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Charles A. S. Hall  
Carlos A. Ramírez-Pascualli

# The First Half of the Age of Oil

An Exploration of  
the Work of Colin  
Campbell and Jean  
Laherrère

 Springer

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An Exploration of the Work  
of Colin Campbell and Jean Laherrère

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**Professor Charles A. S. Hall** is a systems ecologist with strong interests in energy flows in natural systems and human society. He received his Ph.D. from Dr. Howard Odum at the University of North Carolina at Chapel Hill in 1970. His work has involved streams, estuaries, and tropical forests but has focused increasingly on human-dominated ecosystems in the USA and Latin America. He is best known for developing the concept of EROI, or energy return on investment, as it relates to, e.g., migrating fish and obtaining oil and gas. Hall's latest focus has been on developing an alternative approach to economics called biophysical economics, an attempt to understand human economies from a biophysical rather than just social perspective. He recently coauthored *Energy and the Wealth of Nations: Understanding the Biophysical Economy* with economist Kent Klitgaard.

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# Preface

This book was originally conceived as a series of chapters written by Colin Campbell and Jean Laherrère themselves. But because of the difficulty in writing an entire volume for two men in their late 70s or early 80s, particularly given their still very busy schedules, it became a book about the immense contributions of Campbell and Laherrère—using their own words as much as possible. Carlos Ramírez-Pascualli took on the job of finding and melding their original words into a series of chapters. He undertook this project because, as a Ph.D. student in economics and the environment with a focus on petroleum, he believed this would be the best way to understand the longstanding debate between so-called “peakists and optimists,” an issue that is crucial for his research. Charles Hall took on the job of polishing Carlos’ usually excellent English, as well as helping in the overall structure of the book. Unless otherwise specified, the final words are, to the best of our knowledge, derived especially from Campbell, with many graphs and plots in Laherrère’s preferred way to communicate scientific information.

A bibliography is provided at the end of each chapter. Whenever it was necessary to update or add more information with the text of Campbell and Laherrère, we include in-text citations which are associated with the list of “References” for each chapter. At the risk of being repetitive, we specified the units of measurement almost every time we cite figures, preferring to be repetitive than inaccurate. Colin Campbell and Jean Laherrère have approved the final version, but any omissions or misrepresentations are the sole responsibility of the authors of this volume.





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