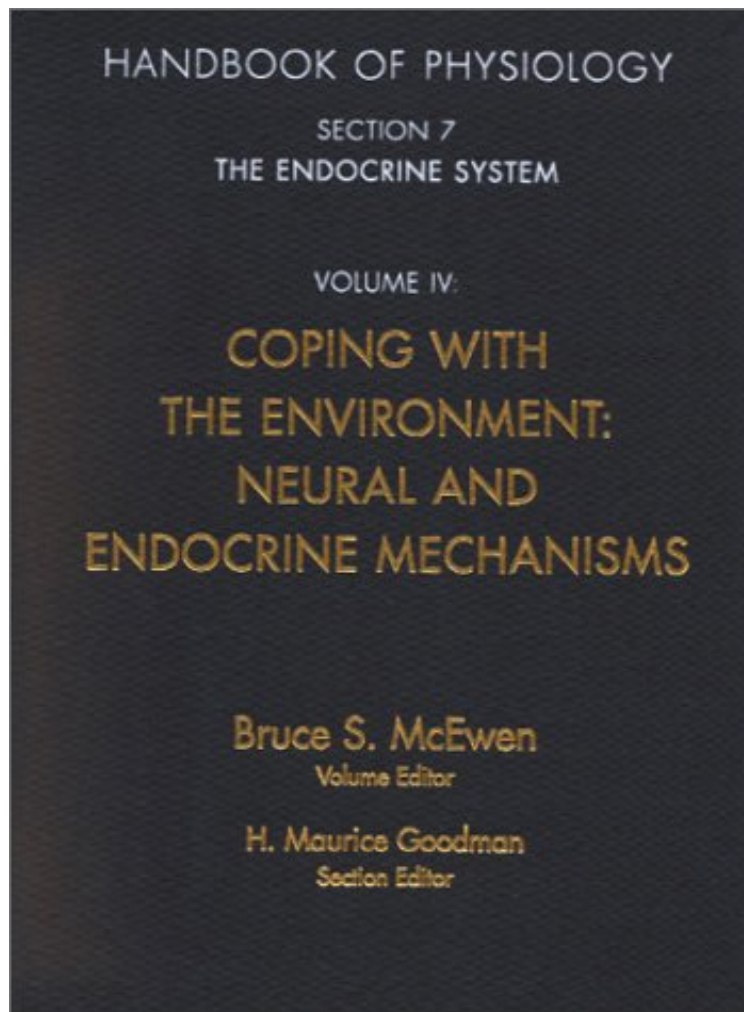


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0 of 0 people found the following review helpful. Plus ca change, plus ca meme choseBy A. R. CelluraBruce McEwen and Maurice Goodman's grand editorial project, encompassing twenty-four richly rewarding chapters written by outstanding researchers on the interface between the environment and neuroendocrine physiology, has very deep roots.

The ones closest to the fecund topsoil of contemporary biological research stem from the middle of the 19th century as two giants of biology, traveling along two entirely different paths, brought about revolutions in their respective fields that, nevertheless, ignoring temporal perspective, crossed and entangled in an anguished birthing that came to be known tautologically as the nature-nurture problem. In retrospect, this was inevitable because each was working, with grossly different time flows, at understanding environmental adaptation as, do also, fast-forwarding, the research programs reported in McEwen and Goodman's book. The kicker is that, as the observant reader will surmise, mother nature has partnered quite inextricably with stay-at-home father nurture. Charles Darwin (1809-1882) and, contemporaneously, Alfred Wallace used observation to derive a synthesis involving minute biological adaptations to subtle (and sometimes not so subtle) ecological changes over the vast range of geologic time. Contrarily, Claude Bernard (1813-1878), contemptuous of the time honored clinical observations of medical practitioners, used a scalpel to answer long debated issues such as whether wetting a dry mouth would satisfy thirst. A poor horse was volunteered. Water gushing out of its cut esophagus kept on drinking until its energy was entirely sapped. Naturally each man's ideas crossed the Channel. But, it is less likely that they read each other's work and vanishingly unlikely that the obscure merkm of the Abb Mendel, whose experiments largely came to light and got mixed in with theirs after their deaths, crossed their minds to say nothing of the twenty-one miles of water separating Darwin's England and Bernard's France. So, even taking into account Darwin's knowledge of domestication issues, and the importance both men attached to the influence of the internal environment of living things on environmental adaptation, it is not unlikely that, after their initial astonishment, they would have marveled at experiments, such as those of the McGill group reported in Chapter 13 (Development of Individual Differences in Behavioral and Endocrine Responses to Stress: Role of the Postnatal Environment), focusing as they do on the complex interplay of maternal grooming behavior on the switching on of genes that ameliorate the response to stressors, or on the ways in which intrauterine influences affect the development and sensitivities of the hypothalamic-pituitary-adrenal system (HPA) that plays so central a role in adaptation to environmental stressors. Of course, the ground covered in McEwen Goodman's COPING would have been particularly appealing to Claude Bernard who not only is credited with emphasizing and promoting modern medical/biological experimentation but whose central idea of a milieu interne emphasized the ways in which the human organism made a constant effort to steady physiological phenomena against the challenges to adaptation of an ever changing environment. Chapter 2, Sympathetic Nervous System Physiology and Pathophysiology in Coping With the Environment. Focuses on the role of the SNS in elaborate detail. Although Bernard did preliminary experiments on the sympathetic nerves it was Walter Cannon who demonstrated the complexity and specificity of sympathetic systems complex role in effecting the equilibration between environmental and organismic stabilization which worked its way into our everyday language as homeostasis. In this chapter, Goldstein and Eisenhofer bring together the literature on how this works and can breakdown with a nice array of descriptive figures. The breakdown emphasizes cardiovascular pathology though, for a quibble, it would have been rewarding to see them go at the phenomenon of "voodoo death" that still gets inconclusively explained though the sympathetic system is obviously implicated. For example, Cannon and Robert Sapolsky offer quite different explanations of this phenomenon. This review will not do justice to this marvelous tome of 562 detailed pages but I can at least give you a sense of its comprehensiveness by listing its parts or sections: Part I Primary Mediators of the Coping Response (Six chapters), Part II Fear, Stress and Coping (Four chapters), Part III Stress and Coping During the Life Course (Three chapters), Part IV Coping Impact of Diurnal Rhythms and Sleep (Two chapters), Part V Stress, Coping, and Immune Defenses (Six chapters), Part VI Stress, Coping, and the Social Environment (Two chapters). Coming from a social science background with a decent background in neurophysiology and clinical psychology I found the text quite readable. Topics closer to home were most enjoyable such as the aforementioned Chapter 13, mainly from Michael Meaney's McGill lab, Coriell Adler's Chapter 24 Social Ordering and Health, and Robert Sapolsky's Chapter 23 Physiological and Pathophysiological Implications of Social Stress in Mammals. As many know decades ago Sapolsky was one of editor McEwen's postdocs and has made a sizeable name for himself through a myriad of peer reviewed papers and popular press articles that report his research in the wilds of Africa and at his Stanford neurophysiology lab. Professionals in the field will ante up the asking price of over \$150 putting it on their grant expense accounts most likely. Fortunately, for the impecunious student it will be, though probably well-worn, in the library. 0 of 1 people found the following review helpful. Plus ca change, plus ca meme chose By A. R. Cellura Bruce McEwen and Maurice Goodman's grand editorial project, encompassing twenty-four richly rewarding chapters written by outstanding researchers on the interface between the environment and neuroendocrine physiology, has very deep roots. 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This unique volume provides fresh insights into the neuroendocrine systems that enable individuals to cope with their physical and social environments. Since the pioneering work of Claude Bernard and Walter Cannon on homeostasis and Hans Selye and John Mason on stress, there have been profound advances in biomedicine, and the regulation of gene expression has emerged as a major theme in connecting nature with nature. With this has come an appreciation of the long time frame in which the environment produces both adaptive and maladaptive changes in an individual organism during the lifespan. Indeed, experiences early in life can have a life-long impact, and advances in behavioral and social sciences have interfaced with biology to reveal that the psychosocial environment shapes life-long patterns of neuroendocrine function and behavior, thus influencing physical and mental health. This book begins by discussing the two main stress mediators, the catecholamines and the hypothalamic-pituitary-adrenal axis. It then deals with the neurobiology of fear, stress and coping and with biological aspects of stress and coping during the life course. Next it considers diurnal rhythms, sleep and immune defense mechanisms. Finally it discusses stress and coping in the social environment in both animal models and humans. The book should provide an intellectual framework for further integration of social, psychological, and biological sciences around basic concepts in physiology.

About the Author Bruce S. McEwen, Professor and Director of the Laboratory of Neuroendocrinology, The

