Adaptation and Well-Being
Social Allostasis

Recently, an interest in our understanding of well-being within the context of competition and cooperation has re-emerged within the biological and neural sciences. Given that we are social animals, our well-being is tightly linked to interactions with others. Prosocial behavior establishes and sustains human contact, contributing to well-being. *Adaptation and Well-Being* is about the evolution and biological importance of social contact. Social sensibility is an essential feature of our central nervous systems, and what has evolved are elaborate behavioral ways in which to sustain and maintain the physiological and endocrine systems that underlie behavioral adaptations. Writing for his fellow academics, and with chapters on evolutionary aspects, chemical messengers and social neuroendocrinology among others, Jay Schulkin explores this fascinating field of behavioral neuroscience.

DR. JAY SCHULKIN is currently a Research Professor in the Department of Neuroscience at Georgetown University, as well as a member of the Center for the Brain Basis of Cognition at Georgetown. His research investigates the neuroendocrine basis of behavior and his current interests include the evolution of information molecules, such as CRH, oxytocin, behavioral adaptation and the brain.

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CAMBRIDGE
UNIVERSITY PRESS

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UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

One Liberty Plaza, 20th Floor, New York, NY 10006, USA

477 Williamstown Road, Port Melbourne, VIC 3207, Australia

314-321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre, New Delhi - 110025, India

103 Penang Road, #05-06/07, Visioncrest Commercial, Singapore 238467

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It furthers the University's mission by disseminating knowledge in the pursuit of education, learning and research at the highest international levels of excellence.

www.cambridge.org
Information on this title: www.cambridge.org/9780521509923

First published 2011

A catalogue record for this publication is available from the British Library

Library of Congress Cataloging in Publication data
Schulkin, Jay.
Adaptation and well-being : social allostasis / Jay Schulkin.
p. cm.
Includes bibliographical references and index.
ISBN 978-0-521-50992-3 (hardback)
1. Psychoneuroendocrinology. 2. Sociobiology. 3. Brain – Evolution.
4. Adaptation (Physiology) 5. Allostasis. 6. Well-being. I. Title.
QP356.45.S377 2011
612´.022–dc22 2011002439

ISBN 978-0-521-50992-3 Hardback

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Preface

This is a book on expanding regulatory concepts in cognitive/physiological neuroscience to the context of social adaptation and evolution.

Our evolutionary history is rich in cephalic expansion and innervation into more and more regions of the body, and the corresponding regulation of those regions. The evolutionary history reflects both regulation of the internal and the social milieu.

In recent years, an interest in understanding something about well-being within the context of competition and cooperation has re-emerged within the biological and neural sciences. Darwin understood that prosocial inclinations are built into cephalic regulation, and that set the stage for investigating the ways in which social adaptive mechanisms are involved in establishing and maintaining well-being.

In a previous book, *Rethinking Homeostasis*, I discussed the concept of allostasis from the point of view of regulation of the internal milieu. In this book, I extend the concept of allostasis to the interaction of the individual with the social environment and its influence on regulation of the internal milieu. The book is grounded in an evolutionary perspective with regard to cephalic functioning – specifically to cephalic responses in managing external resources while maintaining internal viability.

An important recent trend in the neurosciences has proven fruitful and warranted: the burgeoning field of social neuroscience. This new field places an emphasis on the biological aspects of social science, including the hormonal regulation of adaptive behaviors as can be seen in the effects of hormones on the brain in generating behavioral responses that serve regulatory needs, including those knotted to the social milieu. The nice thing about this science is the

confluence of disparate disciplines merging into a common context for discussion – a context for inquiry.

This book tells a biological story about the importance of human social contact, our well-being linked to significant relationships replete with meaning. Our viability is locked in the social milieu that goes from short- and longer-term considerations, from individual gratification to significant social contact. Given that we are social animals, our well-being is tightly linked to our interactions with others. As such, the discussion will focus on the ways in which social interactions are related to short- and longer-term adaptations.

As always I am grateful for my family and friends. I thank my colleagues for the diverse ways in which we interact; the lifeblood of the mind are the meaningful interactions among us. And I thank my two graduate students in particular, Meaghan Leddy and Britta Anderson.

I apologize for those left out. This book started out much larger, but the editorial suggestion was that it be reduced significantly. Given my personal experience and interest with the amygdala and neuropeptides (e.g. CRH, oxytocin), I have emphasized these topics and interactions with colleagues. For those worthy experiments and individuals not acknowledged, I apologize. The field is large and this book is but a snapshot. Further references and citations may be found at the website for this book, www.cambridge.org/9780521509923.

A visit to Gonville and Caius College, Cambridge University, in June of 2008 was a joy; thank you Joe Herbert and James Fitzsimons.

This book is dedicated to David Jacobowitz, Michael Nitabach and Michael Power: three beautiful scientists.