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How often do we see a book that is a game changer, both within our field (with potential to change our approach to design) and the outsider’s view of our field (validating and securing the place of apparel as the most complex of all designed products)? This book formalizes what has, until now, been treated as intuitive knowledge or subjective, individualized procedures. It introduces precision and a thorough review of design for the body that is comparable to an engineer’s approach to design. It replaces seat-of-the-pants approximations with solid information, a professional vocabulary, and an informed way to address the complexity of the human body. Consider the variables that we, as designers of apparel, work with – the body, textile materials, and structure (the pattern shapes that create garment silhouettes). Multiple texts are available for the apparel designer with information on pattern development. Books that address textile material properties also abound. Until now, comprehensive information on the anatomy, physiology, and kinesthetics of the human body have been largely missing from our field.

Human Body: A Wearable Product Designer’s Guide, is the result of a collaboration between an apparel designer and a medical doctor, each of whom have wide experience in the other’s field. The result is a book that belongs on every apparel design educator’s bookshelf or hard drive. The authors interweave information on the body, its social and physical needs, discussions of associated design issues, examples that define the concepts underlying the body/clothing relationship, and suggestions of exercises to stretch the designer’s imagination. It is a tool that will help every designer, whether concerned with ball gowns or bullet proof vests, to be a better practitioner of design. It is a call to all designers for precision in acknowledging and understanding the complexity of the human body.

The book starts out with two overview chapters; the first describes the concept of the body as the foundation of the design of all wearable products, and the second reviews body systems including skeletal, muscular, nervous, respiratory, circulatory, lymphatic, urinary, reproductive, endocrine, and integumentary (skin and related body surface) emphasizing interactions with wearable products. Sections in this chapter also discuss the connections of the neuro-musculo-skeletal system resulting in motion, and the functions of fat and its relationship to form. The next six chapters proceed to describe in great detail all of these body features and functions, dividing the body into regions appropriate for the designer based on the product (i.e., the head and neck, upper torso and arm, lower torso and leg, mid-torso, hand and wrist, and foot and ankle). The body in health or disease, at every age, static or moving; the elite athlete and the couch potato are all covered. These chapters include discussions of related products worn on the body, and how they can interact with, protect, enhance or manage various body parts or processes. The final chapter discusses design for the whole body in a variety of different environments, including a section on designing for space. Extensive drawings by Le Win illustrate complex structures and concepts in a manner that is accessible to the visual designer, providing just enough detail without reducing the complexity of the body and its parts or the complexity of its relationship to clothing. Extensive appendices on landmarking and measuring the body, also focused on different body sections, round out the book.

The language is terse, focused, and efficient, using precise and professional vocabulary paired with ample definitions and straightforward descriptions (along with a complete glossary for when the reader loses track of a term or an acronym). The voices of the anatomist, the kinesiologist, the physiologist, and the designer are intertwined. Each chapter includes information on body motion, on landmarking and measuring the body, and on fit and sizing of relevant products. Issues related to both function and fashion – protective and athletic gear, medical wearable products, and clothing needs of all varieties – are discussed throughout. Cross references abound throughout the book, directing the reader to related or to more detailed explanations. References to useful studies are presented throughout for the practitioner who wishes to pursue concepts in greater depth.

This book is a treasure trove for the functional designer, combining all the most pertinent information about body structure, body movement, and body function in one reference. But the book is also a valuable resource for the fashion designer. Every educated designer should read the first two chapters, but the sections on arm and
shoulder anatomy and movement, on spinal variations and asymmetry of the body, on the mid-torso (the waist area), and many other sections are as relevant to fashion design as to functional design.

One of the best features of this book is that it does not simplify or reduce issues to the ‘norm’, but introduces variation and the full range of body issues. Differences related to sex, age, and body shape and condition are discussed throughout the book. Who would know that not only the dimensions, but also the configuration of the rib cage varies between men and women? It does, and as the authors point out, this fact can impact the design of unisex garments.

Last but not least, the explanation of the body from the point of view of the apparel designer has revealed many areas where research is needed, or where unwarranted assumptions have been made. For example, it seems that the neat ordered anatomical models of body structures placing the various organs in relationship to one another were developed from the study of prone cadavers. But the apparel designer is dealing with live bodies in a standing position, and in motion, in which case this neat ordering is not at all accurate. Repeatedly the authors point out that in the absence of studies that focus on the kinds of data needed by apparel designers, precise information is not available. There is potential for many dissertation projects outlined in this text.

In illuminating the full complexity of the human body in reference to the job of the wearable product designer, the authors have performed an incalculable benefit to designers. As they state in the book when ‘designers go beyond surface observations of the human body to fully understand anatomy and body function – safe, fully functional and innovative products will result.’ Beyond this, using this book to mentor all our students, whether fashion or functional designers, to develop their designs through informed knowledge of the body will result in better and more fulfilled designers.