

# Preface

This book is a contribution of an astrophysicist and an economist to the debate on space exploration. Space exploration is an important subject and one of the most contested and in need of careful investigation. We strongly believe that the analysis should go beyond the scientific and technical aspects, and should be enlarged to economics, sociology, political science, history, and cultural studies. They are equally important in understanding what space exploration is and how space exploration can contribute to the progress of humanity.

Space exploration is quintessentially a human endeavor. Migrations and voyages of exploration and discovery have characterized and distinguished humanity since the dawn of its history. Humanity is a wandering race. Throughout the history of *homo sapiens*, motivations for its wandering have been various: climate instability, pursuit of trade, of power and personal wealth, and of knowledge. Whatever the motivations, the thirst for discovery and exploration seems engrained in our mind. There is no doubt that space exploration is the next big step for humanity. In the opening hearings before the Special Committee on the NASA bill on May 6 1958, its Chairman Lyndon Johnson stated:

Space affects all of us and all that we do, in our private lives, in our business, in our education, and in our Government. [...] We shall succeed or fail [depending on] our [...] success at incorporating the exploration and utilization of space into all aspects of our society and the enrichment of all phases of our life on this Earth.

In writing this book, we explored the conditions for advancement in manned space exploration and colonization. Our analysis, based on the present knowledge of science and technology, indicates that space exploration and colonization of nearby stars systems could be realized within the next 100 years. However, science and technology define the boundary of what is possible. The realization of manned space exploration and colonization depends on our level of civilization. We strongly believe that space exploration on the scale proposed in this book can only be done on a global cooperative basis.

We are far from that level of civilization. There are many grounds for pessimism on whether we can reach this advanced level of civilization in the near future. Despite all the pessimism, our view is that the situation is not entirely hopeless. The human race is the only one on Earth in creating its own problems; hence it is within its own power to solve them. As Dr. Johnston once said:

Life affords no higher pleasure than that of surmounting difficulties, passing from one step of success to another, forming new wishes and seeing them gratified.

The authors want to thank Federica Abaterusso, Amedeo Luttwak, Federico Romanelli, Laura Simei, and Paolo Sommariva for reading and commenting on an earlier draft of this book. Their comments are sincerely appreciated.

Giovanni F. Bignami  
Andrea Sommariva

<http://www.springer.com/978-88-470-5336-6>

A Scenario for Interstellar Exploration and Its Financing

Bignami, G.; Sommariva, A.

2013, VIII, 101 p. 32 illus., Softcover

ISBN: 978-88-470-5336-6