

ROLE AND VALUE OF THE PLANETARIUM

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Because every planetarium will serve a population with a particular nature, specific goals will vary among planetariums. Even before a planetarium building is designed and the instrument and other equipment are purchased, a directing person or group should clearly identify those specific goals.

A long running dialogue exists in the planetarium profession about whether education or entertainment is the top priority of planetariums. This issue arises primarily for museum or science center facilities, since education is acknowledged as the primary goal in pre-college and university planetariums.

It is my view that the staff of museum and science center planetariums, as well as planetariums in schools, should also regard themselves as educators. I like the term "planetarium communicator" for anyone having a role in directing, planning, and presenting programs. In our profession we seek to communicate so much: the joy and spirit of astronomy, astronomical facts and concepts, and astronomy's connections with a wide range of disciplines: physics, chemistry, biology, psychology, mathematics, geography, history, literature, and art. While communicating these ideas, entertainment should not be ignored. The best visual, auditory, and audience participation effects available to a particular staff should be chosen to make the communication process a memorable and enjoyable experience. Lasting learning and desire for more learning occurs when experiences are enjoyed. However, high-technology special effects should not substitute for active experiences – pencil-paper activities, hypothesis-testing, and interaction between audiences and planetarium communicators.

As a second area of importance, I think that it is the responsibility of every planetarium to be accurate in its presentations. Giving a reversed presentation of day-and-night, westward sun or moon motion along the ecliptic, an eclipse in which either the full moon (lunar) or new moon (solar) move westward on the dome, or slides that are inverted and/or backwards – such things are inexcusable. They can initiate wrong ideas and perpetuate the wrong ideas held by many people.

I also think that a planetarium should assume the responsibility to oppose so-called "pseudoscience," including astrology, reports that aliens from space have visited the earth and build large structures, mind-reading, and fortune-telling. The forms which this opposition can take may vary from outright position statements from the planetarium and the area scientific community to a presentation of the pseudoscience and a logical degradation of its position.

Cultural mythology is a different situation. In cultures emerging from strong beliefs in mythological explanations of natural phenomena, planetariums should proceed with care in showing how science explains these phenomena. A difficult process of accommodation must occur in those brought up to believe the mythological explanation. For optimum learning and understanding, the planetarium communicators working with audiences with strong culture-based mythological backgrounds show sincere respect for this heritage, noting that the stories will always form a beautiful and important part of that particular culture. Then the planetarium presentation can gently proceed to replace the mythological belief by revealing inconsistencies with what can be observed.

As my third main point, the most significant aspect of the planetarium communication process is the group of people who are planning and presenting the programs. The value of the planetarium's offerings, regardless of the size and technical level of the facility, is highly dependent upon these individuals. Therefore those hired as planetarium directors, planners, and presenters should have skills that make them effective planetarium communicators. I have done

research that has identified the following individual characteristics as both important and trainable: knowledge of astronomy and related sciences; an ability to coordinate instrument operation with narration; an ability to plan programs; an understanding of the scientific method; and a respect for accuracy.

In the same study, I found these characteristics of planetarium communicators important but largely non-trainable: clear and pleasant speaking voice; ability to explain things clearly; ability to write well; scientific aptitude; mechanical aptitude; enthusiasm, dedication, and interest; creativity and imagination; flexibility; and humility. Further, a planetarium communicator should have some understanding of the psychology of how people learn, including developmental learning levels of children, if a planetarium will be serving young people. Former experience as a classroom teacher is particularly worthwhile in individuals giving school lessons.

Job descriptions of individual planetarium communicators can vary widely, as type of institution, population served, and staff size, direct. But a person with abilities and enthusiasm should be given freedom within appropriate guidelines to help develop the total planetarium's program to its maximum potential. Each planetarium communicator should find his or her job interesting and challenging for, after all, what can be more rewarding than knowing that you help translate the truths and mysteries of the Universe?

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