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In this volume, contributions from more than twenty authors have been brought together with the aim of providing a comprehensive overview for students and teachers of music who wish to enhance and develop performance skills through reflection, informed practice, and meta-performance knowledge. Most chapters start with an overview of theory and research and continue with practical suggestions or case studies. Background information is given on learning, memory, acquisition of skills, and expression through performance, and on the importance of motivation, social context, evaluation and feedback, practice strategies, concentration, and goal-related focus.

The volume is in three parts. The first part, 'Prospect and Limits', provides a background for later chapters. It consists of a general introduction, an explanation of general perspectives on achieving musical excellence, a medical introduction to physical problems that musicians encounter, with possible causes and cures, and a systematic discussion of factors influencing performance evaluation. The second part deals with 'Practice Strategies' for both individuals and ensembles, memorizing music, sight-reading, and improvisation. It gives summaries of research as well as practical suggestions. The final part is called 'Techniques and Interventions' and reports on studies that were specifically meant to enhance performance, through physical fitness, Alexander technique, physiological self-regulation or bio- and neuro-feedback, mental skills training, and feedback concerning musical expressivity. This part closes with a chapter on 'Drugs and Musical Performance', which discusses the use of drugs such as alcohol, coffee, beta blockers, cigarettes, Ecstasy and cocaine, and their use by, or harm for, musicians. The volume ends with a short epilogue by the editor.

A specific secondary aim of the volume is to provide guidance to manage the stress that often accompanies performance. As mentioned, specific chapters are dedicated to physical problems related to performance and how to overcome them through interventions and techniques. It pays specific attention to the mental preparation for practice and concert performance, and emphasizes, for example, the importance of mental and physical relaxation before picking up or sitting down at an instrument.

The general approach adopted is related to research on expertise in sports. It is explained that accomplishments in sports have been improved and monitored using systematic research that has reached a sophisticated level. For music performance, however, research is still in its infancy. The advantages in the sphere of sports suggest that there are potential benefits for music performance, given parallels in specialization, physical endurance, level of motor control, and demands of peak performances at a pre-set time. Still, application of knowledge to music cannot be done directly, so efforts are made to translate insights to the musical domain, using reports of music-specific investigations that have been carried out.

It is noticeable when reading this volume that research into expertise in musical performance is indeed often only in its infancy. Some chapters provide a summary of existing literature and explore new approaches, but lack scientific rigour. This is to some extent inevitable, since some of these studies are among the first of their kind, but it is also a result of the approach to practical guidance that prevails in some chapters, for example the one on individual practice strategies. Such guidance often amounts to no more than the reported experiences of musicians and is more intuitive than thorough.

Nevertheless the volume provides many useful and interesting insights. For example, chapter 2, 'General Perspectives on Achieving Musical Excellence', by Roger Chaffin and Anthony Lemieux, provides in summary many of the insights that return at length later in the volume. It gives a nuanced picture of the factors that contribute to musical excellence and the transitions in...
mindset that are needed to become a professional. Talent has not yet been demonstrated as genetic; it arises, rather, from an appropriate quantity and quality of practice, external motivation that becomes internal, and appropriate self-efficacy and self-evaluation, in the sense that a musician should trust his or her own capacities and attribute the accomplishments to him/herself rather than to contextual factors. Quantity of practice may be replaced by concentrated, goal-directed quality of practice in which both accomplishments and errors are constantly monitored and strategies are adapted to circumstances. Conscious awareness of the structure of the music, and of both the goals and situations of performance, helps to increase the effectiveness of practice.

In later chapters, strategies for such efficient practice are elaborated. In chapters 5, by Harald Jørgensen, and 6, by Jane Davidson and Elaine King, guidance and examples are given on strategies for individual and ensemble practice respectively. The strategies include switching between the rehearsal of detail and attempting to comprehend the bigger picture, sequential and non-sequential practising, and goal-related rehearsal. In addition, the chapter on ensemble practice discusses social interactions between members of chamber groups and orchestral groups, and the roles of bodily movement and non-verbal cues for communication are highlighted.

Chapter 8, by Sam Thompson and Andreas Lehmann, on strategies for sight-reading and improvising music, is one of the more speculative and innovative ones and provides an enlightening viewpoint on sight-reading and improvisation as well as on musical performance in general. It is the only chapter that stresses the importance of acquiring expertise thorough stylistic knowledge by listening to, reading, and playing repertory from the genre that one wishes to perform. In order to establish a basis for the ‘real-time’ processes that are needed for sight-reading and improvisation, it suggests inventing one’s own technical exercises, and the use of different fingerings and techniques when practising often recurring figures. While the motor actions for performing a well-rehearsed solo piece may be closed rather than open-ended, sight-reading and improvisation need a more open-ended motor programme (a parallel is made with swimming versus playing soccer). To prepare motor actions in ‘real-time’ execution, a repertory of generative processes is needed. These are not prepared ‘licks’ that are chained, but consist of knowledge of plausible musical figures, knowledge of translating musical concepts into musical notes and motor actions, abilities to predict plausible continuations, and procedures for playing with appropriate expression. An important observation, which is also made in chapter 7—‘Strategies for Memorizing Music’ by Jane Ginsborg—is that the practice of skills can in fact only be done on a specific task, and transfer is difficult. This is true of the rehearsal of music at anything other than the desired tempo, and of the performance of music with inappropriate expression (e.g. outside the musical domain, for practising reading skills or motor skills).

Only one chapter is directly concerned with expression in performance. This is chapter 13, by Patrick Juslin, Anders Friberg, Erwin Schoonderwaldt, and Jessika Karlsson, on the learning of musical expressivity through feedback. It is an extensive essay, which starts with common myths about expression, summarizes empirical findings of research on expression, and ends with a formalized model that provides feedback on the successful communication of emotion through performance. The model is based on empirical research that has found expressions of emotions such as ‘sad’ and ‘happy’ to be associated with certain tempos, intensity levels, timbres, articulations, attacks, and the rates and extents of vibrato. This research is an example of what can be achieved through empirical investigation and formalization, although the danger is that musicians may find it normative and simplistic, because of its analytic and determinist approach.

The volume has certain shortcomings. The emphasis on enhancing performance through enhancing its context by using especially psychological and medical knowledge indicates a bias away from musical considerations. The title Musical Excellence may lead potential readers to expect discussion and viewpoints on expert music performance that include, for example, a highly stylized individual interpretation of music and ways to develop such a style. In addition, the focus is largely on practising at home rather than on a professional career. Examples of the experience and practice of successful musicians would have helped here, as well as a fuller account of what skills and preparations are needed for such a career; for example, it could have placed more emphasis on the importance of specialization, innovation, and choosing a personal direction.

Staying closer to the contents of the volume, I think that some of the observations would have carried more weight had the reasons for music students or professionals leaving their profession been addressed. The issues of physical problems, mental stress, loss of motivation, and lack of self-confidence would then probably have become even more apparent.

As a general critique, I would say that there is insufficient synthesis of the different chapters—it
is left to the reader to make connections between them, and it is best to read through the whole book to derive sufficient insight and an overview. For example, the intervention studies of Part III give mixed results, and it is left to the reader to figure out which intervention study does best for what. A systematic and synthetic account of these chapters would have been a beneficial addition.

Additionally, I should stress that there is little emphasis on desirable future research and therefore on possible further innovations. The volume is also lacking as a demonstration of the type of research that lies behind the findings and observations. Most of the essays are basically summaries of factual studies rounded off with concrete suggestions to readers. While this is in itself valid, it is a pity as well, since the encouragement of readers to read and investigate further may be an important side-effect of the volume. Certainly some suggestions are made for future research, but this remains an undervalued issue. Research questions that are raised by the volume—and receive some answers, but still need further investigation—include the following. To what extent can the physical problems that musicians encounter be attributed to or prevented by a consideration of performers' mental states—and how much is it a matter of physical training and endurance, and what training programme could be set up? What are the main factors influencing the success of a musical career? What are the demands of such a career, and how can one prepare for them? What is included in a musicians' knowledge of performance style and the expression of music, and how is such knowledge best acquired and developed? How does expression influence a listener? What is the basis of communication using small-scale variations as in expressive performance, and what responses from the brain does it elicit?

The most crucial problem, however, is that only one of the intervention studies reported an improvement in quality of performance. The others showed an improvement in the qualities for which training was specified (e.g. greater lung capacity after increased physical exercise, better body posture after Alexander technique, better communication of emotions according to the feedback model) but not necessarily an improvement in the quality of performance overall. Only neuro-feedback led to a direct improvement, but the reason for this was not the predicted effect of relaxation through control over brain activity within the alpha and theta range. Instead, it may have been an effect of improved memory access and positive affective states. The lack of effect on performance quality of the other intervention studies was attributed to the timescale. While the timescale seemed best for the neuro-feedback study, it was probably too short for the others.

Apart from this, one might wonder if an improvement in the quality of performance is not more likely when the training is more closely related to the task itself (as is indeed suggested in different places in the volume). Without denying the positive contributions of physical health, Alexander technique, and mental training to musical performance, it may be necessary to develop interventions that address in more detail the issues of performance techniques, specific instruments, and performance actions and decisions for quality of performance really to improve. This would involve a better understanding of expression and effects on listeners and more elaborate measurements of, and feedback on, performance.

To summarize, this volume presents a wealth of information and guidance from which musicians could benefit. It may help teachers to monitor the motivation of their students; students to monitor and plan their own progress in more detail; performers to prepare more consciously for stressful concerts, and to decide between options to deal with stress (such as beta blockers, mental preparation, and physical fitness); and both performers and conductors to reflect on group dynamics and social coherence and roles, among many other benefits. It certainly shows the potential enhancement of musical excellence and sets out important steps in demonstrating the benefit of research for the purposes of performance. Future directions are less satisfactorily dealt with, but numerous suggestions are offered. These will quite likely need to examine performance in closer detail, including expression, decision making, and instrument-specific coordination and technique.

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