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Book Review

Physiological Psychology by Vladimir E. Trajkovski – book review

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Abstract

"Physiological psychology" authored by Prof. Dr. Vladimir E. Trajkovski, represents a pivotal contribution to the field of physiological psychology. The Publisher is Faculty of Philosophy in Skopje and it was published on September 29th in Skopje. This is first edition of the book, which is printed in B5 format with ISBN 978-608-238-235-7.

This textbook, the first in the Macedonian language, elaborately explores the biological bases of behaviour. The book's scope extends beyond mere academic interest, serving as a valuable resource for students and professionals. This book is a valuable resource for anyone fascinated by the intersection of psychology and physiology, demystifying how our biological mechanisms shape behaviour. It's a great educational resource, particularly for students and professionals in psychology, neuroscience, and similar fields, because of its exhaustive exploration of physiological psychology. From the workings of the sensory systems and the dynamism of motor functions to the neurological and cognitive complexities, the book clarifies human behaviour's roots. This book is a great candidate for readers seeking to enhance their knowledge of physiological psychology.

Keywords: book review, physiological psychology, human genetics, human physiology, neuroscience, behaviour, Macedonian language

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„Физиолошка психологија“ (“Physiological psychology”) authored by Prof. Dr. Vladimir E. Trajkovski, represents a pivotal contribution to the field of physiological psychology. The Publisher is Faculty of Philosophy in Skopje and it was published on September 29th in Skopje. This is first edition of the book, which is printed in B5 format with ISBN 978-608-238-235-7.

This textbook, the first in the Macedonian language, elaborately explores the biological bases of behaviour. The book's scope extends beyond mere academic interest, serving as a valuable resource for students and professionals.

Prof. Trajkovski has an impressive academic background and professional tenure, profoundly influencing his approach to this book. His significant tenure in teaching Human Genetics and Physiology, spanning over quarter century, has evidently contributed to the rich content and depth of understanding presented in this book. His leadership in raising autism awareness in Macedonia underscores his commitment to applying scientific knowledge for societal benefit. This combination of scholarly experience and practical application informs the depth and utility of “Physiological psychology”.

Spanning 17 chapters, the book covers various topics crucial for a thorough understanding of physiological psychology. The introduction provides a foundational understanding of neuroscience, explaining the relationship between neurology and behaviour. It lays a solid groundwork by exploring the neuroscience of behaviour and contemporary methods of investigating behaviour in neuroscience. This multi-layered approach offers readers a holistic view of the brain's functioning from various scientific angles. The following chapters cover neuroanatomy, the structure and function of neurons, neurotransmission, and the blood-brain barrier, providing a detailed exploration of neuronal communication and the structure and functions of the central and peripheral nervous systems, including various brain regions. The fourth chapter integrates evolutionary theory and genetics with psychology, providing a holistic view of human development and adaptability, covering genetics, evolution, development, and plasticity. The subsequent chapters cover the sensory, motor, and endocrine systems, offering a comprehensive overview of their components and functions. How the senses function biologically, and their complex structure and functions are explained in a lot of detail; however, their importance in human perception is more implied than explicitly discussed, which could be more challenging for readers with no previous knowledge of the subject. The author skilfully elaborates on how the human body coordinates movement, highlighting the importance of neural pathways in motor control and the implications of movement disorders, and gives an in-depth look at how hormones regulate bodily functions and influence behaviour, highlighting the hormonal mechanisms and their wide-ranging effects on the body. The book covers the biopsychology of stress in a manner that analyses the psychological and physiological responses to stress and provides an insightful examination of stress, its mechanisms, and its effects on the body and mind. Including internal regulation and homeostasis in the book's contents allows readers to find out how body temperature regulation, thirst, hunger, and related physiological processes are controlled through the concept of homeostasis, which is explained in great detail. The next chapters provide a deep and comprehensive analysis of reproductive and emotional behaviour. These chapters skilfully connect biological underpinnings with behavioural outcomes, offering a nuanced view of sexual development and its variations and a rich understanding of how emotions are processed and experienced. Although the inclusion of sexual orientation as a disorder in this chapter is outdated and misaligned, the author does not present any statements that might be stigmatising, and all of the information presented is scientifically sound. The next three chapters cover the physiological psychology of learning and memory, cognitive functions, and biopsychology of language capabilities, addressing how memory and learning are embedded in our neural architecture, including discussions on memory disorders like Korsakoff's syndrome and Alzheimer's disease, examining hemispherical asymmetry, the evolution of lateralization, and its implications for behaviour, discussing language from both a biological and cognitive perspective, integrating complex physical concepts with psychological phenomena. Finally, the last two chapters deal with psychological disorders and psychopharmacology, discussing various psychological disorders from a

biopsychological perspective and offering an up-to-date comprehensive look at mental health disorders and the effects of substances on brain function and behaviour.

Overall, each chapter of “Physiological psychology” offers a consolidating understanding of the various aspects of physiological psychology. Prof. Trajkovski’s expertise is evident in his detailed exploration of each topic, making the book an invaluable resource for students, educators, and professionals. The information presented in the chapters is well-researched and based on reliable sources, including new methods and recent information, making its arguments convincing. It keeps up with the latest developments in physiological psychology, which gives the book a lot of credibility and actively contributes to the latest discussions in the field. The writing style is clear; however, the depth and breadth of the book might pose a challenge for beginners in the field as it demands a certain level of pre-existing knowledge in biology or psychology to fully understand the complex intersections of physiology and behaviour. The style and layout of this book are well thought out for its purpose, thoroughly exploring physiological psychology. The organization of the book is logical and systematic, guiding readers through some complex topics in a way that's easy to follow. Additionally, the inclusion of helpful illustrations significantly enhances the learning experience throughout the book, as these visual aids not only break up the density of the text but also provide a clearer understanding of complicated concepts, making the book more engaging and more accessible to grasp for readers with different learning styles. Overall, the thoughtful combination of detailed content, logical structure, and supportive illustrations makes the book a fitting and useful tool for its intended audience. The structured approach, concise writing style, and knowledge questions after each chapter make the book a great pedagogical resource. Although the questions after each chapter are an excellent starting point to check readers’ knowledge, it is worth noting that they only cover lower knowledge goals like remembering and understanding. Still, the book's pedagogical strength is evident, encouraging active engagement and critical thinking.

The book has received positive reviews and acclamations from international professionals in the field, commending its comprehensive coverage, clarity, and utility for a wide range of readers and emphasizing its role in uncovering the physiological foundations of human cognition and behaviour. The book's consolidating exploration of physiological psychology has significant implications for the field. It is the first book of its kind in the Macedonian language to offer insights into how our biological systems influence psychological processes.

In conclusion, this book is a valuable resource for anyone fascinated by the intersection of psychology and physiology, demystifying how our biological mechanisms shape behaviour. It's a great educational resource, particularly for students and professionals in psychology, neuroscience, and similar fields, because of its exhaustive exploration of physiological psychology. From the workings of the sensory systems and the dynamism of motor functions to the neurological and cognitive complexities, the book clarifies human behaviour's roots. This book is a great candidate for readers seeking to enhance their knowledge of physiological psychology.