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This is the fifth edition of this textbook about human performance and motor learning, published with the same title since 1982. In this new edition there are several sidebars with up to date information on key researchers, historical papers or specific concepts in motor learning. Highlight boxes present research issues and historical connections relevant to the chapters' topics. The 581 pages include an appendix with logarithms, a glossary, author presentations, and an author index as well as a subject index.

The book consists of three parts. In the introduction an historical background to the field Motor Behavior is given. Fundamental concepts and factors that affect the quality of motor skills are introduced. A whole chapter concerns methodology for studying motor performance and another describes human information processing. The authors also describe neurological and biomechanical processes that create complex movement behaviors.

The second part is about motor control and deals with the sensory and central nervous systems, closed- and open-loop control systems, generalized motor programs, proprioception, coordination, principles of speed and accuracy, and individual differences and capabilities, i.e. differences between people and among groups of people. There is only a short passage about tactile feedback suggesting the importance of tactile receptors for movement information, whereas visual proprioception is discussed on several pages. Although the acknowledged importance of vision to motor performance this focus on visual perception seems disproportional to me. Scientific methodology includes validity, reliability, and motor abilities identified by factor analyses. Task analysis is described as an easier, but less effective, way to determine the nature of underlying abilities. Multiple correlation methods highlight the idea that good prediction is difficult in the motor behavior area.

In the third part, motor learning, skill acquisition and experiments on learning are in focus. Special methodological problems for studying motor learning and alternative methods for measuring learning are described in detail, including mathematical and biomechanical formulas as well as descriptive statistics. The law of practice, motivation for learning, and research on augmented feedback are discussed. Differing theoretical perspectives and factors associated with retention and transfer of skills are presented. In this part, and in a book of this distinction, the reader might have expected at least one chapter about the significant relationships between motor skills and cognition, i.e., learning in other areas than motor performance.

The book’s advantages include several pedagogical study tools, including a summary after each chapter, and notes, which help the reader to understand important concepts. Diagrams give visual explanations and practical examples illustrate concrete suggestions.

Teachers, students and researchers can learn new perspectives of motor skills and the book could be useful as a
textbook in studying motor control and learning. Researchers in neuroscience, biomechanics, and specialists in medicine could probably find new research questions to study. However, the size (581 large pages) and the weight of the book in combination with the large amount of theoretical content will probably deter to students and educators in university courses, at least outside the US.

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