Introduction

The Cambridge Companion to Recorded Music is a very broad title. On one interpretation it might take in just about all popular music, the development of which was largely conditioned by recording; on another you might expect an annotated guide to the recorded repertory. We are offering neither of these. Our aim is rather to promote an understanding of the ways in which recording has both reflected and shaped music throughout the twentieth century and into the twenty-first: that is, how it has reflected and shaped not just the music itself, but the ways in which it is produced and the ways in which it is heard. That involves a lot of background information about recording and recordings, which we also try to cover. And 'music' in this context is a very inclusive term, encompassing the countless different genres of classical and popular music, all of which have been shaped by the development of recording technologies, originally in North America and Europe, and their subsequent spread across the globe. The way in which music has been shaped by recording is not uniform, however, and comparison of the impact of recording on different classical and popular traditions brings home the variety of conceptions that exists of what recorded music is and might be.

The appearance of this *Companion* is a symptom of – and, we hope, will further contribute to – the increasing interest of musicologists in music as performance. To someone outside musicology it might be odd to think of it as anything else, but the traditional focus on scores as the repositories of compositional creativity has led musicologists to think of performance as something that happens after the event, so to speak, rather than being a creative practice in its own right. It also signals the discipline's increasing concern with reception, with the way in which music is given meaning in the act of listening to it, and in the other acts that are informed by listening, ranging from dancing to it to writing about it: recording has fundamentally changed the reception of music, in terms of its nature, its conditions, the places where it happens. Other recent symptoms of this disciplinary development range from the establishment of an academic journal on the work of producers (*Journal on the Art of Record Production*) to publicly funded initiatives to disseminate the heritage of recorded music (such as the British Library's 'Archival Sound

Recordings' project) and the establishment in the UK of a dedicated research centre, the AHRC Research Centre for the History and Analysis of Recorded Music (CHARM), from which the four co-editors of this book are drawn.[1] At the same time the focus on recordings is establishing new interdisciplinary links, for work on recorded music is carried out not just – not even mainly – by musicologists, but also by cultural and media theorists, sociologists and historians of technology. All these fields are represented in this volume.

Like most collaborative books, *The Companion to Recorded Music* consists of a variety of complementary perspectives on a common subject, with individual contributions being relatively self-contained. (The contributors also write from a variety of geographical perspectives – North America, Britain, Ireland, continental Europe – and this explains some variations in terminology which we have not attempted to standardise.[2]) The main chapters are counterpointed by a series of shorter essays which offer personal (sometimes contradictory) takes on different aspects of recorded music. Most of them reflect a practitioner's viewpoint, the practices in question including performance, record production, sound engineering and record collecting. Several have a strong autobiographical dimension, illustrating how a lifelong enthusiasm for recordings typically takes root at an early age; others are first-hand testimonies of particular moments, whether in the development of recording practices or the discovery of historic recordings long thought lost. All this means that the book can be browsed rather than read straight through, but we have laid out the chapters and personal takes in such a way as to provide, when read in sequence, a possible trajectory through the varied and often complex world of recorded music.

Since the main chapters are designed between them to cover those areas most essential for an understanding of recording and recordings, they provide a convenient structure around which to pick out some of the principal themes that weave in and out of the book. We begin where recording began: with the live performance of which the recording is, literally, a record. It is well known (and quite possibly true) that the first reproduced sound – dating from 1877 – was of Thomas Edison reciting 'Mary had a little lamb', but in chapter 1 Donald Greig writes about performing for the microphone from the perspective of a present-day singer specialising in early music, yet with experience in pop session work as well. Central to this chapter is the contrast between classical and pop performers in terms of their attitude towards both the process of recording and the technologies involved in it: classical performers tend to see recordings as in essence reproducing concert performances, whereas for pop performers the recording is, so to speak, the primary

text. Linked to this is a distinction between two essentially different, though often overlapping, orientations, one towards the event that is recorded, and the other towards the musical work embodied in the recording. As will become plain, these different conceptions of what recorded music is are fundamental to an understanding of the whole field.

Rather as orchestral performance is mediated by the silent yet crucial figure of the conductor, so both classical and popular recordings are mediated by the producer, who is the focus of chapter 2. There is something shadowy about the figure of the producer: Andrew Blake entitles the final section of his chapter 'So, what do producers actually *do*?', and there are many answers to the question. At one extreme the producer's job is to keep the artists happy; at the other it merges into sound engineering. But the producer's central role – like the conductor's – is perhaps as an expert listener able to focus on the larger context as well as the details of the recording as it develops. Yet expert listening is also an essential part of how, in chapter 3, Albin Zak characterises the work of the sound engineer, citing Chick Plotkin: 'That's what you do … Listen hard.' However, Zak stresses the specifically analytical nature of engineers' listening, oriented towards those aspects of sound that are amenable to technological control: the fact that digital technology puts more and more aspects of sound under the engineer's control is one reason why the distinction between producer and engineer is becoming increasingly hard to draw.

But the most important feature shared by Blake's and Zak's chapters is their emphasis on the creative dimension of recording: as Blake puts it, producers, not just performers, 'make music', while Zak emphasises how all technical decisions made by engineers are at the same time 'aesthetic choices'. Both Blake and Zak refer to sonic 'signatures', so underlining the extent to which producers and engineers, like film directors, might be viewed as authors. There is, however, a paradox here. These creative professions have been brought into being by successive developments in technology, yet the digital revolution is now undoing them. By bringing studio-quality recording and editing into garages and teenagers' bedrooms at ever decreasing prices, and by offering integrated interfaces for sound design and manipulation, computers are turning sound engineering into part of general musicianship. If, like producers, sound engineers make music, then increasingly anyone who makes music is likely to be their own sound engineer.

In the early days of recording, the technology was intrusive and could not cope with ensemble performance – at least not without significantly disrupting it. Electrical recording, from about 1925, alleviated the situation, and for two decades the relationship between live performance and recording was arguably at its closest. But, as emerges very clearly from

the three opening chapters, the general adoption of tape recording from the late 1940s initiated a process by which the relationship between live performance and recording became increasingly tenuous. At first this was because tape editing allowed a form of time shifting: mistakes could be overdubbed, or a recording could be assembled from any number of separate takes, resulting in what was heard as a performance – but a performance that had never in fact happened. The introduction around 1970 of multitrack recording (with sixteen or more channels) took things a stage further: musical textures could be built up from layers recorded at different times, with reverberation and other effects being used to generate an acoustic which, again, didn't necessarily exist in reality.

And with the take up of digital technology from the 1990s it became no longer just a matter of shifting time or creating virtual spaces: practically all aspects of sound can now be manipulated or designed from scratch, which means on the one hand that performing, editing and composing become more or less indistinguishable, and on the other that the 'original' performance becomes irrecoverable or irrelevant. ('Recording' has in this way become a misnomer: what matters is the end product, not its antecedents.) The result is a striking disparity between the nature of production and that of reception: sounds may be manufactured rather than performed in the traditional sense, yet we hear them as performed, as human communication enacted in real time. Listening to recordings, then, involves a kind of willing suspension of disbelief, and in order to express this both Simon Trezise and Nicholas Cook borrow the concept of diegesis from film studies, where it refers to the apparent reality of a cinematically depicted scene. And it is this ability of recordings to create their own reality that is the key to how recording has transformed musical practices under the guise of merely reflecting them. This is what Zak calls an 'ontological shift' – a shift reflected in his claim that 'how music *sounds* is inseparable from what it *is*'. (Daniel Leech-Wilkinson echoes the thought: 'when music sounds different it is different'.) Self-evident as this may seem, it represents a conception of what music is quite opposed the traditional idea that music consists of works, more or less coterminous with scores, which are reproduced or translated into sound through performance.

Recording, then, is a technical process, but it is more than that: it is a complex mode of representation which generates meanings in its own right. At one level this is what Blake and Zak were saying about production and engineering. But it is also what Louise Meintjes (chapter 4) argues at a quite different level. Based on a close ethnographic study of Johannesburg recording studios in and after the final years of apartheid, Meintjes shows how sociopolitical changes are both reflected and enacted

in studio practices – particularly since under apartheid sound engineers tended to be white while producers were black. Studios can be seen as metaphors of the larger reality that lies beyond them, but they are also metonyms, little bits of reality in which social change can be enacted. And recording's power to promote social change is explored on a much broader canvas in chapter 5, where Arild Bergh and Tia DeNora show how changing technologies have afforded new ways of listening, and how these new ways of listening have in turn afforded the construction and negotiation of personal and group identities. They have also reshaped experience in a more literal sense: personal stereo from the Walkman to the iPod has reconfigured the boundaries of private and public space. Often seen as emblematic of postmodernism, such reconstruction of experience is again effected by listening, and indeed listening might be seen as the underlying topic of all these first five chapters: performance, production and engineering are all forms of social interaction mediated by the ear, and the listening practices of music users as documented by Bergh and DeNora form only the final stage in an unbroken chain that links the production of recordings to their consumption.

The following group of chapters has a more overtly historical orientation, tracing the development of recording from a number of different perspectives. One of the basic drivers of this development was supplied by the recording industry, which at the beginning of the twentieth century was remarkably forward-looking in its approach (in the first years of the century the Gramophone Company was already seeking to establish offshoots throughout the world to stimulate and service local demand), which had its glory days in the decades after the Second World War, yet which by the century's end had become hopelessly embattled as a result of its failure to seize the opportunities offered by new technologies of dissemination. As David Patmore explains in chapter 6, the record industry has largely moulded our understanding of what music is, both classical and popular. It was, for example, the commercial strategies pursued between the wars that brought about the establishment of a Hollywood-like 'star' system of globe-trotting conductors, and that also established what we still see as the canon of great performers: the vast majority of CD reissues of pre-war recordings are taken from the record companies' premium labels, reserved for international stars as opposed to the now neglected yet often highly talented national artists whom they marketed on their budget labels. And it is often claimed that, in its quest for a technical perfection that would bear repeated listening, the record industry brought about a gradual homogenisation of classical performance style, a convergence on the irreproachable but bland: as will become clear, the jury is out on that one.

At the same time the record industry was itself driven by successive waves of technological innovation, summarised by Patmore but explored more thoroughly by George Brock-Nannestad in the next chapter. It is easy to think of histories of technology as a continuous evolution towards higher standards, and of course that is the broad-brush picture. But there is much light and shade in the detail. For one thing, as Simon Trezise observes, 'The assumption that progress automatically invalidates the listening habits of a previous generation … does a disservice to the many dedicated listeners who believed they had found audio perfection': electrical recordings, for example, set the standard of what recorded music should sound like – until the appearance of the LP. For another thing, industry priorities or user considerations have sometimes overridden quality of sound: the tape cassette captured much of the LP market despite its lower audio standards, because it offered recording as well as playback, while nowadays the MP3 format sacrifices sound quality in the interests of fast downloading and miniaturisation. This is as much as to say that the history of recording is to be understood in terms of the interaction between enabling technologies on the one hand, and the purposes for which individuals and institutions wish to use them on the other. In another paradox, digital technology, which at first gave the music industry a new lease of life as consumers traded in their LPs for CDs, now threatens to fatally undermine it, at least in its current form (a form that reflects the longstanding, near-monopolistic practices of a very small number of global majors): the ease of digital copying and internet dissemination renders copyright – historically the foundation of the music business – increasingly unenforceable. Whether this represents a threat or an opportunity to create new ways of disseminating music depends upon your point of view.

Trezise's own chapter has a dual role. On the one hand it offers a series of case studies in recording, arranged chronologically and illustrating in concrete form many of the issues raised in previous chapters. On the other hand it poses many of the questions that arise in making use of recordings as documents of cultural practice. Musicologists who work on scores take for granted a host of catalogues and other finding aids developed through generations of scholarship. Little of this infrastructure exists for the study of recordings, and as a result specialist knowledge is required at all stages. You need it in order to find out what records have been released, and then to locate copies of them. (The problems are in essence the same whether you are researching, say, Artur Rubinstein or Jimi Hendrix.) You also need specialist knowledge if you are to understand in what ways you can – and cannot – trust recordings as evidence for historical performance. Commercial transfers cannot be relied upon for aspects such as

timbre, because they have often been remade to sound as much as possible like modern CDs, while even the original discs may be misleading because, for example, of intrusive recording techniques that may have disrupted normal performance practices, or simply because nobody knows how fast to play them. (The designation '78' is only an approximation: particularly in early recordings, speed was not standardised.) The message of Trezise's chapter, then, is that recordings do not offer a transparent window on the past. Like other documents, they are artifacts, the products of particular cultural circumstances, and as such they stand as much in need of interpretation as any other historical document.

Once you have got hold of a recording, what do you do with it? In chapter 9, Nicholas Cook explores a number of different ways of working with recordings. Perhaps the most important is the use of computer-based playback environments that provide a great deal of flexibility in navigating one or more recordings at the same time: they bring to the study of recordings some of the convenience musicologists have always taken for granted in working with scores. They also provide a range of visualisations which can help you home in on particular features of the music in which you're interested. All this means you can gain a lot of insight by working directly on the sound of the music, in contrast to older musicological approaches to performance that started with score-based analysis and then attempted to map the analysis onto the performance. Other approaches are more abstract in nature, extracting measurable information from recordings and then correlating the information across a range of contexts. Such work aims to characterise performance at a stylistic level (Hofmann as against Rubinstein, early Rubinstein as against late Rubinstein): in deflecting attention from the musical work towards performance style, it reflects a belief in the creative role of singers and instrumentalists – a belief parallel to Blake's and Zak's emphasis on the creative role of producers and engineers. Performers, producers and engineers, in short, all make music, and not just the composers who were for so long the more or less sole focus of musicology.

And performance style is the topic of chapter 10: if Trezise focuses on the documentary value of recordings and Cook on methods for analysing them, then Daniel Leech-Wilkinson illustrates how sustained historical interpretation can be built on these foundations. At one level Leech-Wilkinson's purpose is to provide an overview of stylistic developments in classical performance practice during the era of recordings. At another, however, his aim is to pose quite fundamental questions that must arise in the history of any performance practice (at least during the age of recording, for he sees any attempt to reconstruct the history of performance in the pre-audio era as essentially a lost cause): what

performance style is – according to Leech-Wilkinson a set of habits, some conscious and others unconscious, some that change slowly and others rapidly – and what the principles underlying style change might be. Drawing on the 'memetic' approach originally advanced by Richard Dawkins, he draws an analogy with natural selection: only successful performers can influence other performers, and success requires a reasonable accommodation to the stylistic norms of a given time and place, coupled with a measure of novelty or idiosyncrasy. As Leech-Wilkinson puts it, 'The young performer succeeds in making a career if she is both highly competent and has something noticeably but not upsettingly new to offer.'

Finally, Simon Frith's and Georgina Born's chapters explore different aspects of the discourses around recordings. Frith documents the essentially accidental and self-appointed origins of the record critic, and identifies four overlapping types of discourse that critical writing employs: these are based on the record understood as the document of a prior performance, as something to collect and organise into a library, as a technological object with particular qualities, and as a work of art. It is in the writing of rock critics that this last discourse developed most strongly, responding to rock's more explicit recognition of the album as a constructed studio product, and the final part of Frith's chapter draws out some of the differences – and commonalities – between critical writing on classical music, jazz and rock. Frith suggests that what draws readers to record criticism is not primarily that they will learn what they should buy, or how they should listen to it, since much of what they read about they already own and know: rather, it is the stimulation and provocation elicited by this writing that is relished, what might be called the dialogics of record criticism. As Frith puts it, 'To be interested in music is to be interested in records, which is to be interested in what people write about those records.'

Styled an 'Afterword', Born's chapter draws on the previous chapters and personal takes while developing an argument about the effects of current and future technology. Situating herself squarely between Adorno's pessimism and Benjamin's optimism, Born stresses the centrality of sound reproduction within early twenty-first-century aesthetic consciousness, and traces its evolution from representation to what she calls 'remediation': a convergence of once distinct media forms in which meaning emerges from 'the *re*-presentation in novel combinations and contexts of pre-existing media content'. Remediation, Born argues, was always implicit in recording technology, but the digital revolution has brought it to stage centre. Now autonomous of any specific physical embodiment, the digital musical object is cultural through and through,

and as such immanently open to re-creation. If, as a prime exemplar of commodity fetishism, analogue recording was a technology of modernism, then Born's vision of a future mediated by digital sound underlines the profound cultural processes unleashed by Edison's recitation of a nursery rhyme in 1877. Recorded music penetrates to the heart of culture even as, for more than a century, it has entertained the world.

Learning to live with recording

SUSAN TOMES

As a concert musician you gradually learn to focus on that little slice of time, typically from 7.30 to 9.30 pm, when you must be at your best. Over the years you learn how to build up towards that point, rehearsing during the day (but not wearing yourself out), eating wisely, resting at the right point, all with the aim of being at your most alert and energetic during the performance. You know you have only one chance to give your best.

Making a recording therefore comes as a shock, because in my experience it involves playing your chosen repertoire at high intensity for hours on end. Nothing in rehearsal quite prepares you for this, because in rehearsal you instinctively pace yourself, and in recording you cannot. If, like me, you work in small chamber groups or on your own, you suddenly find yourself facing unprecedented challenges. A recording session typically starts at 10 am (after an hour of warming up) and runs through until the evening, or until everyone feels too tired to go on. My groups have always wanted to record whole movements at a time, so that their shape on disc has integrity. Only when we've got the whole movement safely recorded do we go back and 'patch' mistakes. When we appear in person to play a concert somewhere, we want to be able to match up to, or do better than, our recordings. However, playing movements over and over at full stretch is something we never did before we first encountered a recording session, and something we never do at any other time.

Recording makes everyone hyper-critical of themselves and one another at a level of detail and with an intensity never sustained for so long in ordinary rehearsal. Only at recording sessions do we have the chance to listen back immediately to our own playing on state-of-the-art equipment. And when we do, we become extremely conscious not only of our playing, but of every little cough and scrape, page-turn, pedal noise and squeak of the piano stool. Then, too, there are planes, tube trains, cars, barking dogs and even birds in the rafters we didn't hear when we were playing. All this creates an acute awareness of the sound quality of each moment. Noise-free takes are at such a premium that you become all too aware that your individual slips may make a 'take' unusable. And of course your colleagues can make it unusable too. I don't know which is worse: to make a mistake while someone else is hitting their best form of the day,