

clearly predate Moxon. As discourses on globes incorporate the rest of astronomy, they keep the problems about the globes, and during the 1700s become more about the cosmos and its workings, and less about globes. My (very few) 1700s British texts have many “examples” but no “problems” beyond globes. My earliest American texts (1820s) have lots of problems all through. Problems abound in them ever since.

B.W. Jones: *This might seem a silly question, but how did you decide, particularly for the older books, which were textbooks, i.e., how did you prepare your sample?*

N. Sperling: On the basis of the stated goals of the author of the book.

TEXTBOOKS: A PANEL DISCUSSION

Textbooks for Developing Countries

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I would like to address the issue of textbooks from a developing country's point of view.

Firstly, I believe that in the developing countries a textbook should be written in the native language if it is to reach the very people whose awareness of astronomy needs to be raised. And when we talk about books in the vernacular, the problem is one of dearth: a dearth of writers and a dearth of resources.

The lack of writers comes about simply because in the developing nations there are inevitably very few astronomers and of these only one or two will be inclined to write books. If there exist writers, they are faced with several choices and problems. There are three types of books which can be written: a university text, a school text, and I shall include a book for the public. Each type of book targets a different kind of audience, so the writer must be attuned to the needs of the nation to know what the priority should be. If, for example, astronomy is about to be introduced into a school curriculum, then a school textbook should take the highest priority because it tackles astronomy education at the grass-roots level. Naturally, the final choice will depend on other factors as well, including promotion, fame, and pecuniary considerations.

A more intractable problem for the developing countries is one of getting materials for the book. Photographs are properties of big observatories or individuals and special permission must be sought to use them. Personal contact is the only

easy way to overcome this problem but it is precisely these personal contacts that are hard to cultivate because of isolation of the Third World astronomers from their counterparts in the more developed world. If there are observatories that allow photographs to be used for the price of an acknowledgment, then these invaluable resources should be listed and made known to all.

I should also mention that I believe that direct translations of foreign books into the local language may not necessarily be the right thing to do because differences in culture are significant. Geographical location is an obvious disparity and it is also true that different countries have disparate needs; therefore, the emphasis of the book should subsequently be dissimilar. A jointly written text may be more desirable, as this will allow the local author to inject the local bias of the book.

Astronomy in American Textbooks

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Over the last dozen years, I have written textbooks on a variety of levels, starting with books for university students, proceeding to work with Naomi Pasachoff on books on the junior-high level, and, most recently, working with her and with others on an elementary-school series. I can testify that, in the United States, at least, the world of college and university texts is as different from the world of “el-hi” (elementary-high) texts as night is from day.

1. College and University Texts

When I began teaching astronomy, in 1972, I looked at the available texts to find one that emphasized the things that I thought were most important to teach students. Since I think students are interested by contemporary astronomy in general, and I am sure they are excited by black holes and quasars in particular, I looked for books with extensive treatments of the latter topics. To my surprise, I found none.

I nonetheless made out my course with topics distributed according to what I thought was appropriate emphasis, including whole lectures on pulsars, black holes, quasars, Mars (with Viking approaching), and so on. Eventually I had the basis of a book from my lecture notes; I had even recorded some of the lectures, though it turned out to be more difficult to transcribe them than it was to write from scratch (given that one of my major skills is typing). Eventually, I showed some of my materials to a publisher, who expressed interest — and who led me on for over a year as one editor replaced another over and over, an interesting introduction to the world of publishing. Eventually, a traveling field representative from another publisher came to my office and I showed him my material. His editor was forceful