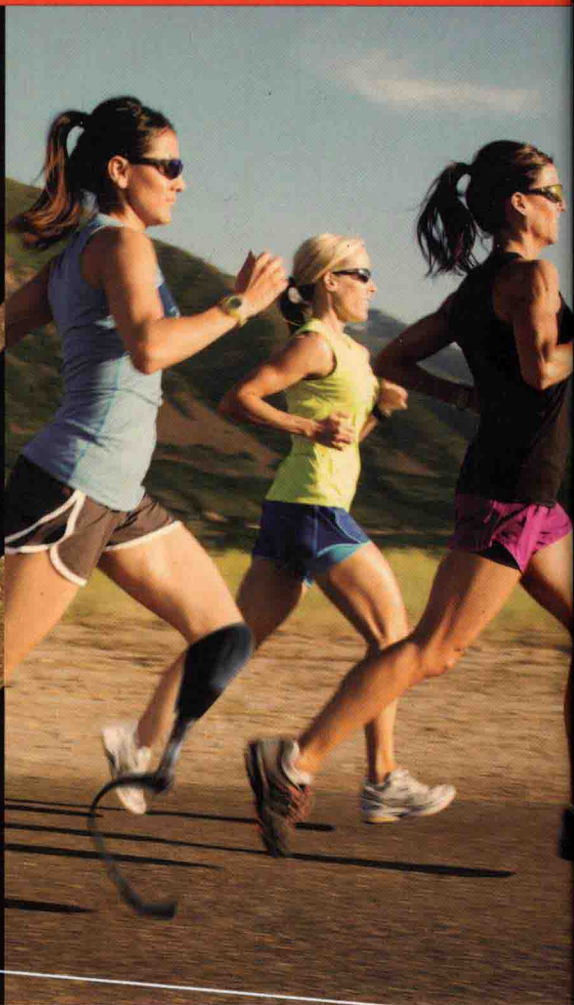
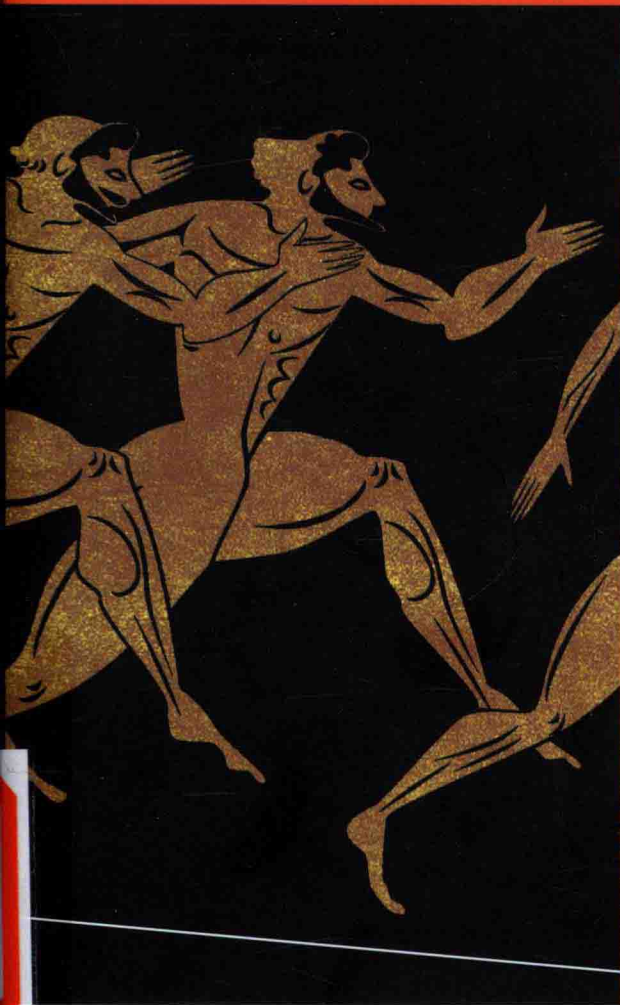


SPORT

A Biological, Philosophical,
and Cultural Perspective



JAY SCHULKIN

PRAISE FOR SPORT

"With his characteristic interdisciplinary breadth of knowledge, Jay Schulkin gives us a comprehensive yet concise survey of the many dimensions of sport from the perspective of evolutionary theory, genetics, neuroscience, social psychology, cultural theory, health science, ethics, and aesthetics. He shows how sport encompasses the full range of human motivations and capacities, from our desire to dominate others to our need for social cooperation and solidarity to our appreciation of human dignity and beauty."

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"*Sport: A Biological, Philosophical, and Cultural Perspective* gives readers a fresh and excellent view of sport. Schulkin illuminates this fascinating topic by bringing to bear a powerful combination of historical, biological, and psychological perspectives."

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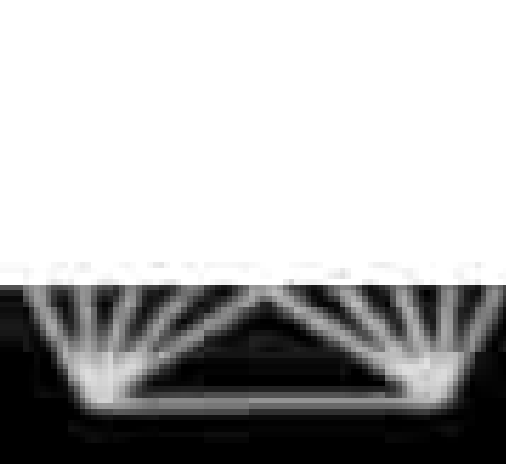


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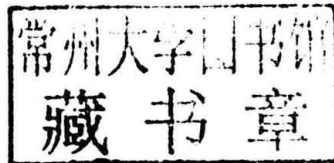


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SPORT



*This book is dedicated to the Siegelman family,
Russ, Beth, Max, and Jacob, for the friendship
and generosity they extended to my family.*

*And to my colleague, friend, and
fellow New York fan Alex Martin.*

*I also want to thank my children's coaches, who have helped
them develop a love for sports.*

INTRODUCTION

A thing of brilliance, brawn, and beauty, sport is as natural an occurrence as breathing and language. For some of us, one sport or another—seasonal or continuous, and whether or not we formally classify it as sport—is what we look to as a source of relief, filling up the space of life, a pastime that can transcend the stuff that divides us.

I am not an athlete, but I am physical and coordinated. When I lived in New York City as a young man and through my thirties, I walked everywhere. While I did not engage in formal athletic training, I have spent many years in the company of athletes, one in particular: my wife of almost twenty-seven years.

The first thing my wife, a swimmer, noticed when she came to my NYC apartment before our marriage was the swimming and sports facility in my building. I knew it was there; I just had never stepped inside. I didn't have a reason to. But, of course, she did. Her world was the discipline and the joy and the pain of formal sport and training.

While I may not be an athlete like my wife, my world clearly includes being physical, and I am certainly driven. Physicality, stamina, and drive are key features for any sporting activity. Walking, thinking, and looking were the constants in my world, and walking—and walking quickly—is being physical. We might even regard it as the evolutionary origin of sport, when we climbed down out of the trees, ventured out onto the open plains, and eventually developed into the only animal that practices sustained and purposeful distance running. In fact, walking can be competitive and is an Olympic sport. Now, in my opinion (and I mean no disrespect), competitive walking is not pretty to look at; the hip business



FIGURE 0.1

Butterfly stroke.

doesn't do it for me. But the simple act of physical movement does, and walking was my way to accomplish that.

Though I didn't physically engage in sports, mentally it was always one of my passions. As a young man I followed sport news and scores: the Yankees, the Knicks, the Giants. At that time, I was part of a neuroscientific laboratory at New York University in Washington Square Park. I would often come out to watch guys play pickup ball. Many times, these were men who had almost made the big leagues, and every once in a while their professional buddies would show up and play with them. They were wonderful to watch, and their trash talk and bravado added to the air of excitement. It was a bit surreal watching such games happen in Greenwich Village, NY, but when these games did take place, there was some great sport on the floor.

When one of my teams won, I could not read enough about them, and when they lost, I wanted to avoid it. Losing is hard even when you're not playing. Working hard and displaying character in losing are qualities of the ethics of sport. But keeping the mind sharp is equally important: Being able to keep track of statistics is crucial in scorekeeping, picking the roster, and following games such as baseball. Humility is also a necessary trait for the player: Batting .300 is a good average, but it actually means that the majority of the time the player is not hitting the ball but is striking out, popping out, or grounding out. There is also a lot of courage involved when someone is throwing a ball at you. Sport is as much a mental and moral exercise as a physical one.

Baseball, while rich for me, was boring for my wife until our son started playing. She got involved, learned the game, and became a fan. My son's

wonderful coach, who was from Boston, was a major Boston Red Sox fan. He was a catcher, as was my son, and he taught our whole family much about the game and the whole mentality of sport. Watching our children engage in athletic activities has given us lifelong friends and engendered many fond memories. Sport is as much social as it is physical.

Sport is large and primordial. It can be used for good or bad. Hitler glorified his vision of the Nazi elite athlete at the 1936 Olympics (though he was stymied by the African American track star Jesse Owens). Nelson Mandela (a hero to many of us), on the other hand, who stressed that “sport has the power to change the world,” used the 1995 Rugby World Cup to unite a racially divided South Africa. Sport goes far beyond winning or losing a specific event. It is a summary of the human condition.

So what does sport do for us? Sport plays a role in our childhood development via the biology associated with play and pedagogy. Pedagogy and expanded play are linked to social contact, and social contact is our foothold in the world around us. Sport emerged from capabilities that are embedded in culture, and participating in sport (in its many forms) is a part of becoming a member of a culture. As Margaret Mahler (2000) intimated, there is biological birth, psychological birth, and social birth, and sport is tied to a sense of social birth; sport enhances the biological capabilities that we bring with us into the world. The cultural is continuous with the biological, and neither reduces the other.

Sport traverses every part of the child, varying, of course, with the culture that child is a part of. The development of form and function is essential to sport, and it is gained by practice and play. These are important components in the normal development of one’s skills and personal sense of competence and excellence. Finally, there is a sense of achievement and discovery associated with participation in sports.

Sport evolved, in part, to facilitate our socialization and our sense of belonging to a particular group. It is also an ancient practice. Several different cultures (for example, China and northern Europe) can independently trace skiing as a practice for more than two thousand years. Sport is culturally ancient and is all-pervasive in the modern era.

What can you expect to gain from this book? First, an appreciation of sport as a part of life that is as important and specific to us as language, standing up straight, singing, or agriculture. Second, an awareness that,

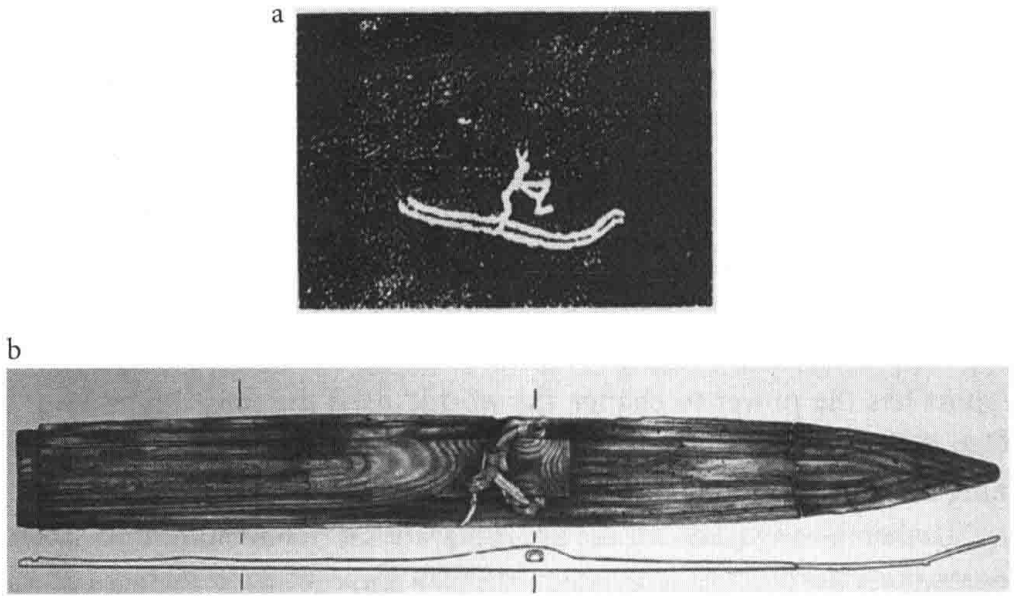


FIGURE 0.2

(a) One of the two figures of skiers carved in stone near Rödöy, Norway (ca. 2000 BC). This is the oldest known reference to skiing. (b) The oldest known ski is shown as it was found; the remaining band that passed around the heel is only partially visible.

Source: National Board of Antiquities, Helsinki, Finland.

Adapted from Formenti et al. (2005).

as in most things in life, diverse biological conditions underlie different forms of sport. Third, the recognition that though it functions as a kind of universal language, the expression of sport varies among cultures. Fourth, the realization that to understand the biology and neuroscience of sport is to understand something fundamental about us as a species.

In this book, mind, body, and culture harmonize on a continuous theme. We will learn that within sport exist core features of biology and neural systems tied to adaptation and action. The same physical and intellectual components that underlie diverse adaptations outside of sport (language; spatial and temporal capabilities; inference; memory; agency and direction; causation; detection of intention of others; mathematical calculation; endurance; etc.) underlie sport as well.

Why this book? No other work makes clear the biology that underlies sport. From the evolution of our species and our brain's functions,

to the diverse information molecules (dopamine, endorphins, oxytocin) our body employs, to the expansion and flexibility of the shoulder muscle (for throwing), to our expanded Achilles tendon (for standing erect and running), I suggest that sport is a really good example of the continuity of biological and cultural evolutionary trends.

Thus this book is written from a biological perspective, and evolutionary considerations figure largely in it. I have always been influenced by John Dewey and the classical pragmatists, which are reflected throughout this book. Key events that the book addresses include our sense of the body, our bipedal stance, our big brains, our distribution across the earth, and our rich endowment with social capabilities. While writing this book, I often thought about two amazing teachers, Paul Weiss and Sophia Delza. Paul Weiss was a philosopher and someone I studied with, and on many things disagreed with, long ago. He wrote a book titled *Sport: A Philosophical Inquiry* in which he recognized and elegantly wrote about the training, sacrifice, dedication, discipline, endurance, and motivation that goes into the pursuit of athletic excellence. Sophia Delza, a dancer and martial-arts expert, was all about perfection, form, and discipline; a mind very much in the body. She was a wonderful teacher.

This is a short book, and it suggests more than I have room to demonstrate. I apologize in advance for any individual or topic not included in this book. This is a small window into the rich world of sports. But I know of no subject that more captures the human drama in all its features—the good, the bad, and the ugly—than sport. Finally, with love, I would like to thank my three athletes: April Oliver and Danielle and Nick Schulkin.

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