



TEXAS TECH UNIVERSITY
Department of Mechanical Engineering

Anthropometric Change in the US: Implications for Design

Dr. Bruce Bradtmiller, President

Anthrotech, Inc.

Abstract: For a century or more, Americans have increased body dimensions. Until recently, the increases have been in height and height-related dimensions. Now, the changes are largely in weight and weight-related dimensions, such as circumferences. This presentation will focus on changes in the U.S. Army population between 1989 and 2012, and in the U.S. civilian population during a comparable time period. We will place it in the context of global anthropometric change, as well as focusing on the changes in anthropometric values used in the design of products and workspaces. The talk will conclude with a brief introduction to Anthrotech, and highlight some of our recent projects.

Bio: Dr. Bruce Bradtmiller, a physical anthropologist, is the owner and president of ANTHROTECH, a business engaged in the collection, analysis, and application of human body size data to ergonomics, design, and sizing problems. Since joining the firm in 1983, Dr. Bradtmiller has designed, conducted, and directed a number of military and civilian body size surveys and other anthropometric research projects. He currently directs the US Navy Sizing and Correlation Study, measuring 4000 sailors. His team recently conducted a major anthropometric survey of the US Marines Corps, and the US Army to update its historic ANSUR survey. Dr. Bradtmiller also designed and directed several three-dimensional head-and-face surveys, using laser scanning techniques. ANTHROTECH completed a nationwide 3-D survey of children's heads for the Snively Foundation aimed at developing standard head forms for the bicycle industry. He directed anthropometric training of measures for the SizeChina project, which produced standard head forms for Chinese adults. Current and recent work for commercial clients includes organizations in Japan, Australia Ireland and the US. He is most recently Division Chair (Technical Standards Division) for the Human Factors and Ergonomics Society, and an appointed expert to the ISO Technical Committee 159 on Ergonomics, Subcommittee 3 on Anthropometry and Biomechanics. He is the liaison expert to ISO TC133 Clothing Sizing Systems. The author of many articles and technical reports, Dr. Bradtmiller received his Ph.D. and M.A. in anthropology from Northwestern University and his B.A. in anthropology from Indiana University.



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Livermore Center 101 | 2:00 – 3:00 pm

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