The Biostatistics of Aging: From Gompertzian Mortality to an Index of Aging-Relatedness

Gilberto Levy, Bruce Levin
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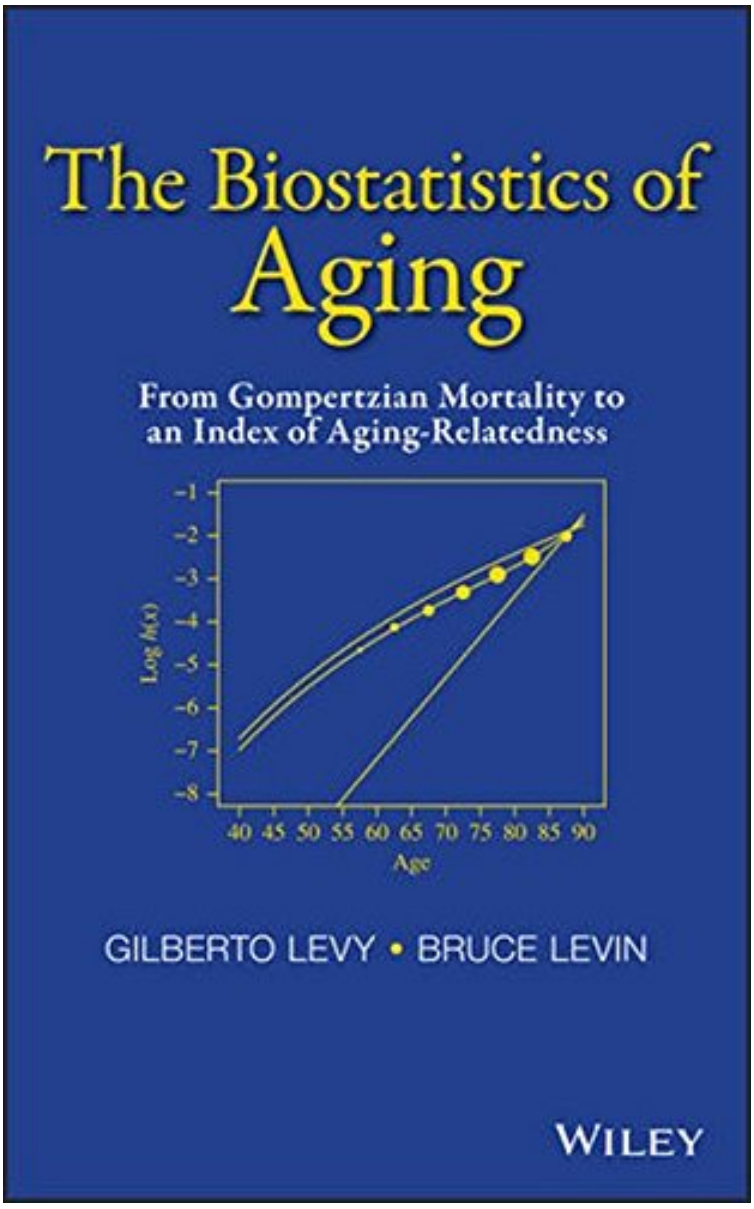

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Gilberto Levy, Bruce Levin : The Biostatistics of Aging: From Gompertzian Mortality to an Index of Aging-Relatedness before purchasing it in order to gage whether or not it would be worth my time, and all praised The

Biostatistics of Aging: From Gompertzian Mortality to an Index of Aging-Relatedness:

A practical and clarifying approach to aging and aging-related diseases Providing a thorough and extensive theoretical framework, The Biostatistics of Aging: From Gompertzian Mortality to an Index of Aging-Relatedness addresses the surprisingly subtlenotionwith consequential biomedical and public health relevanceof what it means for acondition to be related to aging. In this pursuit, the book presents a new quantitative methodto examine the relative contributions of genetic and environmental factors to mortality anddisease incidence in a population. With input from evolutionary biology, population genetics, demography, and epidemiology, this medically motivated book describes an index of aging-relatedness and also features: Original results on the asymptotic behavior of the minimum of time-to-event random variables, which extends those of the classical statistical theory of extreme values A comprehensive and satisfactory explanation based on biological principles of the Gompertz pattern of mortality in human populations The development of an evolution-based model of causation relevant to mortality and aging-related diseases of complex etiology An explanation of how and why the description of human mortality by the Gompertz distribution can be improved upon from first principles The amply illustrated analysis of real-world data, including a program for conducting the analysis written in the freely available R statistical software Technical appendices including mathematical material as well as an extensive and multidisciplinary bibliography on aging and aging-related diseases The Biostatistics of Aging: From Gompertzian Mortality to an Index of Aging-Relatedness is an excellent resource for practitioners and researchers with an interest in aging and aging-related diseases from the fields of medicine, biology, gerontology, biostatistics, epidemiology, demography, and public health.

From the Back CoverA practical and clarifying approach to aging and aging-related diseases Providing a thorough and extensive theoretical framework, The Biostatistics of Aging: From Gompertzian Mortality to an Index of Aging-Relatedness addresses the surprisingly subtle notionwith consequential biomedical and public health relevanceof what it means for a condition to be related to aging. In this pursuit, the book presents a new quantitative method to examine the relative contributions of genetic and environmental factors to mortality and disease incidence in a population. With input from evolutionary biology, population genetics, demography, and epidemiology, this medically motivated book describes an index of aging-relatedness and also features: Original results on the asymptotic behavior of the minimum of time-to-event random variables, which extends those of the classical statistical theory of extreme values A comprehensive and satisfactory explanation based on biological principles of the Gompertz pattern of mortality in human populations The development of an evolution-based model of causation relevant to mortality and aging-related diseases of complex etiology An explanation of how and why the description of human mortality by the Gompertz distribution can be improved upon from first principles The amply illustrated analysis of real-world data, including a program for conducting the analysis written in the freely available R statistical software Technical appendices including mathematical material as well as an extensive and multidisciplinary bibliography on aging and aging-related diseases The Biostatistics of Aging: From Gompertzian Mortality to an Index of Aging-Relatedness is an excellent resource for practitioners and researchers with an interest in aging and aging-related diseases from the fields of medicine, biology, gerontology, biostatistics, epidemiology, demography, and public health.About the AuthorGILBERTO LEVY, MD, DRPH, is a neurologist with a primary research interest in aging and aging-related diseases, particularly dementia. He conducted clinical research within the spheres of epidemiological studies and clinical trials at Columbia University for more than ten years. Dr. Levy is the author of over thirty journal articles and three book chapters. BRUCE LEVIN, PHD, is Professor of Biostatistics and past chair of the Department of Biostatistics in the Mailman School of Public Health at Columbia University. A Fellow of the American Statistical Association, his research interests include sequential selection procedures and their use in adaptive clinical trial designs. He is the coauthor (with J.L. Fleiss and M.C. Paik) of Statistical Methods for Rates and Proportions, Third Edition, published by Wiley.