴ Hinrichsen 2005: 10–12. As Horowitz (1982: 64) explains: ‘[Furtwängler] strikes a balance between old and new ... [by] combin[ing] extreme tempo and temperamental flux with a steady projection of encompassing structure.’ See also Auhagen 2005: 51; 2011: 54–55, 63.

⁵ Philip (2002: 28) points out that whether we view a style as old-fashioned or historical turns on temporal proximity.

⁶ See, for example, Philip 1992; Bowen 1996; Danuser 1992.

⁷ Performance Studies, which had emerged from these initial explorations, has focused – especially more recently – on performance in the general sense and has largely pushed historical factors into the background. Findings on historical performance styles – valuable as they might be – have emerged almost only as byproducts of the researchers’ exploration of analytical techniques and theoretical questions. (See the example of phrase arching in Cook 2009c). A specifically historical summary was attempted in Lawson and Stowell 2012, whose chapters on twentieth-century practices, however, appear to have too narrow a focus to provide a comprehensive overview.

⁸ See below.

⁹ Cook 2013: 4–5, 70, 86–87.

¹⁰ Taruskin 1995: 109–10.

¹¹ Frisch 2003: 279.

¹² Stenzl 1995: 688–89; 1996: 26. To this list we could add Hermann Danuser’s three-pronged differentiation between ‘traditionell’, ‘aktualisierend’ and ‘historisch-rekonstruktiv’ styles (Danuser 1992: 13–17). For an overview of these categorisational attempts, see Giese 2006: 27–32.

¹³ Taken out of their historical context and used as universal shorthand for performance styles, these terms can paper over crucial differences between time periods. See Elek 2022: 45–46.

¹⁴ Leech-Wilkinson 2009: 252–53; Fabian 2006: 180.

Most writers concur that Furtwängler's style is characterised by the first element of the dichotomies described before (that is, romantic, subjective, rhetorical, vitalist, interventionist and espressivo) and that he belongs to the pre-war generation. These categorisations also suggest an emphatically anti-structuralist style – a characterisation that is increasingly disputed in the case of Furtwängler.¹⁵ Indeed, some have suggested that the simplistic profile reflected in most writings on Furtwängler fails to do justice to the complex nature of the conductor's performance style.¹⁶ Below, I establish the complicating factors that arise from the labels most commonly applied to Furtwängler.

Romantic / Classical

One of the terms customarily used to describe Furtwängler's performance style is 'romantic'. In 1949, a critic from the *Neues Österreich*, for example, called him 'the romantic amongst our great conductors'.¹⁷ A correspondent of *The Times* similarly contrasted Otto Klemperer's 'giant and ... classic' representation of Beethoven with Furtwängler's 'romantic recreation' of the music.¹⁸ Harold Schonberg also claimed that Furtwängler 'took a free, romantic view toward music',¹⁹ while Heinrich Schmidt likewise considered his style a "romanticizing" form of musicmaking'.²⁰ In 1970, Paul Henry Lang described him as a 'dyed-in-the-wool romantic',²¹ and more recently Christopher Dymant painted a similar picture by differentiating between the 'arch-Romantic' Furtwängler and the 'Classical rectitude' of Toscanini.²²

Paradoxically, some writers have instead emphasised the 'classical' qualities of Furtwängler's conducting. The critic Max Chop, for instance, claimed that Furtwängler's 'artistic creed is rooted in Classicism', which manifested itself in his rejection of impressionistic and subjectivist qualities.²³ A critic from *The Times* in 1929 furthermore stated that he conducted in a 'severely classical manner', whereby he did not aim for 'striking' performances but rather contented himself with 'exact obedience to the score'.²⁴ Otto Erhardt likewise distanced Furtwängler's 'organic emotional expression' ('organische Gefühlsausdruck') from romanticism.²⁵

¹⁵ See, for example, Cook 1995.

¹⁶ Hinrichsen 2005: 10–11; Auhagen 2005: 63; 2011: 54–55, 63.

¹⁷ RW152.

¹⁸ RW166.

¹⁹ Schonberg 1968: 275.

²⁰ ('Es war eine "romantisierende" Form des Musizierens...') Hürlimann 1955: 204.

²¹ Lang 1970: 62.

²² Dymant 2016: xii. See also RW154.

²³ RW7.

²⁴ RW68. See also RW25.2.

²⁵ Hürlimann 1955: 231.

While discussing Furtwängler's recording of Mozart's Symphony in G minor, K 550, Joachim Matzner outright stated that the work 'cannot be performed in a more classical manner'.²⁶

An explanation for these contradictory views might lie in the changing connotations of the word 'romantic' itself. On the one hand, the term could simply refer to the late nineteenth-century performance style, which was generally characterised by wide tempo modifications on both the micro and the macro levels.²⁷ On the other hand, following the musico-ideological debates of the 1920s, the term 'romantic' gained increasingly negative connotations: it became shorthand for a tasteless, vulgar, irrational and even morally inferior mode of music-making, associated with mannerisms and empty sentimentalism, and which eventually gave way to the emerging modernist style.²⁸ This contextualises the statements listed above, some of which, therefore, might be interpreted as an effort to defend Furtwängler against the accusation of being romantic in this disparaging sense.²⁹ It is also in respect of this latter meaning that Furtwängler himself discussed romanticism – which he did in emphatically negative terms. He argued that the natural shaping of a phrase should not be confused with 'romanticising or sentimentalising, i.e., in plain language *falsifying*'.³⁰ Furthermore, he outright accused romanticism of causing a cultural decline by letting its expressive tendencies run riot and thereby upsetting the balance between 'expression' and 'form'.³¹

Subjective / Objective

Another common trope in the writings on Furtwängler is the subjective/objective dichotomy, wherein the conductor is primarily associated with the former notion. Harold Schonberg, for example, calls him a 'Wagnerian offshoot, a subjectivist, a conductor more interested in phrase

²⁶ ('[K]lassischer läßt sich diese Musik nicht darstellen.') Matzner 1998: 11.

²⁷ Harold Schonberg (1968: 214), for instance, described Furtwängler's 'romanticism' as 'the long ritards bridging various sections, the variations in tempo and dynamics'. Paul Henry Lang (1970: 62) similarly characterised Furtwängler's 'arbitrary and highly subjective procedures in tempo, dynamics, and phrasing' as signs of his romantic style. See also Hürlimann 1955: 204.

²⁸ See Hill 1994: 37–47.

²⁹ Here belong the related attempts to defend Furtwängler from the claim that he only responded in an improvisatory manner to the emotional content of musical details rather than carefully planning his performances and concentrating on large-scale features such as structure. See RW2 and RW29; Kraus 1986: 77; Holden 2005: 203; Haffner 2020: 85; Sandberger 2005: 38; Dymont 2016: 71; Martin 1976: 151; Hinrichsen 2008a: 134, note 8; 2008b: 64–65; Cardus [1964] 1990: 160.

³⁰ ('[A]ls ob natürliche Darstellung einer natürlichen Phrase gleichbedeutend mit Romantisieren, mit Sentimentalisieren, d. h. auf gut deutsch mit *Fälschen* wäre.') Furtwängler 1948: 96; translation from Furtwängler 1953: 71 (translation modified; emphasis in original).

³¹ Furtwängler 1980: 52, 197, 328.

than in bar line, more interested in content than execution',³² while James Clark describes him as an 'arch-subjectivist'.³³

At the same time, there are commentators who have instead placed Furtwängler in the objectivist camp. Neville Cardus, for one, claimed that Furtwängler was 'a conductor at the extreme of the "objective" school that believes music "should be left to speak for itself"'.³⁴ A critic from the *Neue Wiener Journal* likewise argued that Furtwängler played with 'objective clarity',³⁵ while a correspondent of the *Salzburger Wacht* claimed that there is a 'high degree of objectivity' in the conductor's performance style.³⁶ Although most of these reviews date back to the 1920s, when Furtwängler supposedly followed a more reserved approach to performance (see below), this discrepancy cannot simply be explained through changes in Furtwängler's style: descriptions of his style as objective appeared also in the 1960s and 1970s.³⁷

The situation is further complicated by the fact that Furtwängler himself identified with a certain type of objectivity. In a comment on the emerging trend of *Neue Sachlichkeit* ('new objectivity'), he defined objectivity as follows:

'Objectivity' denotes a direct relation to 'objects', which is always connected with a correspondingly large independence from everything that 'does not belong to the object', such as the trends and fashions of the moment. ... In the realm of music, objectivity specifically means a clear and precise understanding of what makes music into an art. This happens when the logic of a sequence of spiritual events becomes the logic of a purely musical process, in other words, when the spiritual and the musical fuse so completely that there is no way they can be separated, from whatever side one approaches them.³⁸

This mixture of opinions once again boils down to divergent uses of terminology. At the heart of the subjective/objective dichotomy lies the concept of *Werktreue* and its various meanings. The modernist camp often rehearsed the criticism that instead of prioritising the composer's intentions, which are manifested in the score, subjectivists rather indulged in individual interpretations, letting the musician's personality overshadow the composer and the

³² Schonberg 1968: 270.

³³ Clark 2005: 76. See also Ardoin 1994: 35; Haffner 2020: 81–85; Pirie 1980: 9, 125; Auhagen 2011: 54–55; Berry 2008: 71; Wierzbicki 1990: 20.

³⁴ Cardus [1964] 1990: 159.

³⁵ RW57.

³⁶ RW36.

³⁷ See Cardus [1964] 1990: 159; Höcker 1979: 98

³⁸ ('Sachlichkeit eine unmittelbare Beziehung zur "Sache" meint, was immer verbunden ist mit einer entsprechend größeren Unabhängigkeit von allem "nicht zur Sache Gehörigen", also besonders von Zeit- und Modeströmungen. ... Sachlichkeit speziell auf dem Gebiete der Musik kann doch wohl nur heißen klare, präzise Einsicht in das, was die Musik zur Kunst macht. Und das geschieht da, wo die Logik eines seelischen Ablaufes zur Logik eines rein musikalischen Prozesses wird, wo mit anderen Worten Musik und Seele, Seele und Musik so sehr eins werden, daß sie schlechterdings nicht und durch nichts zu trennen sind, von welcher Seite man auch an sie herangehe.') Furtwängler 1954: 43; translation from Furtwängler 1991: 99 (translation modified). For discussion, see Hinrichsen 2005: 12–13; Sandberger 2005: 30–34.

work itself.³⁹ However, this criticism is misleading: in reality, even those described as subjectivists appealed to the authority of the composer's intentions and the 'true' meaning of compositions. As Hans-Joachim Hinrichsen put it: 'At no point in modern music history was it imaginable that a musician would be taken seriously as an interpreter if they treated the composer's will as irrelevant to their interpretation or even consciously ignored it.'⁴⁰ In other words, 'fidelity to the composer's intentions' is something that '[e]veryone claims', as Richard Taruskin noted.⁴¹ The real difference rests on *where* the composer's intentions and the meaning of the work lie. For modernists, the answer was the score itself (hence the term *Texttreue*), while the other camp – including Furtwängler himself – understood it as hidden between the lines, as it were.⁴²

Furtwängler / Toscanini

The last dichotomy that I would like to mention is the one drawn between Furtwängler and Arturo Toscanini – a common trope that has come to represent the polarity of twentieth-century performance practices in general. In the musical discourse, these two conductors have often been positioned at opposite ends of a spectrum. As John Ardoin recounts the common generalisation: 'Toscanini was fast; Furtwängler was slow. Toscanini was objective; Furtwängler was subjective. Toscanini was an open and giving Mediterranean; Furtwängler was an aloof and pensive Teuton'.⁴³ While Furtwängler has been seen as the epitome of the romantic and subjectivist approach, Toscanini has been hailed as the spearhead of the modern, objectivist and *Texttreue* style of conducting,⁴⁴ praised by George Szell for 'wip[ing] out the arbitrariness of the postromantic interpreters'.⁴⁵

By this point, it should come as no surprise that this simplistic distinction belies a complicated reality. First of all, some argue that Toscanini's association with the modernist style of performance could have been a matter of coincidence. According to Jürg Stenzl, Toscanini simply applied to the symphonic repertoire the performance style of late nineteenth-century Italian opera, which – contends Stenzl – *happened to conform* to the emerging neo-objective

³⁹ See for example, Stravinsky 1947: 122–28.

⁴⁰ ('Es ist zu keinem Zeitpunkt der neueren Musikgeschichte denkbar gewesen, dass ein Musiker als Interpret ernst genommen werden wollte, wenn er den Willen des Komponisten als Instanz seiner Deutung unerheblich gefunden oder ihn sogar bewusst ignoriert hätte.') Hinrichsen 2011: 25.

⁴¹ Taruskin 1995: 98.

⁴² See Hinrichsen 2011: 35; Danuser 2002: 1118; Giese 2006: 442–44; Taruskin 2018: 110. Nota bene, even this categorisation represents a simplification: Detlef Giese (2006: 447–49) points out that a number of musicians occupied a middle ground between these approaches.

⁴³ Ardoin 1994: 35. See also Galkin 1988: 665–67; Pirie 1960: 36–39.

⁴⁴ See Schonberg 1968: 276–77; Horowitz [1987] 1994: 93–108; Clark 2005: 115; Dymant 2016: xii; Hamilton 1968: 66–68, 108; Wierzbicki 1990: 20.

⁴⁵ Quoted in Schonberg 1968: 252.

style.⁴⁶ Some authors, furthermore, suggest that the two conductors' styles were not as different as music criticism suggests. Herbert Haffner, for example, argues that both musicians represent the *espressivo* style of musical interpretation and that they 'are closer [to each other] than either of them would have liked to admit'.⁴⁷ Moreover, performance analyses have demonstrated that Toscanini was also 'guilty' of employing some of the techniques for which Furtwängler has been criticised. For example, José Bowen has shown that Toscanini's performances, too, employed ample tempo fluctuation and tended to slow down for the second theme in a sonata form and speed up the closing material – practices that were strongly rejected by the modernists.⁴⁸ Robert Philip has also demonstrated that some of Toscanini's recordings show him taking a more liberal approach to tempo than his reputation might suggest.⁴⁹

These examples illustrate the difficulty of historically positioning a musician even as seemingly well-understood as Furtwängler. Notwithstanding the complications presented by individual conductors, the problem of categorisation is exacerbated by our limited understanding of twentieth-century performance ideologies and styles and by a generally inconsistent use of terminology. This also raises doubts about the validity of traditional distinctions between performers who supposedly prioritised musical structure and those that 'neglected' it. Such value judgments arose from modernist notions of musical structure – however, these notions are no longer considered tenable, as shown in Chapter 1, and the perpetuation of the corresponding categorisation is therefore difficult to justify. Consequently, instead of testing performances against certain 'structuralist' criteria, it would be more productive to examine them on their own merit and explore the unique structural formations that they create.

Sources

Sound Recordings

The sound recordings form the most important group of sources in any investigation of Furtwängler's style. Amongst his contemporaries, Furtwängler was one of the most prolific conductors when it came to producing recordings. This fact is largely due to his position at the head of the Berlin Philharmonic, whose performances were captured regularly for radio

⁴⁶ Stenzl 1995: 690–91.

⁴⁷ ('Toscanini und Furtwängler sind sich näher als beide es voneinander wohl hätten wahrhaben wollen.') Haffner 2020: 82.

⁴⁸ Bowen 1996: 132–34, 142–43.

⁴⁹ Philip 1992: 21–23.

broadcast from the 1940s onwards.⁵⁰ Furthermore, despite his general aversion to working in the studio (see below), Furtwängler also produced a significant number of studio recordings. For the present purposes, I focus exclusively on the conductor's live recordings.⁵¹

All Furtwängler recordings discussed in this thesis were captured using reel-to-reel tape recorders.⁵² The German sound engineers of the 1930s and 1940s were trailblazers in developing this technology, allowing for the high-quality recording of Furtwängler's concerts from 1942 onwards.⁵³ Tape recording captured a wider range of dynamics and frequencies and allowed longer recording lengths than the earlier disk-cutting procedure.

However, early tape recording differed significantly from the more established and standardised form of the technology that emerged over the following decades, creating fundamental challenges for sound engineers trying to re-issue these recordings on modern storage media.⁵⁴ This is clear from the speed issues plaguing the modern CD releases of Furtwängler's recordings. These recordings are available in wildly different versions, some of which showcase a difference in pitch – and therefore speed – of up to 10 Hz.⁵⁵ Since accurate tempo readings form an important part of the analyses in this thesis, I have selected CD releases that appeared most reliable and stable in terms of playback speed.⁵⁶

However, one particular recording necessitated direct intervention on my part. At the time of writing this thesis, there was only one available CD release of Furtwängler's 22 October 1948 recording of Brahms's Fourth Symphony with the Berlin Philharmonic.⁵⁷ However, this release was pitched to 430–431 Hz, which is in direct contrast with the markedly higher pitch

⁵⁰ Starting in 1940, most concerts within the orchestra's philharmonic concert series in Berlin were recorded. In 1940 and 1941, these were still captured on shellac discs, while from 1942 onwards the concerts were recorded using reel-to-reel tape (Engel 2018: 168; Schulz 2018: 42–44).

⁵¹ This is done primarily to circumvent the issues of segmented recording sessions and subsequent edits that characterise studio recordings. Furthermore, Furtwängler's live recordings are generally described as more successful in vividly capturing the conductor's performances (see the section 'Live Performance and Studio Recording' below).

⁵² See Tables 3.2 and 5.2 for a list of recordings.

⁵³ Engel 2018: 160–62.

⁵⁴ The width of the tape and its playback speed varied considerably in the first decades of the technology, while the unstable electric supply in Germany during and after the war caused interference with the recording speed of the Magnetophon, which was directly tied to the mains frequency (*ibid.*: 178; Copeland 2008: 82). In the case of Furtwängler's radio recordings in particular, the problem was exacerbated by the absence of the original tapes, which were appropriated by the invading Soviet forces at the end of the Second World War and were returned only in 1991 (Schulz 2018: 48–50).

⁵⁵ Furtwängler's 15 August 1950 recording of Brahms's Fourth Symphony is pitched to 447–449 Hz on the CD reissue made by Orfeo (C 525 991 B, 1999) while it appears at 439–442 Hz on the Music & Arts remastering (CD-258, 2011). (Pitch readings were made with the use of the software Celemony Capstan.)

⁵⁶ Accordingly, for the recordings made with the Berlin Philharmonic in the 1940s, I have selected reissues that show a pitch range of c. 442–446 Hz, while for the recordings from 1950 with the Vienna Philharmonic, reissues ranging roughly from 443 Hz to 448 Hz were used. Furthermore, I sought reissues in which pitch remained mostly stable within and across movements. The pitch values for the orchestras were taken from Haynes 2002: 360–61; and Helmut Fischer's private collection of pitch data for twentieth-century orchestras, for which I am grateful to Mr Fischer.

⁵⁷ Tahra, FURT 1025 (1998). See Table 3.2 in Volume 2.

generally associated with the orchestra during this period.⁵⁸ It also deviates significantly from the recording made only two days later with the same orchestra, which shows a pitch of 444 Hz in a reliable remastering by Pristine Audio.⁵⁹ Having consulted a number of professionals in the field,⁶⁰ it seemed necessary to manually raise the pitch of the earlier recording, which was carried out using the software WaveLab.⁶¹

Furtwängler's Writings

Furtwängler was a rather prolific writer. He published essays and gave lectures and interviews throughout his life, and he also left behind a large number of letters and miscellaneous notes. The majority of his writings have appeared in five collected volumes,⁶² although a significant body of unpublished writings is preserved as part of the Furtwängler estate, currently held in Berlin and Zürich.⁶³

Furtwängler's writings make for engaging reading due to the depth of thought that they reveal. Their style, however, does not facilitate comprehension: the writing conventions of German idealism clearly left their mark on the conductor's prose.⁶⁴ This, coupled with the occasional lack of focus of his argumentation, makes these writings difficult to approach. Furthermore, only a small portion of his work discusses music-making and conducting directly,⁶⁵ the majority of his writings focusing instead on composers, musical style and musical life.

⁵⁸ See footnote 56 in this chapter.

⁵⁹ PASC 456 [2016]. Pristine Audio's reissues of Furtwängler's recordings appear to be generally accurate, which is partly due to the fact that their sound engineer, Andrew Rose, pitched the recordings based on the mains frequency hum preserved in the recordings – a technique that is generally recognised as a relatively reliable way of identifying speed issues in early tape recordings (Copeland 2008: 95–96).

⁶⁰ I hereby thank the kind support and helpful information provided to me by Dr Adam Stanović, Dr Allan Jones, Andrew Hallifax, Dr David Patmore, Helmut Fischer, Dr Sean Williams and Ted Kendall.

⁶¹ The pitch correction was performed by Helmut Fischer, to whom I am deeply grateful. The correct tuning (444–46 Hz) was identified based on the mains frequency hum detected in the recording using iZotope RX8.

⁶² Furtwängler himself oversaw the publication of two compilations: *Gespräche über Musik* (Furtwängler 1948) and *Ton und Wort* (Furtwängler 1954). The former consists of seven interviews held in 1937, while the latter is a compilation of the conductor's essays and lectures. Following his death, three further compilations were published under the supervision of Furtwängler's widow: *Vermächtnis. Nachgelassene Schriften* (Furtwängler 1956), *Briefe* (Furtwängler 1964) and *Aufzeichnungen 1924–1954* (Furtwängler 1980). These volumes introduced further essays, letters and miscellaneous notes, respectively. His writings also appeared in English translation in three volumes: *Concerning Music* (Furtwängler 1953), a translation of Furtwängler 1948; *Furtwängler on Music* (Furtwängler 1991), a compilation broadly corresponding in content to Furtwängler 1954; and *Notebooks 1924–1954* (Furtwängler 1989), a translation of Furtwängler 1980. Amongst these, Furtwängler 1989 is the most accurate and reliable, while Furtwängler 1953 and Furtwängler 1948 should be treated with caution as they contain numerous inaccuracies.

⁶³ Elisabeth Furtwängler, the conductor's widow, donated a significant portion of the estate to the Zentralbibliothek Zürich in 1976 (shelfmark: Nachl. W. Furtwängler). In 2000, she gave a further portion of the material to the Staatsbibliothek zu Berlin, where it is currently held within the Preußischer Kulturbesitz under the shelfmark Signatur 55, Nachl. 13. The Zürich holding mainly consists of musical materials, while the Berlin portion of the estate is primarily composed of letters and notebooks.

⁶⁴ For discussion, see Allen 2018: xxi; Lichtenhahn 1996.

⁶⁵ Even then, he typically remained at the level of generalisations and admonitions, avoiding discussions of the intimate details of the conductor's trade or his own conducting style.

Nevertheless, Furtwängler's writings represent a valuable source of information when it comes to his thoughts on musical structure and its role in performance.

For the purposes of this thesis, I have examined the published volumes as well as a selection of relevant unpublished drafts and letters in order to uncover the conductor's understanding of musical structure (see the section 'Furtwängler on Musical Structure' below) and to shed light on his interpretation of Beethoven's Fifth Symphony (see Chapter 5) – one of the few works that Furtwängler discussed in detail.

Annotated Scores and Performance Materials

The annotated scores and orchestral parts that have been preserved as part of the Furtwängler estate form an important body of sources.⁶⁶ Although the catalogues of the holding institutions provide valuable information about these materials,⁶⁷ as of now, no comprehensive review of these sources has been carried out. A preliminary examination of the material was undertaken by Hans-Joachim Hinrichsen as part of his analysis of Furtwängler's 1953 recording of Schumann's Fourth Symphony.⁶⁸

Based on two annotated scores that I have consulted,⁶⁹ it appears that most of Furtwängler's markings concerned changes or clarifications in dynamics, articulation, bowing and, to a lesser extent, tempo. The set of orchestral parts for Brahms's Fourth Symphony, which I have examined as part of the analyses in Chapters 3 and 4, show similar markings.⁷⁰ In general, it is unclear what exact purpose these annotated materials served, and it seems difficult – if not impossible – to link them with any particular performance or orchestra. According to Chris Walton, who was the head of the Music Division at the Zentralbibliothek Zürich from 1990 to 2001, it is likely that Furtwängler conducted from these annotated scores on a regular basis and that he used the annotated parts when working with orchestras as a guest conductor.⁷¹ Despite these uncertainties, this group of sources could be helpful in illuminating the conductor's recorded performances.

⁶⁶ See footnote 63 in this chapter.

⁶⁷ For the relevant catalogue of the Zentralbibliothek Zürich, see <<https://www.zbcollections.ch/home/#/content/433b09ad72484ce596cfc5b9433d1e40>> (accessed 30 May 2023). For information on the holdings of the Staatsbibliothek zu Berlin, see <<https://staatsbibliothek-berlin.de/die-staatsbibliothek/abteilungen/musik/sammlungen/bestaende/nachlaesse/furtwaengler-wilhelm>> (accessed 30 May 2023). The relevant catalogue is unavailable online; I accessed it by request with assistance from a staff member of the library's musical division.

⁶⁸ Hinrichsen 2008a: 134–36.

⁶⁹ Full score of Beethoven's Third Symphony (Staatsbibliothek zu Berlin, Musikabteilung mit Mendelssohn-Archiv, 55 Nachl 13, M II, 3) and full score of Brahms's Third Symphony (Zentralbibliothek Zürich, Musikabteilung, Nachl. W. Furtwängler: A 16). Both sources contain Furtwängler's handwriting.

⁷⁰ Zentralbibliothek Zürich, Musikabteilung, Nachl. W. Furtwängler: A 19. See pages 123–26 in this thesis.

⁷¹ Private correspondence from 13 August 2021.

Reviews

Concert and recording reviews provide a valuable insight into the ways in which Furtwängler's conducting has been perceived by listeners. As the head of one of the most illustrious orchestras in Europe, Furtwängler was very much in the limelight, both in Germany and internationally, as a result of which his performances were regularly reported in the musical press. Despite this, scholarly examinations of this rich source material are virtually non-existent.⁷² This thesis is unique in the sense that it incorporates a survey of a broad selection of contemporary concert reviews into its discussion of Furtwängler's conducting style.⁷³ This inquiry included various newspapers from Germany, Austria, the United Kingdom, the United States of America and Hungary.⁷⁴

Reviews of Furtwängler's recordings also help to shed light on the conductor's style and its reception in the second half of the twentieth century. In this respect, John Ardoin's and Peter Pirie's books are significant as they provide an overview of the entirety of Furtwängler's discography.⁷⁵ Besides these, I have examined reviews published in various music magazines, including *High Fidelity* and *Gramophone*. In the following sections, I explore Furtwängler's notion of musical structure through his writings and his performance style based on reviews, reminiscences and the scholarly literature.

Furtwängler on Musical Structure

Even a cursory review of his writings reveals that the question of musical structure captivated Furtwängler throughout his life. Writing to Ludwig Curtius in 1922, he acknowledged his preoccupation:

The task is indeed harder than ever: to preserve the living organic form amid the challenges of the present age. But without that, music-making loses its meaning and interest for me. ... I do not know whether I will ... ever find an answer to this passion and yearning of mine, which is quite literally draining my life energy.⁷⁶

⁷² Biographical works tend to include a handful of reviews, but they by no means provide a clear picture of Furtwängler's reception in the press. The seemingly only work that directly engages with this material is Detlef Giese's article: 'Wilhelm Furtwängler und Otto Klemperer im Spiegel der Berliner Musikkritik der Weimarer Republik', *Jahrbuch des Staatlichen Instituts für Musikforschung Preussischer Kulturbesitz* (2005), 52–77.

⁷³ A broad selection of these reviews are included in the Apparatus in Volume 2 (Chapter 2).

⁷⁴ Due to limited availability at the time of writing this thesis (undertaken during the COVID-19 pandemic, which made travel for research purposes difficult at best), the survey focused primarily on Austrian newspapers, which also regularly reported on Furtwängler's performances in Berlin.

⁷⁵ Ardoin 1994 and Pirie 1980.

⁷⁶ ('Die Aufgabe ist wohl schwerer als sie jemals war; mitten in den Anforderungen der Gegenwart sich die lebendig-organische Form zu bewahren. Aber ohne dies hat das Musizieren für mich keinen Sinn und kein Interesse. ... ich weiss nicht, ob ich, – selbst wenn es gelänge – auf diese Leidenschaft und Sehnsucht, die wahrhaft buchstäblich an

It appears that Furtwängler never found a satisfying resolution to the problem since it remained an underlying theme in his essays. In 1944, he jotted down the following: ‘the problem of form is the central problem for every true artist, and will always remain so’.⁷⁷

His letter reveals that Furtwängler’s concept of structure was closely related to organicism, a doctrine prevalent in the nineteenth century, and on which much early twentieth-century music theory was predicated.⁷⁸ According to this view, musical works ‘live’ like organisms: they grow from within themselves following a predetermined natural course and exhibit the qualities of causality, evolution and goal orientation.⁷⁹ In this vein, Furtwängler claimed that organic forms always retain a sense of ‘seeking, groping around and becoming’ (‘Suchenden, Tastenden, Werdenden’), in contrast to the ‘unalterable and predestined’ (‘unverrückbare, vorherbestimmte’) schemata.⁸⁰ Also, through the process whereby musical materials seemingly emerge from one another, ‘The playing-out of the whole assumes a quality of inevitability, as though the piece was evolving by itself, independently of its creator’.⁸¹

Closely related to organicism is the notion of the work as a whole, which is featured prominently in Furtwängler’s discussion of structure. The conductor claimed that the whole corresponds to ‘the structure, the gradient, the process of the spiritual experience’, and that without recognising the whole, ‘chaos and confusion’ ensue.⁸² He argued that a grasp on the whole allows one to recognise that a musical event has ‘causes, which are often visible in a far distance’, and ‘consequences’, which can occur far away from the event itself.⁸³ This creates a complex web of interrelations that connects individual bars across the piece.⁸⁴ Furtwängler claimed that *Fernhören* (‘long-range hearing’) – that is, the Schenkerian concept that Furtwängler defined as ‘hearing applied over great spans to fundamental relationships that often spread across

meinem innersten “Lebensmark” zehrt, jemals eine Antwort bekomme.) Letter from 15 August 1922, Furtwängler 1964: 60 (emphasis removed).

⁷⁷ (‘In diesem Sinne ist das Problem der Form das Zentral-Problem für jeden wahrhaften Künstler und wird es immer bleiben.’) Furtwängler 1980: 240; translation from Furtwängler 1989: 147.

⁷⁸ Although organicist metaphors in relation to art go back as far as Plato and Aristotle, the modern form of the ideology started to develop during the eighteenth century, mainly in the biological sciences (Morgan 2014: 42; Solie 1980: 147). Before long, its influence became all-pervasive, affecting almost every sphere of thinking from literary criticism to political philosophy.

⁷⁹ See Solie 1980: 154–55.

⁸⁰ Furtwängler 1948: 63.

⁸¹ (‘Der Ablauf des Ganzen bekommt damit den Charakter des Notwendigen, gleich als ob das Stück sich unabhängig von seinem Schöpfer von selber entwickelte.’) Furtwängler 1954: 237; translation from Furtwängler 1991: 49 (translation modified).

⁸² (‘[N]ur die Erkenntnis der Existenz eines solchen “Ganzen” – das wir Struktur, Gefälle, Ablauf seelischen Geschehens oder wie immer nennen mögen, ohne dem, was ich eigentlich meine, auch nur annähernd Ausdruck gegeben zu haben – uns vor dem Absinken in Chaos und Konfusion bewahren kann.’) Furtwängler 1954: 83; translation from Furtwängler 1991: 13 (translation modified).

⁸³ (‘Alles und jedes hat Grund und Folge, das heißt, alles und jedes hat oft scheinbar in weiter Ferne liegende Ursachen und zielt auf oft in weiter Ferne liegende Dinge hin.’) Furtwängler 1954: 202.

⁸⁴ *Ibid.*: 203.

many pages⁸⁵ – facilitates the realisation of these interrelations, thereby providing coherence to the structure: ‘*Fernhören* pushed towards large form, was its precondition.’⁸⁶ He also asserted that when the structure as a whole is ‘tonally felt from beginning to end’, the musical details assume their ‘architectural-tonal place’.⁸⁷

Furtwängler argued that organic structure is possible only through tonality. He claimed that it is tonality that allows the ‘music to create a “form”’; it is the ‘structure-forming element, which helps the musical work assume “shape”’.⁸⁸ Elsewhere, he called tonality the ‘architectural structuring of time’.⁸⁹ Furthermore, Furtwängler saw tonality as creating ‘tension and relaxation’, ‘struggle and pacification’, which, in turn, produce the generative force in music.⁹⁰ At one point, Furtwängler described the different levels of tonal tension with the imagery of waves on the sea:

Thus, a tonal work looks rather like the sea: big waves carrying small waves, and small waves smaller waves still, etc. Here, waves correspond to cadence tensions – [a multiplicity of] large and ever smaller [cadence tensions] superimposed upon one another. We are therefore dealing with a system of independent forces taking their effect independently of our intentions or wishes. It is not until our will of expression coincides and unites with the will of expression of these forces that the work of art emerges.⁹¹

Elsewhere, he directly equated musical ‘architecture’ with a ‘network of abstract tensions and relaxations’.⁹²

For Furtwängler, organic form found its most perfect realisation in symphonic music and sonata form (especially as seen in Beethoven’s oeuvre).⁹³ Indeed, for him, the two appeared

⁸⁵ (‘Das Fernhören, das heißt das Hören, das Ausgerichtetsein auf eine weite Ferne, auf einen großen, oft über viele Seiten weggehenden Zusammenhang...’) Ibid.: 202; translation from Wilhelm Furtwängler, 1985: ‘Heinrich Schenker: A Contemporary Problem’, trans. by Jan Emerson, *Sonus: A Journal of Investigations into Global Musical Possibilities*, 6/1, 3; quoted in Cook 1995: 108. References to the concept in Schenker’s own writings are few and far between, and in general, it is discussed almost exclusively in the context of Furtwängler’s performance aesthetics.

⁸⁶ (‘Das Fernhören drängte zur großen Form, war Voraussetzung derselben.’) Furtwängler 1980: 278.

⁸⁷ (‘Eine Sinfonie zu schreiben hat nur Sinn, wenn [...] die ganze Form noch tonal durchfühlt wird, d. h. *alles* seinen architektonisch-tonalen Ort hat.’) Ibid.: 212 (emphasis in original); translation from Furtwängler 1989: 130.

⁸⁸ (‘Tonalität ... macht es der Musik möglich, eine “Form” zu bilden, ist das strukturbildende Element, das dem Musikstück zur “Gestalt” verhilft...’) Furtwängler 1954: 206–07; translation from Furtwängler 1991: 24 (translation modified).

⁸⁹ (‘Tonalität ist nichts anderes als die architektonische Gliederung der Zeit.’) Furtwängler 1980: 342.

⁹⁰ (‘die biologischen Werte der Spannung und Entspannung, des Kampfes und der Befriedung...’) Ibid.: 271.

⁹¹ (‘Ein tonales Musikstück bietet solcherweise etwa den Anblick des Meeres: Auf großen Wellen sind kleinere und auf diesen wiederum kleinere usf. Welle ist hier gleich Kadenzspannung, große und immer kleinere übereinandergelagert. Wir haben es demnach mit einem System von selbständigen Kräften zu tun, die sich unabhängig von unserem Wollen und Wünschen auswirken. Erst durch das Zusammenfallen und Einswerden unseres Ausdruckswillens mit dem Ausdruckswillen dieser Kräfte entsteht das Kunstwerk.’) Furtwängler 1948: 114; translation from Furtwängler 1953: 83–84 (translation modified). Furtwängler possibly borrowed the sea metaphor from the writings of the energeticist music theorist Ernst Kurth (1886–1946) (Allen 2018: 179–80).

⁹² (‘Trotzdem ist die Architektur, ist das Netz abstrakter Spannungen und Entspannungen keineswegs der ganze Inhalt dieser Musik...’) Furtwängler 1954: 232–33.

⁹³ Besides Beethoven, Furtwängler also considered Schubert, Brahms and Bruckner to be significant sonata composers (Furtwängler 1980: 171).

closely linked: he claimed that the symphony – ‘the last completely autonomous musical form’ – ‘is closely bound up with the form of the “sonata”’,⁹⁴ which he also called the ‘natural form’ (‘Naturform’).⁹⁵ For him, these represented the perfect embodiment of the organic process: in his words, the sonata and the symphony are defined by their ‘energy of becoming, inexorability and the force of forward motion’ and a ‘goal-oriented’ nature.⁹⁶ In terms of sonata form, it was not the formal construction itself that appealed to the conductor; as he wrote: ‘The significant thing [is] not the schema itself, but the fertility of the oppositions’.⁹⁷ Sonata demonstrates a ‘depth of proportion’ and it is innately ‘malleable’, corresponding to an ‘event’ rather than a ‘mood’.⁹⁸ According to the conductor, sonata form is ‘primarily connected to subjects’, and these subjects – unlike the themes found in fugues and suites – ‘can never return twice without being completely changed’.⁹⁹ This is because in each consecutive case the subject ‘seems to carry different pasts and through that it presents itself in a new light’.¹⁰⁰

Crucially, in Furtwängler’s view, structure does not emerge passively but should be actively shaped and highlighted by the performer. He claimed that in Beethoven’s ‘strictly architectural music’,¹⁰¹ for instance, on the comprehension of the structural interrelationships ‘no more or less depends than the grasp of the [otherwise] transparent network of meanings in general’. It is therefore ‘not sufficient for such an architecture [just] to be “latent” [...] it has to be directly experienced and heard’.¹⁰² As he argued, ‘The important thing for all truly great effects in

⁹⁴ (‘Was ich hier unter Sinfonie verstehe, ist eng mit der Form der “Sonate” verbunden. ... die Sinfonie, die letzte ganz autonome musikalische Gestalt...’) Ibid.: 268, 271; translation from Furtwängler 1989: 165, 167.

⁹⁵ Furtwängler 1948: 66 (emphasis removed).

⁹⁶ (‘Es macht die eigentliche Sinfonie respektive Sonate in dem hier gemeinten sinfonischen Sinne ... vor allem die Energie des Werdens, die Unentrinnbarkeit und Gewalt des Vorwärtsgehens aus. Die Sinfonie hat immer etwas Zielstrebiges...’) Furtwängler 1980: 269 (emphasis removed); translation from Furtwängler 1989: 165 (translation modified).

⁹⁷ (‘Das Wesentliche nicht das Schema, sondern die Fruchtbarkeit der Gegensätze.’) Furtwängler 1980: 171; translation from Furtwängler 1989: 105.

⁹⁸ (‘Die Sonate, die Fuge sind die Formen, die Tiefe der Proportion besitzen. Es geschieht etwas, verwandelt sich etwas, manifestiert sich etwas, die Musik ist plastisch, ist nicht Stimmung, sondern Geschehnis.’) Furtwängler 1980: 182.

⁹⁹ (‘Die “Sonate” ist zunächst an Themen gebunden... Das Sonatenthema kann niemals zweimal wiederkehren, ohne nicht völlig verändert zu sein.’) Ibid.: 268–69; translation from Furtwängler 1989: 165 (translation modified).

¹⁰⁰ (‘[E]in Thema, das sich in der Mitte oder am Schluß des Satzes wiederholt, jedesmal als ein anderes, d. h. mit einer anderen Vergangenheit belastetes erscheint und dadurch ganz von selbst eine neue Beleuchtung erhält.’) Furtwängler 1954: 232; translation from Furtwängler 1991: 46 (translation modified).

¹⁰¹ (‘Beethovens Werken ... – diese streng architektonische Musik...’) Furtwängler 1954: 260.

¹⁰² (‘Für Beethoven hängt von dem Verständnis des architektonischen Zusammenhangs nicht mehr und nicht weniger ab als das Verständnis des klaren Sinnzusammenhangs überhaupt. ... Das heißt, es genügt nicht, daß eine solche Architektur ... “latent” vorhanden sei; nein, diese Architektur muß unmittelbar erlebt, muß gehört werden.’) Ibid.: 225–26; translation from Furtwängler 1991: 42 (translation modified).

“music” as a material is the effect of form, the “hearing of form”.¹⁰³ In order to realise this, the performer needs to ‘live through the whole work in its structure, as a living organism’.¹⁰⁴

Overall, it is clear that Furtwängler’s organicist concept of music reveals an innately dynamic notion of musical structure. This becomes clear from his rejection of schemata in favour of a gradually unfolding ‘spiritual process’ (‘seelisch[e] Prozes[s]’) and his focus on goal-orientation and the evolving function of sonata subjects.¹⁰⁵ Furthermore, his discussion of structure shows the influence of energetic imagery, seen through his discussion of ‘tension and relaxation’ and a ‘system of independent forces’.¹⁰⁶ Finally, his writings reveal that Furtwängler approached music with an eye for large-scale structural relations and processes, and it is obvious that the conductor considered the performer’s role crucial in the realisation thereof. In Chapters 3–5, these insights will be considered when evaluating Furtwängler’s shaping of structure in performance.

Furtwängler the Conductor¹⁰⁷

Shaping Influences

In discussions of the origins of Furtwängler’s conducting style, one name crops up repeatedly: Arthur Nikisch (1855–1922).¹⁰⁸ In 1912, Furtwängler attended a guest performance of the Berlin Philharmonic led by the Hungarian-born Nikisch, whose Wagnerian conducting style left an indelible mark on the young conductor. Following the concert, Furtwängler reportedly claimed that Nikisch was ‘the only one from whom I can learn’,¹⁰⁹ and later he acknowledged that he had been impressed by the manner in which Nikisch achieved a certain ‘warmth’ in the orchestral sound through ‘simple movements’ (‘einfache Schläge’).¹¹⁰

¹⁰³ (‘Das Wesentliche für alle wirklich großen Wirkungen der Materie “Musik” ist die Formwirkung, das “Formhören”.’) Furtwängler 1980: 262; translation from Furtwängler 1989: 160.

¹⁰⁴ (‘Zu all diesem kann den Interpreten nur eins befähigen – und das ist wohl überhaupt das Wichtigste – das Durchleben des ganzen Werkes in seiner Struktur, als lebendigen Organismus.’) Furtwängler 1954: 12.

¹⁰⁵ Ibid.: 81.

¹⁰⁶ See footnotes 90 and 91 in this chapter..

¹⁰⁷ In the remaining sections of this chapter, I rely on a variety of sources: historical concert reviews, recording reviews and scholarly writings. Some might take issue with the mixing of music criticism and scholarship, but I would argue that all these various works illuminate the subject – Furtwängler’s performance style – from different angles: the reviews provide insights into the listening impressions created by the performances, while the analytical studies provide (tentative) answers as to the causes of those impressions.

¹⁰⁸ See, for example, Schonberg 1968: 275; Blaukopf 1955: 78; Haffner 2020: 55–57; Auhagen 2005: 36; Dymant 2016: 56, 71. The critic Julius Korngold, too, emphasised the similarities between Furtwängler and Nikisch (RW17).

¹⁰⁹ (‘... der einzige, von dem ich lernen kann, wenn ich es auch anders machen werde.’) Hürlimann 1955: 138.

¹¹⁰ Furtwängler 1956: 99. See also Furtwängler 1964: 254–55.

Furtwängler's preference for smooth transitions, which is considered one of his signature techniques,¹¹¹ might have derived directly from Nikisch. Kurt Blaukopf, for example, argues that in Nikisch's playing there were 'no sharp edges, but soft curves; no clearly defined corners, but rounded-off forms' – a quality that probably did not go unnoticed by Furtwängler.¹¹² This sense of smooth transitions might partly stem from the large-scale shaping of tempo into arches – a technique that both conductors shared (see below).¹¹³ More generally, the principle of smooth transitions might have originated in the conducting style of Wagner, whose writings were most likely familiar to Furtwängler, and the concept might have been related to organicism, which – as discussed above – was crucial to Furtwängler's understanding of music.¹¹⁴

A further source of inspiration – in a general sense rather than in terms of conducting technique – came from Heinrich Schenker. Furtwängler was impressed by the theorist's book on Beethoven's Ninth Symphony (so much so that he apparently incorporated elements of Schenker's analysis into his own interpretations of the work),¹¹⁵ and the two made contact in 1919, following which they met regularly and often discussed specific compositions.¹¹⁶ Although they by no means agreed on all matters,¹¹⁷ Schenker's concept of *Fernhören* had a lasting impact on Furtwängler's thinking.¹¹⁸ Some writers go so far as to claim that certain 'structural' features of the conductor's style can be ascribed directly to Schenker's influence. Elisabeth Furtwängler (the conductor's widow), for instance, stated:

I think it is due to Schenker's influence that later during Furtwängler's concerts, especially in the case of the symphonies, the listener could sense – and even recognize – the closed form of a work in its temporal unfolding and the relationships from the first bar to the last.¹¹⁹

Sam Shirakawa similarly points out that certain aspects of Furtwängler's style – namely, 'the sense of a work's entire canvass in every played note, the grasp of a work's totality, the mastery in

¹¹¹ See page 83 in this thesis.

¹¹² Blaukopf 1955: 78. See also Haffner 2020: 57.

¹¹³ Auhagen (2005: 48–49) has demonstrated this similarity through a tempo analysis of Nikisch's and Furtwängler's recordings of Beethoven's Fifth Symphony.

¹¹⁴ See Walton 2021: 246–50.

¹¹⁵ Cook 1995; Gindin 2007.

¹¹⁶ Dodson and Jonas 2003: 130–31. Furtwängler himself acknowledged the 'passionate interest' ('leidenschaftlichste[r] Anteil') that Schenker's early work aroused in him (Furtwängler 1954: 199).

¹¹⁷ Notwithstanding his general admiration, Furtwängler deemed Schenker's later work less appealing due to its more radical abstraction, and he found Schenker's polemical tone alien to his taste (Furtwängler 1954: 231). At the same time, it seems clear that Schenker himself was not always satisfied with the conductor's performances (Federhofer 1985: 112, 119).

¹¹⁸ Furtwängler 1954: 201–02; 1980: 276. Cook (1995: 122), for example, sums up Furtwängler's performance style as 'long-range conducting', emphasising the importance of the Schenkerian concept of *Fernhören* to the musician.

¹¹⁹ ('Ich glaube, daß es Schenkers Einfluß zuzuschreiben ist, daß später die Hörer bei den Furtwängler-Konzerten, insbesondere bei den Symphonien, die geschlossene Form eines Werkes im zeitlichen Ablauf, die Beziehung vom ersten bis zum letzten Takt, erfühlen, ja erkennen konnten.') Furtwängler 1979: 52.

achieving seamless chains of transitions culminating in an organic unity'¹²⁰ – were the very qualities that Schenker advocated in his own teaching.¹²¹

Stylistic Periods

Although most commentators regard Furtwängler's performance style as a closed and unchanging entity, at least a handful of writers – primarily John Ardoin and Peter Pirie, the authors of significant summaries on the subject – argue that his conducting progressed through distinct stylistic periods.¹²² Judging by the few available early recordings, Pirie proposes that the 1920s witnessed a certain early style in Furtwängler's conducting, which presented a 'classical conductor', marked by 'austere brilliance' and a 'clarity of form', alongside lighter textures and slightly faster and more 'rigid' tempos.¹²³ Sam Shirakawa likewise describes Furtwängler's 1926 recording of Beethoven's Fifth Symphony as 'more elementary than elemental' and observes that 'correctness' seems to be the guiding principle of the rendition. Crucially, however, Shirakawa ascribes these qualities to the circumstances of the recording itself,¹²⁴ a factor which might account for Pirie's judgments as well. In general, the concert reviews do not really bear out the existence of this distinct early style since most reviews from the 1920s paint a picture of Furtwängler's style that is very similar to the one that we know from his later recordings; a handful of reviews, however, imply that some 'classicist' features might have surfaced occasionally in his music-making at this stage.¹²⁵

In any case, the 1930s saw the emergence of what is now considered to be the fully-fledged Furtwängler style. According to John Ardoin, this pre-war decade was characterised by 'great intensity' and 'technical assurance'.¹²⁶ Pirie furthermore suggests that in this period his performances gained 'warmth and sensuousness', his textures became richer, and the 'tremendous Furtwängler breadth' was born.¹²⁷

¹²⁰ Please note that in this thesis, the original spelling of quoted materials is preserved, and inconsistencies or mistakes in spelling and grammar are not highlighted.

¹²¹ Shirakawa 1992: 95–96. See also Horowitz 1982: 65. It is worth noting, however, that Schenker's work was not the only music theoretical approach to which Furtwängler's concept of music and conducting style were related. As discussed above (see page 43 and footnote 91 in this chapter), energetic notions of music could have also influenced – or at least aligned with – the conductor's approach to music.

¹²² Ardoin 1994; Pirie 1980. Pirie's work is particularly relevant since he was a witness to Furtwängler's conducting both in the concert hall and through recordings.

¹²³ Pirie first attended Furtwängler's concerts in the 1930s (Pirie 1980: 17–18), therefore his judgements on this 1920s style must be based on the recordings themselves.

¹²⁴ Shirakawa 1992: 412–13.

¹²⁵ See RW7, RW25.1 and RW32.

¹²⁶ Ardoin 1994: 129, 143.

¹²⁷ Pirie 1980: 19–20.

Writers agree that the years of the Second World War constituted a distinct stylistic period in Furtwängler's conducting. Characterised by 'frantic intensity' and 'wildness',¹²⁸ this period saw his characteristic techniques – tempo flexibility and tension-building – elevated to an unprecedented level.¹²⁹ A similar consensus exists about a change in Furtwängler's style following the war. Karla Höcker, for instance, noticed a newly found 'clarity, objectivity, absolute simplicity' in his conducting.¹³⁰ Ardoin similarly observed that after the war, Furtwängler's previous styles 'were reconciled within a more meditative and profound way of making music', characterised by 'serenity and sense of perspective'.¹³¹ Pirie furthermore claimed that in this period

[Furtwängler] combined the massive and architectonic splendour of his style before 1939 with something of the tigerish tension and improvisatory attack of his wartime performances, but controlled and shaped as never before.¹³²

The recordings examined in this thesis were made during the 1940s and early 1950s, and therefore they cover the final two of these supposed stylistic periods: the war-time style and the post-war style. The analyses in Chapter 3–5 reflect on the changes in Furtwängler's style through a comparison of multiple recordings.

Live Performance and Studio Recording

While for some conductors performing live and recording in a studio might simply represent two sides of the same coin, it seems that for Furtwängler they could not have been further apart. He reportedly had a lifelong aversion to studio recording,¹³³ and its products were rarely to his satisfaction.¹³⁴

The main reason for this lay in the recording process itself: Furtwängler was apparently deeply irritated by the fragmentation of pieces into segments of three to four minutes, which the early recording technology necessitated, and by the interruptions by sound producers – both of which disrupted the flow of performance, which was seemingly crucial to his shaping of pieces.¹³⁵

¹²⁸ Ibid.: 20. See also Quantrill 2019: 100.

¹²⁹ According to Elisabeth Furtwängler (1979: 94), the recordings from this period reflect the anxiety that the citizens of Berlin experienced during the Allied bombings.

¹³⁰ ('Klarheit, Sachlichkeit, absolute Schlichtheit der Darstellung wurden jetzt vorherrschende Kennzeichen seines Stils.') Höcker 1979: 98. See also RW143, RW147, RW160 and RW161.

¹³¹ Ardoin 1994: 129, 144.

¹³² Pirie 1980: 22.

¹³³ See Holden 2005: 215; Gillis 1965: 127; Furtwängler 1979: 90–96; Schönzeler 1990: 151; Pirie 1980: 17; Shirakawa 1992: 377.

¹³⁴ According to his widow, Furtwängler would rather have held back most of his studio recordings from release. The one recording with which he appears to have been genuinely satisfied was his 1952 *Tristan und Isolde* (Furtwängler 1979: 96).

¹³⁵ See ibid.: 90; Schönzeler 1990: 151; Shirakawa 1992: 377; Gillis 1965: 167.

One telling example is the 1953 recording of Schumann's Fourth Symphony. A few minutes into the piece the sound editor stopped the music, which infuriated Furtwängler and led him to declare: 'You can have Schumann's Fourth [Symphony] by me under the one condition that you do not interrupt us anymore, neither during the movements nor between the movements'.¹³⁶ As discussed below, Furtwängler's insistence on uninterrupted playing seemingly intertwined with his large-scale structural strategies.¹³⁷

A further cause for his dislike of recordings came from the fact that the studio settings and subsequently the act of listening to the recordings on an individual basis strip away the 'communal experience' ('Gemeinschaftserlebnis') that he considered essential to the successful performance of certain works (mainly Beethoven's symphonies).¹³⁸ As Furtwängler himself put it: 'a full experience of these works, which need to be absorbed, alongside the festive and tremendous exhilaration [that they cause], directly by a real community, is impossible through the radio'.¹³⁹

Furtwängler also bemoaned the fact that recording demands adjustments in the performance itself:

Even the loudness seems fundamentally different; so much so that extreme nuances – a true fortissimo or pianissimo – must be strictly avoided if the performance is to be appropriate for recording. The same goes for tempo. A truly slow tempo can easily seem boring and empty, while a truly fast tempo [appears] noisy and unclear. Pauses – even general pauses – must be avoided as much as possible. Thus, everything on a recording changes – and does so fundamentally – and not only the individual aspects in isolation but also in relation to each other, in their relationships.¹⁴⁰

Many commentators insist that Furtwängler's animosity towards the recording process is reflected in his recordings. On the one hand, some maintain that the mesmerising quality of his live performances is lost in his recordings.¹⁴¹ On the other hand, it is claimed that his studio and live recordings – even when produced immediately after each other – show very different

¹³⁶ ('Sie können die Vierte Schumann von mir unter der einen Bedingung haben, daß Sie uns nicht mehr unterbrechen, weder bei den Sätzen noch zwischen den Sätzen.') Furtwängler 1979: 99.

¹³⁷ See pages 89–91 in this thesis.

¹³⁸ Furtwängler 1954: 37.

¹³⁹ ('Wo es sich nicht um Erinnerungen handelt, ist ein vollwertiges Erleben dieser Werke, die in ihrem festlich-übergewaltigen Hochgefühl unmittelbar von einer leibhaftigen Gemeinschaft aufgenommen werden müssen, am Radio unmöglich.') Ibid.: 38. See also Furtwängler 1979: 92.

¹⁴⁰ ('Auch die Stärkegrade scheinen von Grund aus verändert, so sehr, daß extreme Schattierungen, ein wirkliches Fortissimo oder Pianissimo vom Interpretieren, will er plattengerecht musizieren, streng vermieden werden muß. Nicht anders verhält es sich mit den Tempi. Ein wirklich langsames Tempo wirkt leicht langweilig und inhaltlos, ein wirklich schnelles leicht lärmend und unklar. Pausen, Generalpausen gar, müssen möglichst vermieden werden. So erscheint alles in einer Orchesterplatte verändert – grundsätzlich verändert –, und zwar nicht nur absolut im einzelnen, sondern vor allem auch relativ, in seinen Beziehungen untereinander.') Furtwängler 1954: 35. A telling example is provided by Sergiu Celibidache: he recounted a recording session in London with Furtwängler, who after listening back to the result cried out: 'That is not my tempo!' (Kraus 1986: 143).

¹⁴¹ See Kraus 1986: 143, 193; Schonberg 1968: 270–71; Stuckenschmidt 1981: 159; Rich 1964: 49.

approaches,¹⁴² with the live recordings generally preferred by reviewers.¹⁴³ In comparison with studio versions, live recordings are often described as ‘more fluid and spontaneous’,¹⁴⁴ as having more pronounced contrasts in tempo and dynamics, and as having an ‘improvisatory quality’, which is absent from the studio versions.¹⁴⁵ In contrast, studio recordings are criticised for being ‘conventional and uncharacteristic’ and ‘too staid’, for ‘lacking their tense forward drive’,¹⁴⁶ and for sounding ‘tired’.¹⁴⁷ In light of these issues, I primarily rely on live recordings in my analyses.¹⁴⁸

Changing Performance Strategies

In order to provide a basis for the following analyses, it is also necessary to investigate the consistency of Furtwängler’s interpretations. Overviews of his recorded legacy reveal a varied picture in this regard. John Ardoin, for example, notes that for certain pieces (e.g. Beethoven’s Seventh Symphony or Brahms’s Fourth Symphony) Furtwängler devised a strategy early on, which he then employed relatively consistently over the decades. In contrast, the conductor – so argues Ardoin – grappled with other works such as Beethoven’s Fourth and Fifth Symphonies throughout his career, resulting in widely different interpretations.¹⁴⁹

This variability might be explained on the basis of Furtwängler’s aspiration to repeatedly relearn pieces – even those that had been in his repertoire for decades – as if he had never seen them before.¹⁵⁰ As his widow explained: ‘even symphonies that he often conducted he studied again and again, whereby he sometimes discovered something that had [previously] escaped his attention’.¹⁵¹ Friedrich Herzfeld, the author of an early monograph on the conductor, similarly noted that during the rehearsal of repertoire pieces Furtwängler and the orchestra not only refreshed their memory of the works, but ‘fundamentally and completely relearned’ them: ‘He works out rhythmic, timbral, melodic and other relations that have so far remained hidden from

¹⁴² Ardoin (1994: 117, 121) presents a number of examples where studio and live recordings of the same piece produced in close proximity show widely different approaches.

¹⁴³ See Schönzeler 1990: 151; Pirie 1980: 18, 22, 62.

¹⁴⁴ Ardoin 1994: 169.

¹⁴⁵ Pirie 1980: 62.

¹⁴⁶ Ibid.: 22, 62, 97.

¹⁴⁷ Shirakawa 1992: 429.

¹⁴⁸ In contrast, Hinrichsen (2005: 17) argues that if one is searching for representative examples of Furtwängler’s performance style, his late studio recordings offer the best prospects because these were, claims Hinrichsen, ‘recorded decidedly with the aim of documentation’ (*‘dezidiert mit dem Anspruch der Dokumentation eingespielt worden sind’*). Hinrichsen does not provide any justification for this claim, which therefore appears dubious in light of the contradicting evidence that I have presented above. Also, note that while in certain contexts ‘live recording’ could also refer to an uninterrupted performance recorded in a studio, here I primarily refer to recorded live concert performances.

¹⁴⁹ Ardoin 1994: 122, 125, 137, 252. As Chapters 3–5 show, this hypothesis – at least as far as Brahms’s Fourth Symphony and Beethoven’s Fifth Symphony are considered – is not entirely correct.

¹⁵⁰ See Schönzeler 1990: 152.

¹⁵¹ (*‘Er ging in jede Probe sehr vorbereitet, auch Symphonien, die er oft dirigiert hatte, studierte er immer wieder, wobei er auch manchmal etwas entdeckte, was ihm entgangen war...’*) Furtwängler 1979: 37.

them all. ... thereby even the most well-known symphonies seem completely new'.¹⁵² According to Werner Thärichen, a timpanist under Furtwängler, the conductor often cautioned his musicians against falling into routine by saying that 'I know that you have played the symphony a hundred times, but nobody should notice that!'.¹⁵³

A further source of variability might have been the conductor's documented propensity to follow the inspiration of the moment during concerts. One of the paradoxes of Furtwängler's music-making, as Peter Pirie explains, was that 'he rehearsed with painstaking and technical care, and then left the actual performance to the inspiration of the moment'.¹⁵⁴ Consequently, he occasionally led his musicians differently during performance than in rehearsal.¹⁵⁵ This variability of Furtwängler's performances is directly addressed in Chapters 3–5.

Furtwängler's 'Structural Style'¹⁵⁶

Introduction

In the following, I explore Furtwängler's conducting style as seen through the writings of commentators, including musicians working with Furtwängler, concert and recording critics, and scholars. As such, this section provides an overview not so much of Furtwängler's style per se but rather the ways in which it has been perceived and understood. This exploration of individual responses to Furtwängler's conducting – made possible by an extensive study of a hitherto unexamined body of sources – helps set up and contextualise the forthcoming analyses, in which special emphasis is placed on the personal, aural experience of Furtwängler's performances.

One aspect of Furtwängler's performance style has gained significant attention: the projection of structure (or his representation thereof, to be more exact). References to the conductor's supposedly 'structural style' abound in the literature. Some call him a 'supreme

¹⁵² ('Wohlgemerkt: nicht etwa nur wiederholt, sondern im Grunde völlig neu einstudiert. ... Er arbeitet rhythmische, klangliche, melodische und andere Beziehungen heraus, die ihnen allen bisher verborgen geblieben sind. ... Aber selbst die allerbekanntesten Symphonien wirken dadurch völlig neu.') Herzfeld 1941: 166. Concert reviews also commented on the impression that under Furtwängler's baton, even repertoire pieces seemed to have emerged as new compositions: see RW25.2, RW132 and RW156. See also Ellis and Cairns 2001: ¶ 11; Ardoin 1994: 113; Holden 2005: 203; Haffner 2020: 88; Hürlimann 1955: 216.

This continuous re-learning was made possible by the fact that Furtwängler received the most rehearsal time amongst the conductors working with the Berlin Philharmonic (at least until the end of the war): every philharmonic concert led by Furtwängler was preceded by at least three, but mostly four to six, rehearsals, each lasting four hours on average (Aster 2010: 114).

¹⁵³ ('Meine Herren, ich weiß, Sie haben die Symphonie hundertmal gespielt, aber das darf doch niemand merken!') Thärichen [1987] 1991: 23.

¹⁵⁴ Pirie 1980: 126. See also Stuckenschmidt 1981: 158; Herzfeld 1941: 163.

¹⁵⁵ See Haffner 2020: 88. For discussions of Furtwängler's rehearsing practices, see Gillis 1965: 143, 148; Herzfeld 1941: 164–66; Höcker 1979: 135–36, 142; Thärichen [1987] 1991: 17–19, 22–25.

¹⁵⁶ I borrow this phrase from Rink 1989.

architect', who can gain 'complete mastery of [a piece's] form',¹⁵⁷ while others describe him as a 'master builder'¹⁵⁸ and the 'master of large musical forms'.¹⁵⁹

Many commentators argue that Furtwängler clarified the structure of pieces in some way.¹⁶⁰ A critic from the *Neues Wiener Journal*, for example, wrote that 'Furtwängler gives the work utmost clarity, [and] he illuminates the form'.¹⁶¹ A correspondent of the *Weltpresse*, furthermore, argued that Furtwängler 'outlines – as very few of his contemporaries can – the musical contour with complete clarity',¹⁶² while his colleague characterised the conductor's technique as follows: 'The work that he performed revealed all of its secrets and wonders with the utmost clarity and transparency of its form.'¹⁶³

Others point out that the conductor 'possessed the great secret of proportion', as Paul Hindemith phrased it.¹⁶⁴ The critic Olin Downes, for instance, reflected thus on a concert led by Furtwängler: 'a performance more carefully thought out, more scrupulously proportioned ... would be hard to imagine'.¹⁶⁵ Ardoin similarly claims that there is 'a convincing feeling of proportion and flow' to the conductor's style.¹⁶⁶ Alan Rich likewise praises the 'immense control that Furtwängler was able to exert over architectural proportions'.¹⁶⁷

Still others report that Furtwängler was successful in solving certain structural problems in the pieces he performed. These challenges included the smooth introduction of the vocal element in Beethoven's Ninth Symphony,¹⁶⁸ the pacing and gradation of climaxes,¹⁶⁹ the segmentation of movements while avoiding fragmentation,¹⁷⁰ the integration of multiple movements into a whole,¹⁷¹ and 'structural continuity'.¹⁷²

Writers also comment on Furtwängler's ability to elucidate the thematic relations in a piece.¹⁷³ For instance, music critic Hedwig Kanner argued that – amongst other things – it was

¹⁵⁷ Pirie 1980: 109. The description 'master architect' also appears in Rich 1965: 78.

¹⁵⁸ RW111.

¹⁵⁹ RW32. See also RW40 and RW114; Kraus 1986: 156; Hürlimann 1955: 117–18; Sandberger 2005: 42; Hamilton 1968: 68.

¹⁶⁰ See RW4, RW31, RW41, RW56, RW122, RW123, RW124, RW140, RW149 and RW152; Ardoin 1994: 229; Gillis 1965: 142; Pirie 1980: 107; Hinrichsen 2005: 22.

¹⁶¹ RW64.

¹⁶² RW133.

¹⁶³ RW137.

¹⁶⁴ ('Er besaß das große Geheimnis der Proportion.') Hürlimann 1955: 47; translation from Gillis 1965: 57.

¹⁶⁵ RW25.1.

¹⁶⁶ Ardoin 1994: 270. See also RW48, RW53, RW55, RW100 and RW105.

¹⁶⁷ Rich 1965: 79.

¹⁶⁸ See RW112.

¹⁶⁹ See RW142.

¹⁷⁰ See RW148.

¹⁷¹ See RW109 and RW148.

¹⁷² Hans Keller's comment in Kraus 1986: 30.

¹⁷³ See RW16, RW22, RW46, RW85, RW97, RW112, RW121, RW128, RW130, RW131, RW136 and RW158; Hürlimann 1955: 223.

the ‘lucid clarity with which he can illuminate the thematic fabric’ that makes Furtwängler a great conductor.¹⁷⁴ Max Chop similarly highlighted the ‘graphically [*plastisch*] clear motivic work’ in Furtwängler’s performances,¹⁷⁵ while Max Morold praised his ‘technical mastery’, which manifested itself in the ‘clarification of the thematic relations’.¹⁷⁶

Finally, the most prominent feature of Furtwängler’s structural style – judging by the staggering number of related remarks¹⁷⁷ – was his skill in creating coherence within and over symphonic movements. Perhaps Ardoin described this quality most effectively when he wrote that the conductor had a ‘gift for binding musical sentences and paragraphs together as a single, expressive whole’, and that he could integrate multiple movements into ‘a massive, virtually single-movement symphonic statement’, resulting in a ‘miraculous degree of cohesiveness’.¹⁷⁸ Overall, it is clear that Furtwängler’s performance style has often been perceived as ‘structural’ in some sense of the word. In the following sections, I consider some of the performance techniques that reportedly contributed to this impression.

Tempo, Arches and Transitions

Tempo is probably the most discussed – and controversial – aspect of Furtwängler’s performance style. Alongside the stereotype that he was a conductor of slow tempos, his tempo flexibility and its structural function have been given the most attention in scholarly discussions of Furtwängler. Remarks about his supposedly slow tempos dogged him throughout his career, and the notion has subsequently become part of his posthumous image as a musician.¹⁷⁹ Some writers argue that this stereotype represents a gross oversimplification, however: they point out that sometimes Furtwängler’s performances were indeed faster than those of other conductors, and that his average tempos did not diverge significantly from those found in modern performances.¹⁸⁰

Tempo modification is probably the greatest fault line in discussions of twentieth-century performance practices in general and of Furtwängler’s style in particular. Some authors are

¹⁷⁴ RW18.

¹⁷⁵ RW35.

¹⁷⁶ RW41.

¹⁷⁷ See RW1, RW3, RW5, RW7, RW9, RW10, RW25.1, RW29, RW32, RW33, RW34, RW41, RW55, RW57, RW61, RW64, RW78, RW82, RW92, RW97, RW109, RW112, RW118, RW128, RW130, RW148, RW150 and RW157; Chesterman [2006] 2010: 59; Kraus 1986: 30, 86, 134, 140, 183–84; 190; Gillis 1965: 192; Furtwängler 1979: 52; Herzfeld 1941: 170; Pirie 1980: 7–8, 56, 97, 105, 110, 123, 127; Hürlimann 1955: 26, 47, 211; Höcker 1979: 142; Shirakawa 1992: 95; Holm 2016: 6; 2020: 181; Ellis and Cairns 2001: ¶ 12; Clark 2005: 126–27; Cook 1995: 116–21; Hamilton 1968: 68.

¹⁷⁸ Ardoin 1994: 177, 230, 234, see also 121, 146, 233, 243, 249, 253, 258, 267, 292.

¹⁷⁹ See RW4, RW30, RW44, RW68, RW104, RW141, RW167 and RW168; Galkin 1988: 673; Martin 1976: 152; Hamilton 1968: 67; Lang 1970: 64; Hinrichsen 2008b: 61–62. Some claim that Furtwängler’s tempos slowed further down towards the end of his career (Galkin 1988: 673; Shirakawa 1992: 380).

¹⁸⁰ See Matzner 1998: 8, 11; Holm 2020: 180; Auhagen 2011: 62; Blaukopf 1955: 83.

convinced that the conductor purposefully used the technique of tempo modification to underline structure,¹⁸¹ whereas others view it as a purely romantic mannerism.¹⁸²

Certain writers (especially anglophone commentators) have harshly criticised these ‘vagaries of tempo’,¹⁸³ as a critic from *The Times* called them, and they have argued that such deviations from the basic pulse have a ‘disintegrating effect’ on a piece’s unity.¹⁸⁴ Discussing the finale of Beethoven’s Ninth Symphony in Furtwängler’s performance, Nalen Anthoni, for example, claimed that ‘his over-elasticised line and penchant for extreme histrionics distort the movement’s tightly organised structure’.¹⁸⁵ Comments such as these clearly echo the theory-oriented concept of coherence that I discussed above.¹⁸⁶

Surprisingly, such notions were promoted to a certain extent even by Furtwängler himself and his admirers. Friedrich Herzfeld, for example, argued that a conductor’s excellence can be measured by their adherence to a unified tempo in the first movement of Beethoven’s Third Symphony – a test that Furtwängler apparently passed with flying colours:

Furtwängler shapes this movement with a compellingly consistent tempo. ... [H]e appears to be able to say everything [that he wants] through a single, strictly maintained tempo. However, that is an illusion since his basic tempo goes through many variations. But these are so subtle and grow so naturally out of the construction of the whole that they are unnoticeable.¹⁸⁷

Towards the end of his life, Furtwängler himself advocated a unified tempo. In a colloquium series for music students, he explained that

For the basic tenet is that the tempo within a classical movement is absolutely a unified tempo [Einheitstempo], that is, always the same tempo. And all variations must absolutely fit into the unified tempo and should not give the impression of modifications, of real tempo changes. The assumption that a

¹⁸¹ See Pirie 1980: 9–10, 12; Ardoin 1994: 35; Kraus 1986: 140; Matzner 1998: 10.

¹⁸² See Lang 1970: 62.

¹⁸³ RW76 (emphasis removed).

¹⁸⁴ RW89. See also RW91, RW146, RW153, RW159, RW163 and RW167. Paul Henry Lang went so far as to suggest that Furtwängler’s ‘inability’ to keep a steady tempo derived from a ‘lack of ... orchestral discipline’ (Lang 1970: 66).

¹⁸⁵ Anthoni and Cowan 2011: 28.

¹⁸⁶ See pages 30–31 in this thesis.

¹⁸⁷ (‘Wilhelm Furtwängler gestaltet diesen Satz in einem bezwingend folgerichtigen Zeitmaß. Wie einer Lehre von der “Urlinie” folgend, scheint er mit einem einzigen, streng durchgehaltenen Zeitmaß alles sagen zu können. Das ist freilich Täuschung, denn sein Grundmaß erfährt viele Abwandlungen. Nur sind diese so fein und zwingend aus der Anlage des Ganzen hervorgewachsen, daß man sie nicht spürt.’) Herzfeld 1941: 128. This is all the more surprising when one considers that Herzfeld wrote this during a time in Furtwängler’s career when he was the most extreme in his use of tempo, as evidenced by his recordings. Vladimir Ashkenazy similarly argued that Furtwängler’s changes of tempo cannot be noticed unless one specifically looks for them (Ardoin 1994: 293; see also RW157; Clark 2005: 126). By contrast, David Hamilton suggests that it was Furtwängler’s elastic use of tempo that created coherence: ‘Wilhelm Furtwängler’s interpretations of Brahms diametrically opposed the modern (i.e., Toscanini and since) preference for insuring continuity through uniformity of tempo... He worked to ... make the pieces cohere in terms of ebb and flow rather than steady drive, of flux rather than static rigidity’ (Hamilton 1976: 105–06).

second subject is taken slower than the first is, in my opinion, completely false, always and everywhere false.¹⁸⁸

In the same colloquiums, he furthermore argued that

Some [sections], probably the singing themes, pull towards the slower side, the fast ones towards the faster side. Both must be brought under a common denominator, and that is the defining tempo of the movement.¹⁸⁹

Even a brief exploration of Furtwängler's recordings, however, reveals that these pronouncements are at variance with the conductor's actual practice. There might be a number of reasons for this discrepancy. First, the context itself could be illuminating: Furtwängler was addressing these comments to music students and therefore the statements were intended to be instructional rather than descriptive in nature. Nicholas Cook, for one, has pointed out that this attitude can lead to a sharp divergence between theory and practice.¹⁹⁰ Second, the inconsistency might also be explained by a change in terminology: Peter Gülke argues that the conductor's concept of 'unified tempo' is better understood in light of the nineteenth-century term *Hauptzeitmaß* ('main tempo'), which implies a certain degree of flexibility.¹⁹¹

Taking Furtwängler's comments as starting point, Hans-Joachim Hinrichsen has attempted to demonstrate that there are deliberately established tempo relations in at least one of Furtwängler's recordings.¹⁹² James Clark has also identified certain tempo analogies in the conductor's recordings but has otherwise concluded that the reappearance of thematic materials do not necessarily go hand in hand with a return to the original tempos.¹⁹³ Furthermore, John

¹⁸⁸ ('Denn die Grundlage ist, daß ein Tempo innerhalb eines klassischen Satzes absolut ein Einheits-tempo ist, das heißt immer dasselbe Tempo. Und alle Variationen, die müssen so sein, daß sie absolut in das Einheits-tempo hineingehen und nicht den Eindruck von Modifikationen, von wirklichen Tempowechseln machen. Die Tatsache, daß man ein zweites Thema langsamer nimmt als das erste, das halte ich für ganz falsch, immer und überall falsch.') Excerpt from one of two colloquiums given at the Berlin Hochschule für Musik in June 1950 and February 1951. Transcription of the track 'Wilhelm Furtwängler spricht über Musik 1. Teil' from the sound recording *Wilhelm Furtwängler: An Anniversary Tribute*, Deutsche Grammophon, 00028947700623 (2004); quoted in Hinrichsen 2005: 17.

¹⁸⁹ ('Die einen Teile, die gesanglichen Themen vielleicht, ziehen nach der langsamen Seite, die schnellen nach der schnellen. Beide müssen unter einen großen Generalnenner gebracht werden, und der ist das bestimmende Tempo in einem Satz.') Transcription of the track 'Wilhelm Furtwängler spricht über Musik 1. Teil' from the sound recording *Wilhelm Furtwängler: An Anniversary Tribute*; quoted in Höcker 1979: 194.

¹⁹⁰ As Cook (2013: 21) writes: 'What looks like a description of what people do is often really a prescription of what people *should* do, in other words a description of what they *don't* do; the imperative tone ... should act as a warning of this' (emphasis in original).

¹⁹¹ Gülke 2005: 107.

¹⁹² Hinrichsen (2005: 19–20) argues that in his recording of Schumann's Fourth Symphony, Furtwängler matched the tempo of the secondary theme in the first movement with the tempo of the beginning. Hinrichsen has also identified some further parallels: in the first movement the tempo of the secondary theme conforms to that of the newly introduced lyric theme in the development; and the tempo used for the third part of the development (in the first movement) matches the tempo of the secondary theme in the finale. The same analysis also appears in Hinrichsen 2008a: 136–38; 2008b: 62–63.

¹⁹³ Clark 2005: 119, 121, 124, 127. Clark has observed that in a sonata form Furtwängler tends to present the musical materials in the recapitulation with a faster tempo than in the exposition, though he generally preserves the materials' relative tempo proportions (second theme slower than first theme) (Clark 2005: 124; see also RW112). Clark also

Ardoïn and Herbert Haffner argue that Furtwängler's use of unifying tempo relations extends to whole symphonies.¹⁹⁴ Although these results are suggestive at best,¹⁹⁵ they nevertheless raise the question of what role Furtwängler assigned to tempo analogies and relations in his structural strategies. In order to reach more definitive conclusions in this regard, a broader pool of recordings needs to be studied, as in the analyses that comprise the following chapters.

Writers have also identified a clearly structural use of tempo in Furtwängler's tendency to highlight structural junctures with tempo modifications in his performances.¹⁹⁶ For instance, in sonata movements, Furtwängler often differentiated between main and secondary themes and transitional passages,¹⁹⁷ and he underscored the beginning of the development section as well as the reprise by means of tempo.¹⁹⁸ As José Bowen has demonstrated, this technique is not unique amongst conductors (although the new generation of conductors starting with Herbert von Karajan has attempted to break with these practices),¹⁹⁹ but Furtwängler appears to have employed it more often and in a more pronounced manner than most of his contemporaries.²⁰⁰

Moreover, Nicholas Cook has identified yet another structural application of tempo in Furtwängler's performances. According to him, the conductor's dynamically changing tempo profiles can create expectations similar to those engendered by fixed tempos, and therefore these can serve a structural purpose in their own right,²⁰¹ even 'open[ing] up structural possibilities which do not exist with fixed tempos' by enabling a more complex hierarchical ordering of structure.²⁰² For example, a 'tempo gradient' – that is, a sustained acceleration or deceleration – 'helps tie the section[s] together' and can accommodate nuances without fragmentation more than fixed tempos can.²⁰³

claims that in his 1944 live recording of the first movement of Beethoven's Third Symphony, Furtwängler conducts the newly introduced lyric theme in the development section (bars 288ff.) with a tempo similar to that of the opening chords and the beginning of the development (: 119).

¹⁹⁴ Ardoïn 1994: 243; Haffner 2020: 84–85.

¹⁹⁵ Hinrichsen's results, for example, are not entirely convincing: first, the identified tempo analogies might have been coincidental; second, Hinrichsen's rudimentary analytical technique might have left room for error. Haffner, furthermore, does not provide any evidence of his claims besides a description of listening impressions. Moreover, it is worth noting that these observations are based on an inherently synchronic view of the recordings in question, and it is unclear how relevant these relations would be to the real-time, diachronic experience of the performances.

¹⁹⁶ See Auhagen 2005: 38, 43–45, 50–51; 2011: 57–61, 63; Holm 2020: 180; Hinrichsen 2005: 16; Cook 1995; Horowitz 1979: D24; RW124.

¹⁹⁷ See Hinrichsen 2005: 16; Dymont 2016: 135.

¹⁹⁸ See Clark 2005: 124–26; Hürlimann 1955: 116; Horowitz 1981: 69.

¹⁹⁹ Bowen 1996: 132.

²⁰⁰ See Cook 1995: 116.

²⁰¹ *Ibid.*: 116–18.

²⁰² *Ibid.*: 119.

²⁰³ *Ibid.*: 118.

A musical shape that characterises Furtwängler's performances perhaps more than any other is the arch.²⁰⁴ Although his arch formations are a result of multiple musical parameters (including tempo and dynamics at the very least), they are primarily discussed in the literature in terms of tempo. Tempo curves of Furtwängler's recordings clearly demonstrate these large arches.²⁰⁵ Cook argues that they 'embrace extended passages of music within a single span', lending coherence to the piece; moreover, by giving 'rise to structural divisions when one arch succeeds another', they offer a tool for structural segmentation.²⁰⁶ Cook has also shown that arches constitute a complex system of structural organisation: similarly to tempo gradients, tempo arches can accommodate a variety of local nuances while still preserving the integrity of the section that they span, broadening the options for hierarchical organisation.²⁰⁷

Another technique related to tempo is Furtwängler's use of transitions. Amongst the many sobriquets assigned to the conductor,²⁰⁸ 'master of transition' is seemingly the most popular.²⁰⁹ Indeed, discussions of his performance style rarely go without mentioning his smooth transitions.²¹⁰ Most accounts agree that Furtwängler achieved this effect by connecting different tempo regions through a gradual modification of tempo: he begins to scale the speed up or down long before the new sections arrive in order to minimise disruption.²¹¹ According to some commentators, this helps Furtwängler create coherence over large stretches of music. John Ardoin, for example, praises one of Furtwängler's recordings of Beethoven's Third Symphony for the 'binding character of its transitions'.²¹²

Large tempo gradients, arches and smooth transitions all contribute to a quality that many commentators associate with Furtwängler's performance style: long, unbroken lines.²¹³ The critic

²⁰⁴ These arch shapes are frequently pointed out in music criticism (Ardoin 1994: 121, 134; Kraus 1986: 157; Gillis 1965: 199; Haffner 2020: 83; Pirie 1980: 52, 110; Hürlimann 1955: 158; RW155). Some commentators argue that Furtwängler's arches can embrace large spans of music, even whole acts of Wagnerian operas (Kraus 1986: 193; Pirie 1980: 93).

²⁰⁵ See Auhagen 2005: 38–50; 2011: 57–61; Cook 1995: 110–13.

²⁰⁶ Cook 1995: 119.

²⁰⁷ *Ibid.*: 119–21.

²⁰⁸ He has been variously called the master of 'form', 'large musical forms', 'musical architecture', and also a 'master builder' (respectively: Fritz Sedlak's comment in Hürlimann 1955: 211; RW32; Sandberger 2005: 42; RW111).

²⁰⁹ See RW13; Kraus 1986: 140, 185; Haffner 2020: 57, 83; Hürlimann 1955: 211; Ellis and Cairns 2001: ¶ 12.

²¹⁰ See RW3, RW21, RW41, RW120, RW164 and RW165; Ardoin 1994: 121; Borchard 2004: 49; Kraus 1986: 157; Hürlimann 1955: 116; Shirakawa 1992: 95; Matzner 1998: 10; Clark 2005: 104, 121, 125; Dymont 2016: 183. The preference for smooth transitions seemingly distinguished Furtwängler's generation from later conductors. Based on his tempo analyses, Bowen (1996: 148) posits that smoother transitions (at least in terms of tempo) characterised earlier recordings in general, while modern conductors tend to flatten individual sections but increase the contrast between them.

²¹¹ See RW145; Borchard 2004: 49; Kraus 1986: 186; Herzfeld 1941: 180; Hürlimann 1955: 211; Höcker 1979: 142; Clark 2005: 121; Horowitz 1979: D24.

²¹² Ardoin 1994: 121. See also Kraus 1986: 157; Haffner 2020: 83; Shirakawa 1992: 95; Cook 1995: 120; Horowitz 1979: D24.

²¹³ See RW9, RW31, RW38, RW54, RW77, RW85, RW97 and RW140; Kraus 1986: 186; Gillis 1965: 148; Haffner 2020: 83, 85, 89; Hürlimann 1955: 26; Höcker 1979: 135; Hamilton 1968: 108; Pirie 1980: 127. This way, Furtwängler

Elsa Bienenfeld, for example, argued that Furtwängler integrates everything into a ‘line that emerges in a unified manner’.²¹⁴ Fritz Sedlak similarly praised Furtwängler’s ‘ingenious construction’ of the finale of Brahms’s Fourth Symphony, which ‘presented a large, unbroken line, [stretching] from the beginning to the end’.²¹⁵ Ardoïn variously referred to this linear quality as a ‘single fortress of thought’, an ‘unbroken span of sound’ and the ‘unswerving flight of an arrow’.²¹⁶ Writers also point out that the conductor’s focus on long lines did not come at the expense of attention to detail: Fritz Ohrmann praised the way in which Furtwängler ‘builds up’ a work ‘in broad lines and still works out every detail in the most delicate manner’,²¹⁷ while a correspondent of the *Reichspost* commended in his performance the ‘subtlety of details as well as the large sweep of his synthesis’.²¹⁸ Perhaps these broad lines are the reason for the impressions of monumentality and expansiveness that Furtwängler’s performances often evoked in listeners.²¹⁹

As this discussion has shown, tempo emerges as a crucial factor in Furtwängler’s structural strategies. Notwithstanding its importance, tempo constitutes only one aspect of the conductor’s performances, and a single-minded focus on it – as has been the tendency so far – excludes a range of musical parameters that might play a similarly significant role in Furtwängler’s shaping of musical structure. It has been reported, for instance, that the conductor operated with an unusually broad spectrum of dynamics,²²⁰ but this has hardly been considered by writers on the subject. Furtwängler’s shaping of rhythm might also be relevant: discussing a recording of Bruckner’s Ninth Symphony, Peter Pirie observes that the conductor ‘pull[s] the structure together with stretto rhythms’.²²¹ Therefore, it stands to reason that a broader range of musical parameters should be explored in order to gain a deeper understanding of Furtwängler’s shaping of structure. In the forthcoming analyses, an examination of the holistic phenomena of intensity and motion help go beyond this limited view.

seems to have followed an approach which was seemingly consonant with Nadia Boulanger’s concept of *grande ligne*. See pages 46–47 in this thesis.

²¹⁴ RW57.

²¹⁵ (‘sein genialer Aufbau der Passacaglia in Brahms’ 4. Sinfonie, die vom Anfang bis zum Ende einen lückenlosen, großen Zug aufwies’) Hürlimann 1955: 211.

²¹⁶ Ardoïn 1994: 230, 234, 250.

²¹⁷ RW71.

²¹⁸ RW73. See also RW6, RW16, RW22, RW23, RW31, RW32, RW33, RW34, RW55, RW61, RW71, RW77, RW97, RW106, RW131, RW140, RW150 and RW162; Chesterman [2006] 2010: 59; Kraus 1986: 157, 187, 190; Gillis 1965: 192; Pirie 1980: 107; Hürlimann 1955: 158; Cook 1995: 122; Horowitz 1979: D23.

²¹⁹ See RW7, RW10, RW15, RW16, RW17, RW27, RW32, RW34, RW35, RW45, RW46, RW47, RW51, RW53, RW54, RW57, RW58, RW62, RW65, RW80, RW85, RW90, RW93, RW95, RW97, RW106, RW118, RW128, RW139, RW140, RW150 and RW161; Ardoïn 1994: 253; Schonberg 1968: 271, 275; Cardus [1964] 1990: 160; Pirie 1980: 15, 56; Hürlimann 1955: 29; Hürlimann 1955: 219; Cook 2013: 50; Hinrichsen 2004: 87; Rich 1964: 48.

²²⁰ See RW22, RW25.1, RW43, RW49, RW70, RW72, RW96, RW101, RW104, RW110, RW117 and RW141.

²²¹ Pirie 1980: 110. See also RW149.

Large-Scale Intensification and Tension

Intensity appears particularly relevant to Furtwängler's shaping of structure as the notion has been widely used to describe the conductor's performances. Perhaps the most mentioned performance technique used by Furtwängler is large-scale intensification (*Steigerung*):²²² that is, a broad increase in perceived intensity based on such factors as acceleration and crescendo²²³ that embraces vast expanses – even whole symphonies²²⁴ – and culminates in a climax. Pirie, for instance, described Furtwängler's handling of Beethoven's Fifth Symphony as follows:

[N]o one has led into the finale with more tremendous force. The seemingly unending crescendo leads into the three great chords ... and then into a finale in which the tension and power grows with every bar. It is part of the Furtwängler mystery that he can maintain, and even increase, the tension for so long.²²⁵

Friedrich Bayer similarly characterised this technique:

And thus Furtwängler, the master builder, carefully piles the stones of the musical form on top of each other and erects the building up until the rondo finale through a constantly growing intensification.²²⁶

Henry Holst likewise argued that Furtwängler's 'feeling for building up a movement to one overwhelming climax' represented a unique feature of his playing.²²⁷ Furtwängler himself suggested that the source of these intensifications lies in the works themselves: 'A large proportion of absolute music – from Haydn onwards – consists of concentrations: the content becomes more dense, more intense, and then dissolves once more...'²²⁸

Furtwängler's large-scale intensifications have been described as structural in two ways: first, they sometimes emerged as his primary strategy of shaping structure (at least in the listeners' perception); second, they provided coherence to the performed piece. Furtwängler's intensifications and his creation of structure have been bracketed together by many commentators. A critic from the *Neues Wiener Journal*, for example, marvelled at the conductor's

²²² Besides the sources mentioned below, see RW5, RW8, RW11, RW14, RW23, RW51, RW52, RW58, RW66, RW73, RW83, RW87, RW89, RW106, RW107, RW128, RW130, RW131, RW142, RW143 and RW159; Peyser 1931: 443; Ardoin 1994: 237; Herzfeld 1941: 133, 179; Stuckenschmidt 1981: 158; Sandberger 2005: 39.

²²³ In at least one case, Furtwängler even changed the orchestration of a piece in order to maximise the effect of 'a continuous intensification that draws through individual movements and that also spans the whole work' ('die Einzelsätze durchziehenden und zugleich das gesamte Werk übergreifenden kontinuierlichen Steigerung'), as Hinrichsen (2005: 19) claimed. In Schumann's Fourth Symphony, Furtwängler thinned the initial instrumentation of certain musical materials and left unchanged their reappearance later in the movement.

²²⁴ See Ibid.: 19, 21; RW19, RW42, RW119 and RW129.

²²⁵ Pirie 1980: 43–44, see also 111, 127.

²²⁶ RW111. Some critics suggested that Furtwängler's typical strategy to shape the beginning of symphonies with slow tempo and quiet dynamics was aimed at enhancing the impact of his intensifications. See RW20 and RW126; Rich 1964: 48.

²²⁷ Gillis 1965: 131.

²²⁸ ('Ein großer Teil der absoluten Musik – schon von Haydn an – besteht aus Ballungen: Der Inhalt verdichtet sich, steigert sich, löst sich dann wieder...') Furtwängler 1980: 136–37; translation from Furtwängler 1989: 83.

ability to ‘build up the greatness of the form with purposeful intensifications’,²²⁹ while Julius Biströn stated outright that ‘The intensifications of this conductor illustrate his phenomenal architectural work’.²³⁰ Richard Taruskin described the tensional highpoints in Furtwängler’s recordings as functioning as broader musical goals: ‘That acute directionality of execution was Furtwängler’s alone, and of course it always implied a goal. A goal achieved is a climax...’²³¹ According to Nicholas Cook, Furtwängler’s ‘structural *accelerando*[s]’ – which can be more or less equated with these intensifications – serve a direct structural purpose,²³² while James Clark similarly claimed that ‘The long *accelerandi* that form such a part of Furtwängler’s interpretative fingerprint ... are structurally integrated into his conception of the music’.²³³ One of Furtwängler’s musicians, furthermore, described the conductor’s style as follows: ‘The crowning [achievement] was his sense of form. How he could build up a composition! He handled some intensifications cautiously in order to direct all attention to the goal...’²³⁴

Discussions of the technique of intensification, furthermore, often highlight its cohesive power. A correspondent for *Der Morgen*, for instance, argued that Furtwängler’s ability to ‘build up and intensify the work, so to speak, [with an eye] towards the last movement’ constituted his ‘power of cohesion’ (*zusammenfassender Kraft*).²³⁵ Max Donisch also claimed that Furtwängler’s ‘restrained impulsiveness’, the true force of which he saved for culmination points, ‘achieved a closedness of form’.²³⁶ Cook likewise observed that the conductor’s large tempo gradients ‘embrace extended passages of music within a single span’.²³⁷

Some commentators contend that the cohesive power of the conductor’s intensifications lay in the sense of goal-oriented forward propulsion that they engendered. Discussing a recording of Bruckner’s Fifth Symphony, Ardoin praised the conductor’s ability to ‘bind the work together as a massive, virtually single-movement symphonic statement’, which he achieved by ‘pressing ahead with a single-mindedness’, while in the context of another recording he commented that Furtwängler ‘mov[ed] through the music with a directness and dispatch that played down its sectional character’.²³⁸ Peter Pirie similarly observed that ‘the forward-sweeping movement,

²²⁹ RW16.

²³⁰ RW86.

²³¹ Taruskin 2018: 130.

²³² Cook 1995: 118.

²³³ Clark 2005: 125.

²³⁴ (‘Die Krönung war sein Formgefühl. Wie konnte er eine Komposition aufbauen! Mit manchen Steigerungen ist er verhalten umgegangen, um alle Aufmerksamkeit auf das Ziel zu lenken...’) Thärichen [1987] 1991: 22.

²³⁵ RW97.

²³⁶ RW29.

²³⁷ Cook 1995: 119. See also RW50.

²³⁸ Ardoin 1994: 230, 267.

encompassing the whole structure of the work in one enormous arch' is a defining feature of a Furtwängler performance.²³⁹

Furtwängler's large-scale intensifications most often appear in the final movement of a symphony or drive towards the final movement. In 1922, the Viennese critic Julius Korngold, for example, described Furtwängler's performance of Brahms's Fourth Symphony as follows:

The most significant was the final passacaglia. The sonata movement ... was mightily intensified in its bleak tragedy. ... The symphony reached its culmination with such weight that it felt as though the work was striving only towards this final chord, that it achieved its sense and meaning only through that.²⁴⁰

A critic from *The Times* similarly characterised Furtwängler's performance of Beethoven's Fifth Symphony in 1938: 'he did not allow his sense of drama to affect the musical proportions of the work, which was led up to its proper climax in the blazing splendour of the finale'.²⁴¹ Writing about a Toscanini concert, Furtwängler himself expressed his view that the 'closing build-up' of a work with 'relentless, emphatic strength' represents a 'great and authentic final effect of the concert as a whole'.²⁴²

This focus on endings emerges as a feature typical of Furtwängler's approach in general. Commentators have often described his finales as the most impressive or as the core of the conductor's whole performance strategy.²⁴³ Besides the comment published in *Der Morgen* which I quoted above,²⁴⁴ the Hungarian critic Sándor Jemnitz's remark about Furtwängler's rendition of Beethoven's Sixth Symphony also illuminates this strategy:

[T]his storm [of the finale]... in Furtwängler's straining and strained, threatening and threatened performance it dominates the whole symphony: it casts its dark shadow over the first bars [of the symphony] and it trembles on in the shepherd's bones and nerves until the final chords.²⁴⁵

Ardoïn likewise felt that in Furtwängler's performance, the first three movements of Beethoven's Ninth Symphony were 'colored and conditioned by the finale',²⁴⁶ while Korngold argued that the finale of Brahms's final symphony was 'decisive for Furtwängler's understanding of the whole

²³⁹ Pirie 1980: 52. See also Cook 1995: 120; Rich 1964: 48; RW144.

²⁴⁰ RW17. See also RW4, RW12, RW19, RW26, RW39, RW42, RW63, RW67, RW84, RW99, RW119, RW127, RW129 and RW160.

²⁴¹ RW105. See also RW15, RW38, RW54, RW81, RW91, RW96, RW97, RW101, RW102, RW103, RW104, RW109, RW113, RW115, RW116, RW134 and RW138; Ardoïn 1994: 231; Pirie 1980: 80, 107; Matzner 1998: 9–10.

²⁴² ('[D]ie unerbittliche, nachdrückliche Kraft und Breite, mit der Toscanini die letzte Steigerung und den Ausklang des Schlusses aufbaute und durchführte, waren einfach richtig, groß und bewundernswert. Eine große und echte Schlußwirkung des Konzertes überhaupt stand damit außer jedem Zweifel...') Furtwängler 1980: 79; translation from Furtwängler 1989: 45.

²⁴³ See RW3, RW44, RW57, RW119 and RW151; Pirie 1980: 56; Kraus 1986: 184.

²⁴⁴ RW97.

²⁴⁵ RW108.

²⁴⁶ Ardoïn 1994: 142.

symphony'.²⁴⁷ He even went so far as to call Furtwängler a 'finale conductor'.²⁴⁸ According to these comments, it seems that Furtwängler, at least on occasion, centred his whole performance conception around finales, bringing the movements together into one goal-oriented progression.

Finally, it is necessary to explore in more depth the notion of intensity in the context of Furtwängler's performance style. Based on some of the above-quoted writings, I suggested that the conductor's large-scale structural formations (especially broad intensifications) are better understood in terms of intensity rather than in relation to individual parameters such as tempo or dynamics. Intensity indeed emerges as an important aspect of the conductor's music-making as perceived by listeners.

First, many writers describe Furtwängler's playing style as being characterised by a high level of intensity in general.²⁴⁹ A critic from *Der Tag*, for example, claimed that 'The mental and spiritual tension that Furtwängler creates in each of his concerts is something completely extraordinary. ... Like Nikisch or Mahler, he is a condenser of energy, fantasy and spirit.'²⁵⁰ A correspondent of *Der Wiener Tag* similarly commented on a Furtwängler concert: 'The nerves are always on edge; the intensity of the playing is extraordinary.'²⁵¹ Walter Dahms likewise praised the conductor for his 'ability to hear, feel and express the inner organic tensions of music within a masterwork'.²⁵²

Second, some commentators have argued that Furtwängler's handling of intensity contributed to – if not determined – his shaping of structure. As Joseph Horowitz observed: 'Furtwängler devises a large-scale scheme of tension and release'.²⁵³ James Clark, furthermore, stated that for Furtwängler

[t]he key to musical interpretation ... is to understand and properly relate the tensions in each part of the work to each other. ... I would suggest that Furtwängler's interpretation ... is best understood in terms of a model that gives priority to long-range harmonic tensions within the movement.²⁵⁴

In the context of a discussion on tonality, Furtwängler himself commented on the importance of tension and release:

²⁴⁷ RW28.

²⁴⁸ RW63.

²⁴⁹ As discussed in Chapter 1, 'intensity' and 'tension' appear to be mostly synonymous in this context and therefore are used interchangeably. See footnote 86 in Chapter 1.

²⁵⁰ RW59.

²⁵¹ RW98. See also RW32, RW34, RW69, RW79, RW85, RW100, RW115, RW125, RW135, RW142, RW161 and RW166; Ardoin 1994: 253; Kraus 1986: 157; Pirie 1980: 8, 60, 80, 111, 127; Höcker 1979: 100; Ellis and Cairns 2001: ¶ 12; Sandberger 2005: 39, 41; Thärichen [1987] 1991: 19.

²⁵² RW36. Rich (1964: 48) also described a Furtwängler recording as 'blinding in its intensity'.

²⁵³ Horowitz 1981: 69. See also Herzfeld 1941: 179. Christian Thielemann (2012: 27) similarly notes that Furtwängler 'always revealed a sense for the overall architecture and the build-up of tension'.

²⁵⁴ Clark 2005: 125.

All organic life existing in time – and music is an art which has its being in time – is subject to the alternation between tension and relaxation. The up and down [fluctuation] of these two, tension and relaxation, represents the rhythm of life... [In tonal music, there are] tensions that can hold big stretches [of music] together...²⁵⁵

Elsewhere, Furtwängler argued that ideally a musician is able to

accumulate the flow of energy of the musical process [*Geschehen*] at certain points, [and] to do justice to the natural alternation between tension and relaxation, which is an inherent feature of all [living] creatures.²⁵⁶

Elsewhere in the same essay, the conductor explicitly associated the shaping of tension with the structure of a composition:

Nevertheless, the *architecture – the network of abstract tensions and relaxations* – in no way represents the complete content of this music, because even these architectural tensions are ultimately experienced by people, are felt by people.²⁵⁷

Intensity therefore emerges as a parameter that is relevant to both Furtwängler's thinking about performances and listeners' experience. It follows that Furtwängler's shaping of intensity needs to be examined if we are to illuminate his creation and inflection of structure in performance.

Coherence beyond Movements

Finally, Furtwängler's variously documented ability to bind symphonic movements together warrants discussion. Above, I have shown that a number of his musical techniques could create a sense of coherence for listeners, including steady tempo (or a unified *Hauptzeitmass* to be more exact), dynamic tempo profiles (extended tempo gradients and arches), smooth transitions, large-scale intensifications and the related sense of goal-oriented forward movement. Most observations about these features have been made with respect to individual movements, but some relate to cohesive tendencies that go beyond the confines of movements.²⁵⁸ Friedrich Bayer, for example, discussed Furtwängler's performance of Brahms's Fourth Symphony as follows: 'the first three movements ... emerged under the masterly conducting as an enormous and

²⁵⁵ ('Alles zeitlich abrollende organische Leben – die Musik ist ja Zeitkunst – unterliegt dem Wechsel zwischen Spannung und Entspannung. Das Auf und Ab von diesen beiden, Spannung und Entspannung, stellt den Rhythmus des Lebens dar... es hier Spannungen, die größere Strecken zusammenfassen können...') Furtwängler 1948: 118–19, 121; translation from Furtwängler 1953: 87–88 (translation modified).

²⁵⁶ ('Es ermöglicht den Aufbau des Ganzen, gibt die Möglichkeit, den Kraftstrom des Geschehens an gewissen Punkten zu kumulieren, dem natürlichen, aller Kreatur eingeborenen Wechsel von Spannung und Entspannung Rechnung zu tragen.') Furtwängler 1954: 232.

²⁵⁷ ('Trotzdem ist die Architektur, ist das Netz abstrakter Spannungen und Entspannungen keineswegs der ganze Inhalt dieser Musik; denn auch diese architektonischen Spannungen sind schließlich vom Menschen aus erlebt, von Menschen und für Menschen erfüllt.') Ibid.: 232–33 (emphasis added).

²⁵⁸ See RW4, RW37, RW86, RW109 and RW148; Rich 1964: 49.

captivating sound construction’.²⁵⁹ John Ardoin also praised Furtwängler’s performance of Bruckner’s Fifth Symphony for ‘bind[ing] the work together as a massive, virtually single-movement symphonic statement’,²⁶⁰ while Joseph Horowitz likewise noted that ‘The entire symphony [Schumann’s Fourth] ... unfolds in a single unified gesture under Furtwängler’s baton’.²⁶¹ Furthermore, Michael Marcus identified pairings of movements in one of Furtwängler’s recordings of Brahms’s Third Symphony: ‘The Andante becomes a restful postscript to the arch-like, towering structure of the Allegro con brio, and the delicate Poco allegretto a preparation for the stormy Finale.’²⁶²

One of the ways in which Furtwängler reportedly created inter-movement coherence was his elevation of final movements to a defining role. Some of the above-cited writers reported that in Furtwängler’s performances sometimes whole symphonies seemed to point towards the finale, or that the finale dictated the shaping of other movements, creating a sense of cohesion.²⁶³ Further descriptions include the critic Zeno von Liebl’s account of Furtwängler’s handling of Bruckner’s Sixth Symphony: ‘Unsurpassable was the inner determination [*Konsequenz*] of the intensification, which embraced all of the movements, and which reached its highpoint ... in the apocalyptic drama of the finale’.²⁶⁴ Furthermore, Ferdinand Scherber similarly reported in 1927 that under the conductor’s baton, ‘Beethoven’s Seventh [Symphony] intensified very effectively until the last movement’.²⁶⁵

Furthermore, Furtwängler also supposedly created inter-movement cohesion through tempo. Ardoin, for example, claims that Furtwängler ‘all but joins’ the first two movements of Beethoven’s Sixth Symphony by ‘downgrading the first-movement *allegro ma non troppo* to a gait that meshes with the *andante molto mosso* of the second movement’.²⁶⁶ He also refers to the conductor’s creation of a ‘singular impression ... [of a] symphony as one great utterance in sound rather than a multi-part structure composed of contrasting sections’, ascribing this feature to Furtwängler’s interrelating of tempo markings from movement to movement.²⁶⁷ Herbert Haffner describes a Furtwängler recording in similar terms:

The tempo is determined from [the view of] the total work, from an – from *his* – image of the whole. The speed of the Andante in Brahms’s Fourth is therefore not an absolute value, but ... is rather determined by the coda of the first movement, the sound possibilities of the third [movement] and the necessity to handle

²⁵⁹ RW109.

²⁶⁰ Ardoin 1994: 230.

²⁶¹ Horowitz 1982: 65.

²⁶² Gillis 1965: 199.

²⁶³ See pages 85–88 in this thesis.

²⁶⁴ RW129.

²⁶⁵ RW42.

²⁶⁶ Ardoin 1994: 133, see also 247.

²⁶⁷ *Ibid.*: 243.

the passacaglia with broad lines. ... And Furtwängler's strength lies in ... finding this inner line, [and] in stretching these large arches over the details of the work, over movements and over large choral works.²⁶⁸

The importance of these overarching strategies to Furtwängler can help to explain his insistence on the uninterrupted flow of music – in both the recording studio and the concert hall. Above, I have discussed Furtwängler's dislike of the recording process due to the segmentations and interruptions that it necessitates.²⁶⁹ It is conceivable that a similar desire for uninterrupted flow informed his decision to discourage his live audiences from applauding between the movements of a piece²⁷⁰ – a practice that seemed modern at the time and one that vexed some of his critics.²⁷¹

Summary

In this chapter, I have explored Furtwängler's thoughts on musical structure and his conducting style as reflected through the writings of commentators and scholars. I have illustrated the difficulty of positioning him in performance history, provided an overview of his notion of musical structure through an examination of his writings, described the sources available for a study of his style, and discussed issues that help provide a basis for studying his performances: the musical influences that shaped his performance style, changes in his style over time, his attitude towards the recording process and the changes in his performance strategies. I have also reviewed what has been written to date about Furtwängler's approach to structure in music criticism and scholarship.

Writings on Furtwängler yield a rather confusing picture: amongst other things, he has been variously called both a romantic and a classicist, and both a subjectivist and an objectivist. I have suggested that this confusion relates to the incomplete understanding of twentieth-century performance practices on the one hand, and to an inconsistent use of terminology on the other hand. It seems that simplistic dichotomies, such as those mentioned above, do not do justice to the complex nature of Furtwängler's performance style, which incorporated both traditional and progressive elements. I have also argued that it is not productive to distinguish between

²⁶⁸ ([D]as Tempo ist aus dem Gesamtwerk heraus definiert, aus einer, aus *seiner* Vision vom Ganzen. Die Geschwindigkeit des Andante der Vierten Brahms' ist also kein absoluter Wert, sondern ... richtet sich vielleicht nach der Coda des ersten Satzes vorher, nach den instrumentalen Klangmöglichkeiten im dritten oder nach den Erfordernissen, um die Passacaglia im großen Zug bewältig zu können... diese innere Linie zu finden, diese großen Bögen über Werkdetails zu spannen, über Sätze, über riesige Chorwerke hinweg, das ist die Stärke Furtwänglers...) Haffner 2020: 84–85 (emphasis in original). See also Höcker 1979: 142.

²⁶⁹ See pages 74–75 in this thesis.

²⁷⁰ See Blaukopf 1955: 81.

²⁷¹ See RW30 and RW60.

conductors based on their attention to ‘structure’ due to the problematic definition of structure that this categorisation implies.

This chapter has also highlighted the importance of differentiating between Furtwängler’s studio and live recordings. As the evidence suggests, Furtwängler had a lifelong antipathy towards studio recording due to the constant interruptions that disrupt the flow of performance crucial to his large-scale strategies, the loss of communal experience due to the lack of an audience, and the distortion of the sound result. Various commentators have argued that due to these factors, most of Furtwängler’s studio recordings are uncharacteristic and inferior to his live recordings. For these reasons, in the following analyses I rely primarily on live recordings.

The consistency of performance conceptions also emerges as relevant to a study of Furtwängler’s recordings. Some writers have observed that while Furtwängler performed certain pieces with relative consistency over the decades, other works were given in wildly different interpretations in the conductor’s discography. The literature points to two main reasons for such variability: first, he reportedly never succumbed to routine and fundamentally relearned his repertoire pieces whenever they were to be performed; second, he appears to have responded to the inspiration of the moment during performances, which created a further source of variation. However, further research is needed to uncover the causes behind the variances in the conductor’s interpretations – a subject that the forthcoming analytical chapters address.

An overview of Furtwängler’s writings has revealed that the notion of structure and its realisation in performance occupied the conductor throughout his life. It is clear that his understanding of structure has deep roots in organicism, which also explains his preoccupation with the processual unfolding of compositions and the relation of detail to the whole. Overall, his writings betray an inherently dynamic conception of structure, wherein the diachronic experience of performance and the concept of musical tension occupy an important position. This brings Furtwängler in line with the conductors discussed in Chapter 1 and necessitates an examination of ‘dynamic structure’ in his recorded performances.

Turning to the discussion of Furtwängler’s creation and inflection of structure in performance, this chapter has shown that the conductor’s style has commonly been identified as being ‘structural’ in some sense of the word. Some claim that he clarified the structure and found suitable formal proportions, while others comment on his ability to solve certain structural challenges, to illuminate thematic relations within a work and to create coherence both within movements and over whole symphonies. These accounts demonstrate that a certain ‘structural’ quality in Furtwängler’s conducting was perceived by many of his listeners, and that it emerges not only through quantitative analyses of his recordings. However, further research is required to

fully uncover the phenomena engendering these impressions, and Chapters 3–5 provide new insights in this regard.

It appears that tempo is the single most discussed aspect of Furtwängler's performance style, both in general and in the context of structure. Furtwängler and some of his supporters advocated the use of a 'unified tempo', the exact meaning and relevance of which with regard to the conductor's performances are not yet fully understood. Certain writers have argued that the key to this question lies in tempo analogies and relations, some of which have already been documented in recordings by Furtwängler, but whose purpose remains unclear. Others have emphasised the structural importance of the conductor's dynamic tempos, which took the form of tempo gradients and tempo arches, and which contributed to a complex hierarchical structuring of pieces in Furtwängler's performances. Nonetheless, tempo – however important it might be – does not account for the complete structural shaping of a piece, and a preoccupation with it can lead to an exclusion of other parameters that are possibly also relevant to Furtwängler's structural strategies. Chapters 3–5 explore Furtwängler's structural shaping – and his use of tempo – in a broader context.

In Chapter 1, I argued that dynamic concepts such as shape, intensity, motion and goal-directedness provide an avenue through which the emergence of structure in performance can be grasped in a more comprehensive manner than a focus on singular musical parameters can afford. These concepts – intensity and goal-orientation in particular – appear to be highly relevant to Furtwängler's music-making as well and could offer a handle on the conductor's structural strategies. His shaping of intensity has been described as affecting – if not determining – his shaping of pieces, through either a general alternation between tension and release or large-scale intensifications, which was one of the conductor's signature techniques. At the same time, the climaxes created through intensification and through a sense of momentum were often described as forming goals for the broader musical processes present in his performances. Nevertheless, these dynamic parameters have not been analytically explored in Furtwängler's recordings, and the following examination can be considered unique in this regard.

The evidence also suggests that Furtwängler employed performance strategies for the shaping of whole symphonies. Commentators have variously referred to the conductor's ability to create coherence over whole symphonies by either creating a sense of goal-oriented movement towards the finale or relating the tempos of the individual movements to each other. Studies of the conductor's style have primarily focused on individual movements, and no investigation has been undertaken on his shaping of complete symphonies. In Chapter 5, I probe this issue through an analysis of his recordings of Beethoven's Fifth Symphony. First, however, an analysis

of Furtwängler's recordings of the finale of Brahms's Fourth Symphony explores the conductor's approach to movements with ambiguous structural constructions.

PART II

Chapter 3

Furtwängler's Shaping of Variation Finales: The Last Movement of Brahms's Fourth Symphony

Introduction

In this chapter, I examine Furtwängler's five complete recordings of the finale of Brahms's Fourth Symphony, op 98 (Table 3.2). The reasons for selecting this movement are manifold. First of all, as Chapter 2 showed, symphonic finales reportedly formed the core of Furtwängler's performances and were often perceived as remarkable structural constructs;¹ consequently, this investigation complements Chapter 4, in which the other focal point of Furtwängler's performances – the sonata form – is explored. Furthermore, the finale of Brahms's Fourth Symphony is particularly rich in structural affordances, which offers conductors a high degree of freedom in shaping the movement, potentially revealing their musical inclinations. Finally, this piece formed an important part of Furtwängler's conducting repertoire, and he performed it regularly (Table 3.1).

Analysis of the Score

The finale of Brahms's Fourth Symphony is something of a structural enigma, exhibiting multivalent formal tendencies and affording a wide range of structural inferences. The fundamental structural relationships in the piece align closely with a variational form in the chaconne tradition.² Accordingly, a bass line forms the theme, whose reappearance provides segmentation at a broad level (var. 16 and coda, bb. 129–36, 253–60),³ and the movement includes a nebulous middle section in the parallel key (vars 13–15, bb. 105–28).⁴

¹ See pages 87–88 in this thesis.

² Some writers opt for the designation 'passacaglia' instead, but the dividing line between these genres is blurred at best. Brahms himself seemed to have preferred the term 'chaconne' (Knapp 1989: 4, note 2), which therefore is used in this chapter.

³ Until bar 241, variations of eight bars follow each other. Most writers identify bars 9–16 as variation 1, while some designate the theme itself as variation 1, leading to a discrepancy in the overall numbering of variations. In this chapter, I adopt the former approach, labelling bars 1–8 theme, bars 9–16 variations 1, and so on.

⁴ Cantrell (1971: 63–74) and Petersen (2013: 105–18) suggest that Brahms had specific precursors in mind when composing his variational finale: J. S. Bach's Chaconne from the Violin Partita no. 2 in D minor, BWV 1004, and especially Beethoven's *32 Variations on an Original Theme*, WoO 80.

The movement begins with the fanfare-like introduction of the theme, played by the wind instruments. Variation 1 creates an echo of this statement through the muffled tone of the low brass and the pizzicato response of the strings, which also introduce an off-beat emphasis. Variation 2 introduces a melodic flow in crotchets in the woodwinds while preserving the stress on the second beat. Variation 3 continues this movement in crotchets but indicates staccato and marcato articulation and *forte* dynamics.

The theme and variations 1–3 represent a coherent unit in many respects. First, over this section one finds the theme as a melody in the top voices (flutes, oboes, violins) and as harmonic filler (in the violas and cellos) as opposed to its true form as a bass line, which appears only in variation 4 (b. 33). Consequently, this initial segment follows a harmonic progression different from what comes later and indeed what dominates the movement as a whole. Second, these variations are intimately linked, each one preserving a musical feature of the preceding variation, as mentioned above. Third, the first three variations exhibit a continuous intensification, culminating at the end of variation 3. This is achieved through a gradual increase in dynamics, rhythmic activity, textural density and sharpness of articulation, and through a rise in register – a process that lends a developmental quality to these variations. Finally, variation 4 introduces a sharp marking point, which unites the preceding section to an even greater extent.

The structural function of these initial variations is open to debate. It could be argued that the theme and variations 1–3 offer an introduction of sorts, following which the variation process proper begins in variation 4. However, due to the strong developmental character of these variations, one might also interpret the initial sections as presenting a false exposition. Arguably, the theme is presented in the ‘wrong’ form at first and is then developed in the following three variations, effectively misleading the listener. According to this interpretation, the theme itself appears in its true form only in variation 4, starting a new and more extended developmental process.

Variation 4 provides contrast not only through its ‘restoration’ of the theme to its function as a bass line (and, as an extension of this, through establishing a new harmonic pattern), but also through introducing a new melodic idea, which functions as a sub-theme for the variations to follow. This further emphasises the variation’s function as providing a new beginning, as it were. The contrast is also heightened by the new musical character introduced in this variation. As opposed to the wind-dominated theme in variations 1–3, variation 4 is played almost exclusively by the strings, introducing a new colour to the music. Furthermore, it breaks with the uniform rhythmicisation of the previous segment and creates variety through dotted crotchets, providing a lull to the rhythm, and giving weight to the first beat of each bar. (The

second violins and the violas maintain an off-beat accompaniment, which relates back to variations 1–2.)

Variations 5–6 develop the material established in variation 4, further strengthening the interpretation of the latter as the beginning of the variation proper. The wind instruments return in an accompanimental role, and the rhythmic activity is increased by breaking up the violin melody into quavers and by introducing quaver triplets in the accompaniment.

Variation 7 disrupts the developmental process by seemingly leaving behind the sub-theme of variation 4 for a new melodic idea in the violins and by creating contrast: after the legato style of variation 6, this section introduces sharply accentuated double-dotted crotchets and semiquavers and establishes a new texture in the form of high-register violins.⁵ Although this suggests that variation 7 represents a point of structural segmentation, in some respects it continues the variational development begun in variation 5. Continuity is created in the form of the descending figure in the wind accompaniment, which directly follows the pattern established in variation 5. Furthermore, the violin melody – although seemingly broaching a new idea – preserves the broad outlines of the sub-theme of variation 4. Finally, this variation is the first to use semiquavers, thereby providing a bridge between the rhythmic profiles of variations 6 and 8.

Variations 8 and 9 once again pick up the threads of development. The violins reintroduce the sub-theme, only this time it is intensified through the use of semiquavers. In the second half of variation 9, a descending chromatic line appears in the flutes and the strings over a pedal point on E, foreshadowing a transition towards the contrasting character of variation 10. Before that, however, variation 9 provides still further intensification by placing the violin material in a higher register and by introducing semiquaver sextuplets for the first time. Following that, the chromatic line reappears and leads to a sudden drop in intensity through a diminuendo, a simplification of rhythm, a descent in register and a lightening of texture.

Variation 10 presents a completely new musical idea and thus offers a potential break in the structure. As opposed to the strongly rhythmicised variations preceding it, this section introduces long, held-out notes alternating between the string and wind sections, characterised by *piano* dynamics and a low register. Furthermore, the parallel key of E major is introduced, although not yet established. The harmonic progression exhibits a transitory quality with its dominant-seventh chords and unusual step-wise motion. In addition, although the leading

⁵ It appears that Brahms imagined the performance of this variation to provide even further contrast in terms of tempo: when Joseph Joachim asked him for metronome markings for the symphony before his performance of the piece, the composer sent him a score with additional tempo markings, which ultimately did not find their way into the published version (Pascall and Weller 2003: 223–24). These included a ‘largamente’ marking at bar 57 and an ‘(in Tempo I)’ at bar 65, indicating a slower tempo for variation 7.

melody finishes on E, it forms part of an A minor chord in the second inversion, which creates even further harmonic uncertainty.

Variation 11 preserves the general character and harmonic progression of the previous variation, but it introduces some rhythmic activity in the form of quaver triplets in the violins and the flutes. Furthermore, as opposed to the bar-long swells of variation 10, swells are created here over the span of two bars. The melodic outline, however, relates back to that of variations 4–6 and 8–9. The second half of the variation reintroduces the chromatic descent first heard in variations 8–9, which here provides a transition towards variation 12.

Variation 12 once again represents a combination of contrast and continuation. First of all, a new metre is introduced in the form of 3/2, which effectively doubles the length of the variation. In terms of harmony, the sequence established in variation 4 is reintroduced, but the harmonic motion is slowed down considerably. It also preserves the character of the previous two variations in the form of the *piano* dynamics, low register and sparse texture. However, this variation introduces a completely new voice: the solo flute. Under the winding chromatic line of the flute, a pulsating accompaniment is heard, creating tension through a pedal point on E. Furthermore, the solo melody establishes a pattern of five-note-long melodic fragments, which is then adopted in the following variation.

Similarly to the previous section, variation 13 also creates ambiguity through its juxtaposition of familiar and new elements. The key of E major is now securely established and is reflected in a change in key signature. Also, a sense of stability characterises the harmonic progression, which is centred around E major and seems rather passive (the first four bars present a simple pendulum between E major and A major). Coupled with the fragmented melodic units adopted from variation 12, this tonal stability creates a warm and idyllic atmosphere with the musical time all but stopped. This lack of forward progression is also emphasised by the pulsating crotchets in the string accompaniment, which represents a further link back to the previous variation.

Variations 14 and 15 maintain the reposeful atmosphere created in the previous variation and further slow down the musical time through a melody dominated by minims, played by the trombones and horns. The string accompaniment continues the pattern established in variation 13, while the rhythmic profile of the brass material broadly reflects that of the sub-theme in variation 4. These two variations are perhaps the most closely united amongst all individual variations in the movement since their differences amount to only a slight enrichment in texture and accompaniment.

Through a recapitulation of the main theme, variation 16 creates a fundamental structural segmentation, and it launches a developmental process that is in stark contrast with the peaceful quality of variations 10–15. Indeed, variations 16–23 seem to repeat the same musical processes witnessed earlier in variations 2–9. Variations 17–18 show direct parallels with variations 2–3: the outlines of the flowing melody of variation 2 is clearly visible behind the fragmented melodic cells of variation 17; furthermore, variation 18 reintroduces the materials of variation 3 albeit with contrasting articulation and rhythm. While different in character, variation 19 fulfils the same function as did variation 4 earlier in the movement: it introduces melodic material which is developed in the following variations.⁶ Accordingly, variation 20 is based on the newly established melody, which here gains more rhythmic drive in the form of quaver triplets. Variations 21–22 interrupt this burgeoning development similarly to the way in which variation 7 halted the progression that began in variation 4. Variation 21 introduces a new musical idea in the form of demisemiquaver scales in the flutes and violins rushing towards highly emphasised, high-pitched crotchets. Variation 22 then brings a drop in intensity through an opening up of texture, the descending line of *piano* staccato notes in the winds and the *pianissimo* murmuring of quaver triplets in the strings. Variation 23 resumes the development with musical material that is the combination of the melodic outline of variation 19 and the ascending scales of variation 21. Overall, variations 16–23 rework a previous portion of the movement with close relations to its musical materials. Ultimately, this gives the impression of a development section in the style of sonata form.

The links to sonata form are further strengthened through the almost identical repetition of variations 1–2 over variations 24–25. Although showcasing small differences in rhythm, orchestration and dynamics, these similarities are overwhelmingly strong, and have led many writers to claim that these variations mark the beginning of a recapitulation of sorts. While exhibiting clear relations to variation 3, variation 26 functions as a transition towards variations 27–28, which stand apart due to their lyric tone. These two variations do not reference any previous variations directly, but in certain elements (e.g. long note values and major mode) and in general character they seem to relate back to variations 10–15. Variations 29–30 then lead towards the coda, the beginning of which in bar 253 is indicated by the final reappearance of the main theme.

As mentioned above, the piece is shrouded in structural ambiguity on numerous levels. Firstly, as we have seen, Brahms uses the first thirty-two bars (theme and variations 1–3) to create

⁶ This relation is further emphasised by the fact that Brahms inserted a ‘pesante’ marking at this point in his score sent to Joachim, which seems to relate back to the ‘marcamente’ instruction of variation 4 (Pascall and Weller 2003: 223–24).

uncertainty as to the identity and function of the theme: initially, it emerges as a melody in the top voices and as harmonic filler, and it is only in bar 33 (var. 4) that it appears in its true form, as a bass line. Secondly, Brahms obscures the beginning of the contrasting middle section by introducing some of its defining features gradually, over the course of multiple variations: variations 10–11 (bb. 81–96) are already toying with the major mode (established only in variation 13, b. 105), while the new time signature of 3/2 is introduced as early as variation 12 (b. 97). Thirdly, adding further complexity to the web of structural relationships, Brahms introduces elements of sonata form into the movement, the most obvious indications of which are the developmental quality of variations 16–23 and the recapitulation of sorts in variations 24–28. Viewed through this lens, the first part of the movement might also be interpreted as comprising two contrasting sections, possibly corresponding to first- and second-subject groups.

It is also noteworthy that Brahms creates continuity and cohesion in his variational movement partly by relating successive variations to each other in numerous ways. As discussed above, virtually every variation – even those introducing seemingly new materials – preserves some features of the preceding variations. Some of these connections are so strong as to form distinct pairs of variations with deep ties to each other, including variations 5–6, 8–9, 10–11, 14–15, 19–20 and 27–28.

The inherent ambiguity of the movement has led analysts to widely divergent conclusions regarding its formal interpretation. Beyond the foundational variation form, writers variously interpret the movement as falling into a broad two-part form,⁷ a three-part form⁸ or even sonata form,⁹ while a few analysts opt simply to divide the movement into various sections, corresponding to no particular formal schema. Furthermore, even those sharing the same general understanding might disagree on the details: amongst those subscribing to the sonata-form interpretation, for instance, no two analysts agree on the exact structural layout. (For the purposes of this overview, I have included a broad selection of structural analyses in Table 3.3.)

Perhaps the clearest layer of structural segmentation within the movement is the division into two halves of roughly corresponding size. Variation 16 stands in sharp contrast with the previous variations, and it gives way to a new musical process that ultimately culminates in the coda. The clarity of this division is one of the few features of the music on which almost all analysts agree, and it is reflected in most exegeses. Some writers, including David Osmond-Smith, Robert Pascall and Bruno Plantard, go so far as to propose a two-part form as one possible

⁷ Osmond-Smith 1983; Pascall 1989; Heudières 1997; Plantard 1997.

⁸ Kalbeck 1913; Cantrell 1971; Musgrave 1985; Richter 1986; Pascall 1989; Hekkers 1991; Voss 1996; Heudières 1997; Petersen 2013.

⁹ Richter 1986; Pascall 1989; Mäckelmann 1991; Frisch [1996] 2003; Brodbeck 1997; Heudières 1997; Schmidt 1998;

interpretation of the movement.¹⁰ There is only one writer who proposes a two-part form with a segmentation point other than variation 16: Bruno d'Heudières considered variation 23 to segment the piece into two.¹¹

Emphasising the importance of the nebulous middle section, writers from Max Kalbeck to Peter Petersen have proposed that the movement comprises three major sections, possibly corresponding to an ABA form. Although the movement seems to fit this form on a general level, the ambiguous nature of the middle section makes it difficult to determine the location of the first segmentation. Christoph Richter argues that variations 10–15 form an independent episode.¹² By contrast, Byron Cantrell identifies the beginning of the middle section with the establishment of the major mode in variation 13, while Osmond-Smith, Pascall, William Hekkers, Egon Voss and Petersen rather base it on the change in metre in variation 12.¹³ Ever the outlier, Heudières proposes a different interpretation: he argues that after the A section of the theme and variations 1–15, variations 16–22 form a B section and variations 23–28 an A' section, which is followed by a brief transition leading to a developmental coda ('coda développante').¹⁴ Other writers, such as Michael Musgrave, interpret the movement as an ABA form without specifying the corresponding structural segmentation.¹⁵

There are also analysts who understood the movement as incorporating five distinct sections with no claim to any established schema. However, amongst these writers, the interpretation of variations 10–15 proved no less divisive: Hugo Leichtentritt and Cantrell consider variations 10–15 to form an independent unit, while Paul Fontaine and Wolfgang Doebel argue that variations 12–15 make up a distinct group.¹⁶ Furthermore, as opposed to Leichtentritt's and Cantrell's interpretation of variation 22 marking the beginning of a new section, the same function is ascribed to variation 23 by Doebel and to variation 24 by Fontaine.

Further disagreement characterises discussions of the ambiguous sonata form in the movement. Pascall understands the theme and variations 1–3 to constitute the first-subject group and variations 12–15 the second-subject group, with variations 4–11 serving as a transition between them. He then explains that variation 16 begins the recapitulation, which however is interrupted by the development section in variations 17–23, after which the recapitulation

¹⁰ Osmond-Smith 1983: 161–65; Pascall 1989: 238–43; Plantard 1997: 26–28.

¹¹ In Heudières's (1997: 8–9) explanation, the theme and variations 1–22 outline the exposition and the first developmental section, while variations 23–30 and the coda provide the recapitulation and a secondary developmental episode.

¹² Richter 1986: 192–218.

¹³ Cantrell 1971: 70–72; Osmond-Smith 1983: 161–62; Pascall 1989: 238–43; Hekkers 1991: 59–60; Voss 1996: 247–48; Petersen 2013: 114.

¹⁴ Heudières 1997: 8–9.

¹⁵ Musgrave 1985: 226–27; Kalbeck 1913: 479.

¹⁶ Leichtentritt 1951: 315; Cantrell 1971: 70–72; Fontaine 1967: 105–20; Doebel 1997: 20–21.

resumes. Michael Mäckelmann shares the same interpretation of the first-subject group but regards variations 4–6 as the second-subject group. Furthermore, he views variations 12–22 as the development section (incorporating a false recapitulation in variation 16), and the recapitulation as variations 23–30. By contrast, Walter Frisch understands the theme and variations 1–9 to form the first-subject group, variations 10–11 the transition, and variations 12–15 the second-subject group. In his view, variations 16–23 fulfil the role of development, and variation 24 launches the recapitulation. David Brodbeck interprets the second-subject group, the development and the recapitulation in the same manner as Frisch, but he identifies the theme and variations 1–7 as the first-subject group and variations 8–11 as a transition.¹⁷ Similarly to Mäckelmann, Christian Schmidt considers the theme and variations 1–3 to correspond to the first-subject group, and he also places the beginning of the recapitulation at variation 23. Unlike Mäckelmann, however, he designates variations 4–7 as the second-subject group and identifies variation 8 as the beginning of the development section.¹⁸

This overview of the movement and the analytical literature dedicated to it portray a piece that affords the inference of a particularly rich set of structural relationships and showcases multivalent formal tendencies shrouded in ambiguity. In the following, I examine how Furtwängler approached this piece, and I attempt to gain insights into the conductor's structural representation(s) and techniques of projection.

Recording Analysis

As Table 3.1 shows, Furtwängler performed the symphony frequently throughout his conducting career. Most of his performances took place in the 1920s and early 1930s, but even thereafter his programme featured the work as part of at least one concert series or tour in most years.¹⁹ This means that by 1943 – the year of his first recording – he had had over two decades of experience conducting the work, which might indicate that he had developed a fully formed interpretation of the symphony by the time he recorded it. Furthermore, although some of the recordings are rather distant chronologically, they follow each other closely in the overall list of Furtwängler's performances: for instance, the conductor gave only four performances of the symphony between the 1943 and 1948 recordings. Once again, this might suggest a similarity between the performative approaches taken in the recordings.

¹⁷ Brodbeck 1997: 261–63.

¹⁸ See respectively Pascall 1989: 238–43; Mäckelmann 1991: 61–68; Frisch [1996] 2003: 130–33; Schmidt 1998: 270–71.

¹⁹ Except for 1935, 1937, 1940–41 and 1944–47, when Furtwängler did not conduct the symphony.

WF 50a/IV²⁰

I begin the analysis with Furtwängler's last recording of the movement, produced in August 1950 with the Vienna Philharmonic. The reason for this decision is that this recording, in my opinion, achieves the most coherent structural construction amongst all of Furtwängler's recorded performances, and it therefore provides an instructive basis of comparison for the rest. The analysis is accompanied by a structural outline, which includes an intensity curve and a representation of perceived segmentation and motion (Figure 3.1a), tempo and dynamics curves (Figure 3.1b), arch correlation plots (Figures 3.10–3.16), and datasets emerging from correlation analysis (Tables 3.4–3.10)

In WF 50a/IV, the theme of the movement is presented at a relatively fast pace and with particularly high intensity. This establishes a highly dramatic tone, which will last until the end of the movement. Variation 1 is firmly linked to the theme and serves to round off the initial gesture through a coordinated decrease in tempo and dynamics. Through an increase in both tempo and dynamics, variations 2–3 begin a process of intensification, which, by the end of variation 3, reaches a higher level of tension than that experienced in the theme. The beginning of variation 4 is then sharply separated from what preceded it through a sudden drop in tempo and dynamics. This serves to emphasise the structural significance of this variation. Variation 4 immediately launches a new process of intensification, which ultimately culminates in variation 9. However, at the end of variation 4 a small break in the intensification occurs due to a dip in tempo and dynamics. The extent of this break seems to have been calculated to emphasise the variation's importance as presenting a new sub-theme but also to preserve its function as forming part of a larger development.

Alongside a general intensification, variation 2 also creates a sense of motion or drive. Throughout the movement, Furtwängler seems to strategically shape this sensation to help project his representation of the structure. Three hierarchical layers of this are indicated in Figure 3.1a. When viewed alongside the intensity curve, this representation shows that the process of intensification initiated in variation 2 is effectively continued in variation 4, despite the pronounced separation of the two sections. This serves to emphasise the double function of variations 2–3 as both providing an introduction and launching a large-scale process of development (see 'Groupings' no. 2 in Figure 3.1a).

Variations 5–6 continue the intensification. On the one hand, this is the result of the composed-out development of materials discussed above. On the other hand, a significant

²⁰ The 'codes' used to identify recordings in this thesis are made up of the conductors' initials, the year of recording and – where relevant – Roman numerals indicating the ordinal number of the movement in question.

increase in tempo and dynamics complements and reinforces this tendency (Figure 3.1b). As discussed above, variation 7 has the potential to halt the developmental process through its introduction of contrast. From a conductor's point of view, this represents a dilemma: one could either bring out the contrasting expressive qualities of the variation or attempt to minimise the disruption and emphasise continuity. As the analysis of the rest of the recordings will show, this was a point over which Furtwängler vacillated. By 1950, he seemingly had decided to prioritise continuity to the maximum degree. Although a drop in tempo occurs, the conductor keeps the tempo at a relatively high level and begins to further increase it immediately after the beginning of the variation.²¹ This, coupled with sharp rhythmicisation on Furtwängler's part, results in the variation feeling rushed – a quality, however, that helps minimise the disruption. Finally, a sustained increase in dynamics over variations 6–8 helps to integrate the variation in the process of a broader intensification.

Variations 8–9 then lead the intensification to its culmination in bars 75–77. In this section, the tempo and dynamics curves seem to be at variance with the perceived sense of intensity: although these variations reach a higher plane of tempo and dynamics compared to the previous section, they also exhibit a levelling-out and then a decrease in these parameters, which would normally indicate a respective plateauing and ebbing of intensity. Two factors help maintain the sense of rising intensity. First, as discussed above, the compositional development continues over these variations, and it contributes to a sense of maintained intensification. Second, Furtwängler employs *tempo rubato* on the small scale to create a strong sense of drive, which translates into intensification on a broad level. The conductor does so by rushing individual bars which are then followed by slower bars to compensate for the change in tempo. Accordingly, bars 65, 67, 69–70, 73, 75, 77–78 all witness a significant tempo increase to which the slower tempo of the surrounding bars responds (see Figure 3.1b).

Overall, Furtwängler succeeds in unifying variations 2/4–9 through a long line of intensification. This is coupled by a very strong sense of drive maintained all the way through these variations, indicated in Figure 3.1a. He manages to maintain this sense even over variation 7, which tends to arrest any development due to its contrasting musical material. In this recording, Furtwängler seemingly prioritised continuity over highlighting the expressive qualities of this variation.

The shaping of variations 10–12 appears to be crucial to Furtwängler's structural representation. In the 1950 recording, the conductor seems to transform these variations into an

²¹ The tempo drops towards the end of the variation, but this does not create a sense of closure or energy loss due to the continuously increasing dynamics (Figure 3.1b).

independent, unified section, which ultimately yields the impression of a transition. First of all, he begins the section at a significantly slower tempo and lower dynamics, effectively separating variation 10 from what preceded it. Then Furtwängler creates a line of intensification, which culminates in variation 12 (bb. 100–01), and holds these three variations together. Alongside this, a sense of drive – albeit weaker than before – is preserved in this section. The root of the transitory feel of variations 10–12 lies in the shaping of variations 13–15, which seem to form the contrasting middle section of the movement in this performance. First, a decrescendo and *ritardando* marks the end of variation 12, effectively indicating the end of a structural segment. Furthermore, variations 13–15 stand in stark contrast with everything that came before it (and what follows). This is because Furtwängler here brings the sense of motion that dominated the previous variations to an almost complete halt. This temporal recession characterises this entire section, which serves to unify it and to separate it from the previous variations. In retrospect, variations 10–12 appear to provide a transition by breaking the long developmental process of variations 2/4–9 while at the same time preserving some sense of the drive that characterised the performance until that point. This transitoriness is also reflected in the tempo curve, which shows variations 10–12 occupying a level between the two distinct planes of tempo of variations 4–9 and 13–15. The latter also appears to form an arch shape in terms of tempo, which further reinforces its status as an independent unit.

Variations 16–23 also seem to form a coherent unit in Furtwängler’s performance. This perceived sense of unity is achieved primarily through the broad line of intensification that stretches over the successive variations. Once again, the sense of rising intensity is contradicted by the tempo curve, which shows no corresponding increase. Instead, it shows a nebulous arch shape and even a gradual descent from variation 17 onwards. Similarly to variations 8–9, the perceived intensification comes from multiple sources. First, a composed-out development takes place over these variations, which is directly comparable to – and is indeed based on – the developmental process in variations 2–9. Second, a broad increase in dynamics can be observed over variations 17–21, with variation 23 re-establishing the high level of dynamics after the more muted variation 22.²² Third, Furtwängler once again employs small-scale *tempo rubato* to generate motion and consequently intensification. For instance, in variation 17, the two crotchets played by the wind instruments in bar 137 are rushed, while bar 138 compensates for this through a slightly slower tempo. The same occurs over bars 139 and 140. In variation 18, the sense of drive is primarily created by rushing through bars 146 and 148, which are followed respectively by the

²² It is clear that in variation 17, the tempo is calibrated in a way as to balance out the compositionally determined weaker dynamics and sparser texture of the variation, which helps to integrate it in a broader musical line.

slower bars of 147 and 149. In a similar fashion, in variations 19 and 20, the second and fourth bars are once again rushed (bars 154, 156, 162 and 164), and the surrounding bars are, in turn, played more slowly. Variations 21–22 make less use of this technique, allowing variation 22 to dip in terms of intensity due to the sparse texture and low dynamics – but not to disrupt the overall process of intensification.²³ Variation 23 once again picks up the thread of intensification using the same technique of *tempo rubato*: bars 185 and 187 are rushed, for which the more relaxed tempos in the surrounding bars compensate.

Just before variation 24, Furtwängler makes a notable caesura, which signals the arrival of a structurally significant point. As discussed above, variation 24 directly relates back to variation 1, effectively beginning a recapitulation of sorts. Coupled with a sudden drop in tempo, this caesura clearly marks the beginning of a new structural segment in Furtwängler's performance, lasting until the end of variation 30. Over these variations, the intensification continues, this time underlined by a broad increase in tempo, embracing the entire segment. A slight fall in intensity can be experienced over the 'lyric' section of variations 27–28. Despite the change in character, Furtwängler maintains a sense of drive over these variations primarily through the sustained increase in tempo and the use of small-scale *tempo rubato*.

The coda in Furtwängler's performance functions as the final phase of the large-scale intensification embracing the entire second half of the movement – and in some respect the movement as a whole. In terms of intensity, the end of the coda witnesses the strongest climax of the performance, conjuring up an overwhelming sense of dramatic tension. Curiously, the perceived sense of intensity does not entirely match that of the tempo curve, which peaks in bars 233–35, after which it descends considerably. First, this decrease in tempo is offset by dynamics, which remain at a generally high level and show an internal increase that overlaps – and thereby counterbalances – the tempo decrease. Second, Furtwängler makes recourse to *tempo rubato*, which once again creates a strong sense of drive, overriding the general decrease in tempo. Third, the slightly slower tempo allows Furtwängler to use sharper articulation and stronger emphasis on individual notes, which gives the impression of the final heavy steps of the relentless pursuit that characterises Furtwängler's performance.

Let us now consider the arch correlation plots. Based on timing, the largest marking points seem to occur at variation 16, variation 24, coda and variation 13 in order of magnitude (Figure 3.10). Furthermore, the first half of the movement outlines a large arch shape (Figure

²³ Similarly to variation 17, the weaker dynamics and sparser texture in variation 22 are counterbalanced in tempo to some extent: after the slightly slower variation 21, variation 22 is played at a faster tempo and also exhibits an internal tempo increase, which together provide a developmental and transitory quality to the variation, resulting in the variation being perceived as a brief energy-gathering section rather than a true segmentation.

3.11). In addition, Furtwängler seems to have connected multiple variations through arches in tempo: in the first half, one can see strong arching over variations 1–3, 5–7/8, 7/8–10, 10–12 (Figure 3.11); in variations 16–23, weaker arching connects groups of two to three variations (variations 16/17–17/18, 19–21, 21–23), while from variation 24 onwards, no similar arches are visible besides an ambiguous arch over variations 24–25 (Figure 3.14). The more detailed images of the first half of the movement (Figures 3.12–3.13) also show tempo arches on the two-bar level, which correspond to Furtwängler’s *tempo rubato* discussed above. In variations 13 and 14, arches of four to six bars are also visible, which provide internal segmentation to these slower variations. In the second half of the movement, four-bar arches are particularly prominent in variations 16–23 and 29 (Figures 3.15–3.16).

The arches in dynamics are repeatedly at variance with those in tempo, caused primarily by compositional factors. In the first half of the movement, there are clear arches in dynamics over variations 2–5 and 6–9 (Figure 3.11). Strong eight-bar arching also emerges in variations 10, 11 and 12, alongside less pronounced eight-bar arching in variation 13. In the second half of the movement, a faint arch connects variations 17–21 and 22–28 (Figure 3.14). On a smaller scale, variations 17–18/19, 18/19–21 are also connected, while further arches are visible between variation 29 and bar 260 and bars 261–80 in the coda. Variations 20 and 21 also showcase eight-bar arching of varying strength.

In light of this general misalignment, the points at which the arches within the two parameters match are noteworthy. The theme and variations 1–3 show a clear correlation between the two parameters, exhibiting a broad decrease and increase in value. The fundamental break in variation 10 is also paralleled in both tempo and dynamics, and so are smaller arches in variations 11–12. A corresponding decrease appears at the end of variations 18, 23 and 26. Variations 4–5 show a misalignment of parameters, which, however, serves to reinforce continuity over these variations: while a drop occurs in tempo at the beginning of variation 4, in dynamics a long descending line reaches its endpoint at the end of variation 5. This minimises the break experienced in variation 4, as a result of which it is perceived as part of the broader process of intensification.

The first thing to note regarding the arch correlation plots is that in his 1950 recording, Furtwängler seems to have downplayed the importance of the arch type perhaps most relevant to the movement: eight-bar arches. Consisting predominantly of variations of eight bars, the movement in Furtwängler’s interpretation rather seems to be segmented into groups of two to four variations, and into two- to four-bar units (Figures 3.12–3.13, 3.15–3.16). This is especially true in terms of tempo, while dynamics highlight the contours of a few variations (variations 10,

11, 12, 13, 20, 21). This lack of emphasis on individual variations probably contributed to the impression of the performance as consisting of broad strokes and as ultimately following a single overarching line of intensification.

Compared with the groupings indicated in Figure 1, the segments identified on the arch correlation plots show some similarities. The more significant points of phrase-final lengthening at variations 13, 16, 24 and the coda are all perceived as fundamental structural marking points. The tempo arches in the movement also match relatively closely the perceived structural segments (variations 1–3, 10–12, 24–25). The arches in dynamics tend to outline smaller segments than those identified as independent groups or are misaligned completely with the latter.

It seems clear that Furtwängler does not simply ‘reproduce’ compositional structures in his performance but shapes the material in a profound way. First of all, he clearly segments the movement into larger blocks at structurally significant turning points (variations 4, 10, 13, 16, 24 and the beginning of the coda; see ‘Groupings’ in Figure 3.1a). This clarity partly comes from the fact that the conductor can afford large separations between structural segments without the danger of fragmentation since the sense of overarching drive holds the individual sections together. As a result, the structure in Furtwängler’s performance appears coherent in both senses of the word: easily comprehensible and cohesive.

Furthermore, Furtwängler successfully preserves some of the movement’s inherent ambiguity. First, the shaping of variations 2–3 in his performance clearly reflects the dual role of these sections: they are both part of an independent introductory section, separated from the rest of the movement, and begin a process of intensification that extends beyond the segmentation at variation 4. Second, Furtwängler squares the circle of creating clarity in the middle section while preserving some of its ambiguity: at first, variations 10–12 seem to form part of an independent middle section, but later on it becomes clear that they function as a transition towards variations 13–15, the middle section proper of the movement.

A key tool that Furtwängler seems to use to structure the performance is the perceptual phenomenon of motion or drive. First, he maintains a sense of drive over the majority of the movement, as a result of which the performance gives the impression of a single, monumental gesture of intensification. Second, by varying the strength of this sensation, Furtwängler provides the first half of the movement with a nuanced structure, whereby in variations 13–15 the motion comes to a halt, elevating these variations to the level of an independent middle section.

When juxtaposed with the analytical literature discussed above, Furtwängler’s structure does not seem to fit any of the outlines proposed by writers (Table 3.3). In terms of schemata,

however, there is some compatibility. Due to the clear marking of variations 13–15, Furtwängler's interpretation might be construed as falling into a three-part form (see 'Groupings' no. 3 in Figure 3.1a). However, because variations 10–12 organically connect the preceding segment to variations 13–15, a more processually conceived form might be better suited to describe his performance. Sonata form provides one such interpretation, and it is one that fits Furtwängler's performance quite well, albeit not perfectly. In the first half of the movement, we can identify two sections of contrasting characters and modalities (variations 4–9 and 13–15), connected by a transition. Furthermore, variations 16–23 can be interpreted as fulfilling the role of development due to the inherent processual quality of these variations, which is reinforced by the intensification created by Furtwängler. Most importantly, however, Furtwängler marks variation 24 through a caesura and a general change in tempo, and he thereby emphasises the beginning of the supposed recapitulation that takes place over the following variations. The one thing that weakens this interpretation is that Furtwängler does not create real contrast between variations 27–28 and the surrounding variations. In a reading according to sonata form, these variations would provide the recapitulation of the second subject area, in this case variations 13–15. Crucially, in Furtwängler's interpretation, no decrease in tempo occurs over these two variations, which otherwise accompanies his treatment of second-subject groups in movements in sonata form.²⁴

I would argue that Furtwängler's shaping of the music as a continuous development or intensification relates even more closely to another form: the chaconne itself. Sustained increase of activity and tension is a fundamental element of every variational movement, and Furtwängler seemingly capitalises on this to elevate overarching intensification to the level of primary structural strategy within the performance. Furthermore, his recording highlights elements of the chaconne tradition: first, he underlines the recurrences of the theme at structural turning points (variation 16, the coda, and arguably variation 24), and second, he creates a middle section that dovetails with the area in the parallel major key (variations 13–15).

WF 43a/IV

Based on the intensity, tempo and dynamics curves (Figures 3.2a–b, 3.8–3.9), it is clear that Furtwängler's 1943 recording is highly similar to his final one – especially in comparison with Karl Böhm's performance, discussed below. Nevertheless, the two recordings showcase some significant differences, which ultimately result in different structural interpretations.

²⁴ See, for instance, Clark 2005: 121–24.

In the first half of the movement, WF 43a/IV favours small, vehement bursts over long lines of intensification. Here, variation 4 truly begins a new process of intensification, eliminating any ambiguity regarding the function of variations 2–3, which now form an introduction to the variation proper. Furthermore, as opposed to the long uninterrupted line extended over variations 4–9 in WF 50a/IV, in WF 43a/IV Furtwängler instead creates two separate units: variations 4–6 and 7–9. Accordingly, Furtwängler here draws two distinct lines of intensification, both of which are clearly reflected in tempo. This segmented nature of the performance allows him to increase tempo to a higher speed in the individual sections, reaching various highpoints in variations 3, 6, 9 and 12.

This tendency towards segmentation into smaller blocks is also apparent in variations 10–15. Instead of directly connecting to variations 11–12, variation 10 in WF 43a/IV seems to form a unit in itself through a small arch of internal intensification and a more pronounced separation from the following section.²⁵ In a similar fashion, variation 13 is shaped as a more or less independent section, containing a small tensional burst and generating a weaker sense of drive.²⁶ Crucially, however, this shaping results in the minimising of contrast between groups of variations – a contrast that forms an essential part of the structural plan of WF 50a/IV. Instead, here variation 13 seems to provide yet a further element of transition, following which variations 14–15, however, do not give the impression of a truly contrasting section. This is due to there being no perceived segmentation between variations 13 and 14, as a result of which variations 14–15 are perceived to occupy the same, relatively high, level of intensity. This is further emphasised by the fact that variations 14–15 are more separated from each other in terms of tempo than they are in WF 50s/IV (here, variation 15 is played noticeably faster than variation 14). Without a contrasting section at the end and with the more gradual transition provided in the form of variations 10–13, the first half of the movement seems to outline a large-scale arch in terms of intensity.

The second half of the movement also witnesses some significant discrepancies between the recordings. Although variation 24 and the beginning of the coda are similarly highlighted in WF 43a/IV, there is a noticeable difference in the treatment of variations 22 and 27–28. While in WF 50a/IV Furtwängler shapes these sections to provide a momentary sense of respite, in WF 43a/IV he seemingly aspires to minimise the disruption to the overall line of intensification. In this recording, variation 22 sees the tempo rise continuously, in contrast to the small dip in

²⁵ It is reflected in the tempo curve: WF 43a/IV shows a sharper segmentation at the edges of variation 10, and also a more pronounced arch shape.

²⁶ The impression of separateness primarily comes from the fact that the variation outlines an internal intensification (clearly visible in tempo and dynamics) which is not continued in the following variations.

tempo in WF 50a/IV. In variations 27–28 (especially variation 28), small-scale *tempo rubato* is used to create a sense of forward momentum,²⁷ while the contrast in dynamics between variation 26 and variations 27–28 is less pronounced than in the later recording.²⁸ In WF 43a/IV, Furtwängler follows a slightly different strategy in the coda as well: he reaches the highpoint in tempo at a slightly later stage (around bar 285), and after a brief decrease in tempo, he speeds up again towards the end of the piece. Seemingly, this is done in an attempt to ratchet up tension even further.

When it comes to phrase arching the two recordings appear to be remarkably similar (Figures 3.10–3.16). Most of the broader arches identified in WF 50a/IV are also present in this recording, but there are some differences on the smaller scale. First, in terms of tempo, WF 43a/IV showcases a less prevalent use of two-bar arches, while strong eight-bar arching characterises variations 10–11. Over variations 16–23, furthermore, there are no discernible four-bar arches. The tempo/dynamics relation also shows some interesting discrepancies compared with the 1950 recording. First, in WF 43a/IV these parameters are not coordinated in the theme and variation 1: the tempo drops just before variation 1, while the dynamics decrease at the end of this variation. Furthermore, variation 4 witnesses an almost perfectly aligned decrease in tempo and dynamics, which contributes to the strong segmentation experienced at this point.

Overall, the 1943 recording gives the impression of a more impulsive performance, which is in line with the general view of Furtwängler's war-time style.²⁹ Here, intensification is given priority, on both the small and the large scale. On paper, this would suggest that this performance has a stronger sense of overall intensification and that it reaches higher levels of overall tension. However, this is not borne out by the listening impressions, as reflected in the intensity curves (Figure 3.8). In WF 43a/IV, the non-stop intensification eventually (around variations 22–25) dampens the listener's sensitivity, ultimately leading to the intensification losing much of its effectiveness. The reason for this perhaps lies in the fact that the listener is allowed no breathing space throughout the movement. In WF 50a/IV, variations 13–15, 22 and 27–28 offer moments of respite, which ultimately enhance the impact of the overall intensification. Without such breaks, the relentless drive in WF 43a/IV appears ineffective in comparison.

The more segmented nature of the performance, furthermore, results in a less clearly structured construction than WF 50a/IV, with everything being subsumed under the primary

²⁷ It is not readily visible on the tempo curve as this rubato takes place within individual bars, but it appears that the smaller note values are sped up, while the longer notes are held longer as a result. This is most pronounced in bars 229–31.

²⁸ In WF 50a/IV, there is a sharp upsurge in dynamics at the very end of variation 26, which creates a sharp contrast with the generally quieter variations that follow.

²⁹ See page 74 in this thesis.

structural principle of overarching intensification. In terms of schemata, the chaconne form is slightly undermined here because variations 13–15 do not emerge as a contrasting middle section. WF 43a/IV is also further away from the sonata form since there is no clearly defined second-subject group, and the supposed recapitulation thereof (variations 27–28) is underemphasised. A nebulous three-part form is possible to imagine, but the supposed B section – possibly corresponding to variations 10–15 (see ‘Grouping’ no. 3 in Figure 3.2a) – is not contrasting enough to support this interpretation. Ultimately, the performance might be best understood as a simple two-part form, with the first half outlining an arch shape and the second showcasing a goal-oriented intensification (see ‘Grouping’ no. 4 in Figure 3.2a).

WF 24/10/48/IV

Furtwängler’s two recordings from 1948 were recorded only two days apart from each other and with the same orchestra. Unsurprisingly, they represent highly similar performances, which nevertheless showcase some important differences. Since these performances are highly comparable, I have combined their structural outlines in one figure (Figure 3.3), in which the relevant discrepancies are highlighted through different colours. Between the two, WF 24/10/48/IV seems to represent a more distinctive interpretation, and therefore it serves as the basis of comparison.

If WF 43a/IV takes the idea of intensification to the extreme, WF 24/10/48/IV pushes the idea of respite to its limits (that is, in the context of Furtwängler’s ever dramatic style). Its intensity contour is perceived to be significantly flatter than that of either the 1943 or the 1950 recording (Figure 3.8). The climaxes and the overall intensification are also weaker. This is partly the result of a generally slower tempo (in the value of c. 10 MM; see Figures 3.5, 3.9).

The theme and variation 1 set the relatively peaceful tone that will characterise the entire performance. Starting 15–20 MM slower than WF 50a/IV, this beginning offers quite a contrast with the strongly driven and dramatic start of the later performance. Variations 3–4 begin a process of intensification, which, however, hardly goes above the low level of intensity of the theme itself. After the usual segmentation at the end of variation 3, variation 4 seems to preserve the level of intensity reached previously, but instead of elevating it further, it seems to plateau, emphasising the variation’s function as one of presenting a new subtheme. The maintaining of the same level of intensity nevertheless seems to connect variation 4 to variations 2–3, which consequently regain their dual meaning (as discussed above).

Variations 5–6 begin the intensification in earnest while generating a strong sense of drive. Similarly to WF 43a/IV, variation 7 breaks the short-lived development, but instead of

launching a new process of intensification (as in WF 43a/IV), this variation sees the intensity plateau. This is supported by a stronger break in both tempo and dynamics.³⁰ Following this, variations 8–9 continue the intensification but with less vigour than before. Although the overall tempo profile of these variations appears to be largely similar to that of WF 50a/IV, the lack of small-scale *tempo rubato* results in a lower sense of drive. Ultimately, this results in variations 4–9 being segmented into two units: variations 4–6 and 7–9.

Variation 10 brings sharp contrast by eliminating almost all sense of drive and by introducing a sense of calm. This is only slightly disturbed in variations 11–12, which stoke up a weak sense of motion, but without the dramatic heat typical of Furtwängler's other recordings. Variation 13 follows from the preceding section with minimal interruption (relative to WF 43a/IV and WF 50a/IV),³¹ and it brings with it an even greater sense of tranquillity, lasting until the end of variation 15. This sense of respite is even more pronounced than that experienced in WF 50a/IV, and this is reflected in the tempo curve: over these variations, WF 24/10/48/IV is roughly 10 MM slower, and it also exhibits fewer and weaker spikes in tempo. Although variations 11–12 preserve some of their transitory quality, it is overshadowed by the general sense of serenity, as a result of which variations 10–15 appear to form an independent segment, functioning as the contrasting middle section of the movement.

The performance maintains a generally tranquil quality in the second half of the movement, with weaker drive and more emphasis placed on the lyric quality of variations 27–28 – a segment that here seems to be extended to variation 29 as well. This is once again reflected in the generally lower tempo level, the lack of tempo spikes and the more significant decrease in dynamics. Besides a generally lower gradient of intensification throughout this section, one perceives a slight variation in the strength of the intensification, with variations 23–25 and the end of the coda showing a comparably greater increase in intensity compared to the surrounding sections. As a result of this gear change, the coda appears to be segmented into two sections, with stronger intensification beginning around bar 273, supported by a large increase in tempo at this point. Overall, due to the emphasis on tranquil moments and the variation in the degree of intensification, the sense of an overarching line is diminished.

The arch correlation plots (Figures 3.10–3.16) show considerable similarity between this and the 1950 recording in terms of larger arches, but they also showcase some fundamental

³⁰ The break in dynamics is immediately clear, but the break in tempo appears more significant primarily in the light of what follows: while in WF 43a/IV, the tempo begins to increase immediately until the fast tempo of variation 6 is regained, in WF 24/10/48/IV, the tempo remains mostly unchanged after its decrease at the beginning of variation 7.

³¹ In tempo, the segmentation in WF 24/10/48/IV is significantly less pronounced than in WF 43a/IV and slightly less pronounced than in WF 50s/IV, while in dynamics it is noticeably less sharp than in either of those recordings.

differences on the lower levels of the structure. As opposed to the focus on four-bar units in WF 50a/IV, here we can see clear segmentation based on eight bars, that is on individual variations. This is particularly striking in variations 4–9, where most of these arches correspond in tempo and dynamics. Less pronounced eight-bar arching appears in variations 17–18, 27–29, primarily in tempo. In variations 13–14, weak arching at the level of four to six bars can also be observed in tempo. In the second half of the movement, lower-level arches are sparser, but the larger-level arching in tempo over variations 16–18 and 18/19–20 is noticeably stronger than in WF 50a/IV. In the coda, we see more and more varied arches than in WF 50a/IV, in which this section was shaped based on longer lines. Here one can observe various four-, eight- and twelve-bar arches, especially in tempo. In terms of dynamics, the less defined nature of the arches of variations 2–5 and 6–9 results in a larger arch extending between variations 2 and 9 and even between variations 2 and 12.

Overall, WF 24/10/48/IV appears to fall into a clear three-part form (possibly even ABA form)³² more than any of Furtwängler's other recorded performances (see 'Grouping' no. 3 in Figure 3.3). The contrast created between variations 10–15 and the rest of the movement is strong, and this contrast seems to define the structure of the performance at large. The recording might also be interpreted as a sonata form. It is supported by the clear separation of two contrasting sections in the first half of the movement and through the emphasis given to variations 27–29. However, no tempo difference underlines the latter, which weakens this interpretation.

WF 22/10/48/IV

The performance recorded two days earlier represents a highly similar interpretation: the intensity, tempo and dynamics curves (Figures 3.3–3.5) all demonstrate a close relation. This is hardly surprising considering their chronological proximity. What is intriguing is the nature of the differences and their effect on large-scale structure.

The fundamental difference between the recordings seems to arise from that fact that WF 22/10/48/IV exhibits a stronger drive at key moments in the movement. As the intensity curve shows (Figure 3.3), variation 4 is now part of the broad intensification embracing variations 2–6 (variation 7 still disrupts the development). Furthermore, variations 8–9 generate a stronger sense of drive, which results in a higher climax reached at the end of variation 9. Even more importantly, however, the shaping of variations 10–12 is also characterised by a heightened sense

³² ABA form emerges mainly in terms of motion, where the strong forward progression of the outer sections provides stark contrast with the general stillness of the middle section.

of drive and intensification, which places this interpretation closer to WF 50a/IV than WF 24/10/48/IV. As a result, this section gains a distinctive transitory quality, which is reinforced by further features of the performance: there is more continuity between variations 9 and 10 (see the more gradual change in tempo), a more noticeable break occurs before variation 13 (visible in the tempo curve), and variations 13–15 occupy an unchanging level of low intensity and create no sense of momentum. The second half of the movement appears to be performed largely similarly to WF 24/10/48/IV. One noticeable difference emerges in variation 29, which leads back to the higher level of intensity of variation 30 rather than forming part of the lyric section starting in variation 27.

The arch correlation plots (Figures 3.10–3.16) also show that the two recordings from 1948 are largely identical. However, in terms of tempo, the earlier recording shows stronger arching at the level of four to six bars over variations 13–15. In the second half of the movement, variations 17–18 no longer form eight-bar arches, but instead are part of the larger arch extending over variations 16–18. Furthermore, a new arch of variations 21–22 appear in this recording and strong eight-bar arching emerges in variation 25.

In general, WF 22/10/48/IV seems to focus more on the general sense of drive and intensification than WF 24/10/48/IV. Furthermore, through a shaping of variations 10–15 that resembles that of WF 50a/IV, this performance creates a contrasting middle section in the parallel major mode. This interpretation therefore stands in contrast with WF 24/10/48/IV. This divergence, however, does not necessarily come from a fundamentally different structural representation. As we have seen, the two recordings follow a very similar strategy overall, and the divergences are rather the result of contrasting degrees of drive and intensification.

WF 49/IV

Furtwängler's penultimate recording of the movement presents a fundamentally similar interpretation but with a unique approach to some segments of the movement (Figures 3.6a–b). First of all, in this recording, the theme and variation 1 emerge as the most restrained, and variations 2–3 as having the least sense of momentum amongst all of Furtwängler's recordings. This is partly the result of the generally slower tempo of the beginning (10 MM slower than WF 50a/IV; Figure 3.9), but also of the narrower range of tempo traversed in this initial section: while a difference of 30–40 MM is typical in his other recordings between the low point of variation 1 and the highpoint of variation 3, in WF 49/IV the differential is closer to 20 MM.

This generally lower sense of drive carries over to variation 4, which seemingly begins from an even lower level of intensity and remains there until the end of the variation. Variations

5–6 begin a process of intensification, which is then interrupted by variation 7, plateauing the intensity. Variations 8–9 then continue the intensification with a renewed sense of drive. Up until this point, this performance closely resembles WF 24/10/48/IV.

However, what occurs in the next few variations makes this performance stand apart from the rest of Furtwängler's recordings. As opposed to providing contrast with the previous section, variation 10 functions as a direct transition between variations 9 and 11. It starts out at a relatively high level of intensity, which then decreases gradually, effectively providing a bridge between the surrounding sections. This transitoriness is clearly visible on the tempo curve, which shows a segmentation before this variation that is weaker than usual, and where one can see that the line of tempo is more gradually decreasing over the course of the variation.³³ Furthermore, through their internal thrusts of tension, variations 11 and 12 maintain this high level of intensity. Overall, the shaping of these three variations seems to connect them to the previous section more than in any of the other recordings.

The transitioning does not stop there because variation 13 seems to continue the gradual decrease of intensity, closely connecting variations 12 and 14 as a result. A small internal arch of intensification emerges in this variation, which connects it with the previous section, despite the composed-out segmentation at the end of variation 12. Furthermore, the general level of tempo in the variation also seems to reinforce this transitoriness: while in most of the other recordings variations 13–15 form an even plane or arch of tempo, here variation 13 slightly stands above the variations that follow (at MM 70, while variations 14–15 stand at MM 60), providing a further increment between the two tempo levels. Finally, variations 14–15 represent the end of this process, bringing a sense of stillness and a very low level of intensity. The second half of the movement unfolds in a way roughly corresponding to WF 50a/IV. Only the general intensification feels weaker, and the coda seems to be segmented into two sections, as in the 1948 recordings.

The arch correlation plots (Figures 3.10–3.16) show that in terms of phrase arching, WF 49/IV is most similar to the two recordings from 1948. In particular, in the first half of the movement, it is closest to WF 24/10/48/IV, and in the second half of the movement to WF 22/10/48/IV. In tempo, in the first half similarly strong eight-bar arching appears in variations 4, 8, 9 and to a lesser extent in variation 15. In comparison with WF 24/10/48/IV, even clearer eight-bar arches seem to outline variations 12 and 13, which supports the interpretation of these variations functioning as individual building blocks rather than forming part of a larger unit. Over

³³ At first glance, it might seem that variation 10 provides a more gradual transition in tempo in WF 22/10/48/IV. However, in that recording, the variation is preceded by a sharp decelerando, which is completely missing from WF 49/IV, resulting in the impression of a smoother connection.

variations 13–15, the wider range of smaller arches in the previous recording is here reduced to four-bar arches in variation 14. In the second half, similarly to WF 22/10/48/IV, fewer eight-bar arches appear, but clearly articulated arches extend over variations 16–18 and 21–22. One can also observe weak eight-bar arching in variations 24–25 and 27. In the coda, arches of eight and twelve bars emerge, once again corresponding to the 1948 recordings. In terms of dynamics, the relation between this and the 1948 recordings is similar to that identified in tempo: in the first half, it resembles WF 24/10/48/IV the most, while in the second half, it lies closer to WF 22/10/48/IV.

Overall, the performance seems to perfect the arch shape encompassing the entire first half of the movement – a structural idea that first appeared in WF 43a/IV. By providing a smooth transition between individual variations in variations 10–14, the conductor emphasises the continuity between these segments – a continuity that can be seen as suggested by the musical material itself, as discussed above. As a result, the movement appears primarily to fall into a two-part form, the first part outlining a large-scale arch shape while the second shows a long line of intensification leading towards the end of the movement (see ‘Grouping’ no. 3 in Figure 3.6a).

KB 75/IV³⁴

In order to put the findings in context and to demonstrate the extent of the similarities and differences between Furtwängler’s performances, I now briefly present another, largely contemporaneous, conductor’s recording: Karl Böhm’s 1975 recording with the Vienna Philharmonic.³⁵ Böhm (1894–1981) was a conductor generally considered to belong to the ‘classical’ or ‘modernist’ brand of musicians, and his performances were praised for their precision and clarity and were often ascribed certain structuralist qualities.³⁶

Looking at the recording’s intensity curve (Figure 3.7a), it is immediately clear that Böhm follows a fundamentally different structural strategy. Most importantly, there is no sign of the kind of overarching intensification that Furtwängler realises in his recordings. Böhm instead shapes the intensity in the second half of the movement in a way that creates a large, mostly descending line – in other words, the opposite of an intensification. Furthermore, it is clear that Böhm makes use of a significantly narrower range of intensity and nowhere reaches highpoints as extreme as those of Furtwängler’s. This demonstrates that intensity is not an immutable feature

³⁴ An expanded version of this analysis is soon to be published as an article: Elek [forthcoming].

³⁵ Rec. 9 May 1975, Vienna, Grosser Musikvereinssaal, Deutsche Grammophon, E4714432 (2002).

³⁶ Dostal (1964: 22), for example, claimed that ‘For [Böhm], form is an essential element of any art...’ (‘Die Form ist für [Böhm] Wesenselement jeglicher Kunst...’), while Osborne (1967: 76) suggested that ‘Böhm is the great explicator of the score’s structure, the illuminator of its many voices and intricacies’. For discussion, see Elek [forthcoming].

of the music as composed, but a phenomenon that is actively shaped by performers, leading to differing – sometimes completely contradictory – results.

The same tendencies are visible in the recording's tempo curve (Figure 3.7b), which overall appears to be significantly flatter than that of the Furtwängler recordings (see Figure 3.9). Furthermore, it demonstrates an interesting pattern: Böhm seemingly created two large-scale descending lines in both halves of the movement. The consistency of this strategy is particularly remarkable in the first half of the movement, where the tempo change is realised through small, incremental changes, which would not be immediately apparent to most listeners.

When it comes to the structural segmentations within Böhm's recordings, further differences can be observed. In KB 75/IV, variation 4 represents a more significant marking point than in Furtwängler's recordings, emphasising the introductory function of the theme and variations 1–3.³⁷ Furthermore, variations 10–12 seem to connect to variations 13–15 directly and they together create a large middle section, all but eliminating the sense of ambiguity inherent in the music. Although a break occurs at variation 13, the entire section occupies a similar plane of intensity (also of tempo), which effectively unifies it.

Further differences emerge between the two conductors' recordings in the second half of the movement. First, Böhm seems to mark variation 24 less clearly than Furtwängler does. Although Böhm slows down for this variation, this does not give the impression of a segmentation for a number of reasons: no caesura precedes it, and the tempo is immediately resumed in variation 25. Second, the conductor highly emphasises the more lyric qualities of variations 27–28. This is also reflected in a noticeable drop in dynamics and also in tempo (in the light of the tempo plane established in variations 18–23), which is remarkable considering that such a technique (slowing down for lyric passages) is generally associated with 'romantic' performers, such as Furtwängler, who, however, clearly rejects this interpretation in this particular instance.

Finally, a few words regarding arch correlation plots in Böhm's recording. It is immediately clear that phrase arching is significantly sparser and weaker at all levels of structure in Böhm's performance than in Furtwängler's recordings (Figures 3.10–3.16). Besides a few arches on the level of two to three variations (variations 1–3, 5–6 and 24–26), no clear phrase arching is noticeable in Böhm's performance. Furthermore, tempo and dynamics seem to be less coordinated in his recording than in Furtwängler's. Only in variations 8–9 and 13 is clear

³⁷ Although in real terms, the tempo change at variation 4 is similar to those observed in Furtwängler's recordings, the structural weight of this in KB 75/IV is heavier due to the generally consistent or gradually changing tempo in Böhm's performance. Furthermore, although the tempo drops at this point, variation 4 overall is experienced as occupying a higher level of intensity than the preceding sections. The reason for this is that the music at this point is perceived to be heavier overall and controlled by a more powerful dramatic drive.

coordination visible (Figures 3.12–3.13), while in the surrounding variations tempo and dynamics are slightly misaligned. This demonstrates that creating arches was an important element of Furtwängler’s structural shaping of the movement, and that he used tempo and dynamics in a more coordinated manner than some other conductors.³⁸

Correlations and Trends

This chapter has so far explored the similarities and differences between Furtwängler’s recordings based on listening impressions, the perceived sense of intensity and motion, tempo and dynamics curves, and arch correlation plots. These techniques, however, cannot express correlation on a quantifiable basis. In order to complement the analysis, I now present a Pearson correlation analysis of the recordings based on timing and loudness data.³⁹

Tables 3.4–3.8 shows the results for the recordings under investigation.⁴⁰ Even at first glance, it is clear that in terms of tempo, Böhm’s recording differs significantly from all of Furtwängler’s recordings, all of which exhibit a high degree of similarity compared to one another. Interestingly, the data for loudness paints a slightly different image: not only is KB 75/IV fairly similar to almost all of Furtwängler’s recordings, but for one in particular (WF 24/10/48/IV) it actually demonstrates the highest correlation values at almost all levels of the structure.⁴¹

The two recordings from 1948 provide an illustrative starting point to investigating Furtwängler’s performances. When examined in terms of tempo, it is clear that WF 22/10/48/IV and WF 24/10/48/IV demonstrate the mutually closest relationships. From the perspective of WF 22/10/48/IV, the 24 October recording is the closest at most levels and in the total average of values (Table 3.5).⁴² The connection appears stronger still from the view of WF 24/10/48/IV: WF 22/10/48/IV emerges as the most similar at all but one level of the structure (Table 3.6).⁴³

³⁸ This corroborates the claims that writers have made about this phenomenon. See pages 83 in this thesis.

³⁹ See pages 54–55 in this thesis for discussion of this analytical technique.

⁴⁰ Each individual table presents correlation from the perspective of one particular recording. The numerical values represent the strength of the correlation: the closer the value is to 1, the stronger the similarity is. For better visibility, the values are colour-coded: lighter grey represents higher similarity and darker grey lower similarity. In order to gain a detailed picture of the relations between the recordings, I have examined them at various hierarchical levels: complete movement, Part I (theme–variation 15), variations 4–9, variations 10–15, Part II (variation 16–coda), variations 16–23, variations 24–30, coda.

⁴¹ From the perspective of WF 24/10/48/IV, Böhm’s performance appears to be the most similar in terms of dynamics at the following levels: complete movement, Part I, variations 4–9, Part II, variations 16–23, variations 24–30. Despite this, however, in the total average of these values, Böhm’s recording comes second after Furtwängler’s 1949 recording.

⁴² From the view of WF 22/10/48/IV, this connection is the strongest at the following levels: complete movement, Part I, variations 4–9, 10–15 and Part II. In variations 16–23, 24–30 and coda, this connection emerges as the third strongest, with the 1949 and 1950 recordings emerging as more similar.

⁴³ In variations 24–30, the 1949 and 1950 recordings are the closest.

Furthermore, this mutual relationship is the strongest amongst any of Furtwängler's recordings (Table 3.9).⁴⁴

When it comes to dynamics, however, the results are more complicated. From the perspective of WF 22/10/48/IV, WF 24/10/48/IV is still fairly similar (the second closest in the total average), but it is overtaken by WF 49/IV (Table 3.5).⁴⁵ Compared to WF 24/10/48/IV, WF 49/IV and KB 75/IV emerge as the most similar, while WF 22/10/48/IV appears to be the fourth closest (Table 3.6).⁴⁶ Table 3.9 furthermore shows that the connection in loudness data between WF 24/10/48/IV and WF 49/IV is the strongest amongst any two Furtwängler recordings.⁴⁷

This paints a complex picture of the relationships between the two recordings from 1948. The high correlation in terms of tempo supports the listening impression, according to which these two performances are highly comparable. However, this relation appears to be less strong in terms of loudness, where WF 49/IV emerges as the most similar to each of the two recordings. This demonstrates that in Furtwängler's conducting activity chronological proximity generally resulted in more similar performances. However, this statement comes with the caveat that this similarity is conditional: it does not necessarily reflect all musical parameters, it represents only marginally stronger relations, and – as the following discussion shows – it does not necessarily mean that a larger gap between recording dates always translates into dissimilarity.

Correlation analysis allows us to examine whether any broader tendencies inform changes in interpretation. Were a linear historical trend to exist, for instance, it would mean that incremental changes appear in recordings over the years, resulting in a situation where chronological proximity corresponds to the strength of correlation. In other words, one would assume on the basis of a linear trend that Furtwängler's 1943 and the 1950 recordings would be the least similar, and that the performances recorded in succession would be the most similar.

It appears that from the perspective of WF 50a/IV, there is no discernible linear trend in the changes in Furtwängler's performances. Instead of producing the lowest correlation values, WF 43a/IV actually emerges as the second closest to WF 50a/IV in terms of both tempo and

⁴⁴ When viewed in the light of total average, the two recordings from 1948 have a correlation value of 0.9675, which is followed by a value of 0.9663 between WF 22/10/48/IV and WF 50a/IV.

⁴⁵ This connection is strongest in the first half of the movement and in variations 16–23, and these similarities translate into the strongest overall correlation.

⁴⁶ From the perspective of the total average, WF 49/IV appears to be the most similar. At the same time, KB 75/IV shows a slightly higher correlation than WF 49/IV in all but two sections (vars 10–15 and coda) – these two sections, however, significantly bring down the total average of KB 75, resulting in a lower overall correlation value. Similarly, the correlation values between the two recordings from 1948 are brought down significantly in the coda, where the correlation value is 0.28 from the perspective of WF 24/10/48/IV – a seemingly fundamental difference, which is however not clear from the dynamics curve or the listening experience.

⁴⁷ Their total average value is 0.925, while the second strongest connection amongst Furtwängler's recordings exists between the 1943 and 1949 recordings with a value of 0.9238.

dynamics (Table 3.8) – a finding that appears particularly noteworthy considering that the recordings were produced with different orchestras. Furthermore, the relation between WF 49/IV and WF 50a/IV shows a complex picture: WF 49/IV is the closest one in terms of dynamics, but the least similar regarding tempo. In the latter aspect, WF 22/10/48/IV emerges as the most similar.

In light of the strong correlation between WF 43a/IV and WF 50a/IV, it is also worth examining whether the latter can be interpreted as returning to the performance strategies of the former. Based on the correlation data, this theory is supported only partially. As we have seen, in terms of both tempo and dynamics, other performances are more similar to WF 50a/IV than WF 43a/IV (Table 3.8). From the perspective of the 1943 recording, WF 22/10/48/IV and WF 50a/IV emerge as the closest in tempo, but WF 50a/IV as the second most dissimilar in terms of dynamics (Table 3.4). Overall, although this does not present a straightforward case that Furtwängler returned to his previous ideas, the connection between the two recordings is striking.

It is also worth examining whether Furtwängler's performance changed after the Second World War, as it is often claimed. From the perspectives of the 1948 and 1949 recordings, WF 43a/IV indeed emerges as relatively dissimilar (Tables 3.5–3.7): in terms of tempo, WF 43a/IV produces the lowest correlation values of all of Furtwängler's performances. The data for loudness once again confounds the picture, however: while WF 43a/IV appears to be the least similar to WF 22/10/48/IV, it emerges as the second closest to WF 24/10/48/IV and WF 49/IV. In sum, the data (primarily in terms of tempo) seems to support claims regarding a change in style in Furtwängler's performance after the end of the war, although this comes with the caveats that this trend is less clear in terms of loudness and that the 1950 performance forms a notable exception in both parameters, as discussed above.

A further point to consider is whether and how Furtwängler's interpretation changed when he conducted different orchestras. One could examine this through the 1950 recording, which featured the Vienna Philharmonic as opposed to the Berlin Philharmonic, which played on the earlier recordings. In terms of tempo, this change in performing body does not seem to translate into a difference in performance. In this respect, WF 50a/IV is actually the closest to WF 43a/IV and the second closest to the 1948 and 1949 recordings (Tables 3.4–3.7). The dynamics data places the recording slightly further from the rest: it emerges as the third closest to WF 43a/IV, WF 22/10/48/IV and WF 49/IV and the least similar to WF 24/10/48/IV. Overall, however, this degree of similarity is remarkable and speaks to the ease with which Furtwängler conveyed his intentions to both orchestras.

Finally, an analysis of the data can also show which of Furtwängler's recorded performances can be considered the most 'typical'. This can be determined by examining which recording bears the strongest similarity to all of the other recordings by the conductor.⁴⁸ Based on Table 3.10, WF 22/10/48/IV emerges as the most typical based on tempo, and WF 49/IV in terms of dynamics. Importantly, this does not automatically translate into the perceived quality of the performances; in other words, the most typical performance is not necessarily the 'best', however one might define that. Indeed, this discrepancy raises an important question that has a bearing on performance analysis in general: in evaluations of the recorded legacy of performers, should the most typical or the – from the listener's, analyst's or even performer's perspective – most successful recording be given primary focus? If the goal of analysis is to provide an overview of a performer's style or to situate them within performance history, then it seems logical that typicality should be the governing factor. However, in other contexts, typicality does not necessarily emerge as relevant to the same degree. In this thesis, for example, the primary focus is on the creation of dynamic structure in performance and its analysis – a general subject that allows for more emphasis to be placed on more relevant, but potentially less typical, examples (this principle guided the selection of recordings in Chapter 5, for example). Furthermore, even in the context of examining individual style, the concept of typicality raises certain concerns: a performer's recorded legacy might not be representative of their performances in general for various reasons,⁴⁹ which means that claims about typicality based on recordings only might be inaccurate or misleading.⁵⁰

Annotated Orchestral Parts

Unfortunately, no annotated full score of the symphony has been preserved in Furtwängler's estate. However, a complete set of annotated parts has survived and is now held at the

⁴⁸ This is achieved by averaging the similarity values for each recording from the perspective of the other recordings. In the case of WF 43a/IV for variations 4–9 in tempo, for example, this meant the following equation: $0.93 \text{ (WF 22/10/48)} + 0.88 \text{ (WF 24/10/48)} + 0.94 \text{ (WF 49)} + 0.93 \text{ (WF 50)} / 4 = 0.92$.

⁴⁹ First, the recorded performances might cover only a short, and potentially unrepresentative, period of a performer's career (consider, for example, recordings produced in old age). Second, the limitations of the recording technology might also have negative consequences: in order to satisfy the requirements of the technology, a performer might change their playing deliberately, resulting in an 'untypical' performance; furthermore, irrespective of performing circumstances, a recording can provide only an incomplete image of a performance.

⁵⁰ In this particular case, Furtwängler's recordings arguably do not provide a comprehensive representation of his performances of the symphony in general: they captured only five of his 122 total performances, and they cover only eight years of the thirty-five-year period during which Furtwängler conducted the work (or four out of twenty-five years when discounting years with no performances). In other words, WF 22/10/49/IV and WF 49/IV are the most typical only of Furtwängler's *recorded* performances.

Zentralbibliothek Zürich.⁵¹ Based on the edition of the set, it is possible to narrow down the time period in which Furtwängler might have used it in performance. According to the title page, it is the American reprint of the parts prepared as part of the Brahms Complete Edition, which was published in Leipzig in 1926–27 by Breitkopf & Härtel.⁵² Furthermore, it is possible to ascertain that the publishing house responsible for the reprint (Associated Music Publishers, New York) was founded in 1927.⁵³ Based on this information, one can confidently conclude that the parts in question were published in 1927 at the earliest.

Furthermore, based on the place of publication, one can assume that the parts were used during Furtwängler's guest performances in the Americas.⁵⁴ Amongst Furtwängler's three tours in the USA, only one featured Brahms's Fourth Symphony: his guest performances with the New York Philharmonic in early 1926.⁵⁵ As discussed above, this falls before the possible publication of the parts and therefore it can be excluded from consideration. The one other instance when Furtwängler performed the symphony on the American continents was in 1950, during his guest performances in Buenos Aires with the Teatro Colon Orchestra. During this time, the piece was played on two occasions: on 20 April and 10 May. This would hypothetically place the parts closest to Furtwängler's recording of the symphony from August of the same year.

For the purposes of this investigation, I have examined a selection of parts from this set: in particular, Flute 1 and Oboe 1, as well as three copies of Violin 1.⁵⁶ The first thing to note is that the two wind parts contain only a handful of markings, reflecting a few changes in dynamics and reminders of key signatures. The string parts contain a fairly significant number of markings in pencil, most of which, however, relate to bowing. A not insignificant portion of the annotations concerns changes in dynamics, while a few markings concern articulation, and only two relate to timing. All of these markings appear in the three violin parts almost without exception, and they seem to have been written by the same hand. This suggests that they were put down by the concert master based on a model, perhaps a since-lost annotated score.⁵⁷

⁵¹ 56 parts (fl 1, fl 2/pic, ob 1, ob 2, cl 1, cl 2, bn 1, bn 2, dbn, hn 1, hn 2, hn 3, hn 4, tpt 1, tpt 2, trbn 1, trbn 2, trbn 3, timp, trgl, 10 vn 1, 8 vn 2, 7 va, 6 vc, 5 db) and 5 additional parts as photocopies (vn 1, vn 2, va, vc, db). Shelf mark: Nachl. W. Furtwängler: A 19. Plate number: Orch.B. 2807.

⁵² Plate number of the original orchestral parts: O.B. 3207.

⁵³ Page 2001.

⁵⁴ It appears likely that during his various European tours, Furtwängler's would have relied on either original German publications or European reprints available to him.

⁵⁵ The piece was performed on the following dates: 11, 12, 13 and 21 February, 8, 9 and 10 March (Trémine 1997).

⁵⁶ Identifying markings on the cover: Flute 1: '1' (black pen); Oboe 1: '3' (black pen); Violin 1: '2', '3', '6' (black pencil, one on each part).

⁵⁷ A comparison of handwritings shows that Furtwängler can be confidently ruled out as the person making the markings (based on his handwriting in the full score of Brahms's Third Symphony and Beethoven's Third Symphony; see footnote 69 in Chapter 2).

Some of the dynamic markings function as clarifications. For instance, *mezzo forte* is placed at the beginning of variation 5 (b. 41), while a dashed line is drawn from bar 50 to bar 56 to clarify the extent of the crescendo appearing in bar 49. At other points, the annotations serve to overwrite existing marks. In bar 9, for instance, the original *forte* is changed to *fortissimo*, while in bar 65, a ‘meno’ is placed next to the *forte* sign. It is noteworthy that Furtwängler makes use of a wider range of dynamic markings than are indicated in the score: instead of the *pianissimo*–*fortissimo* range present in the score, the markings embrace the broader spectrum of *ppp*–*fff*. Besides this, however, there does not seem to be one clear tendency in the changes regarding dynamics.

Dynamics is one aspect of the music that is rather difficult to deduce from historical recordings, and therefore comparisons of these markings with Furtwängler’s recorded performances are challenging, if not impossible. However, there is one point in the movement where Furtwängler’s notated changes to the markings are so substantial as to allow for comparison with the sound evidence. This concerns variations 8 and its relation to the preceding section. Based on the annotations, it seems that Furtwängler asked for a gradual decrease of loudness over this variation. As Figure 3.17 shows, in the violin parts a ‘meno’ instruction is placed next to the *forte* sign in bar 65, signalling that the variation should begin at a slightly lower level of dynamics. Then in bar 67, a *mezzo forte* sign is added, indicating a gradual decrease in loudness. Finally, in bar 70 a ‘molto’ instruction appears next to the diminuendo sign, followed by a dashed line until the end of bar 72, which calls for a significant decrease in dynamics.⁵⁸ These changes, alongside the *mezzo forte* instruction placed at the beginning of variation 5 (bar 41), seem to create an arch in dynamics embracing variations 5–8, which reaches its peak at the end of variation 7, following which variation 8 provides a gradual return to the lower plane. Curiously, however, none of Furtwängler’s sound recordings seems to follow the instructions pertaining to variation 8. Least of all does WF 50a/IV, which showcases a significant intensification over this section. The previous recordings are slightly more restrained in this respect, but none showcase a decrease in dynamics at this point in the movement. Perhaps these markings represented a short-lived experiment on Furtwängler’s part, which would have assumedly been aimed at creating an internal arch shape within the larger arch of variations 2/4–9 as a way to integrate variation 7 within the process. It seems that Furtwängler ultimately decided to avoid the sharp contrast in dynamics between variations 8 and 9, which would unavoidably result from this arch, and he instead opted for a continuous intensification over these variations.

⁵⁸ These markings can be found in all three violin parts, but they do not appear in the wind parts.

Despite their scarcity, the markings regarding timing are of fundamental importance. Most importantly, a caesura sign appears in the violin parts just before the beginning of variation 24. As discussed above, this variation fulfils a significant role in the structure because it launches a recapitulation of sorts. All of Furtwängler's recordings feature a brief pause at this point, and this marking serves to reinforce its importance to the conductor's structural representation.

A further marking in the violin parts indicates a brief slowing before variation 13. In bar 104, a *ritardando* (vl 1: parts '2' and '3') or a *rallentando* (vl 1: part '6') sign appears to reinforce the composed-out decrease in speed. On paper, this *decelerando* indicates an important segmentation between variations 12 and 13. Indeed, all of Furtwängler's recordings slow down at this point in the movement (see Figures 3.1b, 3.2b, 3.4–3.5, 3.6b). Its effectiveness as a point of separation, however, varies across the recordings and is usually overshadowed by other aspects of the music. It is perhaps least pronounced in WF 24/10/48/IV and WF 50a/IV. It is important to note that this is the only marking in the parts that does not seem to have been introduced by one person only. The variation in the terms used and also a difference in handwriting suggest that these were added by the musicians themselves, presumably during a rehearsal with Furtwängler.

In this discussion, two instances have emerged where the markings seemingly go against the recording to which they presumably lie the closest chronologically. This might be interpreted as further proof of the variability of Furtwängler's structural conception as indicated by the analysis above. The two markings regarding timing, however, show important points of segmentation in the structure, and they are clearly reflected in the recordings.

Summary: One Interpretation, Multiple Realisations?

One of the goals of this chapter has been to examine how Furtwängler approached a movement with multivalent formal tendencies, in other words, a movement that allows a conductor to give free expression to their structural preferences. In this respect, the examined recordings clearly reflect Furtwängler's structural propensities as identified in Chapter 2.

The archetypal arch shape, which is often mentioned in the context of Furtwängler's performances, appears in at least two recordings: WF 43a/IV and WF 49/IV. This analysis has shown that in these two performances (especially WF 49/IV), Furtwängler created a large arch shape in terms of overall intensity (closely matching the tempo contour) in the first half of the movement, emphasising the inherent continuity between individual variations.

Transitions also appear to form an important part of Furtwängler's shaping of the movement, reflecting the significance of the technique to his general conducting style. As

discussed above, variations 10–12 fulfil a fundamental role in the structural organisation of the performance in almost all of these recordings. They represent a link between variations 4–9 and the reposeful middle section of variations 13/14–15. In listening to these recordings, the function of this section first seems ambiguous since it might initially be interpreted as the beginning of the contrasting middle section of the movement. In retrospect, however, it becomes clear that its role is to provide a bridge between the two segments. All of this helps to preserve some of the movement's inherent ambiguity while managing to create clarity. Importantly, in these variations, the transitory quality is achieved through the shaping of intensity and the generation of momentum.

Finally, large-scale intensification – a technique customarily associated with Furtwängler's performances – emerges as a fundamental layer of structural shaping in his recordings of the finale of Brahms's Fourth Symphony.⁵⁹ As discussed above, the prominence of this structural approach varied over the years, but the fundamental shape of intensification was preserved in all of Furtwängler's recordings – a feature that is all the more noticeable in comparison with Karl Böhm's fundamentally contrasting performance. This technique, furthermore, lends coherence to the performances in the form of a 'unifying thread', to use John Rink's term, allowing Furtwängler to clearly segment his structure without the danger of fragmentation.⁶⁰

Furtwängler's use of intensity as a fundamental structuring device demonstrates that this holistic parameter can indeed serve a role in the creation and inflection of musical structure in performance. As this analysis shows, changes in intensity result from a variety of parameters, including register, rhythm, texture, timing and loudness. In performative terms, tempo and dynamics seem to fundamentally etch the contour of intensity, as the close correlation between these parameters and the intensity curves demonstrates. Large-scale increases in tempo are usually accompanied by similar increases in perceived intensity (see, for instance, variations 2–6 in all of Furtwängler's recordings; Figures 3.1–3.6). However, a lack of such broad changes in tempo does not always result in a flat intensity contour. Variations 8–9 and 16–23 in WF 50a/IV show that small-scale *tempo rubato* can generate enough momentum to engender a sense of continuous intensification, despite a fairly even tempo on the broader level. Furthermore, this analysis has shown that intensity contour – like other structural features – is not an immanent compositional feature but a layer of the music that is actively generated by performers. The fundamental differences between Furtwängler's and Böhm's shaping of intensity in the movement serves as a clear demonstration of this. This casts doubt on the basis of previous

⁵⁹ Contemporary reviewers also commented on this tendency in Furtwängler's performances of this particular movement. See RW26 and RW127 in the Apparatus in Volume 2 (Chapter 2).

⁶⁰ Rink 1999: 218. See page 32 in this thesis.

attempts to employ intensity curves for the purposes of score-based analysis. Given the control that performers uniquely have over intensity contours, one can only assume that such attempts at analysis reflected the properties of specific performances (whether real or imagined) as characteristics of the pieces themselves.⁶¹

This analysis provides sufficient basis on which to formulate certain hypotheses regarding the structural representation(s) informing Furtwängler's performances. The primary question is whether the recordings represent variants of a single conception or rather realisations of multiple and contrasting interpretations. The correlation analysis of the timing and loudness data showed some interesting tendencies in this regard. First of all, it appears that there was no clear linear progression across Furtwängler's interpretations: the 1943 and 1950 recordings are by no means the most dissimilar, and the 1949 and 1950 recordings are the closest performances only in certain respects. Indeed, WF 43a/IV and WF 50a/IV are surprisingly similar, which is partially borne out by the broader analysis of these recordings. This might suggest a return in 1950 to the earlier performative strategy exhibited in 1943 – a premise which is not fully supported by the correlation analysis. However, it is clear that the three recordings from 1948 and 1949 stand in stark contrast with WF 43a/IV. This seems to provide evidence of a change in Furtwängler's performance style after the war, but the 1950 recording's similarity with this early performance qualifies this statement. Finally, the correlation analysis demonstrates that, generally speaking, temporal proximity translated into a higher degree of similarity. This is most apparent between the 22 and 24 October 1948 recordings in terms of tempo, and between these recordings and WF 49/IV in dynamics. As the general analysis has shown, the similarity between the 1948 performances was also apparent when listening to the recordings.

A further pattern can be observed in the arch correlation plots. This showed that although the grouping of variations into larger segments remained fairly similar over the years in Furtwängler's performances, there was a distinct change in his approach towards lower-level arches. While the 1948 and 1949 recordings demonstrate a strong emphasis on individual variations by creating arches of eight bars in terms of tempo, these are mostly missing from WF 43a/IV and are completely absent from WF 50a/IV. An increased focus on phrase arching after the war adheres to the general tendencies in performance practice in this time period,⁶² and the 1950 recording's apparent recourse to the earlier practice is noteworthy in itself and perhaps also an indication of the variability of Furtwängler's performance style.

⁶¹ This supports Daniel Leech-Wilkinson's thesis that essentially every analysis is based on listening impressions to a certain extent and therefore reflects the performance styles of a given period (Leech-Wilkinson 2012: ¶ 1.6–2.3).

⁶² See Cook 2009c.

When viewed in light of the general analysis of these recordings and the structural constructs identified within them, there seems to be no clear tendency in the changes. Overarching intensification is present in all recordings but is most prominent in WF 43a/IV and WF 50a/IV. The arch shape is present in WF 43a/IV and WF 49/IV, while a contrasting middle section appears in the 1948 and 1950 recordings, with particular emphasis in WF 24/10/48/IV. In terms of formal schemata, the picture is even more complex. The 1943 and 1949 recordings seemingly outline a clear two-part form, while the earlier one also highlights elements of the chaconne form. WF 24/10/48/IV shows a clear three-part form alongside a clearly outlined sonata form. WF 22/10/48/IV outlines a sonata form primarily but also with references to the chaconne form and the three-part form. Furtwängler's final recording then primarily highlights the chaconne form, alongside elements of sonata form and three-part form.

Based on this variability and the lack of clear tendencies in the changes of his interpretations, one could argue that Furtwängler's recordings are based on a single but fluid structural representation which comprises three structural ideas competing with each other, as it were: those of overarching intensification, contrasting middle section, and arch shape.⁶³ If these recordings and their differences are viewed from this perspective, the picture becomes clearer. Instead of a constantly changing conception based on schemata or synchronic separation of segments, Furtwängler's recordings can be interpreted as various realisations of a flexible structural representation that is based on multiple, and even contradictory, structural ideas, which appear with varying prominence in the performances and appear to be balanced – in my opinion – most successfully in the 1950 recording. According to this theory, the schemata or structural segmentations of the performances were not the driving force behind the shaping of the structure but its consequences.⁶⁴ This also refines our understanding of the variations in performers' interpretations over time, which are not yet fully understood.⁶⁵

⁶³ This interpretation is also supported by Furtwängler's overall performance history of the symphony: based on his extensive prior experience with the work (see Table 3.1), it appears likely that Furtwängler had already developed a fully formed interpretation of the work before recording it, suggesting that the differences observed in the recordings are in fact variations of a fundamental conception.

⁶⁴ This would also explain the seeming contradiction between the two performances from 1948, which, despite their strong similarity, appear to outline fundamentally different structures. If these differences are understood as a slight recalibration of the balance between the three structural ideas (notably, more emphasis on intensification in WF 22/10/48/IV), the resulting differences are easier to account for.

⁶⁵ Writers generally agree that most performers' interpretations remain largely unchanged once established, and that variations occur through 'gradual changes, made almost without anyone noticing, that accumulate rapidly', as Leech-Wilkinson (2009: 248, 250; see also 2011: 136–37; 2015: 339) puts it, and that usually 'subsequent recordings take similar ideas further', as Fabian (2015: 218) claims. Computational comparisons between recorded performances also tend to support this argument (see Shaffer 1984: 584; Shaffer and Todd 1987; Cook 1995: 114). At the same time, it is widely recognised that performers can revise their approach fundamentally, as seen through the exceptional examples of Glenn Gould, Arthur Rubinstein and others (see Leech-Wilkinson 2009: 252; Fabian 2015: 218; Llorens 2018: 217).

If accepted, this interpretation has ramifications for our understanding of conductors' representations of structure: instead of a fixed, synchronically conceived phenomenon based on schemata or separation of segments, a conductor might understand a piece's structure in terms of multiple, sometimes contradictory, structural ideas, resulting in a flexible representation with variations in realisation – variations that might be further influenced by factors such as the orchestras, the halls and the recording technologies involved.

Chapter 4

Furtwängler's Shaping of Sonata Form: The First Movement of Brahms's Fourth Symphony

Introduction

Chapter 3 looked at Furtwängler's approach to a movement with a diffuse form, rich in structural affordances. This allowed an examination of the conductor's structural inclinations, which could come to the forefront seemingly unaffected by formal schemata. This chapter, by contrast, investigates the ways in which Furtwängler shaped a movement with much narrower formal interpretations.

The first movement of Brahms's Fourth Symphony has been interpreted as a sonata form since its premiere. An overview below of the analytical exegeses will show that the sonata paradigm has been the dominating way in which the piece is understood, with virtually no challenges made to the primacy of this form in the structural unfolding of the movement.

This provides a good opportunity to examine Furtwängler's approach to the form, which occupied a central position in his thinking about music, as Chapter 2 has shown. As discussed above, it was not the schema itself that interested Furtwängler but instead the 'fertility of the oppositions'.¹ Furthermore, his notion of the form was closely tied to a dynamic conception of the music, wherein the 'energy of becoming, inexorability and the force of forward motion' dominates.² Finally, he saw sonata form as being inextricably linked to the evolution of its subjects, which – he claimed – 'can never return twice without being completely changed'.³

Judging by the singular focus of analysts in the movement and the importance of the form in Furtwängler's thinking, one might expect Furtwängler's main structural strategy in the movement to revolve around highlighting elements of sonata form. However, this assumption betrays a paradigm that sees a performer's task in fulfilling the expectations of theorists – a view that is no longer tenable, as discussed in Chapter 1. Instead, a more productive approach would be to acknowledge the creative agency of performers by examining their performances

¹ See footnote 97 in Chapter 2.

² See footnote 96 in Chapter 2.

³ See footnote 99 in Chapter 2.

independently of preconceived formal expectations (as much as that is possible) – an approach that following analysis demonstrates.

Analysis of the Score

As mentioned above, analysts have understood the first movement of Brahms's Fourth Symphony in terms of sonata form almost without exception.⁴ Therefore, in the following I provide an overview of the movement and its possible interpretations within the sonata paradigm.

In order to gain a deeper understanding of the processual tendencies in the movement, I borrow two concepts from James Hepokoski and Warren Darcy's book *Elements of Sonata Theory*: that of 'medial caesura' and 'essential expositional closure', or 'EEC' for short.⁵ The medial caesura is the crucial moment in the exposition that establishes the secondary key and therefore prepares the arrival of the second subject. It is normally preceded by an 'energy-gaining zone of transition', culminating in an imperfect cadence in the new key.⁶ The EEC is the perfect cadence in the new key towards which the second subject and the exposition in general strive.⁷ Crucially, Hepokoski and Darcy emphasise that if a musical idea lacks either the preceding medial caesura or the subsequent EEC, it cannot normally be considered a second subject.⁸

Tentatively emerging from silence, the movement's main theme (henceforth *A*, bb. 1–8, Example 4.1) is perhaps one of Brahms's best-known melodies.⁹ It consists of two chains of thirds, one descending and one ascending, and it achieves an ephemeral character through the sigh-like gestures and off-beat wind accompaniment. The melody establishes the primary key of the movement: E minor. However, the theme is not rounded off harmonically, but it instead

⁴ To my knowledge, the only writer to propose an alternative reading of the movement was Edwin Evans ([1935]: 147–53), who suggested that the movement can be understood as a combination of sonata form and passacaglia form.

⁵ Hepokoski and Darcy 2006.

⁶ Ibid.: 18, 24. Hepokoski and Darcy define a medial caesura as the 'brief, rhetorically reinforced break or gap that serves to divide an exposition into two parts' (ibid.: 24). An essential part of it is the structural dominant, which is usually extended for a couple of bars through a dominant lock, following which the articulation of the medial caesura proper occurs. At this point, normally a general pause takes place in all voices, resulting in a sudden loss of energy, making way for the second subject. In many nineteenth-century movements, including Brahms's works, the general pause is filled in with some type of bridging material, which however still fulfils the expressive function of decreasing the intensity (: 24–44). See also Hunt 2009: 107–07.

⁷ Hepokoski and Darcy 2006: 18, 117–20.

⁸ Ibid.: 117. A focus on medial caesuras in the analysis of this movement is supported by Peter Smith's (2005: 147) suggestion that in mode-shifting expositions, Brahms often played with the conventions of medial caesuras as a fundamental way in which to create formal and tonal ambiguities.

⁹ In order to facilitate orientation, in this analysis, I use the designations '*A*, *B*, *C*, etc.' as a way to refer to unique and potentially salient elements of the thematic material, which go on to play important roles in the unfolding of the music, in the form of either themes or transitory material (see Examples 4.1–4.7).

leads directly into transitory material (henceforth *B*, bb. 9–18, Example 4.2). This section is tonally unstable and highly chromatic, and it represents a search for a new key (in bb. 9–14 leaning towards A minor), which is ultimately abandoned, circling back to E minor in bars 17–18.

In bar 19, *A* reappears and initiates a repetition of the entire process heard so far. As if the initial momentum was not strong enough to break through into a secondary key, bars 19–26 see an intensified version of the main theme. The melody is reinforced with quaver octaves, while the winds leave behind the off-beat accompaniment for a more pronounced formula in quavers, resulting in an increasingly richer texture. The repetition of *B* over bars 27–32 also brings a handful of changes: the chromatic ascent in the bass is replaced with a chromatic descent, which is now counterbalanced by a chromatically rising melodic line in the violins. However, this section ultimately fails to depart from E minor, which is likely the reason why it is interrupted before its conclusion by a reworked and intensified version of *B* (bb. 33–44), which more forcefully leads to the key of B minor. Indeed, bars 42–43 all but create a quintessential medial caesura in this new key (a crescendo provides an intensification, and an F sharp pedal appears in the bass and cellos) before derailing at the last moment (b. 44). This leads away from B minor to G major, failing to articulate the expected medial caesura.

In bars 45–53, a new lyric idea appears (henceforth *C*, Example 4.3), which introduces a sweeping melody and a contrast in texture. Perhaps as a result of the failed medial caesura, this section remains harmonically ambiguous, oscillating between G major, D major and B minor. In bars 53–57, new material (henceforth *D*, Example 4.4) interrupts the melody. This section creates stark contrast with what preceded it through the marcato and staccato articulation, the new rhythmic formula (dotted crotchet, semiquavers and quaver triplets) and the unisono of voices. *D* can be interpreted as a direct reaction to the harmonic failure of *C* to secure a secondary key. Functioning as a ‘shake-up’ or a disruption, *D* completely breaks with the meandering harmonic line of *C* and effectively hammers in the dominant of B minor to set up a medial caesura for a new potential second subject. However, while bars 53–54 function as a dominant lock, bars 55–56 – instead of articulating a traditional imperfect cadence – set up a full cadential pattern expected to end on the first degree of B minor.

Bars 57–73 present yet another unique melody (henceforth *E*, Example 4.5) and thereby a further candidate for the role of second subject. The cellos introduce a broad melody in B minor above an accompaniment based on *D*. This neatly shaped melody of 8 bars is then repeated in the violins, further establishing its importance. Although *E* has as yet the best prospects of being interpreted as the second subject of the movement, it falls short on some important fronts. For instance, despite the forceful attempt to set up a medial caesura by *D*, this

ultimately does not occur due to the ‘spoiled’ imperfect cadence in bars 55–56. Because of the lack of articulation, furthermore, *E* begins without a loss in energy, which contradicts the general rule for second subjects. Nonetheless, it is firmly set in the new key of B minor, which implies that it could lead to an EEC in this key and therefore conclude the exposition.

In bar 73, a transitory section based on *D* (bb. 73–79) and *A* (bb. 80–86) ensues. Instead of securing the secondary key of B minor and closing off the exposition, this section serves to destabilise the key (through extended G major and C major chords). However, from bar 87 onwards, the music leaves behind this tonal mire and quickly turns to secure a new key: B major. This unexpected turn is emphasised through a steep increase in energy, culminating in the first perfectly executed medial caesura of the movement in bars 93–94. At last, the long-awaited imperfect cadence takes place, following which the necessary drop in energy and a break in texture are delivered as expected.

In bar 95, a new melodic construct (henceforth *F*, bb. 95–98, Example 4.6) emerges in the winds, offering a still further possible second subject. However, after only four bars, the preparatory musical idea from bars 91–94 returns, which problematises the notion of *F* forming a coherent unit. Perhaps this is why the music seemingly loses momentum and purpose in bars 103–06, ultimately dissipating into harmonic ambiguity in bar 107.

In bar 107, another transitional section (henceforth *G*, Example 4.7) ensues, which introduces the musical idea of swirling, quasi-arpeggiating quavers over a held-out chord in *pianissimo*. Over bars 107–18, this is used in conjunction with *D* to destabilise the key once again, before circling back to the key of B major in bars 119–36, leading to a forceful re-establishment of this key and the long-awaited EEC in bars 135–36. In bars 137–44, the closing section proper can be said to take place, where *A* reappears in B major and then subsequently modulates back to E minor as part of the retransition.

The form of the exposition is by no means straightforward. As shown above, it incorporates three distinct key areas (E minor, B minor and B major: I–v–V), it presents at least three viable options for a second subject, and it showcases developmental techniques (such as the modified repetition of *A* and *B*).¹⁰ First, it is useful to consider the type of the exposition. Three-key expositions are common in Brahms’s music (in a general sense, the first movements of all of

¹⁰ The choice of B minor as the second key of the movement represents a common choice of key in minor-mode movements. Besides the primary choice of the mediant (III), the minor dominant (v) – and in the 19th century increasingly the submediant (VI) – was the most common option for composers. However, as Hepokoski and Darcy (2006: 314–15) argue, this is considered a ‘doggedly negative tonal choice’, which denies the transformation (or ‘emancipation’) of the minor mode into major, resulting in a ‘chillingly dark, fatalistic, punishing, or pessimistic referential layout’. By ending the exposition in the parallel major mode, Brahms therefore rejects this bleak option in favour of a more optimistic alternative.

his symphonies belong in this category).¹¹ However, some writers make a distinction between movements in which the three keys represent three different tonal centres – which they consider to be the basis of a three-key exposition proper – and those where a change in mode results in the extra key.¹² Notwithstanding these issues of categorisation, one possible interpretation of the ‘narrative’ of this exposition is the continuous pursuit for a contrasting key and an appropriate second subject, which are achieved at an unusually late point in the movement after having experimented with various musical ideas and an intermediary key.

Having discussed the exposition in depth, let us now move on to the rest of the movement. The development begins with a false repetition of the exposition in bar 145.¹³ In bars 145–56, one hears an almost exact repetition of *A* and *B*, which is then interrupted by new developmental material starting in bar 157. This is clearly meant to play on the listener’s expectations, and it ultimately serves to blur the divide between the exposition and the development. From here, the music goes on to use the main thematic ideas of *A* and *B* and the transitory materials of *D* and *G*. Based on these, the development might be segmented as follows: bars 145–83 (*A* and *B*), bars 184–218 (*D* and *G*) and bars 219–46 (‘closing section’, *A* and *B*).¹⁴

Similarly to the development, the beginning of the recapitulation is also concealed. After bars 243–45, which function as a retransition, bar 246 witnesses the return of the main theme, albeit in augmented form. Interspersed with *G* as a harmonic destabiliser, the first four bars of the original theme are played in this manner, after which the material regains its original form from bar 259 onwards.¹⁵ What follows is a regular recapitulation wherein all materials of the exposition return, now transposed to E (*C*–*E* in E minor and *F* in E major). They are presented largely unchanged until bar 371, whereupon a newly composed intensification leads to a climax heralding the arrival of the coda in bar 394, which then concludes the movement with the use of *A*–*C*.

¹¹ First Symphony, op. 68: I–III–iii; Second Symphony, op. 73: I–iii–V; Third Symphony, op. 90: I–III–iii.

¹² So argues, for instance, Hunt (2009: 102–03), who accordingly excludes the first movements of the First, Third and Fourth Symphonies from his overview of this type (which he terms ‘three-key trimodular block exposition’), although he acknowledges that expositions with a change in mode represent an important sub-category of expositions in Brahms’s oeuvre. In contrast, Graybill (1988: 141–42) contends that mode-changing expositions form an integral part of Brahms’s three-key expositions, especially those where the segmentations between modes are clearly articulated. See also Smith 2005: 133–40.

¹³ Note that a number of writers (Vetter 1914; Hekkers 1991; Schmidt 1998) identify bar 137 as the beginning of the development section.

¹⁴ Schmidt (1998: 262) reaches a similar conclusion. Alternative readings include those of Vetter (1914: 131–39): bars 137–84, 184–227, 227–58; Richter (1986: 197): bars 145–84, 184–227, 227–46; Mäckelmann (1991: 31–32): bars 144–56 being *A*–*B*, bars 156–68 being 1. variant of *A*–*B*, bars 168–84 being 2. variant of *A*–*B*, bars 184–92 being *D*, bars 192–206, bars 206–19 being *D*, bars 219–46 being 3. variant of *A*–*B*; Brodbeck (1997: 257): bars 157ff. being 1. variation of *A*–*B*, bars 169ff. being 2. variation of *A*–*B*, bars 219ff. being 3. variation of *A*–*B*; and Schmidt (1998: 262): bars 137–84, 184–219, 219–46.

¹⁵ Vetter (1914: 140) and Bozarth (2019: 135) actually argue that the recapitulation proper begins at bar 259, once the original note values are restored.

While most analysts agree on the general form and layout of the movement, the diffused nature of the materials in bars 45–144 has led to divergent conclusions regarding the interpretation of the exposition (Table 4.1). For the most part, writers seem to regard *E* (bb. 57–73) as the second subject. This reading is supported by, for instance, Donald Francis Tovey, Julius Harrison, Egon Voss, David Brodbeck and George Bozarth.¹⁶ Philip Austin Browne also interprets *E* as the second subject, while he characterises *D* as an ‘important subsidiary theme’.¹⁷ In their highly similar interpretations, Michael Mäckelmann and Christian Martin Schmidt both identify *E* as the most important secondary thematic material of the exposition, calling it ‘2. Thema’ and ‘Seitenthema’ (‘secondary theme’), respectively. However, instead of relegating *D* and *F* to transitions, they give them unique, but rather vague, formal designations: *D* is described as ‘Seitensatzmotiv’ (‘motif of the second-subject group’) by Mäckelmann and as ‘Seitensatz-Hauptmotiv’ (‘main motif of the second-subject group’) by Schmidt, and *F* as ‘Seitensatzepisode’ (‘episode of the second-subject group’) by Mäckelmann and as ‘episodische Themengruppe’ (‘episodic group of themes’) by Schmidt.¹⁸ Robert Pascall and William Hekkers avoid this issue altogether and simply identify *E* as the beginning of the second-subject group, which would go on to incorporate *F* as well.¹⁹

Although there is a broad consensus behind the idea of *E* functioning as the second subject, some writers arrived at alternative interpretations of the exposition’s thematic material. For instance, *D* was reportedly interpreted as the second subject by Karl Geiringer and as the beginning of the second group by James Webster.²⁰ By contrast, *F* emerges in a similar role in the exegeses of Edwin Evans, Walter Frisch and Kofi Agawu.²¹

There is also a considerable number of writers who entirely circumvent the issue of identifying a second subject and rather describe the various themes as largely equal in structural significance. In 1887, Hermann Kretzschmar called *D* a ‘Gegenthema’ (‘countertheme’), *E* ‘Seitenthema’ (‘secondary theme’) and *F* ‘zweite Thema’ (‘second theme’) – terms that were used interchangeably in the German literature of the time to describe the second subject.²² Max Kalbeck identified *D* as ‘Seitenthema’ (‘secondary theme’) and *E* as the ‘dritte Thema’ (‘third

¹⁶ Respectively: Tovey 1935: 117; Harrison 1939: 264; Voss 1996: 246; Brodbeck 1997: 257; Bozarth 2019: 135.

¹⁷ Browne 1933: 58.

¹⁸ Mäckelmann 1991: 31–37; Schmidt 1998: 262–63.

¹⁹ Pascall 1973: 108–09, 115–16; Hekkers 1991: 54.

²⁰ Geiringer’s interpretation was relayed by Harrison (1939: 264). The source of this information was apparently Geiringer’s foreword to the symphony’s ‘Philharmonia Miniature Score’. Webster’s analysis comes from Webster 1990: 52–53.

²¹ Evans [1935]: 147–53; Frisch [1996] 2003: 117–20; Agawu 1999: 145. Note that Frisch – seemingly inadvertently – provides two contrasting interpretations for the beginning of the second-subject group.

²² Kretzschmar [1887] 1921: 304. For discussion on terminology, see Blumröder [1995] 2006: 17–18.

theme’).²³ Walther Vetter instead called *E* ‘zweite Gedanke’ (‘second idea’) and *F* ‘dritte Gedanke’ (‘third idea’).²⁴ Similarly, David Osmond-Smith equated *E* with the second subject and *F* with the third subject.²⁵ Finally, Christoph Richter argued that the exposition incorporates two fundamental ‘themes’ or ‘projects’: ‘project A’ in bars 1–19 and ‘project B’ in 53–80, the latter of which comprises two ‘signals’ (*D* and bb. 77ff.) and a ‘melody’ proper (*E*).²⁶ However, he admitted that *F* appears important enough to be given the description ‘project C’.²⁷

Along with contrasting approaches to the parsing of the movement, a handful of analysts also disagree about the nature of the movement as a whole. Some writers argue that the movement lacks the overriding dramatic process typical of most romantic sonata forms, especially those by Beethoven. Agawu, for instance, contends that the idea of sonata form here is rather a ‘flexible, fantasy-driven scheme’, with no ‘obvious causality’ in the emergence of musical materials, and that there is no real ‘first movement discourse’ to be found.²⁸ Osmond-Smith goes so far as to claim that the movement serves as an example of Brahms’s ‘regression to a more rigid and sectionalized view of sonata form’, rejecting the ideas of ‘dynamic growth’ and ‘overriding process’.²⁹ By contrast, Richter maintains that due to the prevalence of developmental processes throughout the movement and the blurring of structural segmentations, the music is dominated by ‘dramatische Handlungszüge’ (‘dramatic streams of action’), within which the melodic ideas of the exposition function as ‘Inseln der Ruhe’ (‘islands of repose’).³⁰ Similarly, Schmidt argues that the movement incorporates multiple processes of development, all directed towards the end of the piece.³¹

From these writings it emerges that the movement is generally interpreted strictly within the sonata paradigm. These primarily synchronic exegeses seem to be preoccupied with a taxonomy of the movement’s various musical ideas, while the broader dynamic tendencies within the music are interrogated only by a handful of writers. This suggests that a conductor’s main structural focus – according to the analysis-centred view – ‘should’ be to identify and

²³ Kalbeck 1913: 464–66.

²⁴ Vetter 1914: 83–87.

²⁵ Osmond-Smith 1983: 152.

²⁶ Richter 1986: 195–96.

²⁷ Ibid.: 196–97.

²⁸ Agawu 1999: 145–46.

²⁹ Osmond-Smith 1983: 150–51.

³⁰ Richter 1986: 196–98. Richter’s association of the blurred segmentations with processuality is corroborated by Reddick (2010), who argued that such divisional overlaps are directly related to the concept of structure as ‘becoming’, as described by Schmalfeldt (2011).

³¹ Schmidt (1999: 93–97) asserted that besides the ‘dynamic highpoint’ in the coda towards which the movement strives, ‘a total of three developmental processes stretch over the entire movement’, two of which emanate from the first subject and one from the second subject (‘den gesamten Satz mit einem Netzwerk von insgesamt drei variativen Entwicklungszügen zu überspannen’). See also Schmidt 1998: 257–61.

appropriately highlight the second subject proper – which is seen as *E* by the large majority of writers.

At first glance, these circumstances might call for an analytical methodology whereby the performances are tested against the theoretical ideal of sonata form – an approach that would be in line with earlier work in the discipline.³² However, a focus on sonata form would unavoidably skew the perception and interpretation of the structural constructs emerging in Furtwängler's performances, which may or may not be related to sonata form. In order to circumvent this issue, every effort was made to analyse the recordings below from a neutral perspective, allowing the performances themselves to engender a sense of structure or narrative instead of viewing them through the lens of a preconceived formal conception.³³ Once the emerging structural formations have been identified, a juxtaposition is made with sonata form, examining the relevance of the form to Furtwängler's shaping of the movement.

Recording Analysis³⁴

WF 43a/I

Let us now examine Furtwängler's approach to the movement. In his earliest recording, Furtwängler clearly accentuates the emerging quality of the main theme. Rather than establishing a stable tempo with the first notes, he begins the movement extremely slowly, only gradually building up the tempo over the next few bars (Figure 4.1b). The rest of the theme is then played relatively slowly and with a low level of dynamics, which creates an impression of stillness, as visualised in Figure 4.1a ('Sense of Motion' no. 1). Over bars 9–18 (*B*), the material becomes slightly more dynamic. However, rather than creating a highpoint in bar 13, as the conductor does in some of his later recordings, here this section is instead shaped as a broader intensification leading towards bar 17.³⁵ From bar 19 until the arrival of *C* in bar 45, an extended and dramatic intensification takes place, resulting from a significant increase in both tempo and dynamics.³⁶

³² See page 36 in this thesis.

³³ See page 40 in this thesis..

³⁴ Since the recordings discussed in this chapter correspond to those in Chapter 3, the general overview provided there (page 103) applies to this analysis as well. See also Tables 3.1–3.2.

³⁵ Although the tempo indeed peaks around bars 12–13, the intensification in dynamics towards the end of the phrase counterbalances this.

³⁶ Although the tempo curve shows a sharp jump in tempo rather than an extended rise (indeed, it seems to plateau after bar 25), the more gradual increase of dynamics and the progressively developing musical material create an impression of constant intensification coupled with a sense of a strong drive forwards.

As *C* arrives, in bar 45, the intensity suddenly drops, reflecting a parallel break in both tempo and dynamics. Although over the course of *C* the tempo undergoes a brief surge and decrease in preparation for *D*, overall, this section is experienced as a halting of the developmental process, and even perhaps as a brief lyric episode. Following this, *D* (bb. 53–57) is perceived to launch a new section, primarily due to the preceding decelerando and the reestablishment of the previous tempo. After the brief moment of repose provided by *C*, *D* renews the dramatic drive. *E* (bb. 57–73) connects seamlessly to *D* and initially occupies the same level of intensity and drive. However, the repetition of the melodic idea from bar 65 onwards introduces a new line of intensification, which is reflected in tempo. This gives *E* a transitory quality. The transition proper starting in bar 73 continues this intensification, despite the sudden reduction in texture in bars 81–86. Eventually, it becomes clear that this extended process leads directly towards bars 93–94 (the medial caesura in the sonata interpretation), which is experienced as a true breakthrough moment, emphasised by the peak in dynamics and the subsequent fall in energy.

Due to the sharp decrease in tempo and dynamics, the beginning of *F* in bar 95 is experienced as a crucial marking point. *F* itself is played at a significantly lower level of tempo and dynamics, coupled with an almost complete lack of drive. After a few bars of extending the reposeful character established by *F*, *G* begins a sharp intensification towards bars 135–36 (the EEC in the potential sonata form), which is perceived as the second and most important breakthrough moment in the exposition and as the conclusion of a broad goal-oriented process reaching back to the beginning of the movement. The closing section of bars 137–44 then rounds off the exposition and prepares the development.

The reiteration of the main theme at the beginning of the development (b. 145) is played at a noticeably faster speed than before, which eliminates the functional ambiguity inherent in this section and clearly marks the arrival of a new episode. Between bars 145 and 183, one experiences a sustained line of intensification, which is reflected both in tempo and in dynamics. Although those curves show a break at around bar 169, this does not translate into a perceived segmentation. This is partly because the drop in tempo seems to have been calculated to offset the sudden increase in dynamics and texture prescribed by the score. This way, the fall in tempo actually serves to minimise the disruption and ensure continuity over these bars.³⁷

Bars 184–205 introduce a sudden break in texture, tempo and dynamics, unavoidably resulting in a segmentation. However, Furtwängler's goal seem to have been to minimise the

³⁷ Also, the contrast in dynamics appears smaller than in some of Furtwängler's later recordings, for instance those from 1948 – however, this impression might simply be the result of the overall flatter dynamics curve of WF 43a/I.

disruption to the overall process of intensification: instead of dropping the tempo immediately in bar 184, he instead decreases it gradually over bars 184–91. After this decelerando, the music becomes imbued with instability and underlying tension, which is reflected in the sharp bursts of tempo and dynamics, creating an impression of a brief break in the broader process of intensification rather than a truly contrasting section.

Bar 206 re-establishes the high intensity level of bars 169–83, and it is indeed perceived as continuing the larger line of intensification that was briefly interrupted in bars 184–205. Ultimately, this leads to a moment of climax in bars 217–18. Due to the forcefulness of this intensification over bars 145–83 and the minimised disruption caused by bars 184–205, the entire development can be experienced as building up to this climax.

Just as bars 184–91 acted as the postlude to the climax reached in the previous bars, bars 219–26 serve to round off the high intensity reached in bars 217–18. In bar 227, the tempo and the intensity in general plateau. Over bars 243–45, the tempo comes to an almost complete halt, which seems almost shocking within this highly driven performance. Since no change in tempo is indicated in the score, we can safely interpret this as Furtwängler's way of highlighting a fundamental structural marking point (corresponding to the arrival of the recapitulation).

In the recapitulation, an extremely slow tempo is maintained throughout the augmented part of *A* (bb. 246–58). However, a gradual increase in dynamics over these bars indicates that this section is already part of a new process. Once the main theme regains its original form in bar 259, it is shaped in a way that contrasts starkly with its original statement. As opposed to the static character of the beginning, here *A* is imbued with a strong sense of drive. The section is played c. 10 MM faster than in the exposition,³⁸ and the tempo curve shows a sharper surge and decline over bars 259–72. The repetition of *A* and *B* (bb. 273–88) follows the same approach as at the beginning by executing a broad and dramatic intensification. However, since this section is shorter than its previous iteration by about 10 bars, this intensification cannot reach the same heights as previously.

Curiously, *C* (bb. 289–96) is shaped rather differently upon its return. Instead of forming a lyric episode, it is now integrated within the broad line of intensification.³⁹ Alongside the dramatic reshaping of *A* and *B*, a more processual characterisation of *C* helps to create an uninterrupted line of intensification directed towards the end of the piece. As a result of *C*'s integration, *D* and *E* no longer appear separate from *C*; instead, they seamlessly advance the intensification. There is an interesting difference in the shaping of the returning transition in bars

³⁸ Based on measurement in minims.

³⁹ This is reflected in a tempo increase over this section, which stands in contrast with the previous iteration of *C* (Figure 4.1b).

317–38: instead of building up towards bars 337–38 (i.e. the medial caesura in the sonata interpretation), here the performance seems to round off the gesture of intensification and create a smoother connection to *F*. This is clearly visible on the tempo and dynamics curves, which now take the shape of an arch rather than a cliff. Ultimately, a smoother joint between *A–D* and *F* helps to maintain one sustained line over the entire recapitulation.

Although *F* is still shaped as a contrasting lyric section, it now connects more organically to everything that it follows. *G* preserves this character for slightly longer, perhaps as a way to prepare the subsequent monumental intensification, which leads to the most powerful climax of the movement. The tempo curve clearly shows this extended intensification, which confirms the goal-oriented nature of the recapitulation.

In Furtwängler's 1943 recording, the movement is experienced primarily as a succession of three broad lines of intensification: bars 1–136, bars 145–218 and bars 246–440. Ultimately, they can be perceived as forming one line embracing the entire movement and leading from the beginning towards the end of the piece. In this way, the shaping of the first movement in this recording reflects clearly that of the last movement, as discussed in the previous chapter. However, one important difference makes WF 43a's goal-oriented approach more effective in the first movement. While performing the finale, Furtwängler does not allow any respite in the relentless drive towards the end of the piece. Here, by contrast, the reposeful episode of *F* and the dramatic halt at the beginning of the recapitulation serve to provide the necessary break that allows the final intensification to succeed. The overall impact of this is further enhanced by the shaping of the very beginning of the movement, the markedly slow tempo of which sets up a long trajectory towards the frantic coda.

While creating an emphatically end-oriented process, Furtwängler's shaping of structure also shows many similarities with sonata form. On a basic level, the segmentation between the three major sections of the form (exposition, development and recapitulation) is strongly emphasised. Furthermore, the exposition's main structural events are clearly highlighted. The medial caesura and the EEC (the two primary structural goals of a sonata exposition) are both clearly emphasised by shaping them as moments of climax and the goals of extended intensifications. Moreover, one of the lyric ideas of the exposition is shaped as a quintessential second subject: through the preceding medial caesura and a contrast in character and dramatic drive, *F* is readily perceived as the second subject of a sonata form. As we have seen above, although this goes against the general interpretation of *E* as second subject, the selection of *F* seems rather appropriate from a tonal and functional perspective. Further connections to sonata form can be observed in the recapitulation, where the shaping of the returning materials also

reflects the changes in their structural roles: no longer a candidate for second subject, *C* is now integrated into the larger process; also, the medial caesura no longer brings a climax since it no longer serves as a tonal turning point. Therefore, Furtwängler's shaping of the movement yields a high-level 'logic' which can be seen as parallel, or at least analogous, to the 'logic' implied by, or inferable from, sonata form.

WF 22/10/48/I

The first thing to note about Furtwängler's next recording of the movement is the significantly narrower spectrum of intensity that it traverses compared to WF 43a/I.⁴⁰ As the intensity curve shows (Figures 4.2 and 4.8), WF 22/10/48/I is perceived to occupy a significantly lower level of intensity in general. This change is also reflected in the sense of drive, which appears weaker. Despite these discrepancies, the overall shapes of the performances and their structural tendencies are highly comparable.

A and *B* begin at a higher tempo than in WF 43a/I and appear more dynamic from the very beginning (Figures 4.3 and 4.9). In this way, bars 1–18 no longer function as an introduction of sorts, but rather as an initial thrust of intensification that is then repeated and extended over bars 19–44. The latter section still presents an intensification leading towards *C*, but it does not reach the same heights as in WF 43a/I (Figure 4.8).

C here does not form a contrasting section, but instead functions as a rounding-off gesture for the preceding intensification, thereby cementing its transitory role. This is shown in the tempo curve, where bars 45–52 now highlight a sharp decrease in tempo instead of an arch shape. This, however, makes the entrance of *D* an important marking point. In contrast to WF 43a/I, where *D* and *E* were experienced as taking up the threads of intensification left behind in bar 45, here they seem to begin an entirely new section, separate from *A–C*. *D* and *E* are once again connected to each other seamlessly, and *E* no longer witnesses an intensification.

Interestingly, the transition leading towards *F* (bb. 73–92) does not show signs of an intensification; instead, it creates a smooth transition between *A–E* and *F*. This creates an almost perfect tensional arch shape from the beginning of the piece until *G*, which is also reflected in the tempo curve. Despite the weaker contrast that it brings, *F* is still experienced as an independent lyric section. Its importance is also supported by the fact that it is essentially extended with the first seven bars of *G* (bb. 107–13), which preserve the same peaceful quality and relatively slow

⁴⁰ As discussed on page 51 in this thesis, the intensity curves within each chapter are mutually calibrated, reflecting their relative differences.

tempo. The exposition then concludes with an intensification towards bars 135–36 (the supposed EEC).

Perhaps the biggest difference between WF 43a/I and WF 22/10/48/I lies in their shaping of the development. As opposed to the fluid lines of WF 43a/I, here one experiences rather fragmented blocks. Bars 145–83 are now broken up into three more or less distinct units: bars 145–56, showing a brief intensification; bars 157–68, which prepare the ensuing *forte* section but do not connect to it as smoothly as in WF 43a/I; and bars 169–83. These sections can still be experienced as forming one broad line of intensification leading towards bar 183, but the segmentations are more pronounced. Furthermore, the contrast introduced by bars 184–205 is no longer minimised but instead heightened. This section is now clearly separated from the two *forte* outbursts surrounding it, making the impression of the development more static overall. The same applies to bars 219–26, which introduce contrast and form an independent unit.

Bars 243–57 (the beginning of the recapitulation) are marked by an extreme halt in musical time similar to that in WF 43a/I. The returning *A* and *B* go through an important transformation in that they appear significantly more driven than their counterparts in the exposition, reflected in the overall higher tempo ('Sense of Motion' no. 1 in Figure 4.2). This seems to be aimed at launching a new line of intensification towards the coda. This newly found drive leads to the reshaping of *C*, which now preserves the intensification and the momentum, instead of breaking them. *D* and *E* appear more driven as well, although this does not seem to translate into an intensification in general. The rest of the movement plays out similarly to WF 43a/I, with the exception of the coda, which does not reach the same heights in terms of tempo, but slightly widens out towards the end of the piece.

Overall, the performance still preserves the structural idea of end-oriented intensification, though its execution changes. Instead of broad lines of intensification building upon each other, here a new technique emerges: instilling the recapitulation (bb. 246–440) with more drive than the exposition (bb. 1–144), therefore presenting the entire movement as an intensification. However, its effect lags behind that of WF 43a/I.

WF 22/10/48/I also seems to introduce a new structural principle: that of the contrasting middle section. Instead of continuing the processes begun in the exposition, the development (bb. 145–246) presents a contrasting approach to the musical material. As opposed to the fluid lines and dynamic shaping of the exposition, the development introduces clearly separated blocks, turning it into a collection of short episodes. Furthermore, as opposed to the developmental processes leading towards *C* and bars 135–36 in the exposition, here one witnesses sudden outbursts in the form of bars 169–83 and 206–18. Ultimately, therefore, the

movement emerges as a tentative ABA' form, although the symmetry is not perfect due to the significant transformation of materials in the recapitulation.

In contrast with WF 43a/I, this recording lends itself less to a reading in terms of sonata form. Through the smoother connection between *A–E* and *F*, the tonal breakthrough of the medial caesura is underemphasised, and therefore the tonal processes of the exposition are not highlighted as clearly as in WF 43a/I. Indeed, the medial caesura in the recapitulation seems almost more emphasised, which contradicts its lessened formal importance. Furthermore, due to the increased sense of drive in the recapitulation, *A–F* emerge as more dramatic and intense upon their return than in the exposition, which generally goes against the idea of resolution inherent in sonata recapitulations – however, this might also be interpreted as bringing the movement closer to the ‘high’ romantic sonata conception, wherein the ‘statistical climax’, as Leonard Meyer calls it, ‘tends to occur late in the form, often in the coda’.⁴¹ *F* still emerges as a clear second subject, although it is not as prepared as in WF 43a/I. Overall, therefore, WF 22/10/48/I seems to be governed by the structural ideas of the overarching intensification and the contrasting middle section, while sonata form appears less relevant overall.

WF 24/10/48/I

Corroborating the findings of the previous chapter, the two recordings from 1948 represent remarkably similar performances. The overall tension profiles of these performances are perceived as highly compatible (Figure 4.2), reflecting a close similarity in tempo and dynamics (Figures 4.3–4.4). However, some crucial differences result in contrasting structural interpretations.

In WF 24/10/48/I, the shaping of the first eighteen bars of the movement differs only slightly from that seen in the previous recording. Here, *A* emerges as a peaceful episode with no real sense of drive. It is only in bar 9 that an intensification begins; however, it is more forceful than in WF 22/10/48/I, and it creates a tensional peak in bar 13 before dissipating. This contrast between the recordings is not immediately evident based on the tempo curves; it is indeed in dynamics that a higher peak is created in bar 13 than in bar 17.

The intensification towards *C* unfolds in a similar fashion except that a slightly faster tempo is reached in WF 24/10/48/I. *C* itself seems to maintain the high level of intensity and it decreases only with the textural change in *D*.⁴² This does not alter the function of *C* as a

⁴¹ Meyer 1989: 306. Meyer defines ‘statistical climax’ as ‘the place at which the secondary parameters reach their greatest degree of intensity: highest (and lowest) pitches, most frequent rate of attack, high acoustic tension (discord), loudest dynamic, most forceful sonorities, and densest textures’ (ibid.). See also Rosen 1988: 393.

⁴² This is also reflected in a smaller decrease in tempo over these bars compared to WF 22/10/48/I.

transition. *D*, which joins seamlessly to *E*, does not continue at the previous tempo but instead begins at a noticeably higher speed, which only increases with the arrival of *E*. Ultimately, this results in this section occupying an overall higher level of intensity than previously and played with a stronger sense of drive. Over the transitory section of bars 73–94, the intensity is sustained for a longer time and drops rather sharply just before the arrival of *F*, which is also reflected in the tempo and dynamics curves. As a result, the contrast created by *F* is sharper than in the previous recording. Following this, the rest of the exposition unfolds similarly.

The overall shape of the development (bb. 145–246) is once again rather similar to that of WF 22/10/48/I. The only real difference is that bars 145–68 now appear even more fragmented. This is achieved through a wider fluctuation in the sense of drive, and through the more disjointed beginning of the *forte* section in bar 169. This fragmentation is also reflected in the tempo curve, where this section (bb. 145–168) appears to have three distinct ‘waves’ as opposed to one overarching line. The rest of the development is performed in largely the same way as in the previous recording. As for the recapitulation (bb. 246–440), the only major difference concerns the shaping of *A* and *B*, which mirrors the approach taken in the exposition.

In general, the most consequential difference between the two recordings lies in the exposition (bb. 1–144). While this is shaped in a largely similar fashion in WF 22/10/48/I and WF 24/10/48/I, the overall stronger intensity and momentum created in the later recording have a profound impact on the overall structure of the performance. Since the recapitulation is no longer experienced as an intensified and more driven version of the exposition, the effect of the overarching intensification is greatly diminished. Instead, an almost perfect symmetry emerges centred around the contrasting development. First, similarly to WF 22/10/48/I, this provides fundamental contrast with the surrounding sections through its more fragmented blocks – which are further emphasised here through the more sectionalised approach to bars 145–68. Second, the perceived tensional shape and indeed the tempo and dynamics curves show an almost identical replication of the exposition in the recapitulation, which creates a sense of balance. In other words, in WF 24/10/48/I Furtwängler downplays the importance of the goal-oriented process and instead emphasises overall symmetry, resulting in a clear ABA’ form. Similarly to WF 22/10/48/I, sonata form emerges as secondary in importance to the structural shaping of WF 24/10/48/I. Although this performance might be interpreted as a return to a more classical sonata conception through the elimination of intensification in the recapitulation, due to the underemphasised nature of certain key elements of the exposition (the medial caesura in particular), sonata form is overshadowed by the idea of the contrasting middle section, which seems to be the dominating structural principle of the performance.

WF 49/I

In its overall shape and structural conception, WF 49/I is closely related to the recordings from 1948, especially WF 22/10/48/I. Indeed, in terms of the perceived tension profile (Figure 4.5a), the development and the recapitulation (bb. 145–246 and 246–440) appear almost identical in the two recordings – an impression that is also supported by the tempo and dynamics data (Figures 4.5b and 4.9).

The way in which Furtwängler shapes the exposition (bb. 1–144) in WF 49/I relates to the structural principles explored in WF 22/10/48/I. In the latter, Furtwängler experiments with enhancing the effect of the overall intensification by heightening the drive in the recapitulation of the previously heard materials. In WF 49/I, the conductor seems to follow the same approach, but this time he takes this idea to the extreme.

The first fifty bars of the movement are played noticeably slower than in any of the previous recordings. *A* and *B* (bb. 1–18) are c. 10 MM slower than in the 1948 recordings and 5 MM slower than in WF 43a/I. In addition to their extremely low base tempo, *A* and *B* here also lack the kind of strongly driven tensional waves seen in previous performances, as a result of which they are experienced as mostly static in character. Bars 19–44 witness the now familiar intensification, which, however, is significantly weaker than previously. The tempo traverses an area that is c. 10 MM slower than in 1948, and the line seems to be broken up into two halves at the return of *B* in bar 27, which further weakens the overall strength of this intensification.

By the time *C* arrives, a considerably lower level of intensity has been achieved than in the previous recordings. *C* itself is experienced as a transition, maintaining the same intensity and surrounded at both ends by small decelerandos. *D* begins at a significantly higher tempo, as a result of which it is perceived as launching a new section at a slightly higher level of intensity (in contrast with the 1948 recordings, where it seems to start lower). *D* once again connects organically to *E*, which slightly increases in tempo during its second iteration (bb. 65–73). However, this does not translate into an increase in overall intensity since the tempo drops noticeably with the arrival of the transition in bar 73.

Interestingly, the contrast between *A–E* and *F* here appears to be the smallest amongst any of Furtwängler's recordings. Although the articulation of *F* is still clear, what follows does not seem to introduce a truly contrasting character; rather, it continues what came before. However, the contrast in tempo and dynamics here is not noticeably smaller than that in the recordings from 1948 (especially WF 22/10/48/I). This impression of smoother connection is perhaps due to the slow base tempo of the performance, in the context of which the shaping of *F* as a peaceful and slow episode no longer strikes the listener as unique, leading to its perception as

a less important structural segmentation.⁴³ Indeed, the arrival of the transitory *G* creates an almost more substantial marking point through its preceding articulation than *F* itself. Overall, this connects *F* to *A–E*, resulting in an almost perfect arch shape in terms of intensity and tempo. At the end of the exposition, an intensification leads up to bars 135–36 (the EEC), which still function as the primary highpoint of the section.

As mentioned above, the rest of the movement unfolds very similarly to WF 22/10/48/I. The development (bb. 145–246) is experienced as a collection of independent blocks, wherein two *forte* outbursts emerge out of the primarily *piano* material. The recapitulation (bb. 246–440) represents a fundamental transformation of materials compared to the exposition. The music is now instilled with a strong sense of drive and is played at a noticeably faster tempo (c. 10 MM faster) than in the exposition, which ultimately creates a drive towards the coda. *C–F* are also shaped rather differently than before. Instead of rounding off the intensification that came before it, *C* now actually continues it, reaching a peak of intensity not experienced in the performance before.⁴⁴ *D* and *E* are no longer presented at a noticeably faster tempo, and as a result their thinner texture translates into a lower level of intensity. Furthermore, due to the higher overall tempo of *A–E*, *F* – which occupies the same range of tempo as in the exposition – now brings more contrast than previously. Finally, the beginning of *G* no longer creates segmentation, although now there is a noticeable fallback in tempo and intensity over the following bars (bb. 354–57), which seemingly prepares the launch of the final intensification.

Behind this shaping of the movement seemingly lies a strategy already explored in WF 22/10/48/I: an overarching intensification through the reshaping of materials in the recapitulation. However, the execution of this idea in WF 49/I leads to a separation of the first two sections from the recapitulation. Due to the restrained nature of the exposition, the most salient features of the music before the recapitulation appear to be the mostly unprepared *forte* climaxes: bars 135–36 and the two outbursts in the development (bb. 169–83 and 206–18). Due to this and their similarity of character, they are likely to be connected in the mental image of the listener as providing the primary structural process in the movement up until the recapitulation.⁴⁵ As a result, while the first two sections are closely linked through their climaxes, the broad line of intensification created in the recapitulation feels disjointed. This leads to the lopsided structure illustrated in Figure 4.5a (‘Grouping’ no. 4b). Fundamentally, neither of the structural ideas discussed above appears to be consistently executed in this recording: overarching intensification

⁴³ This emphasises the importance of salience in the experience of musical structure in performance. See pages 34–35 in this thesis.

⁴⁴ This is also reflected in tempo, where – in the recapitulation – a higher peak is reached in *C* than over *A–B*.

⁴⁵ See the discussion of saliency in the context of structural perception in Chapter 1 (pages 34–35).

is probably the dominating idea of the performance, but its effect is weakened through the separation of the recapitulation from the first two sections; due to the connection between the exposition and the development, furthermore, there is no sense of a contrasting middle section; finally, sonata form seems to be the least relevant structural idea here amongst Furtwängler's recordings due to the underemphasised medial caesura, the lack of contrast in the exposition and because of the fundamental transformation of materials in the recapitulation. Ultimately, the recording can be seen as generally pursuing the principles of arch shape (exposition) and intensification.

WF 50a/I

Even though Furtwängler's 1950 recording was made with a different orchestra (Vienna Philharmonic), it seems directly connected to WF 49/I in both overall shape and structural priorities. A comparison of the tempo and dynamics curves shows that WF 50a/I is indeed highly comparable to WF 49/I (Figures 4.6b and 4.9). The tempo in particular is moulded in a remarkably similar manner in terms of both overall shape and MM values. The only major difference in dynamics concerns bars 31–47, where a brief distortion in the sound quality of the recording itself causes a sudden drop in loudness.⁴⁶ These similarities are also reflected in the tension curves (Figures 4.6a and 4.8), in which only the shaping of the development (bb. 145–246) differs in a significant fashion – although this difference has far-reaching consequences.

Similarly to WF 49/I, WF 50a/I takes the beginning of the movement at an extremely slow tempo and with a low sense of drive, leading to a relatively low level of intensity at the end of the intensification of bars 19–44. *C* at first falls back in tempo and dynamics, which creates the expectation of a lyric section. This impression, however, soon changes when an internal intensification begins after a few bars, solidifying *C*'s function as a transition. As a result, the arrival of *D*, which connects organically to *E*, is experienced as the beginning of a new section. Although *E* might first seem to introduce a self-standing lyric episode, it soon launches a significant intensification in both tempo and dynamics, which gives it a transitory character. In comparison with WF 49/I, here the transition beginning in bar 73 does not drop in intensity but rather remains at the same level. Due to this higher level of intensity, the preparation and arrival of *F* once again seem significant and highly contrasting. Afterwards, *G* is not separated from *F*, but rather extends it briefly. Finally, the highpoint in bars 135–36 (the EEC) is reached through a new line of intensification.

⁴⁶ This is seemingly present in all modern CD transfers of the recording, and it unfortunately affects not only the listening experience but also the loudness data, which consequently provides a less reliable basis for comparison.

The primary difference between WF 50a/I and WF 49/I lies in the contrasting treatment of the development. There are two components to this. First, the entire section in WF 50a/I is experienced as having a relatively fast but rather stable tempo. This unifies this section and puts it in contrast with the highly dynamic tempos of the surrounding parts of bars 1–144 and 246–440 (see Figure 4.6b).⁴⁷ Second, the *forte* sections (bb. 169–83 and 206–18) are significantly underemphasised. In terms of dynamics, they are clearly treated less as outbursts (as they appeared in WF 49/I) and more as integrated within the general texture of the section. The arrival of the *forte* in bar 169 is furthermore underemphasised through a drop in tempo, similarly to WF 43a/I. Overall, a clear contrast is created between the development and the surrounding sections: as opposed to the dynamic tempos and fluid lines of the outer sections, this presents an essentially static tempo and fragmented blocks. Crucially, the underemphasised climaxes here no longer emerge as the most salient features of the performance, which avoids the sort of lopsided structure experienced in WF 49/I.

With a more restrained development, Furtwängler can now intensify the recapitulation effectively and thereby create a strong overarching intensification hurtling towards the coda. This new shaping of the development not only makes this intensification possible but also greatly enhances its effect: the static character of the development provides a break from the dynamic intensifications experienced in the exposition, which can then have an even greater impact once they reappear in the recapitulation. There, the returning themes are also treated slightly differently than previously. Here, there is no ambiguity about the structural role of *C*, which now connects organically to *A–B*, rounding off the intensification.⁴⁸

Ultimately, WF 50a/I seems to successfully combine the two structural principles identified in the previous recordings: overarching intensification and symmetry around a contrasting middle section. As discussed before, the former seems to have been Furtwängler's primary preoccupation in the majority of his recordings (WF 43a/I, WF 22/10/48/I, WF 49/I). In his recordings following the strongly driven WF 43a/I, Furtwängler experiments with a new approach to achieve this goal: namely, reshaping the materials in the recapitulation to enhance intensification and momentum. In WF 50a/I, Furtwängler follows the same approach and executes his plan in a rather effective manner. The idea of the contrasting middle section is introduced in WF 22/10/48/I, but it is fully realised in WF 24/10/48/I. The major achievement of WF 50a/I seems to be that it manages to reconcile these seemingly contradictory structural

⁴⁷ This contrast is not immediately obvious looking at the tempo curve, but when comparing it to the curves of the previous recordings we can see a narrower range of tempo traversed and less contrast created between the *forte* sections of bars 169–83 and 206–18 and their surroundings.

⁴⁸ In tempo and dynamics, *C* now shows a less pronounced segmentation from *A–B*.

principles. Although it lags behind these structural ideas in relevance, sonata form also emerges to some extent: the medial caesura is once again emphasised, and as a result *F* is presented with more contrast. Overall, however, the combined priorities of creating an intensification and a contrasting middle section seem to dominate Furtwängler's interpretation.

AT 52/I

Arturo Toscanini's 1952 recording with the Philharmonia Orchestra stands in stark contrast with Furtwängler's performances but it also helps to contextualise them.⁴⁹ When compared with Furtwängler's recordings, AT 52 shows fundamental divergences in the use of tempo and in the intensity profile in general (Figures 4.7–4.9). Throughout the performance, Toscanini traverses a comparably higher, although narrower range of tempo. Furthermore, missing are the extreme halt before the recapitulation and the vehement drive towards the end of the piece. This juxtaposition also demonstrates the close similarities between Furtwängler's recordings, shown most conspicuously in the tempo curves (Figure 4.9). Despite the differences in the date of production, the venue or even the orchestra, all of his performances were shaped in a fundamentally similar fashion. As visualised on the intensity curve (Figure 4.7a), Toscanini's recording is also experienced in a fundamentally different fashion than Furtwängler's. Instead of the broad lines of intensification and extreme highs and lows, in AT 52 one instead encounters clearly segmented and relatively short units, organised by varying levels of intensity. Curiously, the dynamics curves show a rather different image: AT 52 closely follows the trajectories of Furtwängler's recordings, showing no significant divergence.

The first thing that strikes the listener in AT 52 is the relatively fast tempo, which is largely maintained throughout the recording. The beginning of the movement does not emerge from nowhere but dives immediately into the action, as it were. Furthermore, no real intensification is experienced over bars 1–18.⁵⁰ After a decelerando, the repeated *A* and *B* begin to intensify, seemingly leading towards *C*. However, this intensification suddenly dissipates over bars 31–32, where the tempo drops significantly. Over bars 35–44, the intensity builds once again, only to fall shortly afterwards to prepare *C*, which is shaped as a lyric section.

Following this, *D* returns to the previously established tempo, while *E* increases this even further, generating momentum and creating a segmentation. This sense of drive is further

⁴⁹ Rec. 1 October 1952, London, Royal Festival Hall (live), Pristine Audio, PASC 377 (2013).

⁵⁰ Although a sudden increase in tempo occurs over bars 9–12, this does not translate into a parallel sense of intensification since the quavers in each bar decrease in dynamics, which offsets the increase in tempo. Towards the end of this section, the opposite occurs: while a highpoint in dynamics is developed in bar 17, a sharp decrease in tempo serves to level out any potential change to the overall level of intensity.

increased from the second iteration of *E* onwards, building towards a climax in bars 93–94 (the supposed medial caesura). This, coupled with the sharp drop in both tempo and dynamics, sets up *F* as the contrasting lyric episode of the exposition. However, instead of occupying a contrastingly low level of intensity, *F* seems to return to that of *A* and *B*, which slightly undermines *F*'s assumed structural significance. The arrival of the *forte* in bar 119 is preceded by a brief decelerando, which finally gives way to an intensification leading towards bars 135–36 (the EEC), the primary highpoint of this section (emphasised mostly in dynamics).

Interestingly, the beginning of the development is marked only with a small decelerando, following which Toscanini heightens the contrast between the *forte* and the *piano* sections. The arrival of the *forte* in bar 169 for instance is further emphasised by an increase in tempo.⁵¹ The *fortissimo* section of bars 206–18 is similarly emphasised by a sudden increase in both tempo and dynamics.

Toscanini's treatment of the beginning of the recapitulation also stands in stark contrast with Furtwängler's approach. In AT 52, bars 227–46 (the retransition) are played at a slower tempo, and there is a small decelerando in the final bars. However, perhaps as a way to maintain the drive of the performance, the return of *A* feels almost rushed. This serves to underplay the importance of this segmentation to the extent that it is almost unclear where Toscanini planned the recapitulation to begin: in bar 246 or in bar 259, the latter of which is also preceded by a similar decelerando (this ambiguity is reflected in the 'Groupings' of Figure 4.7a).

Once *A* regains its original note values in bar 259, *A* and *B* unfold similarly to the exposition: no intensification takes place (although they are played at a faster tempo than previously), but the repetition of these materials is highlighted with a segmentation in bar 273. Perhaps due to the shortened lead-up to *C*, bars 273–88 no longer outline two tensional waves but only one, which directly prepares the arrival of *C*. Although *C* begins at the same tempo as in the exposition, it is now played louder, which weakens the lyric character associated with it previously. The contrast to *D* is also minimised through a smaller difference in dynamics,⁵² following which *E* begins at only a slightly higher tempo than *A–D*, thus deviating from its earlier counterpart. The reappearance of *F* is also characterised by a slightly smaller caesura, reflected in both tempo and dynamics. Therefore, the returning themes appear more similar to each other than they did in the exposition, which can be interpreted as directly reflecting the tonal and functional resolution dictated by sonata form. The arrival of the *forte* dynamics within the transitory section (b. 363) is once again marked by a segmentation. Following this, a strong

⁵¹ At the end of this section, around 184, the pause is slightly lengthened, which appears as a fundamental marking point in the tempo curve. However, this is not really experienced as such.

⁵² The first three bars of *D* (bb. 297–99) fall back in dynamics less than they did in the exposition (bb. 53–55).

drive begins towards the coda, the arrival of which is preceded by the biggest climax of the movement so far. Interestingly, and in direct opposition to Furtwängler's performances, the coda itself widens out the tempo and leads to a drop in intensity overall, rounding off the movement rather than driving it towards a final climax.

Overall, Toscanini and Furtwängler shape the structure in fundamentally different ways. Perhaps most importantly, while Furtwängler clearly marks the beginning of major structural sections such as the development and especially the recapitulation, Toscanini seems to underplay the importance of these moments, almost obscuring their arrival. Furthermore, Toscanini uses a technique to mark segmentations which is used more sparingly by Furtwängler: just before a new section, he regularly speeds up before dropping the tempo. This occurs at the beginning of *C* and *F* (in both the exposition and the recapitulation) and at the coda.

The minimising of structural segmentations works in tandem with another feature of Toscanini's performance to create an impression of a fundamentally linear conception of the movement. As visualised in Figure 4.7a, a sense of constant drive is maintained throughout the performance. The blurring of structural breaks helps to maintain this drive, which ultimately creates the impression of linearity – but crucially not of end-orientation, since the very end of the movement widens out as opposed to leading to a climax. This shows that a sense of linearity can be created in a performance without necessarily coupling it with end-orientation.

Instead of the major structural segmentations, Toscanini seems to focus on the shaping of the themes themselves, and in this regard he takes a unique approach. *C*, *E* and *F* are all emphasised in contrasting ways: *C* is prepared by a decelerando and is played at a slower tempo and a lower level of dynamics; *E* begins at a significantly faster tempo; finally, *F* is preceded by a broad increase and subsequent drop in intensity. It seems that Toscanini toys with the idea of ambiguity and therefore offers all three of these themes as potential candidates for a contrasting lyric subject. Ultimately, it is *F* that emerges as the most obvious choice – especially due to the clear emphasis on the preceding articulation (the medial caesura). This resolution is directly reflected in the recapitulation, where the contrast between these themes is minimised, mirroring the sonata narrative of the movement.

Phrase Arching, Correlations and Trends

When it comes to phrase arching, there does not seem to be a trend in Furtwängler's performances comparable to that identified in Chapter 3. In the exposition (Figure 4.10), a high

number of low-level arches (4–8 bars)⁵³ appear in tempo in WF 22/10/48/I and 24/10/48/I and even in WF 43a/I. In comparison, these are largely missing from WF 49/I and WF 50a/I. In the development (Figure 4.11), low-level arches are the most abundant in the 1948 and 1949 recordings, although WF 43a/I and WF 50a/I are not far behind. Surprisingly, in the recapitulation (Figure 4.12), it is actually WF 50a/I that has the largest amount of and the most regularly shaped low-level arches. Besides these, strongly articulated high-level arches appear throughout the movement in all of Furtwängler's recordings, while the 1948 and 1949 performances also exhibit a few mid-level arches (15–20 bars).⁵⁴

From a comparison of Furtwängler's recordings with Toscanini's recording, it is immediately apparent that the high-level arches seen in Furtwängler's recordings are all but absent from AT 52. Perhaps the clearest examples of these are found in the development (Figure 4.11), where Furtwängler's recordings noticeably outline a large drop in both tempo and dynamics in the middle area (bb. 184–205), which is surrounded by areas of sharp increase (bb. 145–83 and 206–18). In AT 52, this segmentation is reflected in dynamics but not in tempo, where only a slight increase over the entire section is detected. The surrounding parts present a similar picture (Figures 4.10 and 4.12). Instead of high-level arches, in AT 52 we mostly find mid-level arches in tempo. This reflects a fundamental difference in the two conductors' approaches: while Furtwängler uses large-scale intensifications to group together lengthy swathes of music, Toscanini instead segments the music into smaller episodes, with seemingly no overarching processes connecting them (besides the general sense of forward drive).

Similarly to the finale, I have subjected the first movement's tempo and loudness data to a Pearson correlation analysis, wherein the movement was examined in various segmentations to provide clearer results (see Tables 4.2–4.6). As this shows, Toscanini's shaping of tempo differs substantially from that of Furtwängler, whose recordings show a high level of correlation to one another. While the correlation values between AT 52 and Furtwängler's recordings are around 0.6, the latter's performances produce a value of around 0.9 or higher when compared to each other.⁵⁵ The loudness data paints a different picture. In this respect, Toscanini's recording is fairly close to Furtwängler's recordings.⁵⁶ Alongside the similar conclusions reached in the context of the finale and Karl Böhm's recording, this suggests that Furtwängler's treatment of dynamics was far less distinctive than his approach to tempo.

⁵³ Most of these low-level arches are difficult to pinpoint in terms of bar numbers, in contrast with the finale where the 8-bar segmentation arises naturally from the musical material itself.

⁵⁴ See the 1948 recordings in the exposition, and the 1948 and 1949 recordings in the recapitulation.

⁵⁵ To reiterate, the closer a value is to 1.0, the stronger the correlation is. See pages 54–55 in this thesis.

⁵⁶ In some cases, AT 52 actually produces higher correlation values to some of Furtwängler's recordings than certain other recordings by the conductor: AT 52 is more similar to WF 43a/I than WF 22/10/48/I and WF 50a/I (Table 4.2); AT 52 is more similar to WF 24/10/48/I than WF 50a/I (Table 4.4).

With regards to the comparison of Furtwängler's recordings, the conclusions reached here build upon and refine those made in the previous chapter. First of all, the same results are obtained regarding the relations between the pair of recordings from 1948. Once again, in tempo the two recordings are the mutual best matches of each other, and their average correlation value is the highest amongst any two Furtwängler recordings (Table 4.7). In dynamics, the recordings are the second closest to each other after WF 49/I. This close similarity between these performances once again corroborates the listening impression and also the conclusion reached in the previous chapter according to which for Furtwängler temporal proximity generally resulted in more similar performances.

With respect to broader trends in Furtwängler's performances, the correlation analysis of the first movement seems to contradict some of the results obtained in the finale. Here, a clear linear evolution of the performances can be observed. In terms of both tempo and dynamics, WF 50a/I emerges as the least similar recording to WF 43a/I (Table 4.2). For WF 49/I, the data shows WF 43a/I as the least similar in tempo and the second least similar in terms of dynamics (Table 4.5). For WF 50a/I, the recording closest in production date (WF 49/I) represents the most similar in both tempo and dynamics, and WF 43a/I emerges as the least similar in dynamics (Table 4.6). This suggests a linear evolution of Furtwängler's performances, whereby each performance built upon and further developed the previous one. However, there are certain complicating factors. For instance, from the viewpoint of the 1948 recordings (Tables 4.3–4.4), WF 43a/I – in other words, the one furthest away in time of recording – only appears to be the second most dissimilar after WF 50a/I. Furthermore, WF 43a/I is actually the second closest in tempo to WF 50a/I (Table 4.6). Some of these results are perhaps better understood when interpreted in the light that WF 50a/I was recorded with a different orchestra and that it suffers from an extended distortion of its dynamics, which certainly affected the results of the correlation analysis. Altogether, however, the linear tendency appears to be strongly supported, which also corroborates the listening impression. This finding differs from that obtained in the finale, suggesting that the performances of the two movements developed in contrasting ways. This is possibly explained by the differences between the movements themselves: the ambiguity of the finale could have encouraged more experimentation on Furtwängler's part than the more conventional first movement.

The data for the first movement also allows us to consider whether Furtwängler's performance style changed after the Second World War. In the overall listening impression, this seems to be true, in that the general intensity profile and structural shaping of the movement in WF 43a/I are perceived as highly contrasting with Furtwängler's post-1943 recordings. This also

seems to be supported by the correlation analysis, whereby WF 43a/I emerges as the second least typical amongst Furtwängler's recordings (Table 4.8). However, once again there are complicating factors. For instance, for WF 24/10/48/I and WF 50a/I (Tables 4.4 and 4.6), this early recording actually emerges as the second closest in terms of tempo.

Finally, let us examine the effect that the use of a different orchestra had on Furtwängler's performance. As explained above, WF 50a was recorded with the Vienna Philharmonic, while all previous recordings were made with the Berlin Philharmonic. In opposition to the conclusions reached about the finale, where no relevant differences were found, the data for the first movement shows a clear separation between WF 50a and the rest of Furtwängler's recordings. According to Table 4.8, WF 50a/I is the clear outlier in both tempo and dynamics by a significant margin.⁵⁷ This is clearly reflected in the individual comparisons between recordings (Table 4.2–4.6), where every earlier recording except for WF 49/I show WF 50a/I as the least similar in both tempo and dynamics. This puts the results of the previous chapter in context: Furtwängler's performances may or may not have been affected by the orchestra he was conducting, and this influence could have varied from movement to movement.

Interestingly, the results regarding 'typicality' are the same as in the finale. WF 22/10/48/I once again emerges as the most typical in terms of tempo, and WF 49/I in terms of dynamics (Table 4.8). However, in contrast to the finale, WF 49/I emerges as the second most typical in tempo alongside WF 24/10/48/I (lagging behind WF 22/10/48/I only marginally), and WF 22/10/48/I appears as the third most typical in terms of dynamics.

Annotated Orchestral Parts

The annotations in the parts for the first movement are highly similar in nature to those in the finale. The wind parts contain significantly fewer markings than the string parts, and the annotations themselves are primarily related to bowing, dynamics and articulation. Similarly to the finale, the changes to dynamics serve to heighten contrast. For instance, at the arrival of *C* in bar 45, the original *forte* is changed to *fortissimo* in the strings, and a crescendo-decrescendo swell is introduced to the first two bars of the theme (Figure 4.13). Also, the second phrase of *E* in the violins (bb. 65ff.) is marked *fortissimo* instead of *forte*.⁵⁸ Furthermore, the *G* interpolations within the augmented main theme (bb. 249–51, 255–57) are now indicated as *ppp* in the violins as opposed to the original *pp*. Besides these, many intensifications in dynamics are either reinforced or newly introduced. For example, in bars 28–30 in the violin parts the overall crescendo is

⁵⁷ Even outside the section affected by the sound distortion.

⁵⁸ Only in parts '2' and '6' of Violin 1.

emphasised with crescendo hairpins under the minims (Figure 4.13). In the returning *C*, a crescendo hairpin is inserted in bar 292 and also a ‘molto’ above the already existing crescendo hairpin in bars 295–96. Finally, the lead-up to the coda and the coda itself received many similar markings to underline the intensification in dynamics: written-out crescendos, hairpins or ‘molto’ indications appear in bars 388–89, 406, 409, 417 and 432 in the strings, which correspond to the overall intensification heard in this section in every one of Furtwängler’s recordings. In the light of Furtwängler’s highly individual approach to tempo, it is surprising that there are no markings relating to timing. Possibly, Furtwängler wanted to control the flow of the music in the performance itself rather than fixing it in advance, which would be in line with his stated approach to rehearsals in general.⁵⁹

Due to the nature and relative scarcity of the markings, it is difficult to match the parts with any of the recorded performances. The only annotation that might be directly juxtaposed with the recordings is the *fortissimo* added in the string parts in bar 45 (Figure 4.13). This means that *C* is meant to start at a higher level of dynamics than bar 44, where the *forte* instruction was left unchanged. Also, at the return of *C* no change was made to dynamics at the relevant place, which suggests that this contrast was supposed to take place only in the exposition. Amongst the recordings, it is only WF 43a/I that clearly goes against these instructions. In WF 24/10/48/I, *C* seems to maintain the previously established level of dynamics in the exposition, while in the recapitulation this actually seems to increase, not decrease. In WF 49/I, the exposition’s *C* indeed starts louder, but upon its return it is played louder still. WF 50a/I is difficult to probe in this regard since its distortion of the sound affects the beginning of *C*. Overall, WF 22/10/48/I seems to fit this instruction the most. There, the first *C* is indeed played louder; however, there is no discernible difference between this and its return in the recapitulation.

Summary: Two Movements, One Approach?

The goal of this chapter has been to examine how Furtwängler structured a movement that is universally interpreted within the sonata paradigm, and which would therefore suggest a preoccupation on the part of conductors with outlining that form. As discussed in the recording analyses above, although certain elements of sonata form are indeed highlighted in Furtwängler’s conducting, there are other, broader structural principles that seem to have driven these performances.

⁵⁹ See page 77 in this thesis.

It appears that two fundamental structural ideas are explored in Furtwängler's recordings: end-oriented intensification and symmetry around a contrasting middle section. The former appears in its purest form in WF 43a/I, where the shaping of the entire movement is predicated on creating three large lines of intensification, ultimately leading towards the end of the movement. WF 22/10/48/I pursues the same goal but with different tools. Instead of the forceful intensifications and extremely strong drive of WF 43a/I, this performance instead experiments with the idea of intensifying the recapitulation (bb. 246–440) compared to the exposition, thereby creating a trajectory leading to the coda. WF 49/I appears to take this idea to the extreme, whereby the exposition is significantly held back in terms of drive and intensity, and where the recapitulation then provides a complete transformation of everything heard before.

The idea of the contrasting middle section first appears in WF 22/10/48/I, where the fragmented blocks of the development (bb. 145–246) stand in sharp relief against the more fluid lines of the surrounding sections. This strategy seems to have been perfected in the recording made two days later, in which the exposition and the recapitulation are brought into almost perfect symmetry, reflected most clearly in their strikingly similar tempo profiles. This performance is the closest to creating a sort of ABA form in the movement.

These two structural principles seem to be reconciled successfully in WF 50a/I. This performance preserves the tensional trajectory of WF 49/I – low intensity and drive in the exposition, high intensity and drive in the recapitulation – but it also creates a contrast between the development and the surrounding segments. This is due not only to the development's fragmented nature but also to its shaping of tempo. In comparison with the highly dynamic tempos of the exposition and the recapitulation, the development seems to use a relatively stable tempo, effectively unifying the section. This provides contrast, but it also helps to enhance the effect of the overarching intensification by providing an area of respite before the vehement drive towards the coda ensues.

Although these broad tendencies seem to dominate his performances, Furtwängler's structural shaping also affords certain analogies with sonata form. First of all, the largest segmentations within the form are clearly articulated in all of his recordings: the beginnings of the development section, the recapitulation and the coda are all highlighted primarily through tempo. The arrival of the recapitulation in particular is noteworthy since at this point Furtwängler brings the musical time to an almost complete halt. Furthermore, in all of these recordings, *F* is more or less clearly shaped as a contrasting lyric section, which lends itself to be interpreted as the second

subject of the movement.⁶⁰ Furthermore, Furtwängler manages to preserve some of the functional ambiguity inherent in the musical materials of the exposition through his unique treatment of *C*, *D* and *E*. These are all variously presented as potential candidates for the second subject in the recordings.⁶¹ Moreover, the fact that *D–E* are shaped as the beginning of a new section in each of Furtwängler's recordings might be interpreted as an attempt to highlight the three-key structure of the exposition.⁶² Also, the EEC is treated as a moment of climax in all of the recordings, although the same cannot be said about the medial caesura, which only received emphasis in WF 43a/I and WF 50a/I.⁶³ Overall, it is useful to note that the two consistent elements of Furtwängler's expositions (*F* as contrasting lyric section and intensification towards the EEC) reflect two of the essential features of sonata form as understood by the conductor: the 'fertility of oppositions' and 'force of forward motion'.⁶⁴ The latter is also reflected in the overarching intensification that forms the basic structural idea of most of his performances.

The third fundamental element of sonata form, according to Furtwängler, was that subjects 'can never return twice without being completely changed', as quoted above.⁶⁵ Indeed, in the majority of his recordings, the musical ideas of the exposition reappear in a transformed form in the recapitulation. *A* and *B* are played with a significantly stronger drive (expressed primarily through a faster tempo) upon their return in all recordings except WF 24/10/48/I, where symmetry dominates. Furthermore, the reappearance of *C* (in WF 43a/I, WF 49/I and WF 50a/I) is shaped as an organic part of the intensification starting in *A–B*, in contrast with its more unique characterisation in the exposition. Finally, the relations between *C* and *D–E* are also fundamentally transformed in all but the 1948 recordings.

⁶⁰ It is worth noting that in this way Furtwängler goes against the dominant interpretation of *E* forming the second subject. However, as explained above, the choice of *F* indeed makes sense from a tonal and functional perspective. The strength of the contrast between *A–D* and *F*, however, varies across the recordings. In WF 43a/I and WF 50a/I, the preceding medial caesura is shaped as the climax of an extended intensification, which creates a solid foundation for the entrance of *F*. On the other end of the spectrum, WF 49/I creates a rather smooth link between *A–E* and *F*, where in the place of this contrast a large tensional arch-shape emerges.

⁶¹ *C* (bb. 45–53) emerges in two recordings as a potential candidate: WF 43a/I shapes it as an independent lyric section, while WF 50a/I gives the same initial impression before transforming *C* into a transition. The rest of the recordings treat *C* unequivocally as a transitory section between *A–B* (bb. 1–44) and *D* (bb. 53–57), rounding off the gesture of intensification preceding it. *D* is perceived as the beginning of a new section in every one of the recordings. However, it is seamlessly connected to *E* (bb. 57–73), meaning that it is not experienced as an independent segment. *D* and *E* together, on the other hand, can indeed be interpreted as a potential second subject in multiple recordings. This is clearly the case in WF 22/10/48/I, WF 24/10/48/I and WF 49/I, where they represent a contrasting and relatively stable area. In WF 43a/I and WF 50a/I, *D–E* might initially give the same impression, but then they begin a new process of intensification, which imbues them with a transitional quality.

⁶² As discussed above, *D–E* establishes the second key of B minor, while *F* introduces and secures the third key of B major.

⁶³ Furthermore, in WF 43a/I (the recording where sonata form emerges perhaps the most clearly) the medial caesura in the recapitulation is no longer accentuated, which reflects the change in its tonal function within the sonata narrative.

⁶⁴ See pages 69–70 in this thesis.

⁶⁵ See footnote 99 in Chapter 2.

Overall, therefore, it seems that Furtwängler's shaping of the movement was driven primarily by structural considerations other than sonata form, and that these broader tendencies aligned in varying degrees with the requirements of the latter. Therefore, if we are to draw general conclusions from this about Furtwängler's approach to sonata form, it would be along these lines: Furtwängler's shaping of the movement yields similarities with certain features of sonata form, but mainly those that aligned with his unique understanding of the form, the three main elements of which were contrast, goal-oriented process and evolution of subjects. Crucially, however, sonata form did not necessarily guide his approach to these pieces, in which he seems to have been prioritising other structural considerations.

When we juxtapose the findings of the recording analysis with the score-based analyses, one primary difference emerges. Most analysts do not question the type or nature of form in the movement but rather focus on details, such as the identity of the second subject. Furtwängler's recordings, by contrast, seem to experiment with different conceptions of the form as a whole, while crucial details of the performance remain largely unchanged; most notably, *F* provides a clearly articulated and contrasting lyric episode (and therefore potentially the second subject) in all of his recordings. Accordingly, while one might assume that a conductor's interpretation of a piece remains the same at a fundamental level while the shaping of the details changes, Furtwängler's recordings of this movement show that the opposite can also be true: the very nature and formal conception of the movement might vary from performance to performance while certain details remain intact.

In the overview, I have shown that a few writers provide contrasting interpretations regarding the formal essence of the movement.⁶⁶ While some argue that the movement is dominated by developmental processes and 'dramatische Handlungszüge',⁶⁷ directed towards the end of the piece, others claim that the piece represents a complete rejection of dynamic growth and instead employs a 'strictly ternary version of the form'.⁶⁸ On closer inspection, it emerges that these diametrically opposed views of the music are directly reflected in Furtwängler's two structural ideas: end-oriented intensification and a more static ABA form. Furthermore, it appears that these seemingly irreconcilable views are indeed integrated and balanced to some extent in Furtwängler's final recording of the movement.⁶⁹

⁶⁶ See page 137 in this thesis.

⁶⁷ Richter 1986: 198.

⁶⁸ Osmond-Smith 1983: 151.

⁶⁹ However, this was not necessarily a teleological goal for Furtwängler. As argued in this chapter and the previous one, Furtwängler's structural conception can be interpreted as a fluid amalgamation of various structural principles, and his performances might best be viewed as unique experimentations in realisation instead of more or less successful attempts at synthesis.

Further insights are gained when comparing the findings of this analysis with those of the previous chapter. It immediately becomes clear that the fundamental structural ideas identified here are almost identical with those discussed in relation to the finale: the ideas of the overarching intensification and the contrasting middle section were also the principles governing Furtwängler's approach to the finale of the symphony. Even more surprisingly, the distribution of these ideas amongst the recordings is the same across the two movements: the overarching intensification is present in some form in all of the recordings but is most prominent in WF 43a/I and WF 50a/I; the idea of the contrasting middle section appeared in the 1948 and 1950 recordings but emerges most clearly in WF 24/10/48/I. Although less prominent, the arch shape idea is also present in the first movement: similarly to the finale, WF 49/I creates a tensional arch in the first large section of the movement.⁷⁰

This leads to two crucial points: 1) Furtwängler experimented with a unique set of structural ideas irrespective of the generally identified form of the pieces in question (in this case, variation form and sonata form); 2) each of Furtwängler's recordings represents a coherent stylistic entity, wherein the same structural ideas are explored with similar techniques over multiple movements. These structural ideas seem to be fundamental and almost gestural, which is perhaps the key to the powerful impact that Furtwängler's recordings have reportedly made on listeners.⁷¹

Furthermore, it is not only in the structural principles that a link is created between the movements in Furtwängler's recordings, but also in their overall tempo profile. When viewed side by side in either of the recordings, the two movements seem to outline the same fundamental tempo structure. First of all, the entire movement appears to be segmented into two halves, separated by a fundamental change or separation in tempo somewhere in the middle (the retransition and the beginning of the recapitulation in the first movement over bars 227–58 and the return of the main theme at variation 16 in the finale). The first half, furthermore, seems to outline a broad, initial gesture of intensification (bb. 1–94 in the first movement and variations 1–9 in the finale), which then gives way to a general decrease in tempo (bb. 95–246 in the first movement and variations 10–15 in the finale). The second half then comprises three distinct sections: the first with a generally higher level of tempo (bb. 246–338 in the first movement and variations 16–23 in the finale); the second, which introduces a break in tempo but then quickly begins a process of increase (bb. 339–93 in the first movement and variations 24–30 in the

⁷⁰ However, unlike in the finale, WF 43a/I does not seem to strive for this in the first movement. Instead, WF 22/10/48/I seems to follow the same approach.

⁷¹ The idea of a satisfying overall shape has strong links to Gestalt theory, a connection which might merit further investigation.

finale); and finally the concluding section, which increases the tempo into the highest reaches yet (the coda in both movements). Although certain elements of this scheme are not perceived as clearly as outlined here,⁷² the similarity between the overall tempo shapes is striking and shows a level of consistency over the recordings that suggests either deliberate planning on Furtwängler's part or possibly a general tendency in his performative approach. Chapter 5 examines inter-movement links in Furtwängler's performances in further detail.

Circling back to the first movement, it is useful to investigate a claim that is sometimes made about Furtwängler's conducting style. As discussed in Chapter 2, some writers suggest that the conductor creates direct tempo parallels between related sections of a piece, and not only in tempo profile but also in tempo values.⁷³ In this movement, the reappearance of *A–F* in the recapitulation provides a good basis to examine this issue. A comparison of the relevant sections shows that except for one of Furtwängler's recordings (WF 24/10/48/I), there does not seem to be a consistent effort on the conductor's part to align the tempos of parallel sections within the movement. *A*, *B* and *C* are played at a faster tempo upon their return in all recordings except WF 24/10/48/I. The differences are in the range of 2–4 MM (WF 22/10/48/I), 5MM (WF 49/I and WF 50a/I) and 5–10 MM (WF 43a/I), measured in minims. *D*, *E* and *F* show slightly smaller differences of 2–3 MM across the recordings except for WF 24/10/48/I. The latter, by contrast, exhibits a striking similarity between the iterations of all of these sections, in both tempo profile and values. From this, we could conclude that exact tempo parallels were most likely not a general goal for Furtwängler, and that when they do appear in his recordings, they are used only as a tool to achieve broader structural goals: in the case of WF 24/10/48/I, for instance, they seem to be used strategically to support the ideas of the contrasting middle section and the symmetry between the surrounding sections.

It is also worthwhile to examine how Furtwängler's performance changed, and whether these changes reflect those identified in the previous chapter. When it comes to the overall structural representation of the movement, we can identify an approach closely related to that seen in the finale: multiple structural ideas can be interpreted as forming one, flexible overall conception of the movement, wherein the weighing of the individual structural principles varies from performance to performance.

Based on listening impressions, the performances seem to have changed in a linear fashion. The fundamental tensional shape established in WF 43a/I is fundamentally preserved in all of the recordings. A more reserved version of this is introduced in WF 22/10/48/I, which is

⁷² Primarily, the development in the first movement is generally not perceived as a decrease in tempo.

⁷³ See pages 81–82 in this thesis.

closely related to that of WF 24/10/48/I. WF 49/I seems to preserve the character and shape of the development and the recapitulation established in these previous recordings, but it introduces a new approach to the exposition. Finally, WF 50a/I seems directly to borrow this new approach to the exposition but slightly reworks the development. Importantly, the fact that WF 50a/I was recorded with a different orchestra does not automatically result in a fundamentally contrasting performance based on listening impressions: on the contrary, it seems directly related to WF 49/I. It is actually WF 43a/I that seems to be the outlier in this set of recordings due to its extremely high drive and forceful intensifications.

As discussed above, the correlation analysis supports some of these impressions, while it contradicts others. The linear changes are strongly confirmed by the data, which suggests that the performance of the first movement evolved in a different way to the finale. This analysis also shows that WF 43a/I is indeed relatively dissimilar to the later recordings. However, it emerges that WF 50a/I is the least typical overall, contradicting the listening impression. An explanation for this might be that in WF 50a/I a similar result is achieved through different means.⁷⁴ Overall, the conclusion that Furtwängler was able to project a fundamentally similar structural representation with a different orchestra still stands. Furthermore, the Pearson correlation analysis confirmed the impression that the two recordings from 1948 represent the closest performances overall. Finally, the findings pertaining to typicality also corroborate the findings of the previous chapter: in tempo, the most ‘typical’ recording seems to be WF 22/10/48/I, while in dynamics it is WF 49/I.

This chapter has also analysed a recording by Arturo Toscanini to contextualise Furtwängler’s performances, thereby enriching our understanding of the conductor’s style in a broader context. As discussed, Toscanini’s performance seems to be segmented into smaller sections than Furtwängler’s, and it lacks the kind of overarching processes typical of the latter. However, because of its constant drive and its blurring of structural segmentations, Toscanini’s performance gives the impression of a linear conception – one, however, that is not end-oriented. This shows that a linear conception of the movement is not limited to Furtwängler’s end-oriented intensification but can be achieved through other means as well.

Finally, this chapter has demonstrated the importance of perceived salience in the experience of musical structure in performance. In the light of WF 49/I, it has emerged that sections of the music that have largely similar tempo and loudness profile across multiple recordings can be perceived as forming diverging structural constructs across performances due to differences in perceived salience within the context of the individual performance. In other

⁷⁴ These ‘means’, however, are not clear from the aural analysis or the analysis of the tempo and dynamics curves.

words, a similar decelerando might lead to contrasting impressions in different recordings based on the performative framework created and expectations raised in individual performances. These crucial parameters might not appear immediately obvious from an examination of tempo and dynamics curves alone, and therefore this further demonstrates the need for aural analysis and qualitative methods in the analysis of performance.

Chapter 5

Furtwängler's Shaping of Whole Symphonies: Beethoven's Fifth Symphony

Introduction

The previous chapters examined the ways in which conductors can create a sense of structure when performing individual symphonic movements. However, such movements are rarely performed on their own: instead, they typically appear as part of a larger multi-movement construction in performance. As such, it is important to examine how individual movements coalesce into larger works, and whether performers have an influence on the structure or shape of that work as a whole. Therefore, in this chapter, I analyse three recordings of Beethoven's Fifth Symphony to investigate whether and how conductors can create musical processes of structural significance across entire symphonies.

Studies of this nature are virtually absent from the literature. Writers either avoid the subject altogether or proceed to analyse the performance of cyclical works through severely limited means.¹ The reason for this is the methodological difficulty that such an endeavour entails. Naturally, producing tempo and dynamics data for a larger work requires significant time investment, especially in the case of symphonic works, for which the various assisting tools are mostly unusable.² Furthermore, and perhaps even more importantly, due to the limitations of the human memory, comparisons between multiple recordings of entire symphonies are rather hard to make if one aims to draw upon the listening experience in the analysis, as I do in this thesis.

As a result of these factors, the following analysis will be different in some respects from those in previous chapters. First, only three recordings are analysed in this chapter: two recordings by Furtwängler and one by the Dutch conductor Willem Mengelberg (1871–1951). Also, due to the focus on the work as a whole, the analysis of the individual movements is less

¹ Some attempts were made as part of the Graz-based PETAL project, led by Christian Utz. Their two most relevant publications – Utz 2017; Utz and Glaser 2020 – focused on J. S. Bach's *Goldberg Variations* and Schoenberg's *Sechs kleinen Klavierstücken*, op. 19. Their analyses, however, focused almost exclusively on duration and tempo data, with minimal attention given to listening experience.

² Numerous plugins have been produced for Sonic Visualiser to help speed up tempo analysis by automatically detecting beats in a recording (these include BeatRoot, OnsetsDS plugin, Aubio Onset Detector and others). However, while such tools can be immensely helpful in music with very clear beat-onsets (such as piano music), they are mostly ineffective in the case of the more diffused soundscape of symphonic music.

detailed than before. Moreover, the various subjective representational techniques that formed the backbone of the previous analyses are used more sparingly here. The visualisation of perceived motion in particular is limited almost exclusively to impressions directly relevant to the experience of the symphony as a whole. Likewise, the intensity curves are much more schematic compared to previous chapters, once again reflecting the higher vantage point of this analysis.

Beethoven's Fifth Symphony was chosen for this case study for multiple reasons. First, this is one of the few symphonic works whose large-scale structure or musical narrative has been discussed extensively in the literature. In this way, the analysis will allow an examination of how general interpretations of the symphony as a whole compare to interpretations of its performances. Second, Beethoven and his Fifth Symphony in particular formed a core part of Furtwängler's musical thinking and conducting repertoire. His writings reveal that the conductor saw his organicist principles of music most perfectly realised in Beethoven's music and especially in this symphony.³ Furthermore, the symphony was one of the most often played works in his repertoire, with around 244 performances given throughout his career (Table 5.1), and the second most recorded work in his discography (after the Ninth Symphony), with twelve full recordings (Table 5.2).

For the purposes of analysing recordings of a symphony as a whole, it seemed crucial to choose live recordings, where the integrity of the performance event is preserved. Accordingly, I have selected Furtwängler's 27 June 1943 recording with the Berlin Philharmonic and his 1 October 1950 recording with the Vienna Philharmonic. Although Furtwängler's recordings from 1937 and 1947 are generally more well-known and available, the above performances seemed more relevant for the present purposes since they represent – at least in my interpretation – clearly identifiable and distinct approaches to large-scale structure. The first was recorded as part of the tenth philharmonic concert of the Berlin Philharmonic's 1942/1943 season, which included a public rehearsal, a concert and two repeated performances over four days on 27–30 June 1943, with the present recording seemingly captured for radio broadcast at the general rehearsal on 27 June.⁴ The second recording was made as part of a live broadcast of the Vienna Philharmonic's concert in Copenhagen.

These recordings are juxtaposed with Willem Mengelberg's 1940 live recording of the symphony with the Royal Concertgebouw Orchestra.⁵ The previous chapters compared Furtwängler's performances with those by conductors generally considered to have contrasting

³ See Furtwängler's 1951 essay 'Beethoven und wir. Bemerkungen über den ersten Satz der Fünften Symphonie' in Furtwängler 1954: 221–52.

⁴ For more details, see Table 5.2.

⁵ Rec. 18 April 1940, Amsterdam, Concertgebouw (live), Pristine Audio, PASC 236 (2010).

styles. However, it is also worthwhile examining his performance in the light of a similarly minded conductor such as Mengelberg. The Dutch conductor is also generally categorised as a so-called ‘romantic’ musician and is known for his liberal use of tempo. His 1940 recording of the symphony has a surprisingly good sound quality and wide range of dynamics thanks to the high-quality glass acetate discs on which it was captured.⁶

Interpretations of the Symphony

The Symphony as a Whole

Perhaps more than any other work by Beethoven, the Fifth Symphony has been praised for its cyclical integration. Since the piece’s premiere, writers have discussed the impression of the symphony’s movements being connected to each other by way of motivic links as well as an overarching narrative of sorts to create a ‘concentrated synthesis of successive movements’, as William Kinderman put it.⁷ Although seemingly all writers agree on this point, some focus solely on musical details while others experiment with programmatic interpretations to explain this phenomenon.

In musical terms, a sense of unity is achieved partly through motivic links between movements. The melodic and rhythmic shape of the first movement’s motto seems to underlie most themes in the rest of the movements, creating a web of interconnections.⁸ Furthermore, an even clearer connection is created between the third and the fourth movements: following a lengthy transition at the end of the third movement, the finale starts *attacca*, and subsequently the scherzo material briefly reappears after the development section of the finale.

On a broader level, the symphony is also said to exhibit an end-oriented process, wherein the finale, in the words of Scott Burnham, ‘explicitly and unequivocally resolves the rest of the work’.⁹ First of all, the weight of the symphony is shifted from the first movement, which in most classical symphonies served as the focal point of the work, to the finale.¹⁰ Besides lasting significantly longer in most performances than the first movement, the finale also bucks the trend of following the ‘lighter’ rondo or variation form, instead using sonata form (at least according to general interpretations of the movement). Furthermore, the emphatically jubilant character of the

⁶ See the sound engineer’s introduction to the above-mentioned CD transfer of the recording at <<https://www.pristineclassical.com/products/pasc236>> (accessed 14 April 2023).

⁷ Kinderman 2009: 148.

⁸ This has been discussed by almost every writer on the subject. For a representative example, see Swafford 2014: 495–505

⁹ Burnham 1995: 57.

¹⁰ See Marston 2000: 92–94.

finale stands in stark contrast with the rest of the work, which – together with the transition leading up to it – makes the movement stand out. This impression is further enhanced by the tonal progression over the course of the symphony from C minor to C major, which reaches its conclusion in the finale. All of this creates the impression of a “finale-symphony”, one in which the earlier movements lead up to the finale as the culmination of the work’, as Basil Deane noted.¹¹

Famously, the underlying musical narrative of the symphony has inspired numerous dramatic or programmatic interpretations. Most commonly this is expressed as a progression from darkness to light or from struggle to victory, which arguably reflects the tonal and topical processes found within the piece.¹² Some writers elaborate upon this by describing the successive movements as corresponding to ‘struggle, hope, doubt, victory’, as Paul Bekker claimed, or to ‘I, Outer Struggle; II, Comfort or Reassurance; III, Internal Struggle; IV, Victory’, as Robert Schaufller argued.¹³ An even more specific interpretation was provided by Anton Schindler, Beethoven’s secretary and first biographer, who – purportedly citing Beethoven’s own words – associated the first movement’s main motif with the image of fate knocking on the door.¹⁴ This has led to the interpretation of the symphony as an individual’s struggle against fate, culminating in the triumph of the human will.¹⁵ The struggle-to-victory narrative has also been variously adapted to other contexts.¹⁶

A common feature across these writings is that virtually none comment on the ways in which performers themselves create or contribute to the creation of large-scale structures or narratives in the work. Indeed, the only context in which the issue of performance is discussed is that of the repetitions in the symphony. This concerns the expositions in the first and final movements as well as a repeat in the third movement.

Regarding the repetition of sonata expositions, there exists a generally accepted trend in performances. As Igor Markevitch explains: ‘there is ... in the Fifth no doubt that the repetition in the first movement is significant for the architecture, while the same in the finale is discouraged as unnecessary’.¹⁷ Edward Cone, for example, argued that ‘there can be no excuse for suppressing the repeat’ in the first movement, and that doing so would have an ‘adverse effect’

¹¹ Deane 1973: 299.

¹² See Chop 1910: 36; Bekker 1911: 191; Nef 1928: 135; Schaufller [1929] 1933: 213; Cooper 2000: 184; Bartha 1975: 316; Gülke 1978: 56; Loos 2008: 19; Swafford 2014: 496; Geck 2017: 104.

¹³ (‘Kampf, Hoffnung, Zweifel, Sieg...’) Bekker 1911: 191; Schaufller [1929] 1933: 213.

¹⁴ For discussion of Schindler’s claim and the context of its reception, see Guerrieri 2012: 47–49.

¹⁵ See Marx 1901: II, 62; Bartha 1975: 316; Bekker 1911: 185–90; Leikin 2020: 186–96.

¹⁶ These include interpretations of the symphony as depicting a revolution against oppression (Goldschmidt 1975: 40–43) or Beethoven’s struggle with infirmity (Jander 2000).

¹⁷ (‘So besteht auch in der Fünften kein Zweifel daran, daß die Wiederholung des 1. Satzes wesentlich für die Architektur ist, hingegen ist von derjenigen des Finales unbedingt abzuraten...’) Markevitch 1983: 304.

on the work as a whole.¹⁸ Similarly, Gunther Schuller claimed that omitting this repeat would ‘destroy the intended proportions of Beethoven’s flawless formal design’, wherein the first movement’s exposition needs reinforcing as it serves as the ‘fountainhead of all that follows’.¹⁹ By contrast, the repetition of the finale’s exposition is routinely skipped, which is often justified by the argument that the repeat would only weaken the effect of the movement’s beginning, which consists in the long-awaited establishment of C major as the tonal goal of the entire symphony.²⁰

The potential repeat in the third movement was the subject of an extended debate amongst musicologists and editors. Research into the compositional and early performing materials of the symphony determined that Beethoven’s initial plans for the movement included a complete repeat of the first scherzo and the trio, similarly to the scherzos of the Fourth, Sixth and Seventh Symphonies. This repetition found its way into the premiere’s handwritten orchestral parts but was scrapped before publication.²¹ However, uncertainty around the causes and timeline of this revision has fuelled a lengthy dispute, which – although still unresolved – has lately become dormant. Advocates of the repeat – amongst others, Walter Riezler and Peter Gülke – claimed that it is necessary for the movement to gain true independence and for it to be ‘properly balanced’.²² On the other side of the argument, writers such as Igor Markevitch argued that the repetition would only weigh down the symphony, weakening its effect.²³ More recently, the repeat has been presented simply as a performance option.²⁴

As mentioned above, the Fifth Symphony is one of the few works that Furtwängler discussed at length in his writings. In his 1951 essay ‘Beethoven und wir. Bemerkungen über den ersten Satz der Fünften Symphonie’, the conductor provided a detailed walkthrough of the first movement as well as some general comments about the symphony as a whole.²⁵ From these, it becomes clear that he rejected programmatic interpretations of the work:

There are always people who feel that they have to distance themselves from Beethoven on the pretext that he composed ‘literary’ content, as did for example Liszt in his *Faust Symphony* or did the numerous

¹⁸ Cone 1968: 47.

¹⁹ Schuller 1997: 138.

²⁰ See for example Felix Weingartner’s admonition: ‘It is better to omit the repetition of the first part. The C major coming in after the gloomy anxiety of the third movement is so supremely powerful that a repetition which is not preceded by the anxious expectation can only weaken the effect.’ (‘Es ist besser, die Wiederholung des ersten Teils wegzulassen. Das nach der düsteren Spannung des dritten Satzes eintretende C-dur ist so urgewaltig, daß eine Wiederholung, ohne daß diese Spannung vorhergegangen ist, nur abschwächend wirken kann.’) Weingartner 1906: 81; translation from idem, 1969: *Weingartner on Music and Conducting*, trans. by Jessie Crosland, Dover Books on Music (New York: Dover Publications), 137. Note, however, that some writers – including Gunther Schuller (1997: 207) – advocate for observing the repeat, claiming that a written-out first ending indicates careful thought on the composer’s part, which needs to be respected.

²¹ For an overview, see Muxfeldt and Burnham 2021.

²² Riezler 1938: 146. See also Gülke 1978: 43–49.

²³ Markevitch 1983: 303–04. See also Kinderman 2009: 149–50.

²⁴ See Schuller 1997: 191–92; Muxfeldt and Burnham 2021: 156.

²⁵ Furtwängler 1954: 221–52.

symphony composers since Beethoven who followed the schema ‘through darkness to light’ or ‘per aspera ad astra’. Such notions were completely alien to Beethoven. His manner of composition was objective, devoid of all pretension.²⁶

Seemingly, the only type of narrative he would accept was in the form of general descriptors of the individual movements: the ‘titanic world’ of the first movement is answered by the second movement’s ‘peaceful and religious character, interspersed with heroic moments’, following which the third movement provides ‘a partial return to the world of the first’ before the ‘crowning’ of the work takes place in the finale.²⁷ Not much can be gleaned from these comments about Furtwängler’s approach to performing the symphony except that if he had executed any overarching strategy or narrative in his performance of the work, it would seemingly have been conceived in terms of either purely musical features or, at most, general musical topics.

Individual Movements

First Movement

The first movement is generally interpreted as a sonata form with a few unique features (Figure 5.1a). The exposition (bb. 1–124) begins with the famous ‘knocking’ motif, which functions as a sort of motto throughout the movement. The first-subject area (bb. 1–58) is securely in C minor until bar 52, where a modulation takes place towards E flat major, preparing the entrance of the second subject. The medial caesura takes place in bar 58, whereupon a modified version of the motto introduces the second subject proper, beginning in bar 63 in E flat major. In bars 75–93, the key is destabilised, and the music seemingly moves towards F minor. In bar 94, however, E flat major is re-established, ushering in the closing subject of the exposition, which concludes with a motif derived from the motto.

The development section (bb. 125–247) begins with the motto and the first subject material. This leads to a *fortissimo* version of the horn motif from the second-subject area in bar 179. Starting in bar 196, a fragment of the motto is used to create a lengthy modulatory section culminating in the retransition to C minor in bars 240–47, giving way to the return of the motto in C minor, which marks the beginning of the recapitulation.

²⁶ (‘Es gibt immer wieder Leute, die sich gegen Beethoven wehren zu müssen glauben unter dem Vorwand, er hätte “literarische” Inhalte komponiert, so wie etwa Liszt seine Faustsymphonie oder wie die zahlreichen Symphonie-Komponisten nach Beethoven, die nach dem Schema “Durch Nacht zum Licht”, “per aspera ad astra” verfahren. Beethoven selber liegen solche Vorstellungen denkbar fern. Seine Art des Produzierens war sachlich, ohne jede Präntention.’) Ibid.: 247; translation from Furtwängler 1991: 55–56 (translation modified).

²⁷ (‘titanischen Welt des ersten Satzes ... friedlich-religiöse, mit heroischen Momenten durchsetzte Stimmung des zweiten ... das teilweise Zurückgreifen auf die Welt des ersten im Scherzo und schließlich eine Krönung im Finale...’) Furtwängler 1954: 246.

Besides a newly introduced oboe cadenza in bar 268, the recapitulation (bb. 248–373) unfolds as expected, presenting the materials of the exposition in C (the second-subject area begins in bar 303 while the closing section in bar 346). In bar 374, however, where the conclusion of the movement in C major is expected, a new extended episode begins, which might be interpreted as either a lengthy coda or a second development. This introduces a new motif in bar 423, which is then used to build up a climax that coincides with the reappearance of the motto in C minor in bars 478–82, following which a brief codetta based on the motto concludes the movement.

In his essay ‘Beethoven und wir’, Furtwängler discussed the movement at length, as noted above. First, he emphasised the importance of the initial motif, arguing that ‘in respect of the entire movement, it has the function of a motto, of a heading written in oversized letters’, and that ‘[t]he work proper begins only thereafter’.²⁸ Furthermore, he claimed that this motif’s ‘development and implications directly form the “idea” of the movement’.²⁹ According to him, bars 14–17 then function as an ‘intensification’ (‘Steigerung’) towards the upcoming fermata, which acts as a ‘dam against which breaks the wave of passion that rose suddenly in the previous bars’.³⁰ He imagined bars 37–43 as an ‘extraordinarily steep intensification in frantic tempo’, following which ‘the entire force of the large *forte* tutti is unloaded’ over the following eight bars.³¹ He then argued that the ‘second idea’ of the movement ‘falls into two contrasting parts’: bars 59–62 and bars 63–66.³² This is significant because it reveals that he considered the former to be an integral part of the subject and not simply a transition. Finally, he described the ‘third idea’ (bar 94 onwards) as being preceded by a ‘ten-bar intensification’, which leads the music ‘from an idyllic valley to a clear mountain top’.³³

Furtwängler described the development section as exhibiting ‘immense succinctness’ (‘ungeheure Knappheit’), while he brought attention to the beginning of the recapitulation, which is ‘not prepared; it is suddenly there, so to speak’.³⁴ Here, he reiterated his interpretation of sonata subjects, which always ‘appear in a new light’ upon their return later in the movement.³⁵ In this

²⁸ (‘vier Takten, die dem ganzen Satz gegenüber so etwas wie die Funktion eines Mottos, einer in übergroßen Lettern geschriebenen Überschrift besitzen. ... Das eigentliche Stück fängt erst danach an.’) Ibid.: 223, 225.

²⁹ (‘seine Entwicklung und Auswirkung bilde geradezu die “Idee” des Satzes.’) Ibid.: 245.

³⁰ (‘sie ist eher wie ein Staudamm, an dem sich die Flut der in den letzten Takten urplötzlich aufbrandenden Leidenschaft bricht.’) Ibid.: 227.

³¹ (‘Es entsteht eine außerordentlich steile Steigerung in rasendem Tempo; erst wenn das obere c-moll erreicht ist, entläßt sich die ganze Wucht des großen f-tutti in zwei breit ausladende viertaktige Perioden...’) Ibid.: 228.

³² (‘Der zweite Gedanke ... zerfällt in zwei kontrastierende Teile.’) Ibid.: 234.

³³ (‘zehntaktiger Steigerung zum dritten Gedanken ... aus einem idyllischen Tal auf eine klare Bergeshöhe...’) Ibid.: 235.

³⁴ (‘Die Reprise wird nämlich gar nicht eingeführt; sie ist sozusagen auf einmal da.’) Ibid.: 244.

³⁵ (‘ein Thema, das sich in der Mitte oder am Schluß des Satzes wiederholt, jedesmal ... eine neue Beleuchtung erhält.’) Ibid.: 232.

case, ‘the first theme receives a lyric and lingering character’, primarily through the newly introduced oboe cadenza.³⁶ He wrote of the coda (from b. 374 onwards): ‘As in a state of trance, the composer drives the intensification ever further’, until the reappearance of the motto.³⁷ Finally, he described bars 483–90 as a ‘brief reminiscence of the first theme in *pianissimo* – like a distant dream’, which is followed by the ‘resolute, short ending’.³⁸

Second Movement

The second movement is generally understood as a loose variation form with two main thematic materials (Figure 5.1b). The first is a singing melody first presented in the viola and cello in A flat major (hereafter *A1*, bb. 1–8), which is followed by an epilogue of sorts based on fragmented musical ideas (hereafter *A2*, bb. 9–22), partly derived from *A1* but mostly new. In bar 23, a new theme appears (hereafter *B1*), which – although it bears resemblance to *A1* with its anacrusis and *dolce* character – introduces a new melodic idea. This is interrupted after only a few bars by a sudden modulation to C major, played tutti and *fortissimo*, setting the stage for the second theme proper, *B2*, starting in bar 32. This directly borrows the melody from *B1* but transforms it into a *fortissimo* march in C major. In bars 39–49, a harmonically ambiguous transition in *piano* leads back to A flat major and potentially marks the end of the first self-contained unit of the movement.

Over bars 50–98, a slightly varied repetition of the first block takes place, which increases the rhythmic activity: *A1* and *A2* sees the introduction of continuous semiquaver chains, while *B1* and *B2* receives demisemiquavers in the accompaniment. Initially, the third block (bb. 99–123) seems to continue this pattern by playing the *A1* theme in demisemiquavers. However, *A2*, *B1* and *B2* are replaced by two further variations on *A1*: in bars 107–14 the melody – played *pianissimo* – moves from the viola and cello to the first violin and receives a rhythmically more active accompaniment, while bars 115–23 see the melody taken up by the cello and the double bass against a backdrop of *fortissimo* tutti accompaniment. This culminates in a fermata on E flat in bar 123. Although this block is much more restricted in terms of musical materials than the previous blocks, it still outlines the same structural shape – three internal segments with the first two in *piano* and the final in *forte* – and therefore it could be considered a second variation.

The second half of the movement, especially bars 124–84, is much more diffuse in its musical materials and breaks up the structural pattern established in the first half. Bars 124–47 are transitory in nature, showcasing fragmented musical ideas and creating tonal ambiguity through

³⁶ (‘Das erste Thema bekommt lyrisch-verweilenden Charakter...’) Ibid.: 245.

³⁷ (‘Wie im Trancezustand treibt der Komponist die Steigerung immer weiter vor...’) Ibid.: 246.

³⁸ (‘Danach folgen einige Takte wie eine kurze Erinnerung an das erste Thema in Pianissimo – wie ein ferner Traum –, und dann der entschiedene kurze Abschluß.’) Ibid.: 246.

seventh chords. In bars 146–47, a sudden modulation occurs to C major, giving way to a variation of *B2* in bars 148–57. In bars 158–66, another transition leads to a variation of *A1* in A flat minor, starting in bar 167. This stands in stark contrast with previous iterations of *A1* as it transforms the melody into a staccato march played by the woodwinds. A final transition follows this from bar 176 onwards, leading to a *fortissimo* tutti repetition of *A1* in bar 185, which restores the theme's original melodic shape. In bar 205, a coda of sorts begins, marked by a tempo change ('più moto'). This, however, does not last long as it is interrupted by *A2* in bar 220. Starting in bar 230, a final build-up using *A1* takes place, ending the movement at *fortissimo*.

Third Movement

On paper, the third movement conforms to the three-part scherzo form (scherzo–trio–scherzo), although it is not named as such (Figure 5.1c). The first scherzo section (bb. 1–140) consists of two thematic ideas: a *pianissimo*, arpeggiating melody emerging in the low strings (bb. 1–18) and a *fortissimo*, march-like theme, played initially by the horn and later by the full orchestra (bb. 19–44). Over bars 1–96, these two materials alternate, traversing a wide range of keys along the way. Finally, over bars 97–140 a closing section of sorts takes place in C minor, which initially combines the first and second themes and then introduces a closing theme in bar 115.

The trio section is made up of a fugato in C major, dominated by the cello and the double bass. The first segment (bb. 141–61) is repeated, and then bars 162–97 present a second iteration that is less strongly driven than the first one and shows some tonal ambiguity. The final phase, lasting from bar 198 to bar 235, sees the breaking down of the fugato material, giving way to a retransition to the scherzo and therefore to C minor.

The second scherzo introduces major contrast to the first one in that all the materials are now played with muted dynamics and sparse texture, an effect enhanced by the pizzicato in the strings. Over bars 236–62, the first and second themes appear – closely following the first scherzo – in C minor. However, instead of modulating to E flat minor, the second theme moves to F minor in bar 263. A set of the first and second themes is then omitted (originally bb. 45–96), and the music directly leads to the closing section in bar 281 in C minor. In bar 324, new material emerges, dominated by the timpani, and this serves as a transition towards the finale.

Fourth Movement

Similarly to the first movement, the finale is generally interpreted as a unique take on sonata form (Figure 5.1d). The exposition contains four individual themes, with the first (bb. 1–25) being a triumphant theme in C major, played tutti and *fortissimo*. The second (bb. 26–44), likewise in C major, preserves the bright tone with a melody introduced in the horn. In bar 36, a modulation to

G major begins, culminating in a medial caesura in bars 41–44. The third theme (bb. 45–63) introduces contrast in the form of the new key of G major, its strings-dominated texture and its *piano* passages alternating with the *forte* sections. This theme touches upon the keys of A major and C major before G major is re-established through a sort of secondary medial caesura in bar 63. Beginning in bar 64, the final theme, in G major, is the most lyric in nature, with a rhythmically static melody played by the viola, clarinet and bassoon. In bar 72, this theme is repeated by the full orchestra in *forte*, ending the exposition.

The development starting in bar 90 is primarily based on the third theme and a new melodic idea introduced by the viola and cello in bars 92–95. Overall, this section gradually increases the density of texture, the complexity of rhythm and the dynamics until the retransition in bars 144–52. Before the recapitulation begins, an interjection with material from the third movement appears in bars 153–206, breaking the momentum and introducing contrast to the jubilant character of the movement. The recapitulation proper starts in bar 207 and proceeds as expected, repeating the exposition's materials in C major. Similarly to the first movement, a second development occurs in the finale beginning around bar 295, which uses the third theme and the musical idea introduced in the development. This leads to a cadence in C major in bars 312–17, which then gives way to a further developmental extension based on the second theme, starting in bar 318. The coda proper, marked 'presto' and beginning in bar 362, concludes the movement in *fortissimo*.

Recording Analysis

As mentioned above, Beethoven's Fifth Symphony was one of the most played pieces in Furtwängler's repertoire (Table 5.1). Indeed, from his first performances in the early 1910s, his programme featured the symphony in almost every year, with no significant hiatus. This means that Furtwängler produced the recordings under examination with over thirty years of prior experience performing the symphony. Similarly to the Brahms example examined previously, this fact might suggest that by then he had developed a fully formed interpretation of the symphony, with clear intentions for its execution. It is also worth considering that although the two recordings under survey cover only a short period of his conducting career (a span of eight years out of forty-four), they were separated by a large number of performances (approximately fifty in total), creating distance between them.

WF 43b

WF 43b: First Movement

The importance that Furtwängler attached to the initial motif in his essay is clearly reflected in his 1943 recording of the movement with the Berlin Philharmonic.³⁹ As the tempo curve (Figure 5.2b) shows, the fermatas that accompany the motto throughout the movement (bb. 2, 5, 21, 24, 128, 249, 252, 479, 482) are extremely long, bestowing the motif with a structural or dramatic function. The appearances of the motto at the head of the development and the recapitulation (respectively bb. 125–28 and 248–52) clearly mark their respective structural segmentations. The final appearance of the motif in bars 478–82 furthermore serves as the goal of a large-scale intensification (Figure 5.2a), and thereby it is also elevated to an important structural level. Also, even the horn motif in bars 59–62, which directly derives from the motif, is used as a segmentational device, introducing the second subject.

The shaping of the first set of fermatas creates a unique listening impression. As Figure 5.2b shows, the longest of these by far is the one occurring in bar 21.⁴⁰ This is held so long as to dispel any sense of musical time, creating a dramatic impression similar to the finale of Beethoven's Ninth Symphony, where the 'narrator' (the cello 'recitative') 'rejects' the musical materials presented. Here, a similar rejective gesture is made in the form of this emphatic fermata, following which the music restarts tentatively. This leads to an intensification, achieved primarily through tempo, towards the second subject.

As described in his essay, Furtwängler uses the horn motif in bars 59–62 as part of the second subject's material, as a result of which it immediately provides a fundamental break in tempo and dynamics. The second subject proper does not create a self-contained lyric unit, but instead gradually intensifies towards the closing section, which is reflected in an increase in tempo. The closing section itself, albeit separated from the second subject through a brief drop in tempo, seemingly continues this process, connecting smoothly to what came before. If interpreted within sonata form, this reflects the tonal connection of these sections (both are in the second key of G major).

In both of his recordings examined here, Furtwängler repeats the exposition of the first movement, thereby conforming to the general trend described above. In WF 43b/I, the repeat is very similar to the first iteration, especially in the shape of both the dynamics and tempo. However, some crucial differences can be noticed. First of all, the fermata in bar 21 is now

³⁹ As discussed above, Furtwängler identified the motif as the "idea" of the movement' (Furtwängler 1954: 245).

⁴⁰ The fermata in bar 268, which appears to be longer overall, takes place as part of the oboe cadenza. In terms of appearances of the motif, the fermata in bar 21 is the longest.

significantly shorter. Furthermore, the entire repeat is played roughly 2–3 MM faster. This reflects Furtwängler's view of sonata movements, according to which no two iterations of any musical material can sound the same due to their different place and function within the whole.⁴¹ In this particular case, a smoother and intensified reiteration of the exposition helps to create a sense of process as well as a broad intensification leading towards the development section.

Looking at the tempo and dynamics curves (Figure 5.2b) of the development section (bb. 125–247), one observes an initial intensification until around bar 195, following which a marked drop in both parameters occurs. Interestingly, in listening to the recording, a sustained line of intensification is perceived to lead towards the reappearance of the motto that marks the arrival of the recapitulation (bb. 248–52; see Figure 5.2a), with the preceding drop in energy (especially in bb. 210–27) being perceived only as a momentary setback, creating suspense. This is reinforced by the sudden increase in tempo and dynamics for bars 228–32, which suggests that the accumulated energy is still pressing against this metaphorical dam of musical forces.⁴²

Bars 253–67 at the beginning of the recapitulation still preserve the energy accumulated during the development section (reflected in the tempo, which is identical to that of the end of the development). That energy is finally discharged in the rather slow oboe cadenza (b. 268). From the second subject (b. 303) until the final appearance of the motif in bars 478–82, a large-scale intensification takes place (Figure 5.2a), mirrored in both tempo and dynamics (Figure 5.2b). Furthermore, the second subject and the closing section are played slightly differently than in the exposition. The second-subject area (bb. 303–45) is played slightly faster, which results in a general tempo increase in the three iterations of this material throughout the movement (exposition, repetition of exposition, recapitulation), contributing to the sense of end-orientation that dominates the performance. The closing section is now more segmented from what came previously, gradually building up tempo once again as opposed to essentially continuing with that of the second subject. The reappearance of the motif in bars 478–82 seems to be the goal of the entire recapitulation and arguably the movement as a whole. The second fermata is followed by a significant caesura, after which the tempo and dynamics drop sharply, creating a sense of complete loss of energy, which not even the *fortissimo* final bars can truly regain.

Overall, Furtwängler's 1943 recording of the movement clearly reflects the same structural priorities observed in his Brahms recording from the same year, discussed in Chapters 4 and 5. Large-scale, end-oriented intensification appears to be the guiding principle in the

⁴¹ See page 70 in this thesis.

⁴² This once again shows that the visual appearance of tempo and dynamics graphs does not always reflect the perceived musical processes and events within a performance.

movement, achieved through ever-growing waves of intensifications in the form of the exposition and its repeat, the development, and the recapitulation (Figure 5.2a).

At the same time, these waves of tension do not simply build upon each other: most are followed by a sudden drop in energy, commensurate in size to the strength of the climax, from which the music only gradually recovers, if at all (Figure 5.6b). This happens after the fermata in bar 21, which discharges the energy accumulated so far, following which the music builds up again. The drop in energy for the second subject also belongs here, although it is a more or less self-evident element of the movement. After the intensification of the development reaches its climax in bars 248–52, the oboe cadenza in bar 268 dissipates the energy and brings the momentum to a complete halt. However, most striking of all is the total break-down that occurs in bars 483–90 following the main climax of the movement in bars 478–82.

WF 43b: Second Movement

In Furtwängler's performance, the first three blocks of the second movement (bb. 1–49, 50–98, 99–123) are clearly outlined. In the first two blocks, *A2* acts as a rounding-off of sorts for *A1* (primarily through tempo), while *B1* functions as a transition between *A* and *B* by introducing a faster tempo but preserving the low dynamics of *A* (Figure 5.3). *B2* then creates sharp contrast with its *fortissimo* dynamics and faster tempo. The ensuing transitions (bb. 39–49 and 88–98) bring a sharp drop in energy, reflected in both tempo and dynamics. They then gradually increase in energy to prepare for the entrance of the next block. Overall, these transitions provide a fundamental break in the internal process of the individual blocks, and therefore they serve to create a clear segmentation between them. The third block presents a gradually accelerating tempo against a backdrop of a terrace-style increase in dynamics. The fermata in bar 123 acts as the highpoint of the movement so far. This is emphasised by the tempo, which gradually increases from the beginning of the movement, and also by the build-up in dynamics taking place in the third block.⁴³

The fermata in bar 123 is rather long and is followed by a major general pause. The following bars then present a complete drop in energy, primarily expressed through *pianissimo* dynamics and an initially slow tempo. This marks a fundamental structural segmentation, which effectively cuts the movement in half.

Between bars 124 and 184, the performance recreates the searching quality that characterised the beginning of the first movement. Each transition and thematic unit that follows

⁴³ *A1* in bars 50–57 is played at a significantly faster tempo than the rest of the movement in the first half, although it is not experienced as such. This impression is probably due to the fact that these bars present *A1* in a rhythmically active variation, and that the surrounding transition and *A2* exhibit much less rhythmic activity.

is shaped uniquely, creating a sense of some sort of inscrutable musical narrative. This ‘search’ comes to an end with the return of *A1* in bar 185, which is shaped as a kind of end-goal through its preparatory transition and its initially slow tempo, which creates the impression of a long-awaited arrival. However, this moment of climax quickly gives way to a sudden loss in energy in *A2* (bb. 193–204), expressed primarily through tempo. The coda creates a secondary climax in bars 217–18, which is once again followed by a collapse, leading to an almost complete halt of musical time in bars 227–29.

In general, the most structurally salient feature of Furtwängler’s performance of this movement – besides the segmentation in bar 123 – is the tendency to strive towards climaxes only then to bring the momentum to a halt afterwards. As mentioned above, this ‘intensification–climax–collapse’ narrative characterises the first movement as well, and here it is manifested primarily in the aftermath of the climaxes of bars 123, 192 and 218. On a smaller scale, it also applies to the transitions at the end of the first two blocks. Together with the searching character of the middle section, this suggests a musical narrative of looking for a breakthrough but never truly achieving it.

WF 43b: Third Movement

In WF 43b/III, the fermatas at the beginning of the two scherzo sections are quite long (Figure 5.4), relating the movement to the previous ones, especially the first movement. Throughout the first scherzo section, the two thematic materials are clearly distinguished, with the second theme (bb. 19–44 and 71–96) played significantly faster and louder. This harks back to the contrast created between *A* and *B* in the second movement.

The shaping of the trio section is noteworthy. The first two iterations of the fugato in bars 141–61 are played as a clear line of intensification achieved through both tempo and dynamics. The third appearance starting in bar 162, however, embraces the stumbling character of the initial bars through a sudden drop in tempo, which builds up again but only gradually. Finally, the last segment of the trio, starting in bar 198, once again drops in tempo to fit the faltering character of the music, but this time the speed does not increase, and the momentum instead comes to an almost complete halt in bars 228–35. On the one hand, this marks the complete loss of energy and momentum towards which the second half of the trio was leading. On the other hand, it helps to mark the return of the scherzo section.

The returning scherzo and the transition to the finale is perhaps the most striking part of Furtwängler’s interpretation of the movement – and possibly of the symphony as a whole. Indeed, this was one of the most praised features of his performances of the symphony during

his lifetime.⁴⁴ Instead of re-establishing the tempo at the beginning of the second scherzo, Furtwängler conducted the first nine bars at an extremely slow tempo (Figure 5.4), which – coupled with the *pianissimo* dynamics – creates the impression of a complete lack of energy. Following the lengthy fermata in bar 244, the tempo starts to speed up, and it continues to increase alongside the dynamics until bar 316, whereupon a significant caesura in tempo marks the arrival of the transition in bar 324. This plunges the tempo into a new depth, only increasing it slightly towards the end. Finally, the last bars of the movement are widened out significantly. All of this contributes to a sense of suspension and anxiety leading up to the finale, which then arrives in a forceful fashion.

The most noteworthy structural feature of Furtwängler's performance of the third movement is the apparent continuation of the 'intensification–climax–collapse' or 'breakthrough' narrative, established in the previous movements. Here, however, it is extrapolated to two-thirds of the entire movement. The first half of the trio (bb. 141–61) represents an uninhibited climax. However, this emphatic attempt at 'breakthrough' begins to falter in bar 162, requiring a lengthy reaffirmation to regain its momentum. From bar 198 onwards, the energy is irretrievably lost, and the entire second scherzo is required to finally gather the necessary momentum to achieve ultimate breakthrough in the finale.⁴⁵

WF 43b: Fourth Movement

Even a cursory look at the tempo curve of Furtwängler's recording of the finale (Figure 5.5b) reveals his fundamental structural goal in the movement: end-oriented intensification. All three main sections (exposition, development and recapitulation) show a broad increase in tempo, with the coda reaching the highest tempo in the entire movement. This image, however, is slightly misleading, as the increase in tempo does not in every case result in a corresponding sense of intensification.

As discussed above, the themes of the exposition (bb. 1–89) get progressively 'weaker' in terms of texture, dynamics and rhythmic activity, suggesting a decreasing trajectory in the energy over the course of the exposition. Furtwängler's aim seems to have been to work against this intrinsic tendency by creating an overarching increase in tempo as well as speeding up within each thematic segment to create a sense of constant growing and of momentum. The overall listening impression, however, is that the most this achieves is keeping the exposition at a

⁴⁴ See RW24, RW94, RW104, RW132 in the Apparatus (Chapter 2).

⁴⁵ It is clear that the fundamentals of this musical narrative are ingrained in the score itself: the 'stumbling' of the fugato, the muffled dynamics of the second scherzo and the triumphant character of the finale are all strongly implied features. However, Furtwängler's highlighting of these features and integration within a broader narrative that stretches across the entire symphony is undoubtedly unique.

relatively even level of energy, as indicated in Figure 5.5a. This creates an interesting situation where the second-subject area (bb. 45–89) occupies a higher plane of tempo than the preceding materials. In these themes, however, some sense of respite is created by initially plateauing the tempo before speeding it up in preparation for the next segment (see the plateau in bb. 45–55 and 64–71). In this way, justice is done to the lyric and peaceful character of the second subject while at the same time a sense of overall goal-orientation is preserved through continuous tempo increase.

The development is perceived as a clear line of intensification (Figure 5.5a). Interestingly, the tempo curve (Figure 5.5b) reveals a significant drop around bar 107, which would suggest a break in the process. This, however, needs to be seen in tandem with the dynamics curve, which shows a sudden increase at the same place, evening out the contrast in tempo, resulting in an unbroken line of intensification. The following reappearance of the scherzo material (bb. 153–206) introduces a sharp break in texture and dynamics, which would naturally lend itself to the kind of ‘collapse’ observed in the previous movements. This time, however, it is not the case. As opposed to a weak, gasping character, here Furtwängler imbues the music with resoluteness and goal-orientation. Instead of a failure of breakthrough, this gives the impression of a strategic retreat before a final, victorious assault, so to speak. Indeed, the tempo curve shows this section to be an integral part of the large-scale tempo increase taking place over the entire recapitulation.

The recapitulation re-presents the themes at a significantly faster tempo (8–10 MM faster in the first and second themes, and 5–7 MM faster in the third and fourth). Furthermore, the third theme here relinquishes its peaceful character and exhibits a gradual speeding-up instead of a plateau in tempo. By contrast, the fourth theme shows a sudden drop and subsequent increase of tempo, which creates momentum leading into the second development. The latter leads an intensification (mainly in dynamics) towards the cadence in bars 312–17, causing a small dip in energy and momentum. Bars 318–61 then work to build up the energy once more, which is taken to an even higher level in the frantically fast coda, leading to the ultimate climax of the movement and the symphony as a whole.

As mentioned above, the most obvious structural strategy in the performance of the movement seems to be goal-oriented intensification, which appears to be Furtwängler’s most commonly employed strategy in his performances during the early 1940s. Besides this, the ‘intensification–climax–collapse’ or ‘breakthrough’ narrative seemingly comes to a conclusion here: the finale brings the long-awaited breakthrough, where climaxes build upon each other without any setback. The treatment of the scherzo material is representative in this light: instead of bringing a collapse in energy and a character of being lost or searching for a way out, the

scherzo is used as an integral part of a plan: as a springboard thrusting the music towards its ultimate climax in the coda.

WF 43b: The Symphony as a Whole

The analysis above has already touched upon some of the overarching processes or ‘narratives’ within Furtwängler’s performance of the symphony. Before discussing those, however, I turn to the tempo curve of the recording as a whole (Figures 5.6). First of all, this shows that a similar tempo range is occupied by the middle movements, while the outer movements are played at a generally higher speed, which seems to create a link especially between the first movement and the finale. This is further supported by the overall tempo shapes of the movements (Figure 5.6b), which seem to reveal something about the movements’ function in general. The first movement shows an upward trajectory, which however fails to break out from a fairly limited range. The second movement creates a self-contained unit through its almost perfectly realised arch shape and also a sharp contrast to the first movement through its generally lower tempo plane. The third movement shows a broad downward trajectory, which serves as a preparation for the finale. The finale itself seems to take up the processes left behind at the end of the first movement, eventually reaching breakthrough with its extremely fast tempo towards the end.

This peak in tempo – the fastest in the entire symphony – at the end of the finale also indicates end-orientation within the performance as a whole. At a basic level, this interpretation is supported by the fact that Furtwängler did not repeat the first scherzo and the trio in the third movement, which would have affected the proportions of the symphony and the function of the third movement as a transition. It is also strongly strengthened by the large-scale intensification that effectively begins at the end of the third movement and concludes in the climax at the end of the finale, as shown on the recording’s intensity curve (Figure 5.6a).⁴⁶ As this figure shows, there is an underlying sense of forward motion created throughout the recording, which is perceived to be slightly weaker in the middle movement and most pronounced in the finale, further supporting an end-oriented construction. Also, the relatively slow tempo of the middle movements helps to emphasise this overall highpoint in the finale. If accepted, this means that

⁴⁶ It is worth noting that producing intensity curves for the entire symphony (here as well as in the other two recordings) proved to be rather challenging. It was straightforward to incorporate the intensity curves of the first and the fourth movements shown above (Figures 5.2a and 5.5a) into this summary graph since their basic ‘gist’ was clear and simple enough (but note that from the perspective of the entire symphony a more skeletal representation seemed appropriate). However, it seemed harder to capture the intensity profile of the inner movements, especially of the second movement. This is due to the fact that the intensity contour of these movements lacks the gestural simplicity seen in the outer movements, making it difficult to reduce it down to its structural essence. Naturally, this issue was compounded by the difficulty of grasping and conceptualising the entirety of the symphony in this regard, which points to the possible limitations of the technique in general. It appears that in large-scale works, intensity curves are useful mainly when the intensity profile of the work exhibits simple overall tendencies or shapes.

Furtwängler's strategy of goal-orientation, which in previous chapters I have observed within individual movements, is also realised across entire symphonies.

Besides end-orientation, one can observe a further type of musical 'narrative' at work in Furtwängler's performance. This narrative consists in aiming for a breakthrough by building towards climaxes, which for the most part end, however, in a sudden loss of energy and momentum – in other words, in failure to achieve the breakthrough. Throughout movements 1–3, this is manifested in numerous examples (Figure 5.6b). In the first movement, these include the fermata in bar 21; the arrival of the second subject in bar 59; the oboe cadenza, which discharges the energy accumulated in the development; and the final twenty bars of the movement, in which the energy of the preceding highpoint dissipates. In the second movement, it applies to the transitions connecting the first three blocks of the movement (bb. 39–49 and 88–98), the transition following the climax in bar 123, and the *Ad* sections in bars 193–204 and bars 220–29. In the third movement, this process is extended across a large section, the dissipation of energy occurring in the second half of the trio (bb. 162–235) following the climax reached in the first half (bb. 141–61), with the entire second scherzo working towards recovering from this downfall. Finally, the fourth movement brings about the long-awaited 'breakthrough': the movement is characterised by unrestrained momentum and strength, and the reappearing scherzo material – instead of halting the momentum – is now used strategically to create the ultimate climax at the end of the coda.

Further patterns can be observed in the musical characterisation of the movements. Long and dynamic musical lines and a generally active character define the first and the final movements, while the second movement gives an impression of self-contained and largely static blocks. The first two sections of the third movement (scherzo and trio) are also characterised by short segments and sharp contrasts, which connects them to the second movement, while the return of the scherzo creates an uninterrupted line and an active process leading towards the finale. In this sense, while the second movement provides contrast to the first, the third movement functions as a transition between the second movement and the finale.⁴⁷

⁴⁷ This impression is the result of both compositional and performative parameters. While the fundamentals of this pattern are ingrained in the composition, Furtwängler's use of dynamic lines in the outer movements sharpens this contrast, transforming it into a salient feature of the symphony as a whole.

WF 50b

WF 50b: First Movement

In the first movement, the main difference between WF 43b and WF 50b lies in that the latter lacks the dramatic intensity of the former. Most conspicuously, it also lacks the broad intensifications that form the backbone of WF 43b/I (Figure 5.7a). This is clearly reflected in the tempo curve of WF 50b/I (Figure 5.7b), which is mostly characterised by flat or descending lines. Furthermore, except for the very beginning, the entire performance is about 3–5 MM slower than WF 43b/I (Figure 5.17). At the same time, the fermatas throughout the movement are still extremely long, which however gain a different function due to the lack of preceding climaxes.

The movement begins at a fairly fast tempo, but this does not increase in the lead-up to the second subject. Instead, it is segmented into two parts at around bar 37, where the tempo suddenly drops and recovers only gradually. The shaping of the second subject is also different. The horn motif of bars 59–62 here serves as a transition, providing a link between the tempos of the first subject and the second subject proper, whose entrance in bar 63 represents the beginning of a new section due to its initially slow tempo. There is then a slight intensification towards the end of the closing section (reflected in the gradual increase in tempo); however, this is experienced as much weaker than that in WF 43b/I due to the smaller tempo increase but also because of the dynamics falling back towards the end.

The repetition of the exposition in WF 50b/I preserves some of the fundamental characteristics of that in WF 43b/I: the fermata in bar 21 is significantly shorter and the musical materials are generally more intensified. Once again, this is clearly reflected in tempo as the second-subject area and the closing section are played c. 5 MM faster than previously. Even the first subject seems to intensify more successfully, mostly due to the drop in tempo in bar 37 being less pronounced this time around. Interestingly, in the repeat, the function of the horn motif of bars 59–62 shifts: here, it provides an immediate contrast in tempo compared to the first subject, following which the second subject proper begins immediately at an overall faster tempo, thereby minimising the contrast between the first subject and the second subject proper. This perhaps serves to underline the functional contrast between the two expositions: the goal of the first is to present the materials and highlight their contrasts while the second works to reimagine these as part of a more goal-oriented process. That being said, the general sense of goal-orientation here lags behind that of WF 43b/I.

The development section in WF 50b/I creates the opposite impression of that in WF 43b/I: instead of a general intensification, WF 50b/I creates a descending line of energy (see Figure 5.7a). There is a minor moment of climax in bar 168, which is prepared by a brief

intensification over bars 158–67. Following this, bars 175–95 see a sudden drop in energy, reflected in both tempo and dynamics, in contrast to WF 43b/I where the high intensity was preserved over these bars. Following bar 196, the tempo begins a long descent, ultimately reaching the low point of 65 MM (WF 43b/I stood at around 75 MM). This process is so determined that the overall impression of losing momentum is not affected even by the brief surge in bars 228–29 and 240–47.

After the reappearance of the motto, marking the beginning of the recapitulation, the first subject begins at a fairly slow tempo. Instead of re-establishing the momentum that accompanied it in the exposition, this preserves the weaker character of the development. In this context, the oboe cadenza in bar 268 serves as an energy-gathering moment – in other words, the complete opposite of the oboe cadenza of WF 43b/I. This results in the rest of the first subject gaining a faster-than-before speed in bar 269. The arrival of the second subject unfolds similarly to the exposition repeat, with the horn motif marking the segmentation and the subject proper exhibiting a clear tempo increase towards the closing section. The latter – similarly to WF 43b/I – is clearly separated from the second subject through a significant drop in tempo. Perhaps the sharpest contrast between the recordings lies in the treatment of the coda, where WF 50b/I does not exhibit the emphatically goal-oriented intensification that characterised WF 43b/I. While there is a brief lead-up towards 423, the entrance of the newly introduced musical idea, the tempo gradually decreases afterwards, reaching a low point in bars 483–90.

The overall impression created by the movement and its large-scale processes are vastly different in this performance from those relevant to WF 43b/I. Missing are the emphatic goal-orientation and the musical narrative of striving for breakthrough.⁴⁸ WF 50b/I is overall less dramatic and gives a general impression of being more lyrical and even restrained. In terms of its larger form, perhaps an ABA form can be identified in terms of the tensional directions of the three major sections: the exposition and the recapitulation slightly increasing while the development strongly decreasing (Figure 5.7a).

WF 50b: Second Movement

In terms of overall structural outline, WF 50b/II approaches the movement similarly to WF 43b/II: the first three blocks (bb. 1–49, 50–98, 99–123) are once again clearly outlined and are

⁴⁸ Regarding the latter, the opposite seems to be true, at least when it comes to tempo. In each major section, the tempo curve shows a fast initial tempo, following which everything is played generally slower, with nothing coming close to reaching the same heights. Perhaps this could be interpreted as a different take on this musical narrative: instead of building towards breakthrough moments, here the music begins with strength, which is then lost over the course of the musical journey. However, these trajectories apply only to tempo, and the general listening impression supports this only partially with the expositions perceived as either plateauing in intensity or perhaps slightly increasing.

followed by a major caesura in bar 123, while the second half is shaped ambiguously with *A1* at bar 185 forming a highpoint of sorts, followed by a drop in energy with the arrival of *A2* in bar 193. However, the performance in general feels less active in WF 50b/II, which is partly explained by the overall slower tempo (2–3 MM lower), as shown in Figure 5.18.

Furthermore, the intensifications that characterise the first three blocks in WF 43b/II are missing from this performance. While *B2* functions as the highpoint in WF 43b/II in both dynamics and tempo (Figure 5.8), here all three iterations of *B2* are accompanied by a decrease in tempo compared to the section preceding them, which results in a general evening-out of intensity. The third block (bb. 99–123) – which in WF 43b/II shows a clear line of tempo increase – now exhibits a gradual decrease in tempo.⁴⁹ This creates a strong parallel with the first movement, where a similar internal decelerando occurred within structural blocks.

The second half of the movement unfolds largely similarly to WF 43b/II. The transition in bars 124–47 once again shows an increase in tempo, although here it is more fragmented. Furthermore, *B2* (bb. 148–57) creates a larger contrast in tempo, and it treats the held-out notes in bars 149–50 and 152–53 rather as fermatas, as evidenced by the tempo curve. Also, *A1* in bars 185–92 feels like a less powerful climax than in WF 43b/II due to the more pronounced drop in tempo that accompanies it (Figure 5.18). As a result, the drop in energy in the following *A2* (bb. 193–204) seems less of a post-climax collapse and more of a return to the character of the beginning; indeed, the tempo level and tempo shape of this section are remarkably similar to the first iteration of *A2* in bars 9–22.

Overall, this performance of the movement shows an avoidance of climaxes and a general striving for evenness. As a result, the ‘breakthrough’ narrative of WF 43b/II is not realised here. What remains are the general structural segmentations (primarily bar 123) and a less prominent version of a tempo arch stretching across the movement.

WF 50b: Third Movement

The third movement in WF 50b once again preserves some fundamental elements of WF 43b/III and shows strong similarities with the earlier performance in its general tempo shape (Figure 5.19). Although WF 50b/III is slower by 2–3 MM overall, the tempo curve on a broad scale parallels that of WF 43b/III quite closely. This includes a general decrease in tempo over the course of the trio, and a markedly slower second scherzo section. Furthermore, the fermatas are similarly long, once again creating a strong link with the first movement.

⁴⁹ The dynamics also increase less sharply than in WF 43b/II.

However, as in movements 1–2, WF 50b/III's tempo profile is dominated on the smaller scale by flat or descending lines (Figure 5.9): the second theme in bars 19–44 brings a descending tempo line, as opposed to the arch of WF 43b/III; the second iteration of the second theme in bars 71–96 does not increase the tempo further but instead slows it down; the internal tempo increases of the trio's blocks are also mostly gone, replaced by a general tempo arch embracing the entire trio; finally, the repeat of the scherzo (bb. 236–323) no longer intensifies in either tempo or dynamics. All of this is coupled by an apparent evening-out of contrasts in dynamics, especially in the case of the first appearance of the second theme (bb. 19–44) and the trio (bb. 141–235).⁵⁰ The only exception is the final transition (from b. 324 onwards), which appears intensified in both tempo and dynamics – in contrast with WF 43b/III, where this section was played with a more ambiguous character. Furthermore, it is also worth noting that although the small-scale tempo increases are not realised here, the first scherzo as a whole still shows a general – albeit small – tempo increase, which creates a link with the first two movements.⁵¹

Overall, due to the lack of intensifications and climaxes, the 'breakthrough' narrative is not realised in this movement either. Instead, WF 50b/III creates a much more even performance, with smoother tempo lines and minimised contrasts. However, this generally restrained character – alongside the final transition – gains a new meaning when viewed from the perspective of the finale.

WF 50b: Fourth Movement

The tempo shape of WF 50b/IV (Figure 5.10b) in the finale closely mirrors that of WF 43b/IV with three exceptions: as shown in Figure 5.20, the general tempo is c. 5 MM slower, the return of the scherzo in bars 153–206 does not fall back as much as in WF 43b/IV, and finally the coda does not reach the same tempo heights as in the earlier recording (both in objective tempo values and proportionally within the performance). Crucially, however, WF 50b/IV shows the same abundance of tempo increases on both the small and the large scale as WF 43b/IV. This was par for the course for the latter, but in this performance it creates a stark contrast with all previous movements, and in this light the transition at the end of the third movement emerges as a fundamental turning point.

⁵⁰ This is the impression one gains from listening to the recording but it is not clear from the dynamics curve: this is perhaps due to the sound quality or the dynamic range of the recording itself. A further possibility might be that the microphones were placed further away from the brass section, which sounds muffled at points in comparison with the strings. However, these instruments sound clear and bright in the finale, which seems to contradict this hypothesis.

⁵¹ The first movement's exposition and its repetition and the first half of the second movement also show a slight general tempo increase.

Although it begins fairly slowly, the first theme creates a jubilant character, and it gradually intensifies towards the second subject, whose arrival is accompanied by a drop in tempo, giving way to a steep tempo increase over the course of bars 26–44. The third theme (bb. 45–63) maintains this tempo, which increases only slightly towards the end. The fourth theme is clearly separated from the rest through a brief break in tempo. However, in contrast with WF 43b/IV, WF 50b/IV does not increase the tempo sharply with the arrival of the *forte* tutti in bar 72. Indeed, even the contrast in dynamics is minimised compared to the earlier recording.⁵² As a result, the exposition does not reach a climax comparable to that in WF 43b/IV.

However, this restrained highpoint allows the development to connect more smoothly to the exposition. Indeed, the overall listening impression is that the development continues the intensification began in the exposition, effectively linking these sections (Figure 5.10a). This is also reflected in the tempo curve, where the beginning of the development starts at the tempo established in the fourth theme, which it then further increases over bars 90–106. The rest of the development continues the intensification leading towards the recapitulation.⁵³ At the end of the development, the tempo starts to decrease more gradually towards the scherzo than in WF 43b/IV. Coupled with the fact that the scherzo introduces a smaller tempo contrast in general, this serves to connect this section to the development more smoothly.

As a result of the faster tempo of the scherzo, however, the recapitulation appears more separated from what came before; this impression is also supported by the larger contrast in dynamics that the recapitulation brings after the scherzo in comparison with WF 43b/IV. Similarly to the first movement, the recapitulation in this movement re-introduces the musical materials in a more intensified and goal-oriented version. The first and second themes reappear c. 8–10 MM faster, while the third and fourth themes are played around 3–5 MM faster. Furthermore, the second theme is now less separated from the first in tempo, creating an unbroken line of intensification. Also, the second half of the fourth theme (from bar 281 onwards) now immediately increases the tempo in order to create a larger climax than previously. The second development and the coda then intensify the music until the ultimate climax of the movement and the symphony as a whole.

In general, the main structural priority in the movement seems to be goal-oriented intensification. However, instead of taking the approach seen in WF 43b/IV (i.e. creating ever-growing intensifications), WF 50b/IV achieves this by slightly holding back the exposition, and

⁵² Once again, this is not reflected in the dynamics curve despite the fact that the difference with WF 43b/IV is clear from listening to the recordings.

⁵³ Similarly to WF 43b/IV, the break in tempo at bar 107 is counterbalanced by the surge in dynamics, which work to maintain an unbroken line of intensification.

by creating a more sustained line of intensification across the entire movement. The tempo clearly reflects this: compared to WF 43b/IV's separate tempo increases in the exposition, development and recapitulation, the entire movement here can be seen as forming one broad line of tempo increase. In the perceived intensity profile of the two performances (Figures 5.5a and 5.10a), this creates a clearly three-part form in WF 43b/IV and a two-part form in WF 50b/IV by linking the exposition with the development.

WF 50b: The Symphony as a Whole

WF 50b's overall structural strategy can be succinctly summed up as end-orientation. As discussed above, movements 1–3 appear restrained in terms of larger intensifications and climaxes, as well as in their generally passive or static musical processes (Figure 5.11a). This makes the active and dynamic character – achieved primarily through broad intensifications – and the powerful highpoint of the finale all the more striking, shifting the weight of the work decisively towards the end. This tendency is also clearly reflected in tempo (Figure 5.11b), which in the first three movements is characterised by flat and descending lines while the finale is completely dominated by tempo increases on every level of the movement. In this light, the transition leading to the finale functions as a crucial turning point.

In general, this means that WF 50b achieves the same structural goal as WF 43b – end-orientation – but with different methods: while WF 43b succeeds through ever-growing intensifications culminating in the finale, here holding back before the finale helps create this impression (Figure 5.22). This strategy was previously seen at the movement level in the Brahms recordings from 1949 and 1950, as well as the finale of WF 50b, but this demonstrates that Furtwängler also employed it on the level of the symphony as a whole.⁵⁴

Looking at the tempo curve of the recording as a whole (Figures 5.11b and 5.21), it becomes clear that WF 50b creates smoother links between movements. While WF 43b's second movement introduces a sharp contrast in tempo after the highpoint at the end of the first movement, this connection is much smoother in WF 50b, where the slowing-down at the end of the first movement connects seamlessly to the second movement's tempo. Furthermore, the transition at the end of the third movement now forms an integral part of the broad tempo increase that spans the fourth movement, whereas in WF 43b a sharper contrast in tempo is created here. Also, a simplification of the tempo lines can be observed in movements 3 and 4. Here, each of these movements exhibits more clearly one single gesture in tempo: a sustained

⁵⁴ This correlation suggests a general approach characterising Furtwängler's performances around 1949–50.

decrease in movement 3 and a general increase in the finale. All of this serves to integrate the individual movements into a whole.

WM 40

WM 40: First movement

Willem Mengelberg's 1940 recording of the movement bears some important similarities to Furtwängler's recordings. In tempo (Figure 5.17), it closely follows WF 43b/I in terms of both shape and MM value, with the broad tempo increases of the exposition and the recapitulation also present here. In dynamics, Mengelberg's recording is close to WF 50b/I. At the same time, Figure 5.17 also reveals some crucial differences. Most importantly, Mengelberg did not observe the repeat of the exposition, which has far-reaching consequences for the movement and even the symphony as a whole. Furthermore, Mengelberg's fermatas are significantly shorter throughout the movement, with one notable exception: the oboe cadenza in bar 268, which forms a fundamental point of segmentation as a result.

Similarly to Furtwängler, Mengelberg shapes the exposition as a general intensification towards the closing section (Figure 5.12a). However, instead of the two separate waves – reflected in tempo – in which Furtwängler achieves this (bb. 1–58 and 59–124), Mengelberg seems to create one sustained line, which is only temporarily disturbed by the second subject (Figure 5.12b). Both the fermata in bar 21 and the medial caesura in bar 58 are preceded by small intensifications in both tempo and dynamics, following which the horn motif of bars 59–62 create a sharp break through its suddenly slow tempo. The first few bars of the second subject proper are also played fairly slowly, but the tempo starts increasing from bar 74 onwards, leading towards the closing section. The latter begins at a fairly fast tempo, but instead of further increasing to create a true climax moment, it plateaus and even decreases the tempo in the final bars. Alongside the decreasing dynamics, this creates an impression that a climax is deliberately avoided at this point.

The development reintroduces the first subject at a higher tempo than in the exposition, and it leads to an intensification in both tempo and dynamics towards an area of climax in bars 168–94. Together with the restrained closing section of the exposition, this creates an impression of a singular line of intensification leading from the beginning of the movement to this climax, effectively connecting the exposition and the development as a result (Figure 5.12a). From bar 195, the general energy level decreases significantly, and this pattern is not disrupted even by the *fortissimo* in bars 228–32. As a result, the second half of the development – similarly to WF 50b/I

– gives the impression of a general winding-down following a climax, instead of driving towards the motto, as seen in WF 43b/I.⁵⁵

Following the restatement of the motto in bars 248–52, the first subject begins almost immediately, creating a sense of rush – an impression heightened by a small imperfection in ensemble in bar 253. Bars 253–67 seem to connect directly to the end of the development due to a similarity in tempo, which then increases towards the oboe cadenza in bar 268. This, however, is played rather slowly, and the final fermata is extremely long. In light of the rest of the fermatas in the movement, which are played rather fluidly (at least in comparison with Furtwängler's recordings), this creates a major segmentation, arguably cutting the movement in half.

The rest of the recapitulation reintroduces the exposition's materials in a more integrated manner. The second half of the first subject does not increase the tempo as much as it did previously, which minimises the contrast with the second subject. Furthermore, the latter speeds up more substantially over its first few bars, which – besides helping to minimise the tempo contrast – imbues this section with a more goal-oriented purpose. The closing section is then played as a more intensified version of its counterpart in the exposition, starting at a faster tempo and increasing in dynamics.⁵⁶ The coda then gradually increases the intensity – primarily through dynamics – in the lead-up to the reappearance of the motto in bars 478–82, which is further emphasised by a momentum-creating syncopation created in bars 453–66.⁵⁷ Bars 483–90 create a momentary break in tempo and dynamics, following which the final bars of the movement re-establish the climax's energy and as a result are experienced as an extension thereof.

Overall, Mengelberg seems to strive for the same structural goal as WF 43b/I: end-oriented intensification. The closing section of the exposition is held back, as a result of which the more energetic iteration of this section in the recapitulation results in a general sense of intensification. In tempo, this is also highlighted through a general speeding-up of the first subject over the course of the movement (through its appearances at the beginning of the exposition, the development and the recapitulation). Furthermore, the recapitulation and the coda in general lead towards an extended climax through an intensification in dynamics and, to a lesser extent, in tempo, and also by creating a sense of momentum through syncopation. The

⁵⁵ This might seem contradictory in light of the general tempo shape of the development, where WM 40/I is more akin to WF 43b/I than WF 50b/I. This impression is created primarily by his treatment of bars 228–32, which are much less explosive in dynamics than in either of the Furtwängler recordings, and which also introduce a sharper drop in tempo than in WF 43b/I.

⁵⁶ Although the tempo actually dips in the middle of this section, the increase in dynamics outweighs this in the general listening impression.

⁵⁷ In these bars, Mengelberg enhances this intensification through his phrasing and accentuation on the micro level: he creates three-bar units in bars 453–55, 456–58, 461–63 and 464–66, with the third bar in each group receiving an unexpected stress. This creates a sense of syncopation that propels the music forwards.

recapitulation and the ending also gain more weight in this recording through the omission of the exposition repeat.

The omission of the exposition repeat also affects the structural outline of the movement. As described above, the line of intensification that began in the exposition seemingly continues in the development, which connects the two sections without a repeat to break this link. As a result of this, the oboe cadenza now falls almost exactly in the middle of the movement, allowing the emphatically slow oboe solo to effectively separate the movement into two equal halves.⁵⁸ This impression is also reflected in the general tempo range explored within the two halves, with the exposition and the development mostly occupying a tempo framework of 80–95 MM and the recapitulation's tempo ranging from around 85 MM to 100 MM. Overall, in the performance's perceived intensity profile, a two-part form emerges with an arch shape (exposition–development) followed by a line of increase (recapitulation), as shown in Figure 5.12a.⁵⁹

WM 40: Second movement

It is clear from a comparison of tempo graphs (Figure 5.18) that Mengelberg's performance in the second movement noticeably differs from both WF 43b/II and WF 50b/II. Overall, WM 40/II is 5–7 MM faster than WF 43b/II (when measured at bar-level), and the tempo profile is contrasting. As opposed to the fairly even arch shape of the Furtwängler recordings, Mengelberg's recording shows a much more varied tempo profile.

In WM 40/II, the first three blocks (bb. 1–49, 50–98, 99–123) are shaped as independent units, which do not really form an overarching line of intensification, in contrast with Furtwängler's recordings. Instead, the internal contrasts are emphasised. In the first two blocks, *A2* drops the tempo significantly after *A1* (Figure 5.13), while the ambiguous *B1* section gives way to an extremely powerful *B2*, which towers over the entire block. The following transitions (bb. 39–49 and 88–98) drop the tempo before increasing it again in preparation for the next block. The third block begins at a fast tempo, which is then mostly maintained without increasing

⁵⁸ It is important to point out that this segmentation occurs at a structurally less significant point. The oboe cadenza itself does not mark the beginning of the recapitulation, and therefore this segmentation is slightly misaligned with the sonata form structure of the movement as it is usually interpreted. Perhaps Mengelberg considered the oboe solo an expressively more appropriate moment for a segmentation point created through a sharp decelerando and a fermata.

⁵⁹ This impression is further supported by an incidental detail of the performance. At the beginning of both the exposition and the recapitulation (specifically, in bars 6 and 253), the first subject following the motto is played with some imprecision in ensemble (there is a slight delay in the entry of a few violin players), which creates a parallel between these sections. Since no such imprecision occurs at the beginning of the development, this helps to cement the sense of a two-part form in the performance. It should be noted, however, that such a detail cannot realistically be ascribed to the conductor's intention, and as such this observation relates strictly to what I call 'listener's analysis'. Even though it could not have been intentional, this phenomenon still forms part of the performance, and as such it should arguably be considered in analysis.

it significantly. Together with the restrained dynamics of the final part of the block (bb. 115–23) and the slowing-down that coincides with the climax in dynamics at bar 123,⁶⁰ this turns the entire block into an extended area of climax with no single highpoint. The fermata in bar 123 creates a major segmentation, once again cutting the movement into two equal halves.

The ensuing transition maintains the previously established tempo (in contrast to WF 43b/II) and increases it towards *B2*. The latter itself appears just as bright and powerful as in the first two blocks and is not accompanied by a drop in tempo, unlike in Furtwängler's performances. The return of *A1* in bars 185–92 is experienced as a point of arrival and as an extended climax.⁶¹ A sharp contrast is then created in the ensuing *A2* section (bb. 193–204), which sees the tempo plummet. Following the coda's climax of bars 214–18, *A2* once again creates a large contrast in tempo.

Overall, besides the segmentation at bar 123, the most salient structural feature of the performance is the contrast created between 'weak' and 'strong' sections. This is initially presented in the broad range of energy generated between *A2* and *B2*, while in the second half a sharp contrast exists between the two climax areas (*A1* and coda) and the ensuing *A2* sections. This might suggest a similar 'breakthrough' narrative as seen in WF 43b/II. However, that is not the case here. The weak areas come after broader areas of climax and not singular peaks, and furthermore these climaxes are not the result of large-scale intensifications. Also, no such 'moment of collapse' is created at the most obvious place in the movement: in the transition following the fermata in bar 123. Here, bar 123 does not function as a clear point of climax, and the following transition begins almost immediately while maintaining the same tempo as the previous block.

WM 40: Third movement

The tempo graph once again reveals important differences between Mengelberg's and Furtwängler's recordings (Figure 5.19). First, WM 40/III is around 8–13 MM faster than either of Furtwängler's recordings, and the general tempo shape is quite contrasting. Instead of an arch shape connecting the first scherzo and the trio, here a generally descending tempo line can be observed over the same sections. The return of the scherzo reveals further differences. While this section introduces a noticeable step-back in tempo and dynamics in Furtwängler's recordings,

⁶⁰ Although based on the loudness data, the third section in WM 40/II does not appear to be any quieter than the previous highpoints (*B2*), it is experienced as restrained in dynamics when listening to the recording. This impression is perhaps the result of the soft note attacks of the strings in the third section, which are in stark contrast with the powerful and bright tone of the brass instruments in *B2*.

⁶¹ This is primarily due to its preparation in the transition in bars 177–84. The transition itself is preceded by a significant caesura in tempo, which marks a segmentation or at least signals the advent of an important musical event. This transition then causes a tempo increase towards *A1*, which begins with another small caesura in tempo.

Mengelberg takes it at a rather fast tempo and with less contrast in dynamics compared to the preceding trio. Finally, the transition is accompanied by a sudden drop in tempo, which then increases – alongside the dynamics – to prepare for the finale.

Perhaps the most salient feature of Mengelberg's performance is the sharp contrast between 'weak' and 'strong' sections, a feature which forms a link with the second movement. In bar 19, the second theme 'bursts in' with its fast tempo and loud dynamics (Figure 5.14a–b), creating a stark contrast after the softly played fermata preceding it. The second iteration of the second theme follows a brief intensification in bars 64–70, and the theme itself is emphasised through an even faster tempo. Furthermore, the first three intensifications of the trio section (bb. 141–61 and its repeat, and bb. 162–97) also traverse a broad range of energy, building up the tempo gradually and moving from restrained dynamics to an explosive *fortissimo*.

Indeed, this pattern can be interpreted as a musical narrative of sorts wherein the music moves from sudden sharp contrasts to more gradual intensifications, as visualised in Figure 5.14a. As opposed to the immediate contrast of the second theme's entrance in bar 19, the second iteration of the theme is preceded by a ten-bar-long transition, while the theme's next appearance at the end of the closing section in bars 133–36 is preceded by a twenty-four-bar-long preparation. In the trio, two intensifications of twenty bars and an intensification of thirty-six bars take place in bars 141–61 and 162–97, respectively. Finally, the returning scherzo shows two broad intensifications in bars 236–323 and 324–73. This 'narrative' is supported by the fact that no repeat is observed in the movement, which allows for an uninterrupted unfolding of this pattern. In this way, the movement connects directly to the second movement, whose sudden contrasts between its concluding climax areas and *A2* are carried over initially before gradually being transformed into long-range intensifications.

WM 40: Fourth Movement

When viewed in light of the tempo graph (Figure 5.20), the finale reveals perhaps the largest difference between Furtwängler's and Mengelberg's performances. While both Furtwängler recordings outline tempo increases within their larger sections that add up to one broad tempo increase leading towards the climax in the coda, in WM 40/IV no such pattern emerges. Indeed, the exposition and recapitulation show a somewhat decreasing tempo overall or perhaps a 'U' shape, with a significant dip in tempo in the middle (Figure 5.15b). Overall, this also reflects a fundamental difference between the two conductors' approaches: in contrast to Furtwängler's emphatically end-oriented intensification, Mengelberg effects a front-accented construction.

The movement begins in WM 40/IV with a powerful statement of the first theme. This is played at a high speed, and a general increase in dynamics leads to a sense of intensification,

despite the small decrease in tempo. The second theme is preceded by a significant *rallentando*, and the tempo gradually builds up again, although it does not reach the same heights as in the first theme. The third theme drops in energy even further, which is clearly reflected in tempo. Finally, after a weak beginning, the fourth theme builds up the energy once more, but it avoids reaching a decisive climax – similarly to the first movement's exposition. The development section then begins without an exposition repeat.

Similarly to Furtwängler's recordings, the development section here is experienced as one broad line of intensification (Figure 5.15a). However, as the tempo graph betrays, this is achieved through different means. The tempo drops at the very beginning of the development section, and an intensification follows in both tempo and dynamics. Around bar 122, the tempo drops slightly, giving way to a new phase of tempo increase. This drop in tempo does not break the perceived line of intensification, but instead functions as a brief energy-gathering passage that helps propel the music forwards. The reappearance of the scherzo section in bar 153 does not create too much of a contrast as it lies close to the previous material in tempo.

The recapitulation reveals an attempt at integrating the materials into a more linearly conceived process, as seen previously in the first movement. Here the first theme intensifies less strongly and creates a larger decrease in tempo, which help connect it to the second subject. The latter – although still preceded by a *rallentando* – regains the tempo faster, which once again minimises the contrast between the themes. Following a largely unchanged third theme, the fourth theme begins after a more sharply accentuated *rallentando*, which slightly separates the theme from the rest of the recapitulation. However, this time around, the fourth theme intensifies more clearly in both tempo and dynamics.

In a typical Furtwängler performance, this would be followed by a frantic intensification towards the ultimate climax of the movement. In WM 40/IV, however, no such process takes place. In the second development and the coda, the energy undulates with no clear end goal (Figure 5.15a). The energy accumulated at the end of the recapitulation collapses at the cadence in bar 312. Although it is mostly regained in bars 322–32, energy is lost again in bar 333. The music then builds up in bars 339–47, following which it again loses momentum in bars 348–50. Subsequently, another intensification is created leading into the coda, which maintains the energy until bar 400, whereupon a sudden drop in tempo breaks the momentum. Afterwards, the energy is barely regained, and the ultimate broadening-out of tempo from bar 432 onwards results in a rather anti-climactic ending.

Overall, therefore, the performance of the movement is not experienced as particularly end-oriented. The only intensifications occur within mostly brief, self-contained units such as the

themes of the exposition or the development section, and there is no overarching intensification either in tempo or dynamics, nor is there a clear point of climax at the end the movement. The recapitulation barely intensifies the materials, and the ending is rather fragmented and without a clear goal.

Instead, the movement feels front-accented. The first theme is prepared through large intensifications – the transition at the end of the third movement and the development section later in the finale – and is experienced as the highpoint of the movement, following which each theme represents an ebb in energy levels. This is clearly reflected in tempo, where the second and third themes decrease the tempo considerably. Furthermore, the first theme is also separated from the rest through a significant *rallentando* before the second theme.

WM 40: The Symphony as a Whole

Even though Mengelberg's recording of the symphony differs in key aspects from those of Furtwängler, its main structural goal appears to be identical to that of the latter: end-orientation. In WM 40, the weight of the work is decidedly shifted to the finale by the omission of the exposition repeat in the first movement. Therefore, although the first movement is generally more dynamic and end-accented than the finale, the sheer contrast in length makes the latter dominate the symphony as a whole. Furthermore, the finale is also emphasised by the preceding transition, which in this case included two broad intensifications: the scherzo repeat and the transition proper at the end of the third movement (Figure 5.16a). Finally, the powerful entrance of the finale's first theme (played significantly faster than in either Furtwängler recording) is so powerful that it arguably creates the highpoint of the entire work (Figure 5.16a).

Importantly, however, Mengelberg's approach to end-orientation is different from Furtwängler's. While the latter drives the music to a well-defined climax at the end of the finale (as reflected in the tempo graphs), Mengelberg instead focuses the energy at the beginning of the finale, effectively transforming the rest of the movement into an extension of this climax. As a result, in WM 40 the entire finale can be interpreted as a broad climax (Figure 5.16a).⁶² Mengelberg's particular focus on the beginning of the finale also emphasises the tonal narrative of the symphony, making the long-awaited arrival and establishment of C major at the beginning of the finale the highpoint of the work as whole.

⁶² This can be seen as an extension of his approach to climaxes in the individual movements. In each, the internal climaxes were shaped as general areas rather than points of climax. In the first movement, the epilogue in bars 491–502 extended the climax created by the motto in bars 478–82. In the second movement, the climaxes took the form of *Al* in bars 185–92 and bars 214–18, the latter of which avoided a definitive point of climax through weakening the highpoint in dynamics in bar 218 through a decrease in tempo. Finally, the finale offers multiple areas of higher intensity in the second development and the coda, but none of these intensifies towards any one point.

Besides this, many links are forged between the movements in WM 40. In movements 1, 2 and 4, a significant segmentation is created around the middle of the movement, effectively cutting them into equal halves.⁶³ There is also a similarity in the treatment of sonata form in the first and final movements. In both cases, the exposition's closing section avoids creating a true climax, thus emphasising its return in the recapitulation where it intensifies much more freely. Furthermore, the exposition's materials are re-introduced in a more intensified and integrated form upon their return: they are played at a generally faster tempo and the contrast between themes is reduced. There is also a unique link connecting the middle movements: these movements emphasise the contrast inherent in their materials, and this contrast is woven into a narrative of musical transition in the third movement, where the music gradually moves from sudden contrasts to increasingly long intensifications. Arguably, a sense of cohesion is created in the performance through these similarities and links.

When viewing the tempo graph of the recording as a whole (5.16b and 5.21), one might notice that the middle movements appear to be less separated from the outer movements than in either of Furtwängler's recordings. The general tempo range of the movements are closer to each other, and seemingly smoother links are effected between individual movements, especially in the case of the first, second and third movements. At the same time, it is clear that Mengelberg's movements lack the gestural simplicity of Furtwängler's movements. While each was characterised by a general tempo direction or shape in the latter's recordings, here the movements' tempo profiles are less clearly defined and harder to distinguish. Finally, it is noteworthy that the finale does not stand out in terms of tempo. Indeed, the heights of tempo reached in the coda of the first movement lie above most of the finale's tempos. This might seem to undermine the interpretation of the performance as end-oriented; however, the brevity of the first movement shifts the weight of the symphony fundamentally to the finale, which minimises the significance of this tempo difference.

Correlation Analysis

The Pearson correlation analysis of the tempo and loudness data of the three recordings mostly confirms the findings of the analysis above. Unsurprisingly, the two Furtwängler recordings are generally more similar to each other in both parameters than WM 40 (Tables 5.3–5.5).⁶⁴

⁶³ These segmentations occur at the oboe cadenza in the first movement (b. 268), at bar 123 in the second and – to a lesser extent – at the beginning of the recapitulation in the finale.

⁶⁴ In tempo, the total average values are 0.9347 for the two Furtwängler recordings, 0.8194 for WF 43b and WM 40 and 0.7713 for WF 50b and WM 40. In dynamics, the two Furtwängler recordings show a correlation value of 0.9306, while Mengelberg's recording produces a value of 0.8819 and 0.885 for WF 43b and WF 50b, respectively.

However, there are a few sections throughout the symphony where WM 40 appears more similar to Furtwängler's recordings than the latter do to each other: Table 5.3 shows that WF 43b is closer to WM 40 in tempo in the first movement's development (0.96 as opposed to 0.92 for WF 50b), in dynamics in the first half of the second movement (0.91 against a value of 0.86 for WF 50b) and the movement as a whole (0.9 for WM 40 and 0.89 for WF 50b).⁶⁵ From the perspective of WF 50b (Table 5.4), furthermore, WM 40 appears more similar than WF 43b in tempo in the second scherzo in the third movement (0.96 against 0.95 in WF 43b) and in dynamics once again in the first half of the second movement (0.89 as opposed 0.86 for WF 43b).⁶⁶

Overall, Mengelberg's recording is more similar to WF 43b in tempo and to WF 50b in dynamics (Table 5.5).⁶⁷ In tempo, Mengelberg has the strongest correlation with Furtwängler's recordings in the first movement, followed by the third and the second movements, while the recordings are rather dissimilar in the finale – a finding that is mostly in line with the listening impressions.⁶⁸ Indeed, the similarity between WF 43b and WM 40 in the first movement is so strong that it almost reaches the same value as the two Furtwängler recordings compared to each other: 0.9375 for WM 40 against 0.948 for the Furtwängler recordings. In dynamics, WM 40 is once again the closest to Furtwängler's recordings in the first movement, followed closely by the second movement, while the third and fourth movements slightly lag behind.⁶⁹ The overall similarity in the first movement of Mengelberg's and Furtwängler's recordings (especially WF 43b) is striking, especially considering that the two conductors had seemingly only minimal contact, especially during their formative years, and they apparently shared no conducting teacher or model. This might suggest the existence of certain traditions or conventions of performing the movement, at least during the 1940s – an issue worthy of future investigations. In addition, the relatively strong similarity in dynamics between the recordings further corroborates the observation made in previous chapters that Furtwängler's use of dynamics was by no means as unique as his use of tempo.

When compared to each other (Table 5.6), the two Furtwängler recordings appear to be the most similar in tempo in the first and the third movements (0.948 and 0.945 respectively),

⁶⁵ Furthermore, WM 40 and WF 50b produce an identical correlation value compared to WF 43b in tempo in the second scherzo section of the third movement (0.95 for both).

⁶⁶ Identical values are produced for WM 40 and WF 43b in dynamics in the second movement as a whole (0.89 for both).

⁶⁷ From the perspective of WM 40, WF 43b produces a value of 0.8194 and WF 50b a value of 0.7713 in tempo, while in dynamics WF 43b shows a value of 0.8819 and WF 50b 0.885.

⁶⁸ Average values in tempo from the perspective of WM 40: in the first movement 0.9375 for WF 43b and 0.8775 for WF 50b, in the second movement 0.83 for WF 43b and 0.7667 for WF 50b, in the third movement 0.895 for WF 43b and 0.8875 for WF 50b, in the finale 0.5875 for WF 43b and 0.51 for WF 50b.

⁶⁹ From the perspective of WM 40 in dynamics, the following average values are produced: in the first movement 0.915 for WF 43b and 0.92 for WF 50b, in the second movement 0.9033 for WF 43b and 0.8933 for WF 50b, in the third movement 0.85 for WF 43b and 0.875 for WF 50b, in the finale 0.8525 for WF 43b and 0.8475 for WF 50b.

followed by the second and fourth movements (respectively 0.91 and 0.915). In dynamics, the first and the fourth movements emerge as most similar (respectively 0.944 and 0.9475), with the third lagging slightly behind (0.9225) and the second being considerably less similar (0.8867). Overall, therefore, Furtwängler's shaping of the first movement seems to have changed the least over the seven years between the two recordings, while the rendering of the second movement changed the most – at least in terms of tempo and dynamics. This seems slightly surprising from a listener's point of view, as the starkly contrasting shaping of the development section and the coda in the first movement marks a fundamental difference in the perception of the two recordings. It also contradicts John Ardoin's overview of the recordings, wherein he claimed that Furtwängler's 'lifelong grappling with [the Fifth Symphony's] myriad challenges and problems' revolved around the first movement.⁷⁰ This perhaps indicates a limitation of correlation analysis, which focuses on patterns in sets of data. It also serves as a reminder that the findings of 'objective' analysis cannot be accepted at face value and that data must be viewed in light of the more holistic experience of a listener.

Summary: The Dynamic Structure of a Symphony

This chapter has shown that in performance, a sense of structure or an overarching musical narrative can indeed be created over an entire symphony, and that a conductor's contribution on this scale is by no means limited to altering the proportions of a work by observing or omitting repeats. I have argued that in the three recordings examined here different variations of a general goal-oriented construction are realised, placing the focus on the finale. Furthermore, I have claimed that in WF 43b an additional, and more nuanced, musical narrative emerges, which likewise leads towards the finale.

In WF 43b, a sense of end-orientation is achieved through various means. First, the entire second scherzo of the third movement is shaped as a broad preparation for the finale, as a result of which the latter's arrival is experienced as an immensely important moment in the large scheme of the symphony. Furthermore, a strong sense of intensification is created from this transition until the coda of the finale, leading to the ultimate climax of the entire symphony (Figure 5.6a). This process is clearly reflected in tempo, where the entire movement emerges as a sustained tempo increase (Figure 5.6b).

In WF 50b, a similar impression is created through different techniques. Here, the finale is made to stand out through 'holding back' the previous movements in various ways:

⁷⁰ Ardoin 1994: 125.

intensifications and climaxes are generally avoided, resulting in these movements having a generally passive and static character (Figure 5.11a), and the tempo profiles of these movements are dominated by either flat or descending lines (Figure 5.11b). By contrast, from the third movement's final transition onwards, ever-increasing intensifications are created, reflected in the prevalence of tempo increases on every level of the structure, which results in a highly dynamic and active musical process directed towards the coda of the finale.

In Mengelberg's recording, a similar sense of end-orientation dominates, but its characteristics and the tools used to achieve it are different. Here, weight is shifted to the finale primarily through shortening the first movement by omitting the repeat of its exposition and by shaping the beginning of the finale as the highpoint of the symphony. Here, too, the second scherzo and the transition of the third movement help to set up the finale. Interestingly, the finale itself is rather front-accented in the sense that the first theme serves as the main climax, with everything thereafter in the movement interpreted as a reverberation of this highpoint (Figure 5.16a). This is clear in tempo, where no large speeding-up occurs over the course of the movement, placing this performance in stark contrast with those made by Furtwängler (Figure 5.16b). Overall, Mengelberg's treatment of the finale as an extended climax helps to emphasise the tonal 'narrative' of the symphony, underlining the establishment of C major at the beginning of the finale as the highpoint of the entire work. In some sense, this approach can be considered more traditionally structuralist than Furtwängler's, which contradicts the general image of Mengelberg as an arch-romanticist pre-occupied with expression. In any case, this chapter has demonstrated that the principle of end-orientation – and even end-oriented intensification – was adopted also by conductors other than Furtwängler, albeit realised through different means.

Besides this general end-orientation, a further musical narrative can be observed in Furtwängler's 1943 recording. Throughout movements 1–3, a main feature of the performance is the creation of broad intensifications leading to climaxes, following which the energy suddenly collapses (Figure 5.6b). This pattern finally changes in the finale, where no more 'collapses' occur, and the music can intensify freely towards the symphony's final climax. Coupled with the oftentimes ambivalent and searching character of the 'collapse' sections in the first three movements, this pattern creates a sense that there is a musical narrative at work here: the music strives for a breakthrough moment but repeatedly fails, until in the finale the 'solution' is finally found, and the music receives its long-awaited breakthrough. Naturally, this narrative aligns well with the performance's general end-orientation, but it also provides a musical manifestation of

the ‘struggle-to-victory’ interpretation of the symphony – an interpretation, however, that Furtwängler himself argued against in his writings.⁷¹

Overall, this shows that the structural strategy of end-oriented intensification that has been identified in Furtwängler’s recordings on the movement level in Chapters 4 and 5 was also the driving force in his approach to certain symphonies as a whole. Beyond that, it can be observed that both of Furtwängler’s recordings show fundamental similarities between the structural shaping of individual movements and of the symphony in its entirety. In WF 43b, the first and the final movements both exhibit a strongly end-oriented construction, achieved primarily through increasingly large intensifications and climaxes. As discussed above, the main structural impression at the level of the entire symphony is highly similar: following the significant climaxes in the earlier movements, the finale reaches the ultimate highpoint of the entire work, creating an emphatically end-oriented construction. In WF 50b, a clear parallel is created between the shaping of the whole and the finale in particular. Both show an end-oriented intensification achieved through similar means: while the finale’s exposition is held back in terms of intensity in order to emphasise the effect of the final intensification, a similar procedure takes place at the level of the entire symphony, where the first three movements are noticeably held back in order to highlight the finale’s climax.⁷²

Furthermore, Furtwängler’s methods of achieving his structural goals aligned closely with those used in other recordings from the same periods: ever-growing intensifications in the early 1940s and emphasis on the ending through restraining the beginning in the early 1950s. This chronological alignment and the relation between part and whole explored above demonstrate that the structural priorities that preoccupied Furtwängler at any one point in his career were pursued and realised in most of his musical endeavours, irrespective of the genre or size of the piece in question. The validity of this finding should be further investigated in the future by including even more diverse musical materials from Furtwängler’s conducting repertoire, and similar patterns might be worth investigating in other conductors’ activities as well.

Overall, the structural strategy of end-orientation in symphonies has been noted by multiple reviewers of Furtwängler’s performances, as discussed in Chapter 2.⁷³ For instance, the

⁷¹ See pages 168–69 in this thesis. Nevertheless, similarly to the analysis of compositions, the interpretation of performances should not be limited by comments made by the ‘creators’ (the performers in this case) themselves. It is possible that Furtwängler conceptualised this strategy in purely musical terms, but the parallels are nonetheless clear.

⁷² Although seemingly no such direct parallel exists in Mengelberg’s recording, there are certain structural characteristics that are shared at the level of both movements and the symphony as a whole. This includes the avoidance of creating clearly defined points of climax and instead opting for more extended areas of high intensity. While from the perspective of the whole, the entire finale can be seen as one extended climax, the individual movements also show a substitution of brief peaks of tension for extended climaxes.

⁷³ See pages 85–88 in this thesis.

correspondent of *The Times* described a 1938 performance of the symphony by Furtwängler as follows:

Herr Furtwängler's reading of the symphony was intensely dramatic, but he did not allow his sense of drama to affect the musical proportions of the work, which was led up to its proper climax in the blazing splendour of the finale.⁷⁴

Discussing Furtwängler's 1929 performance of Beethoven's Third Symphony, Julius Korngold gave a similar account of this phenomenon:

Similarly to how we talk about finale composers, we could justifiably call Furtwängler a finale conductor. After allowing all sorts of beautiful and most beautiful things to pass, he condenses his energies above all in the final movement.⁷⁵

A further technique that reviewers have claimed effected inter-movement coherence in Furtwängler's performances was tempo parallels between movements.⁷⁶ In the recordings examined in this chapter, this aspect of his style seems less relevant. Although a smooth connection is created between movements in tempo in WF 50b, a rather sharper contrast emerges in WF 43b. In terms of direct parallels, in WF 43b, the returning scherzo in the finale occupies a largely similar tempo as the third movement, but the same is not true for WF 50b, where the section in question is played noticeably faster than in the previous movement. Overall, there does not appear to be a consistent effort on Furtwängler's part to create tempo parallels between movements in these recordings.

More generally, these examples show that a conductor's contribution to a multi-movement work's structure or musical narrative goes well beyond tweaking its structural proportions through repeats, which the literature on the symphony seems to suggest. Conductors have a wide range of tools at their disposal to create unique structural constructions and narratives even at the level of an entire symphony, and these can range from basic ideas such as end-orientation to more nuanced narrative threads.

However, it is important to consider the extent to which the conductors themselves contributed to these structural impressions. As discussed above, analysts have long argued that a certain sense of end-orientation is an inherent part of the composition itself.⁷⁷ This might raise the question of whether this structural construction is an inevitable feature of all performances of the work, potentially undermining conductors' agency in this matter. First of all, I would like to point out that this structural construction is by no means a foregone conclusion: there are at least

⁷⁴ RW105 in the Apparatus.

⁷⁵ RW63.

⁷⁶ See pages 81–82 in this thesis.

⁷⁷ See pages 166–67 in this thesis.

a handful of recorded performances of the work that seemingly shift the focus away from the finale to another movement in the symphony,⁷⁸ but there are even more performances that do not make any effort to highlight the finale or that actively strive to balance the movements in some form, in which case one could argue that end-orientation is mostly assumed due to convention. Furthermore, it is important to recognise that conductors do more than simply reproduce the score even when their interpretation aligns with conventional, score-based analyses of the work in question.⁷⁹ In the case of Furtwängler and Mengelberg, few would argue that they do little more than adhere to the score. On the contrary, they use various techniques (most notably a flexible shaping of intensity) to actively create a sense of end-orientation, as discussed above. Finally, but perhaps most importantly, general interpretations arguably cannot exist without real or imagined performances informing them, which would suggest that the symphony is understood as end-oriented *because* it is played in such a way.⁸⁰

This chapter has also shown some of the limitations of the subjective analytical methodology employed in this thesis. In this case study, some movements were visualised through intensity curves while others were not. This is due to that some of these movements lent themselves to be conceptualised and perceived in terms of intensity and momentum more than others.⁸¹ Furthermore, due to the broader perspective from which the movements were viewed (the symphony as a whole), the visualisations are also more simplistic and gestural than those used in the previous chapters. This does not invalidate the technique but rather sheds light on the limits of its applicability: similarly to virtually every analytical technique, intensity curves are not universally applicable but are best suited to the analysis of certain repertoires and performance styles. Furthermore, since the method is reliant upon, and therefore limited by, the capacity of the human memory, it also has its limitations regarding the length of performances: although conceptualising large-scale, multi-movement works in terms of an intensity curve is certainly

⁷⁸ One could mention John Eliot Gardiner's performance with the Orchestre Révolutionnaire et Romantique from 2016, available in video recording (<https://www.youtube.com/watch?v=lNtb-ly1I_k&ab_channel=vsevsad> (accessed 22 May 2023)). In this performance, it is arguably the third movement that forms the highpoint of the symphony. Most importantly, Gardiner observes the disputed repeat in the movement, extending it significantly in length. Furthermore, the movement also stands out with its sharp contrasts and generally forceful character, while the fugato of the trio section emerges as possibly the most salient element of the entire performance due to its almost comically fast tempo, which lends a sense of virtuosity to this section. By contrast, the finale's arrival does not introduce a truly new character: the entire performance up to this point was fast and energetic, weakening the contrast created by the last movement.

⁷⁹ Agency is more readily given to performers in cases when they go against the grain and contradict general interpretations of a given piece. Realistically, however, no less thought and preparation go into realising a conventional interpretation.

⁸⁰ See Leech-Wilkinson 2012.

⁸¹ In other words, from the perspective of the symphony as a whole, intensity and motion did not appear as particularly salient in the performance of certain movements or did not conform to a simple and easily comprehensible strategy.

possible,⁸² at that level the technique is useful primarily in grasping broader tendencies, while minute differences between performances need to be examined through other means.

However, this shortcoming should be seen in the light of the no-less problematic quantitative techniques, which – although often touted as the gold-standard, ‘objective’ methods of performance analysis – also suffer from various flaws. As shown through multiple examples in this chapter, the interpretations drawn from tempo and loudness data can sometimes be misleading and stand in stark contrast with general listening impressions. The solution appears to be the complementary application of both qualitative and quantitative techniques as part of a process where findings derived from various sources can be juxtaposed for a more comprehensive understanding of musical performance.

⁸² For a few representative examples, see Mersmann 1925: 387; Muns 1955: 238, 390, 396; Westafer 1973: 269.

Conclusions and Future Prospects

This thesis has argued that there is much more to be understood about the relation between musical performance and musical structure than scholarship has uncovered so far. Performance analysis has largely focused on data gained from computer-assisted analysis. Quantitative techniques can indeed reveal a great deal about the nature of and processes involved in music-making, which is why I also made use of various such methods in this thesis. However, musical experience is ultimately unquantifiable, and a refusal to go beyond the numbers means ignoring much of what makes music music. At the same time, it seems to me that the concept of musical structure has received criticism exactly because it became limited in scope when it was distanced from the actual experience of playing and listening to music. If the notion is to have relevance to the ways in which music is practised and experienced, it needs to become broader and incorporate much more varied approaches and – most importantly – the human subject.

This research represents an attempt to reinvigorate the notion of structure. As discussed throughout the work, the personal, listener-based experience of musical structure in performance forms the basis of the analyses presented in this thesis. As such, this research points to the potential future development of ‘listener’s analysis’ – that is, an analytical approach that takes as its basis the unique experience of listeners when examining recorded performances. Although the insights gleaned from this approach have arguably justified the chosen methodology, there are certain risks inherent in such an endeavour. No amount of complementary data or theoretical foundation can eliminate the issue that listening experience is ultimately not reproducible or verifiable. This might discourage some, especially those with a more positivistic mindset, from ever engaging with the qualitative approaches proposed in this thesis. However, despite their drawbacks, these techniques afford an opportunity to examine and capture the experience of performance in a much more holistic – and arguably more relevant – way than standard methods can.

This study highlights the potential value afforded by such an approach. Overall, it has shown that dynamic qualities of structure can be more pertinent to musicians and listeners than standard definitions of structure. It has provided insights into conductors’ structural representations and the tools and techniques they might use to project these representations in performance. The thesis has also proposed novel analytical techniques for the study of dynamic structure in performance, and it has shed light on the musical style of Wilhelm Furtwängler. In

the following, I summarise my findings in relation to the research questions posed at the beginning of the thesis.

- To what extent are standard definitions of musical structure relevant to the ways in which a conductor might approach the performance of symphonic works?

Chapter 1 has shown that standard definitions of structure – which typically focus on synchronically conceived architecture and formal schemata – are seemingly less relevant to conductors’ conceptualisations of structure than dynamic, diachronic notions. It has emerged that they tend to place emphasis on shape, tension or intensity, goal-orientation, and motion – features that traditional analysis (of both scores and performances) has largely neglected. These dynamic tendencies can even appear as the primary mode of structural shaping, sometimes overriding elements of formal schemata. It has been suggested that these notions merge in some conductors’ structural representations in the form of an intensity curve, which might be interpreted as capturing the overall shape or contour of an entire work.

- How might musical structure be created by those conducting large-scale symphonic works?

The analyses in Chapters 3–5 have shown that besides the parameters that are generally understood to contribute to the creation of structure in performance (first and foremost tempo), the shaping of intensity and the senses of motion and goal-orientation can also have a structure-generating function. Besides the intensity contour potentially functioning as the *de facto* structural shape of a performance, various climax points can be used as the end-goal of long-range musical processes. At the same time, the varying sense of momentum can also carry structural information. Although motion is closely related to the shaping of intensity, it can be used to help shape a performance in unique ways.

- What types of structural representations might a conductor project when conducting large-scale symphonic movements and entire symphonies, and how do these representations vary across multiple performances?

Instead of simply highlighting elements of pre-determined schemata (as suggested in much of the analytical literature), conductors might prioritise other, more abstract, structural ideas, which may or may not align with the supposed form of the piece. These structural strategies can include end-oriented intensification, arch shapes, contrasting middle sections and others. It might seem unusual to identify these basic ideas as ‘structure’; however, throughout the analyses, these

strategies appeared to dominate the large-scale processes in and general organisation of the performances – phenomena that align with the broad definition of ‘structure’ that I identified at the beginning of the thesis.¹ Accordingly, it seems productive to be open to a wide range of potential structural formations emerging from performances and to avoid unnecessarily delimiting their structural affordances by focusing primarily on formal schemata.

The comparison of multiple recordings has also shown that such alternative structural strategies might not necessarily represent contrasting structural interpretations, but instead they might form a single conception, a fluid amalgamation of multiple structural principles, the elements of which come to the fore to varying degrees in individual performances. If accepted, this conclusion has broad implications for our understanding of musicians’ performance strategies, which are generally regarded as being manifested at any one time in a singular, self-contained interpretation with clearly defined goals and techniques of realisation. As a result, differences in performances are generally viewed as a result of a reformulation of the underlying performative vision. By contrast, my conclusion suggests that such differences might be the consequence of an inherently fluid mental representation on the part of performers – a possibility for which examinations of individuals’ performance strategies and performing styles in general need to account.

Furthermore, a juxtaposition of recordings in Chapter 4 has revealed that while the overall structural constructions can change across a conductor’s performances, certain – seemingly crucial – details might remain fixed irrespective of the broader transformation of the structure as a whole. This reveals a contrast in the ways in which structure emerges in performances and score analyses, the latter of which – at least in this particular case – show variances on the level of details instead, with the general formal interpretation enjoying broad consensus. This once again demonstrates that it could be misleading to test the realisation of score-based interpretations in performances, which might function and develop in unique ways.

From my investigation, it has emerged that corresponding structural strategies can be pursued across multiple movements of a symphony irrespective of the supposed form of the movements themselves. Besides contradicting traditional definitions of structure that view performers as simple executants of pre-established structures (which would imply a unique treatment of each movement), this has ramifications also for our understanding of how musicians’ interpretations are formed. Instead of necessarily developing contrasting strategies to different pieces of music, conductors might approach these works with a fundamentally similar strategy, potentially resulting in closely aligned structural formations across performances of

¹ See footnote 1 in Chapter 1.

multiple pieces. This suggests that conductors can pursue abstract structural strategies irrespective of the unique properties of the pieces at hand, which might mean that these general tendencies somehow relate to the concept of ‘style’. However, this connection is made complex by the rather specific nature of these reoccurring patterns and their contrasting techniques of realisation. Further research is needed to shed light on this issue.

Chapters 3 and 4, furthermore, have revealed that each of Furtwängler’s recordings of the two movements under consideration appears to form a stylistic unit in and of itself in terms of structural shaping. In each performance, both movements seemingly follow strikingly similar structural trajectories, and the techniques used to realise these strategies are analogous. This finding suggests that in Furtwängler’s performances, the unique shaping of individual movements is seemingly sacrificed for the sake of integrating the movements into a broader performative vision of the symphony as a whole. This indicates that studying individual movements in isolation (a typical approach in performance analysis) ignores the broader context in which these movements function – a context that could potentially shed light on certain performance strategies employed within movements.

Chapter 5 has addressed this issue directly. When it comes to the structural shaping of entire symphonies, the literature either tends to ignore the contribution of conductors or at most defines their role in altering the proportions of the piece through their observance or otherwise of repeats. Chapter 5 has argued that conductors can indeed shape the structure or narrative of an entire symphony. I have proposed that these strategies can take the form of either basic structural ideas, such as those discussed above, or even more sophisticated musical narratives. Studies of symphonic structure at this hierarchical level are few and far between, which is arguably the result of the previously narrow definition of structure. When approached from the perspective of dynamic structure, however, the performance of symphonies appears in new light, opening up new avenues of research.

- How can the dynamic qualities of symphonic structure in performance be captured and used for the purpose of analysis?

This thesis has shown that the dynamic qualities of structure – especially the notions of shape, intensity, motion and goal-orientation – form an important part of some conductors’ conceptualisation of music. The analyses in Chapters 3–5, furthermore, have demonstrated an analytical application of these features. Most importantly, it has been posited that these elements of the music cannot be measured computationally; instead, they emerge from the experience of performing and listening, necessitating or at least inviting aural analysis. Two representational

techniques were employed in this thesis to capture the dynamic qualities of structure in performance: intensity curves and representations of perceived motion. Previously, intensity curves had not been used to study recorded Western art music – an approach that this thesis pioneers. This research is also the first to incorporate intensity curves and representations of motion into a broader analytical framework that also includes a range of computer-assisted techniques.

Overall, alongside the representation of motion, intensity curves have served as a useful visualisation of the dynamic musical structure, functioning as the representation of the overall shape of performances, and they have helped to reveal features of Furtwängler's style that had not been examined due to the limitations of standard analytical approaches. Importantly, my analysis has demonstrated that intensity contour is by no means an immutable feature of a piece, but that instead it is shaped actively by performers, potentially resulting in widely contrasting overall shapes and tendencies.

A focus on aural analysis has also helped highlight certain issues with quantitative analytical techniques, especially tempo curves. Overwhelmingly, tempo curves have been used to explain structural processes in performance, including the recordings of Furtwängler. However, a comparison with the perceived intensity contours of the conductor's recordings reveals that tempo curves can occasionally contradict the broader tendencies perceived in intensity, and therefore an exclusive focus on tempo could lead to conclusions that are at odds with the general experience of performance. Furthermore, Chapters 3–5 have highlighted the importance of perceived salience in the experience of structure in performance: the processes of expectation and surprise play a fundamental role in our experience of music, but capturing these tendencies requires the examination of listeners' responses to music – a task that aural analysis can fulfil. Overall, my analysis has highlighted that quantitative techniques cannot in themselves account for musical events and processes within performance. Instead, a complementary application of qualitative and quantitative analysis is necessary in order to draw musically meaningful and accurate conclusions.

However, the use of qualitative techniques poses challenges of its own. Since these methods are entirely reliant on human perception and memory, they are susceptible to some variability and therefore have limitations that need to be acknowledged. First, the magnitude of and the level of details included in an intensity curve vary in accordance with the circumstances of the listening session: depending on one's expectations, a curve can occupy a broader or narrower vertical range, while the focus of attention determines the hierarchical levels of intensity being tracked. Second, due to the limitations of the human memory, there is a cap on the amount

of musical information that can be stored and compared. This demonstrates that this technique is better suited to the study of either a single recording or only a handful of recordings, and that it cannot be used for large-scale corpus analysis.

Finally, let us consider the validity and general relevance of the analytical findings of Chapters 3–5. Due to qualitative techniques being used in this thesis, a question arises: what makes the conclusions more than mere ‘opinion’ or subjective impressions? At this point, I would like to circle back to the concept of ‘emergent structures’, discussed in Chapter 1. As outlined there, it has been argued recently that it is problematic to think of structure as a singular, fixed entity, embedded in the score, and that it is more productive to conceptualise structure as being inferred individually and uniquely from the structural relations afforded by scores and performances. This means that there is not a single ‘correct’ interpretation of the structures within a performance. Instead, each and every interpretation is ‘true’ in a personal sense as it emerges from an individual’s – be that an analyst, performer or listener – perception or understanding of a piece. The relevance – and generally perceived ‘correctness’ – of a given interpretation will therefore be dependent on whether it appears convincing to others or not. All this is to say that I cannot claim that the explanations provided in Chapters 3–5 are the only way in which the relevant performances can or should be understood. However, they are my carefully considered interpretations, examined in the light of quantitative analysis, and they might also appear credible to others when engaging with the material.

Besides the general findings discussed above, this thesis has also shed light on Furtwängler’s approach to musical structure and his conducting style in general. Chapter 2 discussed previous attempts to position him in twentieth-century performance history, revealing that categorising Furtwängler is a much more complex task than is generally assumed, which partly stems from our inadequate understanding of performance history in general. An examination of the conductor’s writings – a group of sources mostly neglected in studies on Furtwängler – has also shown that his organicist concept of music reveals an inherently dynamic understanding of musical structure, wherein the ideas of goal-orientation, tension and relaxation, and constant transformation occupy a central position. An examination of a large body of concert and recording reviews and reminiscences – most of which are examined and presented here for the first time – highlights unique features of his style. Most importantly, the majority of commentators point out that Furtwängler’s performances were ‘structural’ in some sense of the word, arguing that he clarified the structure, created ideal formal proportions, solved certain structural challenges, highlighted thematic relations or generated a sense of coherence within and across symphonic movements. This finding reveals that the supposedly structural nature of

Furtwängler's performances does not emerge only from computer-assisted analyses of the conductor's recordings but were instead commonly perceived by listeners during Furtwängler's lifetime and beyond. Based on reviews and reminiscences, the main features of his 'structural style' included the creation of arch shapes, smooth transitions and large-scale intensifications (*Steigerungen*), the latter of which supposedly provided direction and coherence to his performances.

The analyses in Chapters 3–5 have revealed that these techniques were indeed relevant to Furtwängler's shaping of structure. Large-scale intensification in particular has emerged as the single most important feature of the conductor's approach to structure in performance. It appears in almost all of the recordings under examination, and at various levels of the structure (from small formal sections to entire symphonies), and in some cases it seems to form the main structural idea of his performances. Importantly, it has been shown that intensifications are not always analogous to changes in tempo; therefore, the broader tensional processes in the performances should be examined in the light of a broader set of musical parameters. It has also become clear from the aural analysis that intensifications, at all hierarchical levels, also help create a sense of coherence, subsuming everything under a 'unifying thread', to use John Rink's expression.² Furthermore, the simplicity and comprehensibility of Furtwängler's structural strategies arguably also generate coherence, offering a grasp on the broader processes within a performance. However, despite its importance to the conductor's approach to music, the role of intensity in his performances had not been examined prior to this thesis. This research demonstrates that approaching analysis from the perspective of dynamic structure allows previously hidden, yet crucial, features of performances to emerge and be recognised. At the same time, the creation of direct tempo parallels – which has been proposed by some as a technique deliberately employed by Furtwängler to create cyclic unity in his performances – does not appear to have been a priority for the conductor (at least it was not executed consistently), and it seems that the parallels that do emerge in his recordings are most likely the result of broader structural considerations or simple coincidence.

As discussed throughout the analytical chapters, the reportedly 'structural' nature of Furtwängler's performances arguably have little to do with formal schemata. Although Furtwängler highlights many features of form within his recordings, these seem to have been overridden by the alternative structural principles identified above. Indeed, one might argue that the impression of Furtwängler's performances being in some way structurally satisfying has little

² Rink 1999: 218.

to do with his realisation of schemata and more to do with his implementation of simple and easily comprehensible structural strategies.

Although these structural principles seem to have dominated his performances, there are certain elements of Furtwängler's approach to individual formal traditions that are worth discussing. Chapter 4 has shown that although sonata form occupied a central position in the conductor's understanding of music in general, in performance he focused only on features of the form that aligned with his unique understanding thereof: namely, contrast, goal-oriented process and evolution of subjects. His organicist conception of music also affected his approach to variation form, in which he emphasised the goal-oriented nature of the variational process.

Looking ahead, many elements of this thesis could be further developed in future research. Perhaps the most important amongst these is the analysis of dynamic structure in performance. For a deeper understanding of the phenomenon, studies of a wider range of genres and styles (both compositional and performative) would be necessary. This could reveal the extent to which dynamic parameters are relevant to music and performers outside of the romantic tradition, which has largely been the focus of the relevant writers, including myself. This thesis has indicated that while Furtwängler's style in particular is arguably best understood through the phenomenon of intensity, this does not necessarily apply to conductors representing different schools of conducting (Arturo Toscanini and Karl Böhm, for example). However, more work is needed to uncover the full applicability of such notions and techniques.

Future work might also adopt and further develop the methodology employed in this thesis. The combined analysis of recordings, writings (by the conductor, critics and collaborators) and annotated musical materials proved highly effective in contextualising Furtwängler's performances, and as such, this multi-pronged approach can prove valuable in the study of performers in general. The performance analytical tools used in this thesis also have potential for future application. The qualitative techniques in particular – some of which have been developed extensively in this thesis for the first time – open up new possibilities in the study of musical performances, and with appropriate adjustments, they can serve to support analyses of a wide range of style and repertoires.

Furtwängler's style itself could also be investigated further. Applying the techniques presented here (and potentially others) to other parts of the conductor's discography will contextualise the findings of this thesis. In particular, a study of the conductor's recordings of Bruckner's symphonies could be revelatory, as those are often praised for solving certain structural challenges inherent in the music, including issues of continuity and coherence. From a broader perspective, an examination of Furtwängler's contemporaries could also be helpful in

understanding early twentieth-century performing styles in general, which would in turn shed more light on Furtwängler's conducting. For example, Chapter 5 has revealed some intriguing similarities between Furtwängler's and Mengelberg's approaches to Beethoven's Fifth Symphony – a line of inquiry worth pursuing.

Overall, this thesis has shown that the study of musical structure has by no means been exhausted. Large-scale musical processes and overall shape are clearly relevant to musicians and listeners, and shifting the focus from synchronically conceived, score-based structures to diachronically emerging dynamic structures can reveal fundamental ways in which music is practised and experienced.

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