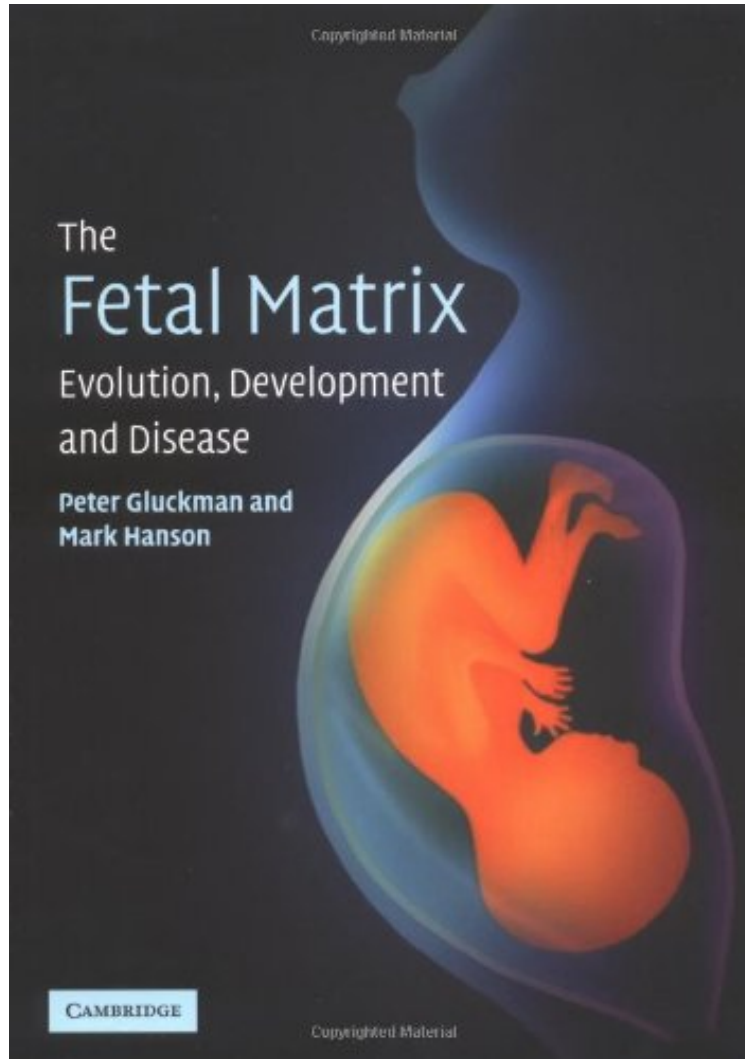


(Mobile book) The Fetal Matrix: Evolution, Development and Disease

The Fetal Matrix: Evolution, Development and Disease

Peter D. Gluckman, Mark A. Hanson

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Peter D. Gluckman, Mark A. Hanson : The Fetal Matrix: Evolution, Development and Disease before purchasing it in order to gauge whether or not it would be worth my time, and all praised The Fetal Matrix: Evolution, Development and Disease:

0 of 0 people found the following review helpful. Must read By G Andrews Must read for anyone interested in health - especially Maternal-Child. Well documented and fascinating read. Have already gifted it to friends. 11 of 12 people found the following review helpful. Review: The Fetal Matrix By A. R. Cellura The Fetal Matrix is a lucid, detailed and comprehensive account of the fetal environment's effects on health, disease and mortality in the middle and later years of the human life cycle. It is the product of years of fertile research collaboration between its distinguished authors. Professor Peter D. Gluckman is University Distinguished Professor and Director, National Research Centre for Growth and Development, University of Auckland and a foreign member of the Institute of Medicine, National

Academy of Sciences (USA). Professor Mark Hanson is Director, The Centre for Fetal Origins of Adult Disease, Southampton University and a fellow of the Royal Society of Medicine (UK). The book is intended for a broad readership that includes researchers in developmental and evolutionary biology, prenatal medicine, epidemiology, health policy and educated lay people. Professors Gluckman and Hanson follow up on the path-breaking epidemiological work of Professor David Barker (*Mothers, Babies and Health in Later Life*), which caused a major stir in medical and public health circles by indicating that disease causes were not exclusively or primarily the result of simplified genetic "traits" or life-style factors. Events unfolding in utero were an essential part of the story. In Chapter One, Gluckman and Hanson provide a nice primer for understanding gene regulation in response to environmental signals. For a more detailed exposition the reader might want to read Matt Ridley's *Nature Via Nurture*, and, though more technical, Massimo Pigliucci's *Phenotypic Plasticity*, Mary Jane West-Eberhard's monumental and prize-winning *Developmental Plasticity And Evolution* and A. R. Cellura's *The Genomic Environment And Niche-Experience*. In Chapter Two, the authors present a wealth of information from their specialties in embryological and fetal physiology and prenatal medicine, which for the non-specialist will likely be worth the price of the book. (Incidentally, each chapter stands on its own so readers can pick and chose according to their interests.) Chapters Three, Seven and Eight contain a detailed exposition of the authors' concept of the "predictive adaptive response" through which they integrate concepts from genetics, fetal physiology, the extra-uterine environment and evolutionary theory. In Chapters Five and Six specific connections are made between in utero genetic switching, the extra-uterine environment and diseases that often emerge in later life such as cardiovascular disease and diabetes. Chapters Nine and Ten focus on the health policy implications of the authors' findings. *The Fetal Matrix* is well written with many interesting examples provided to illuminate key points of the authors' thesis. An excellent index is provided and a bibliography from the scientific literature of almost 500 citations. I recommend it highly as a contribution to the rapidly growing literature on developmental plasticity, genomic regulation and human physiological adaptive processes.

New discoveries reveal how crucial interactions which determine our destiny occur before birth, when our genes interact with their environment as the embryo and fetus develop. These processes - in the matrix of the womb - are evolutionary echoes of mechanisms which allowed our hunter-gatherer ancestors to survive. These exciting insights into predictive adaptive responses suggest new ways of protecting the health of the fetus, infant and adult. If inappropriate they can trigger obesity, diabetes and heart disease, formerly thought to result solely from adult lifestyle. The new concepts in this book are crucial to understanding the daunting public health burden in societies undergoing rapid transition from poverty to affluence. They add an important new dimension to evolutionary theory. Synthesising developmental biology, evolutionary history, medical science, public health and social policy, this is a ground-breaking and fascinating account by two of the world's leading pioneers in this important emerging field.

"The authors are persuasive and their findings have relevance for health policy everywhere" *New Scientist* "...a detailed and comprehensive account...highly readable with many interesting examples provided to illuminate key points of the author's thesis...I recommend this book highly as a contribution to the growing literature on developmental plasticity, genomic regulation and human adaptive physiological processes." *The Midwest Book*, A.R. Cellura, Ed. D. "Despite the complexity of the topic, the authors have managed a tour de force in making it understandable to the educated lay reader as well as the specialized professional." Nicole J. Bernshaw, MSc, IBCLC, *Official Journal of the International Lactation Consultant Association* "The biological interpretation of disease and health is a topic in need of serious attention and wider dissemination. In *The Fetal Matrix*, Gluckman and Hanson have made a very interesting contribution to this enterprise." Stephen Lewis
About the Author
In 2004, Dr Peter Gluckman was named 'New Zealander of the Year' by the *New Zealand Herald*. The newspaper recognized him for 'a long career of achievement that has brought life-saving developments in medicine and demonstrated an ability to produce world-leading scientific research in New Zealand.