

Preface

For decades, scientists have relied on the concept of mobility in describing activity patterns of past and present human populations. Population-level comparisons have traditionally sought to demonstrate differential mobility (e.g., logistical or residential) amongst Pleistocene or Holocene *Homo* groups, using this as a basis for inferring convergent or contrasting adaptive behavior. For example, shifting from a hunter-gatherer to a more sedentary agricultural subsistence strategy generally has been associated with a relative decline in mobility associated with the latter. Substantial efforts have been devoted towards inferring which musculoskeletal adaptations best reflect such a potential shift in mobility. The central role of bipedalism in human locomotion predisposes lower limb musculoskeletal anatomy to feature prominently in these inferences, although it is important to note that expressions of mobility in other areas of the postcranium (e.g., the upper limb) are gaining traction in the field when studying select populations (e.g., coastal or island groups). It is problematic that often mobility is not defined a priori in precise enough terms to facilitate comparability of results across studies. Typically, some derivation of an ethnographic definition of mobility is adopted, whether explicitly recognized or not (e.g., populations with greater mobility travel farther than populations with lesser mobility). Usually, in applying the ethnographic definition, unstated motivations for travel focus on resource acquisition or intergroup relationships (e.g., trading).

On the other hand, an excessively narrow application of the concept of mobility, such as a mechanically focused one, equally limits comparisons of results across studies. Not all studies would (nor should) integrate experimental approaches in order to quantify mobility. Resources necessary for the requisite acquisition of ground reaction force and kinematic data are not equally available to all researchers, and there are ethical and logistical constraints when studying human subjects. Rather, the optimal solution for defining mobility, or fully capturing its essence, should embrace a multidisciplinary approach in how the concept is applied. Despite such a long-standing and widespread reliance on the concept of mobility for reconstructing and comparing activity patterns and life histories of human populations, such an inclusive attempt at defining mobility has not yet been made.

To address this notable absence, in the spring of 2011, we organized a symposium on mobility at the 80th Annual Meeting of the American Association of Physical Anthropologists held in Minneapolis, MN. The symposium assembled an array of experts using different approaches for quantifying and comparing the effects of mobility on postcranial musculoskeletal anatomy. The symposium and subsequent discussions were aimed at embracing current perspectives and stimulating new ones that emphasized a holistic view of the interaction among intrinsic (i.e., skeletal) and extrinsic (i.e., environmental) factors relevant for quantifying and studying the differential expression of mobility. Moreover, the symposium highlighted the importance of disentangling environmental effects some of which transcend traditional categorical groupings, such as coastal versus inland and/or mountainous versus flat terrain environments.

This volume emanates from the original symposium. It is not intended to be the final word on the concept of mobility, but we hope that it will serve as a suitable starting point from which new discussion and future work can begin (or continue), perhaps with a renewed focus on critical issues identified herein or to be expanded laterally. We also hope that this volume represents a useful advance by articulating a consensus working definition of mobility that can be widely applied in anthropological studies in order to overcome the lack of consistency in explicitly defining the concept of mobility that currently cripples the comparisons of results across studies.

There are a number of people we would like to thank, for this volume would not have materialized without the substantial efforts of many. First, we would like to acknowledge the original participants in the 2011 symposium, not all of whom were able to contribute chapters to the volume for one reason or another. The discussions that took place leading up to, during, and following the symposium helped shape this volume considerably. Thank you for your contributions in driving this effort forward. We also would like to thank contributors to the volume who did not participate in the 2011 symposium for one reason or another. Your contributions to the collective effort have broadened its scope in new, exciting ways. Chapters were reviewed by a mix of fellow contributors, co-editors, and additional colleagues. We are indebted to everyone who assisted with reviewing the individual chapters. Thank you for your time and willingness to offer constructive suggestions. Finally, we would like to thank Janet Slobodien, Jacob Gallay, and others at Springer Press for encouraging the efforts that ultimately led to this volume. We are extremely grateful for this unwavering support throughout the entire process.

Johannesburg, South Africa
Pisa, Italy

Kristian J. Carlson
Damiano Marchi

Reconstructing Mobility

Environmental, Behavioral, and Morphological
Determinants

Carlson, K.J.; Marchi, D. (Eds.)

2014, X, 295 p. 54 illus., 11 illus. in color., Hardcover

ISBN: 978-1-4899-7459-4