



## Book Review

**Theaters of time and space: American planetaria, 1930–1970**, by Jordan D. Marché. Rutgers University Press, 2005, 266 p., \$49.95, hardcover (ISBN 0-81353-576-X).

It is a fair guess that many readers of this journal became inspired to study science by a childhood visit to one of America's fine planetariums. Inspiration at an early age is an essential component of developing both a scientific understanding of the universe around us and of helping develop a culture that encourages its populace to embark on technical or scientific careers.

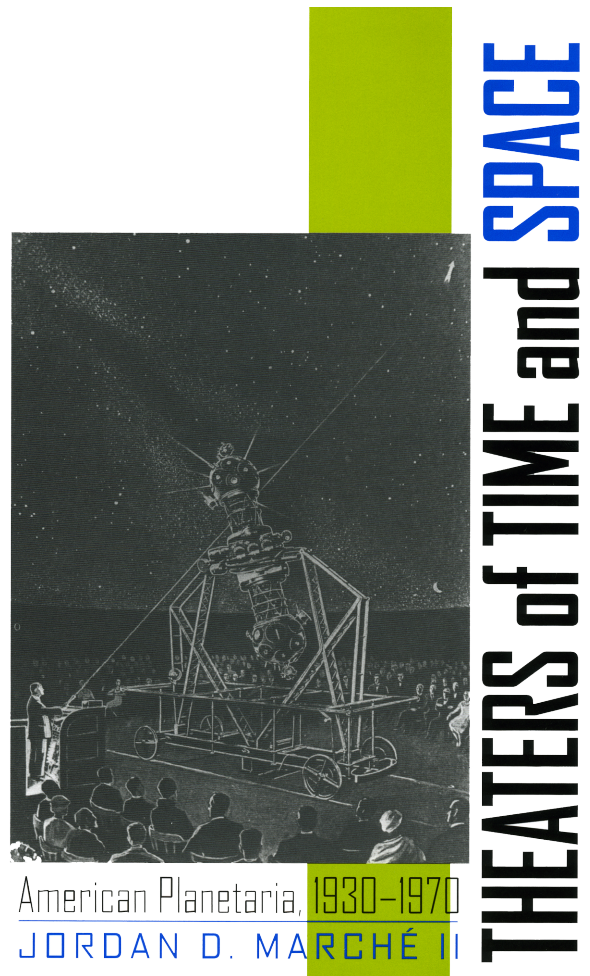
Indeed, this thoroughly researched, sometimes personal book focuses on the social and cultural impact of planetariums during the critical years that encompass the period from before the Second World War up to the landing of Apollo 11 on the Moon. As Marché states in his introduction, the book "illuminates a significant transformation...[in]... twentieth-century astronomy education."

*Theaters of time and space* records how and why the first planetaria were built in the United States, how their programs developed, and how the roles of the planetarium directors changed during this period. Planetarium professionals, who were often astronomers, became a conduit between the publicly funded research astronomer and the tax-paying general public. Planetaria provided the trigger for the later development of the larger science centers that now occupy most major and many smaller cities.

The book is divided into four major parts. The opening chapter reviews the origins of the first projection planetarium in Germany, built by the Zeiss company, and how this led to the development of major theaters in the U.S.

The major construction of large planetarium theaters, matching their European counterparts, takes us into the second part of the book, and the story is told against the fascinating and personal backdrop of the people whose vision inspired their construction. Adler in Chicago, Griffith in Los Angeles, Hayden in New York, Fels in Philadelphia, and Buhl in Pittsburgh: each of the first five big planetarium theaters were named after their respective generous benefactors. Insights into the reasons why these people donated their time and money are given and their motivations for supporting such a new venture are explored. Marché provides a valuable understanding of their origins and history, and makes many interesting comments on the current state of the planetarium industry today.

Separate chapters in this second section cover professional training, careers in astronomy, and the popular



audience, thus making this volume both appealing to the planetarium professional of today and worthwhile for anyone engaged in informal science education. The book also provides a window for formal educators who want to understand the benefits of informal science education.

Also afforded a separate section is Armand Spitz, whose contributions to the field are unique and whose story is well worth telling. Spitz, whose projectors now dot the globe, enabled a rapid, post-war expansion of planetarium construction. His company is still in business today, forging ahead with many others in the digital revolution currently gripping the industry. The contributions of Spitz, both to the construction of projectors and to the professionalizing of the planetarium industry, is a legacy second to none, and is amplified with historical precision by Marché.

The post-Sputnik era, which first created an explosion of funding for science education and consequently led to the construction of a large number of small planetaria in schools and communities across America, begins the fourth and final section of the book. Federal aid to education and the “professionalization” of the planetarium industry are reviewed in such detail that every page carries previously unpublished nuggets of information. After reviewing the book, I found myself picking it up and randomly opening it, always finding something of interest on every page.

An extensive index highlights the places and people who shaped them. A 20-page bibliography indicates the thoroughness of research done for this book, which follows more than 40 pages of notes on each chapter.

So who is this book for? I think it’s a must-read for anyone in the planetarium industry. If you work in a university with a working planetarium, you will find the historical development fascinating. The book offers a valuable background to anyone in a position contemplating replacing a planetarium or building a new one. It also provides some excellent tidbits for anyone in science education.

The current explosive redefinition of the planetarium theater in the modern world of astrophysics has many echoes

of the initial growth period of the planetariums back in the 1930s. This book provides an excellent historical context for that early growth. *Theaters of time and space* is a fascinating insight into the world of planetariums, the people who worked in them, and their combined impact on American society. The technology that allowed humans to build a machine capable of replicating the night sky as seen from Earth has helped transform society’s view of itself and has carried us into the space age.

Today’s history of planetarium theaters remains to be written. Today’s technological tools, digital projection, and three-dimensional models of the universe based on astrophysical data (e.g., the Sloan Digital Sky Survey) will bring a new cultural impact on society because we can now show a post-Copernican view of the universe on planetarium domes. I, for one, look forward to a second volume that will cover the post-Apollo era to WMAP’s accurate determination of the age of the universe and knowledge of its three-dimensional structure, which was unknown at the time of the first planetaria.

**Martin Ratcliffe**

Past president, International Planetarium Society  
Director of Buhl Planetarium, 1991–1997

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