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MAJOR COLLEGE AND UNIVERSITY PLANETARIUMS: A STUDY OF ORGANIZATIONAL MARGINALITY

By

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ABSTRACT

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Major planetariums on college and university campuses occupy a precarious position. They have distinct organizational ties to their academic institutions, but they function programmatically like independent major planetariums. This dual role can put functional stress on the planetarium and limit goal accomplishment.

The purpose of this exploratory study was to examine the administrative relationship between major college planetariums and their parent institutions. The concept of organizational marginality, first proposed in 1956 by Burton Clark, was used as the framework in which to examine the administrative environment of the major college planetarium and to seek strategies for alleviating negative effects induced by marginality. Ten marginality factors were derived from the literature and arranged in three broad themes: administrative structure and goals, personnel reward system, and resource-allocation system. Data on these factors were gathered by means of self-administered questionnaires and follow-up telephone interviews. Four groups were included in the study: the directors

of the major college and university planetariums, their immediate supervisors, the directors of units on each campus similar to the planetariums in structure and function (as designated by the planetarium directors), and the immediate supervisors of these similar-unit directors.

The view of the planetariums that emerged from the data was one of administrative isolation. Planetariums and their staffs were not part of the primary personnel reward system or resource-allocation system.

A strong, apparently unique, relationship existed between the planetariums and the local schools.

Similarities between the planetariums and small businesses were noted, particularly in regard to the skills a planetarium director needed to be successful.

Potential strategies to reduce the effect of marginality derived from the study included improvement of communication with various campus groups, recruitment of college classes to use the planetarium, solicitation of faculty research projects involving the planetarium, and commitment of at least a half-time staff position devoted to marketing, development, and public relations.

To Paula, Suzanne, and Amy.

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CHAPTER I

INTRODUCTION

The focus of this study was the administration of major planetariums located on college or university campuses. The term "major planetarium" has been defined in somewhat different ways in the literature. Although no exact definition is possible, for the purposes of this study a major planetarium has the following distinguishing characteristics: It conducts programming for the public on a regular basis; has a minimum of two professional staff assigned exclusively to the planetarium; has its own independently controlled operating budget, part of which is produced from program admission fees; and most frequently has a projection-dome diameter of at least 50 feet and a theater that seats 100 or more people (but these dimensions are secondary to the administrative attributes).

Such planetariums are not numerous (18 were used in this study) but are nonetheless worthy of study because of their unique position within the planetarium and university communities. Within the planetarium community they bridge the span between a purely public facility, such as a large city museum planetarium, and the small planetarium owned and operated by a school district, whose only function is curriculum enhancement. Within the university community they are one of a few educational public service units. They have

the important obligation to represent the university and, for that matter, the enterprise of science to the public. Yet they are not part of the core mission of the university. Frequently they find themselves on the fringe of the university. This "marginality" can wreak havoc on a planetarium's ability to fulfill its goals. Little attention has been given to planetariums in this context. In fact, little has been written on planetarium administration, generally, and nothing on college planetarium administration. The researcher's purpose, then, in this study was to investigate the planetarium's position on a university campus, particularly in regard to what factors promote or detract from the accomplishment of its goals.

Background

To understand the college planetarium, some familiarity with the history of planetariums is necessary. Planetariums are a twentieth-century phenomenon. The first planetarium, as we now use the word, was created in Germany in 1923. The director of the Deutsches Museum in Munich approached the Zeiss optical firm of Jena to construct a museum exhibit to show the major celestial bodies and their motions. The original plan was to use light bulbs attached to the underside of a hemispherical ceiling to represent the stars and planets. The impracticality of such a scheme was soon realized, and Dr. Walther Bauersfeld, chief engineer at Zeiss, proposed instead a system to project images of the stars and planets onto a hemispherical screen. The result "was much greater than anybody could have imagined" (Hagar, 1980, p. 95). As word spread of this

new device that mimicked the heavens, thousands of visitors flocked to see for themselves the "Wonder of Jena," as the planetarium became known.

Planetariums made their way from Europe into the larger cities of the United States. Chicago was the site of the first United States installation when the Adler Planetarium opened its doors in 1930. Soon other large cities followed: Philadelphia (1933), Los Angeles (1935), New York (1935), and Pittsburgh (1939).

The first planetarium to be built on a university campus was the Morehead Planetarium of the University of North Carolina at Chapel Hill. It was a gift of John M. Morehead, former ambassador to Sweden. Its original purpose was to be "used in conjunction with classes at the University" and to provide "a service to the people of North Carolina" (Chamberlain, 1962, p. 192). This dual role of service to the university and to the public continues to be characteristic of all major college planetariums.

Today, about 1,200 planetariums exist in the United States. Nearly 300 of these reside on campuses of postsecondary institutions. The majority of college planetariums are small, one-person operations with a typical dome diameter of 24 to 30 feet and a seating capacity of 60 to 80 people. Thirty-three have dome diameters of 40 feet or more, and 10 have domes of 50 feet or more (Petersen, 1987).

The modern planetarium consists of a domed, circular theater with a projection device in its center that creates images on the ceiling--not substantially different from the original Deutsches

Museum exhibit in that regard. All planetariums share this basic function: simulating the appearance of the sky with its primary objects, the sun, moon, planets, stars, and their motions. Today, however, few planetariums rely strictly on the central projector. To be considered adequately equipped, a planetarium must have auxiliary projectors to demonstrate a host of other astronomy-related phenomena: eclipses, meteor showers, auroras, and supernovas, to name a few.

Some planetarium theaters now include computer-controlled lasers, projection video, digital audio, and large-format wide-angle motion pictures that fill the dome. Much of this latest hardware has been in response to what is perceived as technically more sophisticated audiences. Some planetarium professionals feel the need to compete with the special effects of Hollywood's elaborate space-adventure films. Others do not see the need, do not have the desire, or do not have the resources to create the special effects. The question of whether the planetarium is primarily an educational tool or an entertainment medium has produced a schism or identity crisis in the profession (Norton, 1985; Ross, 1982).

By and large, college and university planetariums have added only modest special-effects capabilities to their theaters, for several reasons. They generally perceive themselves as more educationally oriented and less entertainment directed. They do not have the population bases to draw large audiences, and consequently,

investing in the complex and expensive hardware is not economically feasible.

It is in this historical context that the present study of college and university planetariums was undertaken.

Identification of the Problem

At first glance, a major planetarium on a college campus would appear to be a comfortable arrangement for both parties. The planetarium, whose primary function is innovative science teaching and dissemination of astronomical knowledge to the public, would seem to have ample opportunity to develop and produce extraordinary teaching while benefiting from the close association with scholarly research. The university also benefits by having a powerful teaching resource available to its students and by the visibility gained in the community due to the planetarium's public programming. And yet in recent years several university planetariums have met with severe financial difficulties, even threat of closure (Wharton, 1983).

Clearly a planetarium is not part of the core mission of a college or university; it occupies a position outside the central administrative structure. But it is not alone. A major university has many such units that are not an integral part of the central structure. Planetariums will unquestionably share characteristics with these other marginal units. An examination of these characteristics could reasonably provide insight to improve the climate for planetariums to carry out their goals.

In particular, the concept of "organizational marginality," as first proposed by Burton Clark (1956/1968) to describe adult education programs he studied in the Los Angeles school district, holds promise for examining and improving the role of the planetarium on campus.

Purpose of the Study

Using organizational marginality as the framework for investigation, this researcher attempted to uncover factors or procedures that could explain and be used to alter the administrative status of the planetarium within the college or university structure. Specifically, the researcher tried to discover what marginality traits, if any, these planetariums possessed. Previous studies of other education units have yielded characteristics indicative of marginality. Which of these do planetariums share?

Further, the investigator probed for techniques that have been employed to overcome undesirable effects of marginality. To this end, each planetarium director was asked to designate a unit with a similar mission and administrative status, one unit per campus. Some possible choices were the museum, art gallery, performing arts center, and radio or television station. These similar units then were examined for marginality traits and compared to the planetariums on their campuses. Differences that exist between the planetarium and the comparable unit should reveal useful techniques for diminishing the effects of marginality.

From the literature, three areas that show promise in detecting marginality are the administrative structure (including goals and purposes), the personnel reward system, and the resource-allocation system. These areas served as the frame in which to seek the portrait of marginality.

The following research questions summarize the purpose of this study:

1. What marginality traits do major college or university planetariums share with other traditional marginal units?

2. In what specific ways are planetariums like other similar marginal units on campus in regard to administrative structure, personnel reward system, and resource allocation? In what ways are they different?

3. Are there strategies that can be inferred from the study which planetariums can successfully use to overcome negative effects of marginality?

Importance of the Study

Because so little research has been conducted on planetarium administration, any thoughtful study will add significantly to the knowledge base. Furthermore, several major college planetariums are under financial constraints that compromise their mission. If such planetariums are to fulfill their potential, knowledge is needed about how planetariums operate within the college setting.

The concept of organizational marginality, as a theoretical framework, appears to have important potential for understanding major planetariums in college settings.

In addition, knowledge that improves the effectiveness of college planetariums has the potential to affect two other areas of national concern. The first is science literacy. National studies (e.g., Bennett, 1988) have urged improvement of science education at all levels. Planetariums have proven to be strong motivational devices with regard to science education (Sunal, 1976). They stimulate people's interest in science, and they do it in more than just the school-age population. Planetarium audiences range from preschoolers through senior citizens and number in the millions. Strengthening planetariums' effectiveness clearly strengthens the nation's science education.

The second area of influence is the university itself. Strengthening planetariums' effectiveness improves the universities' outreach. All universities desire to have effective public service efforts. Similarly, the public likes to see examples of community involvement by the university. A strong planetarium serves both purposes.

Definitions

The following terms are important to the understanding of this study. Precise definitions, applicable to this context, are presented to aid the reader.

Major college or university planetarium. A planetarium residing on a college or university campus that conducts programming for the general public on a regular basis, has a minimum of two professional staff, and has its own independently controlled operating budget, part of which is produced from program fees.

Nonprofit organization. The standard Internal Revenue Service definition is suitable. In essence, it is any organization whose main purpose is other than making a profit.

Organizational marginality. A condition in which a program or unit's aims are not integrally related to the primary endeavor of its parent organization, yet it must compete for a share of the resources of the total organization.

Similar unit. An independently operating unit that is most like the major planetarium in function and administrative status, as determined by the planetarium director, and resides on the same campus as the major planetarium.

Generalizability of the Study Findings

Findings of this study will broaden the conceptual base of organizational marginality beyond the traditionally studied areas of adult and continuing education programs, minority programs, and centers and institutes. Techniques discovered for dealing with the effects of marginality in planetariums should be applicable to other marginal college units. Furthermore, findings of this study should apply to planetariums in settings other than colleges and

universities, provided these planetariums display traits of marginality with respect to their parent organization.

Limitations of the Study

Because the primary data-collection method was survey and interview, limits inherent in self-reporting methods are pertinent. This is not a serious problem for an exploratory study.

Obtaining accurate information on the planetariums from central administrators was expected to be difficult. Planetariums are largely autonomous. Therefore, the primary supervisors might not have been well informed about factual information, particularly in regard to historical data. The primary administrators' perceptions of the facts also were relevant to the study, however.

Asking the planetarium director to choose another unit on campus similar to the planetarium in function and administrative status had the limitation that the director's perception might have been inaccurate. Nonetheless, if the unit turned out not to be marginal, useful information on why that particular unit was not marginal could be obtained.

Garnering the cooperation of another unit's director and immediate supervisor for this study depended in large part on the planetarium director's enthusiasm for the project and his ability to impart that enthusiasm to others.

Delimitations of the Study

This study was delimited to those college or university planetariums identified by the investigator as "major" according to

criteria set forth elsewhere in this study. The planetariums also had to reside on a college or university campus in the United States. This population was chosen to maximize the study's usefulness to administrators of major college and university planetariums.

Summary

A major planetarium on a college or university campus is in a unique administrative environment that can adversely affect its performance. The concept of organizational marginality (originally applied to adult education programs in school systems) shows promise for understanding and improving this environment. Investigating the symptoms of marginality embodied in major college planetariums also may suggest techniques applicable to a variety of marginal units.

Overview

In Chapter II, the literature that provides the context in which to interpret this research is presented. In addition to exploring the information available for the two obvious content areas--planetarium administration and organizational marginality--marketing for nonprofit organizations was also reviewed because of its implied ability to improve an organization's effectiveness.

The plan by which the study was conducted is laid out in Chapter III. Four key groups were surveyed: designated planetarium directors, their supervisors, directors of units similar to the planetariums, and their supervisors. Follow-up interviews were

conducted with selected planetarium directors to clarify certain findings. The summary data resulting from analysis of the surveys and interviews are presented in Chapter IV. The nature of the study precluded elaborate statistical treatments of the data.

Several procedures for reducing marginality were suggested by the findings. They are outlined in Chapter V, along with broader recommendations for improving the effectiveness of major planetariums on college or university campuses.

CHAPTER II

LITERATURE REVIEW

The planetarium has been the subject of a minor body of research literature, almost exclusively devoted to determining the effectiveness of the planetarium at teaching various concepts (King, 1975; Sunal, 1976). Because of the scarcity of published information on topics related to planetarium administration, the literature search was extended beyond planetarium boundaries.

The literature examined as part of this study falls loosely into eight areas: (a) surveys conducted within the planetarium community, particularly those that produced data relevant to planetarium administration; (b) literature examining the duties and characteristics of the planetarium director; (c) information pertinent to planetariums' missions and goals; (d) reports of planetariums in crisis situations; (e) planetariums' involvement in marketing; (f) general literature on marketing in nonprofit organizations; (g) planetariums as small, service-oriented businesses; and (h) research on organizational marginality. A section of this chapter is devoted to each of these categories.

Surveys

Several surveys have been conducted to assess current practices within the planetarium community. Gallagher (1967) sent a survey to 95 (54 participated) North American planetariums giving public shows to determine physical characteristics, programming types, attendance, admission fees, staff numbers, education and experience, and salaries. He later expanded the work to include other planetariums worldwide (Gallagher, 1970).

Schafer (1975) updated and expanded Gallagher's work for the major planetariums in the United States and Canada. Several findings are worth referencing here because they appear to be linked to marginality. Forty-two percent of the financial support came from state or local government, 32% from public admissions, 14% from school admissions, and 5% from foundations and endowments. Fourteen percent of the professional staff of the major planetariums reported having doctorate degrees. Thirty-one percent of the planetariums reported participating in at least one research project. About 60% of the respondents reported having opportunities to teach or do research, about 30% had favorable tenure policies, and 20% had access to funds for supporting scholarly work (p. 40). Less than half reported receiving a professional astronomical journal, whereas all received a popular astronomy magazine, and just under 90% received a planetarium journal. Eighty-five percent of the planetariums had staff who were members of the International Society of Planetarium Educators (now the International Planetarium Society,

the primary professional association). Forty-four percent had staff who were members of a professional astronomical society.

Regarding programming philosophy, Schafer found that, for the public shows, educational value and entertainment value were about equal in importance in considering programming goals (46% and 41%, respectively), whereas inspirational value was significantly less (14%) (p. 94). Attendance figures were the most common means of show evaluation, followed by comments from the audience and critical self-appraisal. Audience survey was seldom used, and professional evaluation was the least used means of evaluation. No large-scale update of Schafer's survey has been undertaken.

Hagar (1983a) made a survey of planetariums worldwide, providing data on attendance, number of full- and part-time personnel, directors' salaries, directors' previous experience, types of activities occurring in the planetarium theater, and average number of seats compared to dome size (p. 24), nothing pertinent to marginality. The previous experience the major planetarium directors listed most frequently was other planetarium work, followed by teaching. Public relations or fund-raising experience was not listed at all. This information is noteworthy because it reveals that directors lack business experience.

The Planetarium Director

Other researchers have contemplated the qualities a director should possess. Chamberlain (1962) inventoried the ideal director's characteristics. He must be a scientist, teacher, administrator,

engineer, showman, and orator (p. 105). Chamberlain referred to a 1956 survey conducted by a management firm for the Adler Planetarium in Chicago, which included two additional duties: "establishing and maintaining strong public relations" and "soliciting exhibits and/or monies" (p. 107).

Menke (1985) began a longitudinal survey specifically examining planetarium directors. He tallied various characteristics such as age, previous experience, education, and salary. The "typical" director was a 42-year-old male with a master's degree in a science, earning $24,000 per year, having come from a nonplanetarium background (p. 10). Although the survey did not ask about the characteristics a director should have, Menke offered an opinion on the skills the "ideal" director should possess. According to Menke, he/she should have an academic astronomy background, some experience in business, public relations, public speaking, and management skills (p. 10). An update of this survey is due to be published in a forthcoming issue of the Planetarian, according to Menke.

Menke (1986) also made a case for what he termed a career planetarium astronomer, a person who is trained in astronomy or a related field but not intent on a research career. Experience in the planetarium operations to complement the academic work should be acquired as a part-time planetarium employee while in college and/or by participating in one of the internships available. Menke listed no specific criteria for the occupation.

Missions and Goals

The mission of the planetarium is another area that has relevance to marginality. To define a mission for all planetariums is not easy. Chamberlain (1962) analyzed the missions of the ten major planetarium facilities in the United States in 1962. He concluded that the purpose of the facility and its staff are interrelated: "The planetarium reaches its greatest potential when it is administered by professionally trained staff members who are oriented toward astronomy and education" (p. i). Chamberlain believed the central goals of the planetarium are astronomy and education.

The popular literature has contained a few articles on planetarium mission/philosophy. They have revealed a debate over the mission of the planetarium. Rodger (1981) fired the first volley in an opinion article in which he described the evolution of the projection planetarium. He concluded that the world has changed dramatically since the first planetarium was invented and that planetariums must likewise change. Planetariums must be aware of the conditions under which they now operate and rely on their strengths to rekindle the excitement of those original planetariums. Those strengths, according to Rodger, are the ability to show the starry sky and to place an audience in the middle of an unfamiliar environment, such as the surface of an alien planet or a distant starscape. Rodger admonished, "the planetarium as we know it can survive only if it remains true to itself" (p. 32).

Norton (1985) composed a variation on this same theme. He wrote of the fracturing of the planetarium's message by high-tech motion picture and television products, laser rock shows, and ultra-wide-angle movies in the dome. He asked whether planetariums should feel compelled to compete with the entertainment field. Although not directly answering the question, he noted that "the most successful institutions have . . . accepted the role of entertaining educator" (p. 538).

Jenzano (1983) also embraced the "entertaining education" function of the planetarium. He suggested a distinction between the planetarium, which concentrates on factual astronomy programming, and the space theater, which uses theatrics to provide educational entertainment." Barton (1987) offered reassurances that the planetarium and space theater concepts can coexist, based on his experience with both. Supporting Jenzano's viewpoint, he stated that each facility has its own function to perform.

Ross (1982) joined the debate by pondering the chasm he observed developing as some planetariums readily embrace the newest technology while others claim supremacy of the classical, realistic-sky approach. Lovi (1985) insisted that, above all else, "planetariums have the responsibility of presenting the real thing as dramatically and beautifully as possible" (p. 240). Hagar (1983b) cautioned that planetariums cannot and should not compete with Hollywood films. The planetarium profession has the obligation to promote astronomy, he declared. "We are professionals in interpretive astronomy, not movie-making" (p. 14).

Planetariums in Crisis

The philosophical arguments become more intense when financial difficulties occur, which happened when the United States economy hit a post-depression low in the late 1970s and early 1980s. Ryan (1982) recorded a school planetarium's traumatic brush with closure and then extrapolated his experiences into advice for other planetariums threatened with a similar fate (Ryan, 1984). For the revenue-generating planetariums (which includes all the ones in this study), his suggestions amounted to marketing strategies: Use advertising, evaluate the times programs are presented, examine the kinds of programs offered, work to improve your relationship with the administration, offer special services, and use volunteers whenever possible. As a parting comment, Ryan suggested that the administration might be willing to consider advice from an outside expert, but he offered no further information on the type of expert or source for the expert.

Marketing of the Planetarium

Marketing was the subject of one planetarium dissertation. McBride (1985) performed a market analysis for the Morehead Planetarium at the University of North Carolina in order to develop a marketing strategy to increase revenues and attendance. He found that the planetarium was considered a family activity by those attending shows. The entertainment value was the most important reason people cited for coming to the planetarium, followed by its educational value. The author suggested that planetariums need a

more traditional business approach which uses professional marketing techniques. Specifically, the Morehead Planetarium should accept a marketing orientation and include "a staff member responsible for implementing and monitoring a comprehensive marketing program" (p. 108).

Other articles espousing marketing techniques can be found in the planetarium literature. They all offered suggestions to solve specific planetarium problems. None of them referred to the greater body of more general nonprofit marketing literature that exists. Both of these categories, planetarium marketing and nonprofit marketing, have bearing on this study and are touched on next.

Use brochures, news releases, public service announcements, community groups, and a telephone-answering service to sell your planetarium, advised Groce (1979). Think about your facility from the viewpoint of a first-time visitor, recommended Hall (1979). Are you inviting from a physical and psychological standpoint? Do you offer programs for minorities and other special interest groups?

deVries (1973) offered tips on writing a press release that the media will use. Hooker (1983) insisted that planetariums must first determine who their audiences are and then target the advertising and publicity to most effectively reach these audiences, basic advice to anyone familiar with marketing but somewhat novel to the planetarium profession. The author then provided examples of how planetariums can target their promotional material.

Buckley (1983), as a broadcast and media research specialist not associated with the planetarium field, gave an "outsider's" impression of what excited and repelled her about planetariums. In so doing, she covered the primary marketing principles.

Hall (1976) offered a first-hand account of one planetarium's successes and failures in attempting to follow a rational and scientific approach to advertising.

Marketing of Nonprofit Organizations

Although marketing would appear to have a minor influence in the planetarium profession, a growing number of other nonprofit organizations are discovering its value. Surveying the marketing literature for nonprofit organizations provides a broader context in which to understand the planetarium as a specific example of a nonprofit organization. Further motivation to review this field was provided by Kotler (1982) when he outlined the reasons nonprofit organizations become interested in marketing. Typically, they acquire an awareness when their market undergoes a change (p. 8). When resources the organization needs become scarce or harder to attract, the organization gets concerned. Kotler noted that, for many nonprofits, this happened in the 1970s.

Kotler's 1975 publication is the first textbook to appear on the subject of marketing for nonprofit organizations, and the later edition (1982) remains the quintessential source. Although the entire book makes thought-provoking reading for any major planetarium director, several points the author addressed are

particularly salient to planetariums. Kotler acknowledged that marketing carries a negative connotation in the minds of many people who consider themselves professionals. It took a Supreme Court decision, in fact, before several professions--medicine, law, and accounting--would allow their members to engage in marketing to solicit clients. Kotler indicated three reasons nonprofit managers often reject marketing: Marketing is perceived to waste the public's money, marketing intrudes into people's personal lives, and marketing can be used to manipulate. While admitting some truth to each of these objections, Kotler noted how each can be avoided (p. 18). The basic reason nonprofits should embrace marketing, he stated, is that it will allow the organization to meet its objectives more effectively (p. 19).

Examples of the kinds of questions marketing can help answer were suggested by Kotler (adapted to the planetarium by this reviewer). What decision-making process do people go through in deciding to attend the planetarium? What is people's image of planetariums in general and your planetarium in particular? What alternate activities do people consider when deciding to visit the planetarium? What are people's motives for selecting the planetarium? What do people look for in a planetarium? What are the important consumer characteristics? What is the role and effectiveness of various promotional material?

Kotler spoke specifically to why marketing is frequently rejected by universities when he listed reasons a university president gave for not believing in market planning:

1. Department heads do not have time to plan, and administrators do not have time to read plans.

2. Department heads could not plan if asked. They are department heads because they are scholars or leaders in their field, not because they are managers.

3. Department heads would not use the plans.

4. The administration's plans are best kept secret from department heads because some heads would feel threatened by them.

5. Making a marketing plan work would cost too much money and time (p. 173).

Probably all of these reasons would be appropriate to major college or university planetariums if the term "department head" was replaced by "planetarium director." Kotler's counter, while not denying some validity to the arguments, was that planning is beneficial on the whole and is needed to improve performance.

Kotler acknowledged that marketing does require money, and most nonprofits do not allocate nearly enough for the job. For-profit organizations spend between 15% and 25% of sales on marketing, whereas many nonprofits allocate less than 1% (p. 181). Other intriguing facts, illuminating examples, and helpful procedures were contained in this book.

Espy (1986) echoed a number of the reasons nonprofit organizations are reluctant to develop a marketing plan:

1. They do not have the expertise.

2. They do not think nonprofits need a "business plan."

3. They do not have the time.

4. The staff is too small.

5. They just survive day-to-day.

6. The mission is already mandated, so planning is unnecessary.

7. Things change so fast that plans are quickly outdated (p. 4).

The author provided arguments to diminish each of these reasons.

Espy presented other ideas that are relevant to major college or university planetariums. Money, she stated, is an important factor in nonprofit management even though its importance is often downplayed. Without sufficient funds, a nonprofit organization is unable to benefit anyone (p. 58). Competition is also a real phenomenon to nonprofits. Issues such as reputation, proximity, and visibility often make the difference. Service must appeal to the sensibilities rather than the pocketbook. Quality is always an important tool. It serves to promote positive word-of-mouth advertising (p. 59). Word-of-mouth is always near the top on surveys asking people where they obtain information about the planetarium. (See, for example, Hall, 1975, p. 62.)

Espy emphasized that marketing is a consumer-based activity, which attempts to identify actual and potential customers and assess their needs, attitudes, and preferences. Selling, which nonprofits should legitimately shun, is oriented toward the organization rather than the customer. Its purpose is to motivate others to buy what

your organization offers without regard to the customers' needs (p. 60).

Another textbook worthy of note is Rados's Marketing for Non-Profit Organizations (1981). The author provided many concrete examples of marketing problems and solutions through numerous case studies, many of potential use to planetariums. For example, Rados provided readers an opportunity to see how public service directors from various media--print, radio, television--appraise the public service announcements they receive, by presenting interviews with several working public service directors (p. 139). He also interviewed a professional giver--that is, a person who has had the task of managing the contributions of a wealthy family for two generations. Two other examples, which were particularly interesting to this investigator, illustrate the breadth of information included. A job description for a marketing director of a symphony orchestra listed 20 functions and responsibilities. A case study of the Seattle Aquarium provided detailed descriptions of finances, programs, attendance, and marketing activities, both current and proposed. One conclusion reached in the latter study was that hiring a full-time marketing assistant was more productive than trying to do marketing with untrained regular staff (p. 558). An additional source of case studies is Lovelock and Weinberg (1984).

Planetariums as Small Businesses

Literature related to small businesses also can be a source of information for planetariums if one thinks of the planetarium as a service-oriented business. For example, Burstiner (1989) offered recommendations for improving a service business:

1. Make a fetish of honesty. Customer loyalty and confidence are all-important.

2. Practice good human relations. Never lose control of your emotions.

3. Become the epitome of dependability.

4. Take pride in your work.

5. Give freely of your time.

6. Learn as much as possible about your business.

7. Train your personnel well.

Courtesy and tact are always expected (p. 318). The author further admonished the business owner to take every opportunity to let people know about your service. Keep reminding them. Word-of-mouth is the best advertising (p. 320).

Bekker (1988) insisted that every small-business manager must develop two habits: the research habit--obtain as much relevant information as you can reasonably afford--and the analytical-thinking habit--carefully scrutinize all available data.

A widely used text on small-business management provided a concise overview of marketing procedures for small businesses (Steinhoff, 1989). A list of basic data sources that marketing professionals use was also given. Planetarium directors could find

Sales and Marketing Management magazine, one of the sources listed, an important resource for population information. The annual "survey of buying power" issue furnishes population figures broken down by county, age group, number of households, retail sales by kind of business, and estimated buying income. No such source has been cited in the planetarium literature.

Organizational Marginality

Attention now turns to the literature on the topic central to this study, organizational marginality. Burton Clark is the principal figure in the development of this concept. A sociologist by training, he originally was interested in adult education within the context of public schools. Based on a study of the adult education programs of the Los Angeles school system, Clark (1956/1968) outlined the symptoms of organizational marginality that he discovered (p. 58). The most important symptom, according to Clark, was the program's "step-child" status; it had to be sold to the public and the other educators. Two closely related elements he found in the adult education programs were "enrollment economy"--attendance determines revenues (p. 61)--and broad goals that led to a weak purpose and criteria that were determined by the day-to-day pressures rather than long-term planning (p. 65).

Clark (1956) elaborated on these findings in a subsequent paper and further described the symptoms of organizational marginality: The unit is disconnected from the primary endeavor of the organization. It has a low degree of legitimacy and charge on

public funds. It needs acceptance from its own personnel, other school units, the state legislature, politically potent interest groups, and the unorganized public (p. 331).

Clark stated that marginality is seen as the basic source of insecurity for administrative units. Such units are in danger whenever finances are low. To become secure, the strategy needs to be oriented toward achieving "peer" status or a fixed partial parity respected by all (p. 332).

The label of "service enterprise" is appropriate for marginal units, Clark declared. They work to serve customers immediately. To legitimize the service, the unit must be viewed as a valuable public-relations instrument, geared to people's demands (p. 334).

Clark (1958) applied the same approach to adult education programs in colleges and universities, with similar findings. Signs of marginality were abundant. The aims of the adult education programs were not integrally related to the core tasks of the parent organization (p. 1). The priorities of the adult education programs were ranked nonessential in the budget process (p. 2). The programs were found to be 85% to 100% self-supporting (p. 2). They were labeled a service enterprise with a dominant responsiveness to the clientele (p. 6). The programs were considered marginal, Clark concluded, because of their relatively low position and status within the administrative structure. He suggested two areas that offered hope for improvement. First, the unit must work to maintain the highest-quality image--the personnel must have high commitment

and be well respected. Further, the quality of work must adhere to the highest academic standards possible. As Clark noted, "the guardians of academic respectability frown on anything not associated with scholarship and research" (p. 16).

When contacted regarding the current study on the status of major planetariums in colleges or universities, Clark (1988) offered that marginality was indicated by the fact that the planetariums must partially pay their own way, and that they are hard to categorize within the college administrative structure.

Knox (1981) extended Clark's work for continuing education agencies using a systems approach to analyze inputs (goals, people, facilities), activities (planning, conducting, supporting), and outcomes, including how they relate to the parent organization's purposes and resources (p. 3). He also noted that research has shown that the leadership (principally the director) can make a major difference regarding the vitality of a continuing education agency (p. 9).

A study by Kolker (1975) of adult basic education programs throughout the United States further illustrated marginality. Kolker found organizational marginality manifested in the adult basic education programs as a scarcity of resources needed for survival. She classified resources as human (personnel and clients), material (budget and facilities), and "moral" (legitimization and support). She also introduced the notion that greater professionalism indicates less marginality. Professionalism was operationally defined as a full-time occupation with a certified

body of knowledge or tangible training requirements and a gatekeeping professional association.

Flanagan (1979) surveyed key community college personnel for their view of the continuing education programs. He found that regular faculty had very little knowledge of or interest in noncredit education. Toombs and Lindsay (1982) echoed this result. Indifference and unawareness are typical of marginality, they stated. There is an absence of enthusiasm rather than direct opposition (p. 11).

Montgomery (1982) examined the marginality of three adult noncredit programs at the university level in her dissertation and found a possible relationship between the administrative location of the program within the university bureaucracy and the allocation of resources. She also found no relationship between tenure and retention of the professional staff; in other words, tenure was irrelevant for the adult education staff.

Sheridan (1979) investigated the marginality of a social science research bureau that resided in a university. She found the following indications of marginality: The university administration did not recognize the bureau's goals. The applied research conducted by the bureau was given little credit by the academic units. The bureau received most of its funding from outside sources. The bureau staff was not part of the faculty reward system. Sheridan concluded that the research bureau can be a productive, valuable unit if it has complete philosophical,

financial, and training commitments from the university administration and faculty, and has a managerial scholar for a director and an actively participating administrative board.

In a case study of a low-income minority student services program at Santa Barbara City College, Robledo (1978) described the transformation of the program from a marginal to a "centralized" program. He documented the decrease of ten marginality factors. These factors were synthesized from Clark (1956/1968) and Thompson (1967). The symptoms attributed to Clark's work were discussed previously. From Thompson's work Robledo determined that marginal units are administratively housed within other units of the organization. Furthermore, the new activities of marginal units are outside the activities of the core units and have little effect on the core units or the organization as a whole.

Katz (1985) conducted extensive interviews with 18 administrators associated with continuing education programs at six community colleges in the New York-New Jersey area in an attempt to uncover symptoms and sources of marginality. Among his findings: Few of the administrators primarily responsible for the continuing education programs had tenure (p. 122). The directors acknowledged that the continuing education programs lacked recognition, but none attempted to theorize reasons for their "problems" (p. 174). The directors lacked "insider" knowledge of how decisions are made and resources allocated at the community colleges (p. 178). They lacked involvement in collegial governance at their college (p. 183). They lacked professional training and contacts in adult and continuing

education. Most came to their positions through the "back door." Furthermore, the directors felt a sense of isolation (p. 184).

Katz also found that the programs were judged exclusively on "numbers" rather than intrinsic educational worth or professional competence. Further, he discovered the service orientation was strongly embedded in the continuing education programs and, he argued, effectively perpetuated the marginality.

Another area of university structure that embodies symptoms of marginality and therefore may offer some insight to the present study is the center or institute. Lynton (1984) described centers and institutes as outlets to satisfy the need for interdisciplinary activities at the research-oriented, discipline-dominated universities. He saw them as analogous to the agricultural extension service of the land-grant universities. Their purpose is to disseminate the knowledge and technology that the core of the university creates. As such, they are not part of the basic resource-allocation system or tenure promotion/reward system. Lynton suggested one means of improving the professional legitimacy of the staffs of centers: Develop a peer review system.

The most extensive study of centers and institutes was conducted by Ikenberry and Friedman (1972). They surveyed and interviewed personnel in 125 centers and institutes at land-grant universities across the United States. Although the research was not formally a study in organizational marginality, the centers and institutes exhibited many marginal characteristics, falling along a

continuum from extremely tenuous to solid, stable units. Specifically, they displayed the following symptoms, considered indicators of marginality in other studies. Centers and institutes are task oriented rather than disciplinary. They are subject to a number of external pressures. The strongest influence in shaping institute programs is the director. It is, therefore, important that the director be capable of effective academic leadership. Ikenberry and Friedman used the term "academic entrepreneur" in describing the director (p. 123).

The study further showed that the position of the center within the university's organizational structure offered no clues about the quality or range of operation (p. 81).

The authors outlined issues that must be resolved if institutes and centers are to be more fully integrated into the colleges and universities, and they offered the following six recommendations:

1. The goals of the center must be congruent with the purposes of the university.

2. The policy relating to personnel matters (e.g., promotion, benefits) must be uniform across institutes and departments.

3. The functional characteristics and utilitarian nature of centers and institutes must be preserved.

4. Procedures must be established for systematic review at least once every five years.

5. The centers should be better integrated into the university in terms of communication, organization, physical facilities, and governance.

6. Universities should make increased use of institutes for instruction as well as research and public service (p. 124).

Summary

Several recurring symptoms that suggest organizational marginality can be identified throughout the literature reviewed above. They will be reiterated here and grouped into factors for further use in this study.

Goals of marginal organizations are often disconnected from the primary endeavor of the institution, leading to goal conflict with the parent organization.

Applied research and a task orientation rather than a disciplinary foundation signal low legitimacy.

Low acceptance is indicated by indifference and unawareness by faculty and administrators, coupled with the lack of clear placement within the academic structure.

Marginal units have little or no ability to influence the core departments. They are not part of the primary communication or governance system. They lack insider knowledge on how decisions are made.

Marginal units suffer from value dispersion due to the day-to-day pressures, leading to lack of consensus on their purpose and role conflict.

Low peer status is revealed through lack of tenure and other perquisites afforded faculty.

Staff of marginal units are considered less professional because they are frequently part time, their primary allegiance is not to an academic discipline, they are without a certified body of knowledge to support their profession, and they lack contacts with other professionals in their field.

Resource allocation is the most indicative symptom of marginality. Resources of all kinds are frequently scarce because the marginal unit is not part of the basic resource-allocation system of the parent organization.

Marginal units operate in an enrollment economy where resources are dependent on admission fees, attendance, or other "numbers" rather than educational worth. The units are largely self-supporting, and the director feels a clear need to "sell the program."

Service orientation is also a strong indicator of marginality. Staff are primarily responsive to clientele and therefore subject to external pressures.

Marginal units are in danger when finances are low. They are considered nonessential in the budget process and consequently receive a disproportionate cut during a crisis.

These marginality factors can be conveniently grouped into three broad categories for ease of analysis. The first four factors relate to administrative structure and goals. The next three are concerned with the personnel reward system. The last three are part of resource allocation. These factors will serve as the basis for examining the organizational marginality of the major college and

university planetariums. The methodology for doing so is the subject of the next chapter.

CHAPTER III

DESIGN OF THE STUDY

Type of Study

Because the research literature on planetarium administration is minimal, an exploratory study was warranted. The procedure used here can be described as a combination of grounded theory methodology and survey research, what Sieker (1973) referred to as analytical description. Sieker contended that this approach is particularly suited to studies in which the number of subjects is small (p. 1358). The goal is a solution to a practical problem: What strategies, if any, can improve the administrative climate of major college or university planetariums?

Population

The population for this study was the directors of all major college planetariums in the United States (excluding the investigator's institution). For comparative purposes, three other groups closely associated with the primary population were designated: the primary supervisors of each of these planetarium directors, the directors or managers of another unit on each of the campuses determined to be most similar to the planetarium in function and administrative status, and the primary supervisors of each of these similar-unit directors. The total number of potential

subjects was 72. Because the population and associated groups were so small, the intention was to include the entire population in the study, removing the need for statistical sampling.

The purpose of using the planetarium directors and their supervisors was to examine the match between the planetarium directors' knowledge and perceptions and the higher administrators' views, both within institutions and across institutions.

Because planetariums are highly individualized, each staff fulfilling its own duties in what it considers to be the optimum way, comparisons across institutions were expected to be difficult. Hence the decision was made to look at each planetarium in relation to a similar unit on its <u>own</u> campus. A comparison of each planetarium to a similar unit on its campus was used to provide added clues to the administrative climate at that institution. Determining what unit was most similar to the planetarium on each campus was made by the planetarium director in consultation with the investigator.

Identifying the planetariums to include in the study was expected to be straightforward--simply use the definition established earlier: "A planetarium residing on a college or university campus that conducts programming for the general public on a regular basis, has a minimum of two professional staff, and has its own independently controlled operating budget, part of which is produced from program fees."

This definition was chosen to target the college or university planetariums that historically have been subject to severe budget

cuts and closures. It was also chosen to separate the target group from the majority of college or university planetariums, which are small, one-person operations used primarily, if not exclusively, for the college students taking astronomy courses. These latter planetariums are similar to laboratory space. There is little overhead involved in operating them; closing them would be only slightly more probable than closing a chemistry or physics laboratory.

An initial attempt was made to denote the major college planetariums by asking planetarium colleagues not associated with college or university planetariums to choose from a list of all college or university planetariums that met certain minimum requirements. This approach yielded nothing more than a random sample of the initial list. The criteria the colleagues used to make their choices were too general. After some thought, the investigator decided to choose the subjects, thereby creating, in essence, a purposive sample from the entire population of college and university planetariums. Although the question of investigator bias arises, this procedure is in keeping with the exploratory character of the study. The choice of subjects was further refined by the investigator through phone calls made to all potential subjects, as detailed in the next section.

Data Collection

Written questionnaires served as the initial instruments for collecting information. The questions were designed to collect

general and demographic data, as well as to seek marginality indicators determined from the literature.

Once the questionnaires were analyzed, telephone interviewing was used to clarify and explore findings that arose from the questionnaires. Four planetarium directors were carefully chosen from those who answered the questionnaire to participate in the phone interview process.

Written documentation consisting of mission statements, annual reports, and organizational charts returned with the questionnaires was used to supplement the other data-collection methods.

A pilot study was conducted to check the readability and validity of the questions and to test procedures for analyzing the data. Eight planetarium directors from college planetariums or who had experience with such planetariums were telephoned and asked to participate. All agreed and were mailed pilot questionnaires. All eight questionnaires were returned. Getting 100% return (without having to send reminders) gave expectations that a high number of the primary subjects would also respond. The same technique of phoning the subjects before sending the questionnaire was to be used with the main study.

The final version of the questionnaire for planetarium directors was developed using the answers and comments from the pilot study. This questionnaire was then modified to obtain three additional versions, one for each of the associated groups: the planetarium director's supervisor, the director of the unit similar

to the planetarium, and the unit director's supervisor. The similar-unit director's questionnaire was as comparable to the planetarium director's questionnaire as possible. References to "the planetarium" were changed to "the unit," and one question asking information specific to the planetarium with no counterpart in the similar unit was dropped. The planetarium director supervisor and unit director supervisor questionnaires were subsets of the corresponding director questionnaires. (See Appendix B.)

Selection of Subjects

A copy of all the data compiled in the 1987 International Planetarium Society Directory of Planetaria and Planetarians (Petersen, 1987) was obtained on computer disk from the editor. Multiple sorts were used to compile a list of all college or university planetariums with dome diameters of 40 feet or greater or seating capacity of 90 or greater. These figures were chosen to make certain that no possible candidates were eliminated. Forty-five planetariums were identified in the initial sort. Nineteen of these were eliminated, based on the investigator's first-hand knowledge of the facility--it was a one-person operation or did not have a budget produced from program admission fees. Eight of the remaining 26 had dome diameters of 50 feet or greater and 100-person capacity. These became the core subjects. Personal contact was made with the directors of the 18 40-foot planetariums to see whether they were suitable subjects and willing to participate in the pilot study. Four were eliminated, based on these contacts, and

8 were promoted to the main study group, providing a total of 18 for the primary research and leaving 5 for the pilot study. The investigator selected an additional three planetariums for the pilot study.

Once the list of planetariums was determined, each planetarium director who had not previously been contacted was called. Each was given general information about the project and asked if he was willing to participate. Several of the early contacts were also asked to designate a unit on their campus that was most similar to the planetarium in function and administration. After these initial calls, the investigator decided to ask for the similar-unit designation as well as the name and address of the planetarium director's immediate supervisor directly on the questionnaire. This approach gave the planetarium directors the opportunity to think about the question and to look up addresses as necessary. It also required the questionnaires to be mailed in three rounds.

The first round went to the planetarium directors. As those questionnaires were returned, a second round was sent to the similar unit's director and the planetarium director's supervisor designated by the planetarium director. Finally, when the similar-unit director's questionnaire was returned, a questionnaire was sent to the supervisor whom the unit director designated. In retrospect, this procedure was quite cumbersome and time consuming. Keeping track of reminder cards and assigned due dates was complex. Furthermore, several of the planetarium directors could not specify a similar unit on their campus, even after being prompted by the

investigator. In one case, the planetarium was administered as a department within the designated similar unit (a museum). Because of these constraints, the number of similar units that could serve as subjects was cut from 16 to 8.

The final tally of returned questionnaires that were incorporated in this study from each of the target groups was as follows:

16 planetarium directors

13 supervisors of planetarium directors

5 directors of units similar to the planetariums

4 supervisors of unit directors

Data Analysis

Analysis of the questionnaires was straightforward. Simple means and ranges for the answers to each question were calculated for each of the four groups. Comparisons of these data are reported in the findings. The small number of subjects negated any formal statistical treatment beyond the basic descriptive results. This approach was consistent with the exploratory nature of the study.

Summary

By means of a mailed questionnaire, four groups of people associated with major college or university planetariums were surveyed on items linked to the concept of organizational marginality. A total of 38 questionnaires provided descriptive statistics. Subsequently, four planetarium directors from the group

of respondents were interviewed by telephone to clarify the analysis. The results of this procedure are set forth in the next chapter.

CHAPTER IV

PRESENTATION OF DATA

Introduction

The data that follow are based on responses from four groups: directors of major college and university planetariums, their immediate supervisors, directors of units similar to the planetariums on the same campuses, and the supervisors of the similar-unit directors. The composition and correspondence of these various groups are indicated in Table 1.

Table 1.--Table of respondents.

Planetarium Director #	Supervisor	Similar-Unit Director	Similar-Unit Supervisor
1	Science Dean	Museum	Provost
2	Science Assoc. Dean	None	--
3	VP Financial Affairs	None	--
4	Provost	Learning Resource Ctr.	No response
5	Physics Dept. Chair	Theater	Dean Arts/ Sciences
6	Dean, Student Affairs/Community Services	Environmental Center	No response

Table 1.--Continued.

Planetarium Director #	Supervisor	Similar-Unit Director	Similar-Unit Supervisor
7	Physics Dept. Chair	Museum	Chair, Library Spec. Collect.
8	Asst. Provost	Art Museum	--
9	Museum Director	None	--
10	VP Student Serv.	None	--
11	VP Business Management	None	--
12	Museum Director	Museum	Museum Director
13	VP Administrative Affairs	None	--
14	Dean of Instruction	Fine Arts Center	Dean of Instruction
15	VP Business	None	--
16	VP Academic Affairs	Theater	Chair, Fine Arts

Note the variety of supervisors represented in this group, as well as the types of units chosen by the respective planetarium directors as most similar to the planetarium. The diversity indicates the difficulty in administratively classifying major college and university planetariums.

Sixteen planetarium directors and 13 of their supervisors responded, out of an original pool of 18 in each category (Table 2). With this high rate of return, the findings were regarded as a

reasonable portrayal of the attitudes of the planetarium directors and their supervisors.

Table 2.--Response rate.

	PD[a]	PS[a]	UD[a]	US[a]
Number in population	18	18	18	18
Number of respondents	16	13	5	4
Percent response	89%	72%	28%	22%

[a]The abbreviations used in tables throughout this chapter are as follows: PD = Planetarium Director, PS = Planetarium Director's Supervisor, UD = Unit Director, US = Unit Director's Supervisor.

With only five of the similar-unit directors responding and four of the unit directors' supervisors responding, more caution must be taken in interpreting those data, however. Because one of the purposes of the study was to explore potential differences between planetariums and similar units, these data can provide reasonable clues to be examined more closely but cannot be taken as hard fact. With this caveat in mind, the demographic questions are inspected first.

Some basic differences in demographics existed between the planetariums and similar units (Table 3). The planetariums in the study had an average of four full-time staff, compared to 15 for the similar units. The budgets of the similar units were also larger, as would be expected with the larger staff. The average years of experience for the similar-unit directors also was greater.

Table 3.--Respondent demographics.

	PD	UD
Avg. number of staff	4	15
Avg. yearly operating budget	$170,000	$313,000
Avg. directors' experience (years):		
In the profession	15	24
In the current position	8	11

The descriptive data that follow are summarized for reporting under the ten marginality factors cited in the literature review. The ten factors are further grouped into three broad areas: administrative structure and goals, personnel rewards, and resource allocation. The factors will be examined in the following order:

I. Administrative structure and goals
   1. Consistency with parent organization's goals
   2. Legitimacy
   3. Acceptance
   4. Ability to influence

II. Personnel rewards
   5. Role conflict (lack of consensus)
   6. Peer status
   7. Professionalism

III. Resource allocation
   8. Enrollment economy
   9. Service orientation
   10. Funding during financial crisis

Administrative Structure and Goals

Consistency With Parent Organization's Goals

Agreement existed between planetarium directors and supervisors on the purpose of the planetarium. A five-point Likert-type scale was used to assess an assortment of potential purpose statements. The choices (and point values) were Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1). The responses are ranked in Table 4.

"To provide community service" ranked highest with both the planetarium directors and their supervisors (4.9 average for each), followed by "act as a resource to local school teachers" and "promote image of parent institution." Least valid as a purpose was "conduct research in an academic discipline" (2.3 PD, 2.4 PS), followed by "publish articles, pamphlets, books" and "conduct research in education/learning," although these latter two were in the "undecided" or middle range. The largest discrepancy between the planetarium directors and their supervisors was on the role of the planetarium as a resource for news media.

The purpose ranked highest for the similar units was not as clear-cut. "Provide academic experiences for college students," "provide community service," and "promote image of parent institution" were about equal. "Teach adult/continuing ed. classes" ranked lowest for the similar units, followed by "provide inservice training for local teachers." "Conduct research in an academic discipline" was much higher than for planetariums.

Table 4.--Perceived purposes of units.

To what extent do you agree that the purpose of the planetarium (or unit) and its staff includes each of the following items? (5 = Strongly Agree, 1 = Strongly Disagree)

	PD	PS	UD	US
Provide service to community	4.9	4.9	4.5	4.8
Act as resource to local school teachers	4.8	4.8	4.3	3.5
Promote image of parent institution	4.6	4.8	4.5	4.8
Act as resource to news media	4.4	3.7	3.5	3.8
Act as resource to other faculty	4.3	4.3	4.3	3.8
Provide academic experiences for college students	4.1	4.0	4.7	4.5
Teach adult/continuing education classes	4.0	3.8	2.7	2.5
Provide inservice training for local teachers	4.0	3.8	2.7	3.5
Teach college classes	3.8	4.2	4.0	3.5
Conduct research in education/learning	3.3	3.0	3.5	2.8
Publish articles, pamphlets, books	3.3	2.9	4.3	3.3
Conduct research in an academic discipline	2.3	2.4	4.3	3.5

How closely the function of the planetarium and similar unit was tied to the purpose of the parent institution was examined. For both the planetarium and similar unit, a moderately close tie to the parent institution's purpose was seen (PD = 4.2, PS = 4.5, UD = 4.0, US = 5.0 on a scale of 5 = Closely to 1 = Adjunct).

A check to see whether the planetariums and similar units were thought to be properly placed in the administrative system of their parent institution yielded strong agreement. For the planetariums, 94% of the directors and 92% of the supervisors thought they were properly placed. For the similar units, the figures were 80% and 75%, respectively. Despite strong agreement that the planetariums were properly placed in the administrative system, no consensus was reached on where that place was. Of the 16 planetarium respondents, four of the planetariums were placed under business vice-presidents, three under the provost's office, two under deans of science, two under department chairs, one under a dean and one under a vice-president of student affairs/community service, two under museum directors, and one under a dean of instruction (Table 1).

To get some sense of what kinds of parent institutions were included, respondents were asked whether the institution was a member of the American Association of Universities (research universities) and Land-Grant Institutions (strong public service goal avouched). Answers showed some respondent confusion as to what these designations meant or whether their institutions belonged. No meaningful data were obtained.

Agreement existed on the extent to which the planetariums and similar units were educational or entertainment enterprises. When asked to indicate on a scale, on which "education" was one extreme and "entertainment" the other, where their unit fell (Education = 5, Entertainment = 1), the scores for the four groups were 3.4, 3.5,

3.3, 3.8 (PD, PS, UD, US, respectively), all just slightly on the side of education.

Legitimacy

To determine whether the planetariums and similar units were considered to be a legitimate part of their college or university, questions were asked about college teaching loads, staff joint appointments (units with many joint appointments are traditionally marginal), the perceived effect on various groups if the unit did not exist, accreditation, mission statements, existence of advisory boards, annual reports, organizational charts, and whether a federal operating grant available to planetariums, museums, and art centers had been applied for and received.

Half the planetariums (50%) and similar units (50%) had a staff member who taught college credit courses as part of his/her regular duties. The number of credit hours per year was small for the planetariums (6.3), and the number of college classes taught was not deemed an indicator of quality for planetariums (13% PD and 31% PS considered it an indicator) or similar units (0% UD, 25% US).

Somewhat fewer than half of the planetariums (44%) had staff who held joint appointments. A small number of similar units had such staff (25%).

If the planetarium did not exist, the groups most strongly affected would be public school students, public school teachers, and the community, as shown in Table 5.

Table 5.--Perceived effect if planetarium did not exist.

If the planetarium (or unit) did not exist, how would the following groups be affected? (5 = Strongly, 1 = None)

	PD	PS	UD	US
Public school students	4.5	4.6	2.8	3.5
Public school teachers	4.0	4.0	2.8	3.5
Community	3.9	4.6	4.3	4.8
College students	2.8	2.7	3.3	3.3
Faculty	2.2	2.7	3.5	3.0
Core departments	2.0	2.7	2.7	3.5
Central administration	2.0	2.3	2.5	2.5

Least affected would be central administration, core departments, and faculty. Similar units expected that if they did not exist the public school students and teachers would be affected moderately. The community would be the most strongly affected for similar units, and central administration the least. Note that faculty were also somewhat more strongly affected by the similar units.

Thirty-seven percent of the planetariums held accreditation (50% for similar units). (See Table 6.) One of the planetariums that reported being accredited was part of a museum that was accredited; the planetarium itself was not.

Table 6.--Percentage of planetariums holding particular attributes.

	PD	UD
Accreditation	37%	50%
Approved mission statement	31	75
Advisory board	25	25
Annual report	50	25
Formal evaluation	47	0
Applied for federal grant	25	75

As shown in the table, 31% of the planetariums had an approved mission statement (75% for similar units), 25% had an advisory board (25% similar units), and 50% produced an annual report (25% similar units). Forty-seven percent of the planetariums had had a formal evaluation in the last three years (none of the similar units had).

Twenty-five percent of the planetariums (75% of similar units) had applied for a federal Institute of Museum Services (IMS) operating grant. These grants are competitively awarded to museums and similar institutions for operating expenses. Because of the comprehensiveness of the application process, receiving an IMS grant indicates a high level of approval by external review. Of the four planetariums that had, at some time, applied for this grant, two had received it. Gifts and grants supplied only 4% of the planetariums' operating budgets, on the average.

Acceptance

To obtain insight into the acceptance level of planetariums and similar units, the respondents were asked to rate the importance of approval of the planetarium's or similar unit's activities by various individuals or groups, and to rate how knowledgeable about the activities these same people were.

Not surprisingly, the supervisor and the general public were considered most important to approve of the planetarium's activities (Table 7). Central administrators' approval was considered moderately important. College students, faculty, and staff of other planetariums were only somewhat important, and state legislators less so. The similar units followed the same pattern.

Table 7.--Perceived importance of various groups' approval.

How important is approval of your planetarium's (or unit's) activities by the following individuals or groups? (5 = Very Important, 1 = Not Important)

	PD	PS	UD	US
Supervisor	4.7	4.7	4.8	4.8
General public	4.7	4.6	4.5	4.5
Central administrators	4.0	3.8	4.3	4.5
College students	3.3	3.1	2.8	3.0
Faculty	3.1	3.7	3.3	3.3
Staff of other planetariums	3.1	3.3	2.3	3.3
State legislators	2.7	2.8	2.3	3.3

Those people thought to be knowledgeable about the planetariums' and similar units' activities followed the same general ranking, but at an overall lower level (Table 8). The supervisor was believed to be most knowledgeable, followed by the general public, staff of other planetariums, central administrators, faculty, college students, and state legislators. Generally, the respondents thought the groups to be only somewhat knowledgeable.

Table 8.--Perceived knowledge of the planetarium's activities.

How knowledgeable about activities at the planetarium (or unit) would you say the following individuals or groups are? (5 = Very Knowledgeable, 1 = Not Knowledgeable)

	PD	PS	UD	US
Supervisor	4.3	4.6	4.8	4.5
General public	3.4	3.8	3.5	3.3
Staff of other planetariums	3.1	3.5	1.8	2.8
Central administrators	2.8	3.2	4.0	4.0
Faculty	2.6	3.3	3.3	3.3
College students	2.6	2.7	3.0	2.8
State legislators	1.9	2.3	2.0	2.3

One other potential indication of acceptance is whether the planetarium or similar unit has an endowment. If the endowment is sufficiently large, it could make the discussion of marginality moot. But such was not the case for the planetariums in this study.

Thirteen percent had endowments that contributed only 1% to their budgets. The figures were somewhat higher for similar units. Fifty percent had endowments that contributed 7% to their budgets.

Ability to Influence

To investigate the influence planetariums might have, survey questions asked about committee membership, joint projects with other departments, whether the planetariums were part of the academic governance system, with whom the directors communicate and how often, from whom they hope to secure support, and with whom they negotiate budgets.

Thirty-eight percent of the planetarium directors served on college-wide committees, compared to 75% of similar-unit directors. Fifty-percent of the planetariums had been involved in joint projects with other campus departments in the last year (100% of the similar units had been so involved). Most planetariums were not in the academic governance network--44% exchanged information with the governance system (50% for similar units).

In the course of their work, planetarium directors communicated with their supervisors and faculty members on a weekly basis, with the vice-president or provost on a monthly basis, somewhat less often with the president, and seldom with college board members. (See Table 9.) The frequencies for the similar-unit directors were essentially the same, except they communicated with faculty on a daily basis.

Table 9.--Frequency of communication.

In the course of your work, how frequently do you communicate with the following individuals? (5 = Daily, 4 = Weekly, 3 = Monthly, 2 = Seldom, 1 = Never)

	PD	UD
Supervisor	4.1	4.0
Faculty member	4.0	5.0
Vice-president or provost	3.0	3.3
President	2.5	2.5
College board member	1.9	2.3

The planetarium directors clearly believed they needed to secure support from their supervisors, not surprisingly (Table 10). They also felt a strong need to secure support from the provost or president even though communication with these individuals was monthly or less often. Support from faculty and the college board was perceived as least needed. Similar-unit directors showed similar beliefs, except securing support from faculty was perceived as more necessary.

In negotiating budgets, more planetarium directors communicated with vice-presidents or presidents than did similar-unit directors. Fifty percent of the planetarium directors were involved with someone at that level for budget negotiations, whereas 25% of the similar-unit directors negotiated at that level.

Table 10.--Importance of securing support.

To what extent do you believe your job entails securing support from the following people? (5 = Definitely, 1 = None)

	PD	PS	UD	US
Supervisor	4.9	4.8	4.5	4.8
Provost or president	4.4	4.4	4.5	4.8
College board	3.3	2.9	3.3	4.0
Faculty	2.9	3.3	4.0	3.8

Personnel Rewards

Role Conflict

To see whether budget constraints are creating role conflicts, the planetarium directors were asked whether there were activities that they now perform that they would not do if the budget were greater. Only 13% were engaged in such activities (0% for similar units).

A pair of questions examined the topic of public relations and marketing in the context of role conflict. When asked to indicate the extent to which they considered public relations and marketing a responsibility of the planetarium or similar unit, the directors and supervisors clearly declared public relations and marketing to be a responsibility of the planetarium (PD = 4.4, PS = 4.7) and similar unit (UD = 4.3, US = 5.0) (scale: 5 = Definitely, 1 = None). Only 19% of the planetariums and 25% of the similar units, however, had

someone on staff whose primary duty was public relations and marketing.

Peer Status

To examine peer status, questions were asked regarding tenure, peers on campus, and staff pay.

Only 31% of the planetariums had anyone on their staff in the tenure stream (75% for similar units). When asked about who are considered to be the director's peers on campus, the planetarium directors most frequently chose department chairpersons, whereas their supervisors chose faculty. (See Table 11.)

Table 11.--Perceived peers.

Whom do you consider your (or the director's) peers on campus?

	PD	PS	UD	US
Department chairmen/women	44%	31%	75%	25%
Faculty	25	39	0	25
Vice-presidents or deans	25	0	25	0
Others	25	31	0	50

Staff pay was considered to be the same as other units by 75% of the planetarium directors, lower than other units by 25% of the planetarium directors. (Similar-unit directors reported identical results.)

Professionalism

To seek information on the professionalism of planetarium directors, questions probed professional organization memberships, journals, professional ties, and the perceived professionalism of college faculty, planetarium staff, and public school teachers.

When asked what professional organizations they belonged to, planetarium directors most frequently indicated two highly planetarium-oriented groups, a regional planetarium association and the International Planetarium Society. (See Table 12.) Neither of these organizations has a traditional academic-discipline orientation. Only 19% of the planetarium directors belonged to the American Astronomical Society, the primary academic astronomy society. All other organizations rated even fewer memberships.

Table 12.--Professional memberships.

To what professional organizations do you belong?

	% of Respondents
Regional planetarium association	94%
International Planetarium Society	88
Other	31
American Astronomical Society	19
American Association of Museums	13
Phi Delta Kappa (educational fraternity)	13
National Science Teachers Association	0
Society for College Science Teaching	0
American Assoc. for the Advancement of Science	0

The trend was similar for professional journals. The publication most frequently considered to be a professional journal by the planetarium directors was The Planetarian, a nonjuried journal of the International Planetarium Society (Table 13). Sky & Telescope and Astronomy, two popular-level astronomy magazines, were next most frequently chosen. Science News, a weekly science newsmagazine, was chosen by more than half of the directors. None of the research journals was chosen more than 13% of the time. Planetarium directors' reading habits did not tend toward the academic journals.

Table 13.--Designated professional journals.

What do you consider to be your professional "journals"?

	% of Respondents
The Planetarian	88%
Sky and Telescope	81
Astronomy	75
Science News	63
Scientific American	44
Others	38
Museum News	13
Science	13
Research in Science Teaching	6
The Science Teacher	6
Phi Delta Kappan	6
Astrophysical Journal	6
Astronomical Journal	6
Icarus	6

The strongest professional ties for the planetarium directors definitely were with other planetarium professionals, as 94% of the planetarium directors indicated (Table 14). Other faculty or staff, either within the discipline or not, were chosen only 13% of the time.

Table 14.--Perceived professional colleagues.

With whom do you feel the strongest professional ties?

	PD	UD
Other planetarium professionals	94%	50%
Other faculty or staff in your discipline on campus	13	25
Other faculty or staff not in your discipline on campus	13	25
Science or education colleagues at other colleges	0	0

When asked to indicate where three groups--college faculty, planetarium (or unit) personnel, and public school teachers--fall in a range from Professional (5) to Nonprofessional (1), planetarium directors judged all three to be professional (Table 15), although college faculty were highest, then planetarium personnel and school teachers. Their supervisors rated planetarium personnel the lowest of the three groups. Similar-unit directors were not as generous, rating all groups lower. Although the differences were small, the supervisors perceived the planetarium personnel to be not as

professional as faculty or public school teachers. One explanation could be that the inclusion of planetarium technical staff influenced the supervisors' answers.

Table 15.--Perceived professionalism of various groups.

In your judgment, under which of the occupation categories do the following groups fall? (5 = Professional, 1 = Nonprofessional)

	PD	PS	UD	US
College faculty	4.9	5.0	4.0	5.0
Planetarium personnel	4.8	4.5	4.0	4.3
Public school teachers	4.7	4.7	3.8	5.0

Resource Allocation

Enrollment Economy

In the literature on marginality, the term "enrollment economy" refers to, as one would guess, the critical need to generate student credit hours and fees. In the context of planetariums, it denotes the need to generate attendance and revenue.

When the planetarium directors were asked to specify, on a scale from 5 (Definitely) to 1 (None), to what extent their job entailed securing monetary resources, 9 out of 16 said Definitely (5), but because of the spread of responses the average was lower (4.1 for directors, 4.2 for supervisors). The similar-unit

directors and supervisors gave comparable responses (3.8 and 4.2, respectively).

Self-generated revenue comprised 43% of the planetarium budgets and 22% of the similar-unit budgets. College or university funds contributed 50% for planetariums, 70% for similar units (Table 16).

Table 16.--Miscellaneous marginality factors.

	PD	PS	UD	US
Percent of budget generated	43%		22%	
Percent of college fund support	50		70	
Unit pays some utilities	44		50	
Expectations of more self-support	56	62	25	75
Planetarium presents light shows	31			
Importance of good attendance	4.4	4.5	4.0	4.3

Forty-four percent of the planetariums paid directly for some maintenance, custodial, or utility costs, most often utility (telephone) and custodial. (Similar units were comparable--50%).

Directors of 56% of the planetariums thought there were expectations for the planetarium to be more self-supporting, whereas 62% of the supervisors felt these expectations. The gap was wider between similar-unit directors and supervisors--25% and 75%, respectively.

About one-third (31%) of the planetariums presented "light shows," a strictly entertainment activity. They did so primarily for revenue (38%).

On a five-point scale (5 = Crucial, 1 = Not Important), the importance of good attendance to the vitality of the planetarium was rated 4.4 and 4.5 by the planetarium directors and supervisors, 4.0 and 4.3 by the similar-unit directors and supervisors.

What the respondents considered to be the indicators of quality for the planetarium and similar-unit support this enrollment-economy orientation (Table 17). The top indicators were increased attendance, increased revenues generated, and positive feedback from the audiences. The planetarium directors' supervisors' opinions of some indicators were considerably higher than the planetarium directors': evaluation by outside specialist, media articles and interviews, feedback from planetarium colleagues, and number of grants received. Professional outside evaluators were quite low on the planetarium directors' list because, perhaps, no ready source of such evaluators exists. Similar unit directors thought positive professional evaluation by an outside specialist and positive feedback from professional colleagues were the best indicators of quality.

Table 17.--Indicators of quality.

What do you use as indicators of quality for the planetarium (or unit)?

	PD	PS	UD	US
Increased attendance	94%	100%	50%	75%
Increased revenues generated	88	77	25	100
Positive verbal feedback from audiences	81	92	25	75
Positive feedback from supervisor	75	54	50	25
Favorable media reviews	69	69	25	75
Letters of support	63	77	75	100
Positive self-appraisal	63	54	50	75
Positive feedback from planetarium colleagues	56	85	75	75
Number of media articles or interviews generated	25	62	0	25
Number of grants received	25	46	25	75
Amount of financial support from parent institution	25	15	25	25
Positive professional evaluation by outside specialist	19	87	75	75
Number of college classes taught	13	31	0	25
Others	6	8	25	0

Service Orientation

Colleges and universities frequently refer to the triad of instruction, research, and public service when discussing mission. These three areas are seldom thought to be equally important.

Research universities favor research; teaching colleges put the majority of their resources in teaching. Public service is often third.

To see how planetariums fit into this scheme, directors and supervisors were asked to indicate the extent to which they considered these three areas to be a function of the planetarium or similar unit (Table 18). Public service was rated highest by all four groups. College instruction was also believed to be a function, although below public service. Scientific research was not considered a function of planetariums but somewhat of a function for similar units.

Table 18.--Perceived function.

To what extent do you consider the following areas a function of your planetarium (or unit)? (5 = Definitely, 1 = None)

	PD	PS	UD	US
Public service	4.9	5.0	4.5	4.8
College instruction	3.6	4.0	2.8	4.0
Scientific research	1.4	1.5	3.3	3.0

This lack of research orientation in planetariums also was revealed in the amount of time the planetarium directors reported spending on publishable, scientific research (Table 19).

Table 19.--How directors' time is spent.

What percent of your time is spent in the following activities?

	PD	UD
Direct administration of your planetarium	74%	65%
College teaching	15	14
General college administration activities	6	3
Student academic advising	1	3
Publishable, scientific research	1	8

The service orientation of the planetarium further was revealed in the rankings of the various purposes of the planetarium, previously discussed. (See Table 4.) Recall that "provide community service" was highest; "conduct research in an academic discipline" was lowest. Similar units were comparable in community service but significantly higher in research. Other areas in which planetariums and similar units differed noticeably were "teach adult/continuing ed. classes" and "provide inservice training for local teachers." Generally, the similar units were less public-school oriented than planetariums.

Funding During Financial Crisis

Four questions were asked about real and imagined budget cuts. Over the last ten years, ten of the planetarium directors saw an increase in their operating budgets, one remained level, one saw a decrease, and three could not answer the question (because they did

not have a ten-year history of the budget). All similar units acknowledged an increase. No useful approximation of the amount of increase or decrease could be made from the surveys.

Over the last ten years, the parent institutions' financial support increased for 47% of the planetariums, remained level for 27%, and decreased for 6%, whereas the parents' general funds increased in 63% of the cases, remained level for 13%, and decreased in none of the cases. Planetariums apparently fared only somewhat more poorly than the general institutions, according to these data. But these questions proved to be too general to give trustworthy results.

In the hypothetical event that the parent institution had a 10% loss in revenues, 50% of the planetarium directors believed they would be cut less than 10%, but only 15% of the supervisors believed this (Table 20). Most of the planetarium supervisors (62%) and similar-unit directors (80%) and their supervisors (67%) thought the cut would be 10%. Nineteen percent of the planetarium directors believed the cut would be greater than 10%.

Table 20.--Percentage budget cut during financial crisis.

In the hypothetical event that your parent institution has a 10% loss in revenues next year, how much of a cut in support from the parent institution would you expect the planetarium (or unit) to receive?

	PD	PS	UD	US
More than 10%	19%	15%	25%	0%
10%	19	62	75	67
Less than 10%	50	15	0	33

Open-Ended Questions

Two open-ended questions allowed the planetarium directors to specify problems they face in the performance of their jobs and to indicate the satisfactions they receive.

The two most frequently listed problems were insufficient funding and lack of sufficient time (Table 21). The university not understanding the planetarium's mission and the bureaucracy also were listed several times. Lack of time and funding were mentioned by the similar-unit directors, also, but none listed the university not understanding their mission or difficulties with the bureaucracy.

Table 21.--Planetarium directors' problems.

The biggest problems planetarium directors face in the performance of their jobs. (Responses mentioned more than once are listed.)

	Number of Times Cited
Insufficient funding	10
Insufficient time	9
University not understanding planetarium mission	5
The bureaucracy	4
Not enough staff	3
Need to do public relations	3
Need to develop exhibits	2
Difficult staff	2

The most frequently listed planetarium directors' satisfaction was working with the public, college students, and school children (Table 22). The sense of accomplishment derived from the job received a significant number of responses, as well.

Table 22.--Planetarium directors' satisfactions.

The greatest satisfactions planetarium directors receive from their job. (Responses mentioned more than once are listed.)

	Number of Times Cited
Presenting programs to the public, school children, and college students	12
Sense of accomplishment	10
Chance to be creative	6
Chance to work in astronomy	2
Work with student employees	2
Independence	2
Positive feedback from community	2

Additional analysis was performed to see whether the size of the planetarium's operating budget had a noticeable effect on the findings. A natural break occurred at $140,000, so the questionnaires were reanalyzed using only planetariums with budgets greater than $140,000. The number in this sample was eight, half the original size. The demographics naturally changed. The average budget increased to $257,000, bringing it closer to the similar units' figure of $313,000, and the average number of full-time staff went from 3.9 to 5.6.

Close examination of the descriptive data revealed numerous minor changes but nothing that contradicted the larger analysis. In most cases the earlier findings were strengthened.

Summary

To summarize the data, Research Questions 1 and 2 will be addressed directly. Research Question 3, which concerns strategies that can be inferred from the study to reduce the negative effects of marginality, will be considered with the implications for practice in Chapter V.

Research Question 1: What marginality traits do planetariums share with other traditional marginal units?

Potential conflict with the parent organization's goals was exhibited through the planetarium staff's indifference to college teaching and disdain for research and publishing, coupled with the strong commitment to community service and public schools. The perceived entertainment component of the planetarium's purpose also may have produced conflict.

The planetariums' low legitimacy was revealed most clearly by how little the core departments, faculty, and students would be affected if the planetarium did not exist. A program that is not integrally related to core tasks of the parent organization was one of Clark's signs of marginality (Clark, 1956). The facts that most planetarium staff taught very few or no college classes and that the planetariums had no approved mission statement, held no accreditation, and received no federal grant money reinforced the low-legitimacy image.

The marginality trait of low acceptance was manifested in the lack of knowledge the central administrators, faculty, and students

exhibited regarding the planetarium. They were all less than "somewhat knowledgeable" about what happened at the planetarium.

The planetarium staff's lack of ability to influence the university was apparent in several ways. Planetarium directors were on the fringe of the academic governance system, and few served on college-wide committees. Both of these characteristics are probably related to lack of membership in the tenure stream. Planetariums were involved in fewer joint projects than similar units. Planetarium directors had monthly or less frequent communication with the vice-president or provost, from whom they felt a strong need to secure support.

Planetarium personnel status also revealed marginality. The most basic indicator of whether a person is part of the higher education reward system is whether he/she has acquired tenure. Fewer than one-third of the planetarium staff reporting in this survey were in the tenure stream--that is, could have the possibility of being granted tenure. The study did not ask how many staff actually had tenure. But, clearly, planetarium staff were not part of the primary personnel reward system.

Planetarium directors believed they had the rank of department chairpersons, but not according to their supervisors. The supervisors most frequently chose the faculty as peers of the planetarium directors. To some extent this discrepancy between the planetarium director and supervisor may be explained by the nonstandard nature of the planetarium. Determining how the head of a nontraditional unit should be classified can produce uncertainty,

as the supervisors' responses showed. Other indications of this peculiar nature of the planetarium were exhibited by the range of places planetariums were administratively positioned and by the fact that half of the planetarium directors could not name another unit on their campus similar to the planetarium.

Academic professionalism is a hallmark of the college and university community. The degree to which one is considered an academic professional, therefore, has bearing on one's marginality. Planetarium directors clearly felt the strongest ties with others in the planetarium field. The field, though, is not regarded as an academic discipline. There is no solid body of scholarly knowledge and research. What literature exists is primarily task oriented and not theoretical. Hence, planetarium staff may likely appear less professional to those who are part of the traditional academic community. The professional organizations the planetarium directors recognized and joined and the journals they read were not aligned with a traditional academic discipline, either. In a community where loyalty to the discipline is stronger than loyalty to the institution, planetarium staff were lesser citizens.

In matters of finance, planetariums were more like a small, nonprofit, service-oriented business than an academic department. Most planetarium directors were acutely aware of the need to raise money. Forty-three percent of their budgets, on the average, were self-generated, and 56% felt expectations to be more self-supporting. Little wonder that increased attendance, increased

revenues, and audience feedback were important indicators of success. The uncertainty of future support from the parent institution only emphasized the need to be businesslike.

The service orientation of the planetariums was evident in the explicit tendency toward public service, working with the community and the public schools.

Research Question 2: In what specific ways are planetariums like other similar marginal units? In what ways are they different?

Once again, caution is called for in interpreting any of the data associated with responses from the similar units and their supervisors because of the small number of respondents. Comparing the planetariums and similar units is thought provoking, nevertheless. Planetariums and similar units shared a number of marginality factors. The factors not shared, however, will prompt the greater interest.

Regarding administrative structure and goals, both planetariums and similar units were service oriented, but the similar units showed a stronger tie to the academic side. They were more oriented to research, faculty, and college students, as indicated in their perceived purpose. Similar units' staff were more likely to be in the tenure stream, participating more frequently in college-wide committees, and having more frequent contact with faculty.

Planetariums were involved with public schools and continuing education. The groups most affected if the planetarium or similar unit did not exist also showed the planetariums' affinity for public

schools. The most distinguishing characteristic of planetariums' purpose, compared to other college units, was their work with the K-12 schools.

Planetariums and similar units had both an educational and an entertainment component to their nature in roughly equal amounts. This trait presumably set them apart from the core university.

Planetarium directors were somewhat more inclined to interact with the news media and considered such interactions as an indication of the quality of the unit. Similar-unit directors were more interested in professional evaluation by outside specialists and feedback from professional colleagues. Planetarium directors thought staff of other planetariums were more knowledgeable about their activities than similar-unit directors thought their colleagues at other institutions were. The communication network between planetarium staff at different institutions would appear stronger than between the staff of the various similar units.

Neither planetarium directors nor similar-unit directors appeared to rely on formal evaluations. Fewer than half of the planetariums and none of the similar units had had formal evaluations in the last three years. In this regard, they are probably similar to academic units, which seldom have formal evaluations (Dressel, 1979, p. 451). Three-quarters of the similar units had approved mission statements, though, and only one-third of the planetariums did.

Planetariums generated about twice as much of their revenues themselves as the similar units surveyed. Neither group made much

use of endowments for revenues, although about half of the similar units reported having an endowment. Endowments were rare for planetariums.

With the data presented and summarized, the stage is set to discuss inferences and implications, which follow in the next chapter. The full list of topics to be presented in Chapter V includes a summary of the study and findings, conclusions, implications for practice, implications for research, and reflections on the project.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

Large planetariums on college and university campuses hold a unique position, both among other planetariums and among other units on campus. As planetariums they are neither major public attractions, such as those found in large cities, nor exclusive educational facilities, such as those residing in school systems throughout the country. In effect, they assume responsibilities of both these planetarium types. They work with classes at the college or university and the surrounding schools, as well as offer programs and services to the public.

The large college planetarium is one of a few public-oriented units on campus. Although it has the appearance of an academic division, it functions primarily as an auxiliary or service unit, similar to a college-owned radio station or performing arts center.

Major college or university planetariums are large and expensive. Smaller planetariums can be treated as an incidental part of an academic department's operating costs, such as a laboratory might be. But large college or university planetariums act as independent cost centers.

Major college or university planetariums are not self-sufficient enterprises. A major planetarium built on a campus relies on the college or university's financial support.

College or university planetariums clearly are not part of the core function of the college or university. When financial hardships beset the parent institution, as has been common in higher education in recent years, the planetarium is often in jeopardy. The effects vary from cutting services to closing down.

In the 1950s, Burton Clark, a sociologist, began looking at the problems facing units in educational settings that were outside the core operation of their parent institutions. He referred to this phenomenon as organizational marginality. Clark's initial studies dealt with adult education programs in the context of public school systems. His concept has been used subsequently to examine other educational enterprises outside the primary mission of the parent organization: continuing education programs, centers and institutes, conference centers, research bureaus, and minority student programs.

This previous research suggested that organizational marginality could provide an appropriate framework in which to examine planetariums' role on the college or university campus. The ultimate goal was to understand the conditions and alleviate the constraints under which planetariums work.

A list of factors that indicate marginality was compiled from the literature, and this list became the basis for a survey questionnaire to study major college or university planetariums.

Because the concept of organizational marginality is so integrated with the parent organization's perception of the planetarium, three other groups associated with the parent organization were included in the study's design. In addition to the directors of the major college or university planetariums, surveys went to the directors' immediate supervisors, to the directors of units on the same campuses that were chosen by the planetarium directors as most similar to the planetariums, and to the immediate supervisors of these similar-unit directors.

The questionnaire was intended to highlight those marginality factors embodied in planetariums, to uncover those factors shared by the planetariums and the similar units and those factors unique to the planetarium, and to suggest potential strategies to alleviate the negative effects of marginality in the context of the planetariums.

Summary of Findings

The findings of this study revealed that the planetariums were strongly committed to community service and particularly the public schools. A unique relationship existed between the planetariums and the schools that was not evident between other units and the schools.

Planetarium staff showed only hesitant commitment to college teaching and low or no interest in research and publishing, thus putting them in conflict with the parent organization's goals. A clear entertainment component to the planetarium's purpose may

further aggravate the conflict. This component was shared by the similar units.

The planetarium had little perceived effect on the core departments. The administrators, faculty, and students knew little about the planetarium. Most planetariums had no approved mission statement, no accreditation, and were not part of the academic governance system, college-wide committees, or the tenure system. The planetarium directors had little communication with vice-presidents or provosts of the college or university but sought support from these people.

Planetarium directors lacked the status of department heads or even faculty in some regards, most notably tenure. Their professionalism also was questionable in classic academic terms. Planetarium directors were intensely committed to the planetarium "profession," but the field is not recognized as a true academic discipline with a body of scholarly research. Planetarium directors did not belong to academic disciplinary organizations or read academic journals.

Although all of the preceding characteristics reveal marginality, the point is driven home in the fiscal arena. Of the planetariums surveyed, 43% of their budgets were self-generated, and more than half of the directors felt expectations to be more self-supporting. Increased attendance, increased revenues, and audience approval were considered the three top indicators of quality; all ranked above supervisor's approval. These are traits of what Clark referred to as enrollment economy.

Similar units, while sharing traits of marginality with planetariums, in most cases held those traits in smaller amounts. The primary differences noted were the similar units' greater faculty, college student, and research orientation; less public school affiliation; and less need for self-generated funds.

No effective means of improving peer status or professionalism for the planetarium staff was revealed in this study. Seeking tenure-track status for one or more of the planetarium staff is unrealistic, given the scant amount of research and teaching carried out by planetarium personnel, according to this survey. Pursuing a doctorate degree could conceivably add to the peer status in a minor way. Six of the 16 planetarium directors who responded had a doctorate.

The question of increasing the professionalism of planetarium staff is more productively addressed in the larger framework of planetarium personnel across all institutions. Planetarium staff members can do little by themselves except join and become active in one of the established academic disciplines, not a likely occurrence, given the duties and skills of the typical staff.

Several means of reducing marginality are suggested by the data. These ideas are explored more fully under implications for practice.

Conclusions

The major college and university planetariums studied in this project are trapped in marginality. Reviewing the results of this

research, it should come as no surprise that they occasionally find themselves in peril. If planetariums are to continue to survive and flourish, intervention is needed.

The planetarium is an oddity on campus. It is an active enterprise but isolated from the surrounding college or university. The planetarium is not an instructional unit in the sense of an academic department. Therefore, it should not be judged by the standards used to evaluate academic programs. If colleges and universities value the planetariums, other strategies that preserve the mission of the planetarium must be used for evaluation and resource allocation.

Similarly, planetarium directors are mismatched to their responsibilities if they are hired and promoted on their academic competence rather than their management skills. Although faculty are frequently promoted to managerial positions because of their academic ability, this procedure definitely is not appropriate for planetarium directors. Planetarium directors need acute managerial and business expertise to keep what amounts to a marginal, nonprofit "business" afloat. Alternatively, hiring a business manager who reports to the director could be explored.

Viewing the planetarium as a business raises the question of self-support. Why not structure the planetarium so that it can pay for itself, a critic might ask. Without completely changing the planetarium's mission, self-sufficiency is unlikely. Remember, the planetarium is a nonprofit enterprise, a public service. If the

costs could be completely passed on to the consumer, nonprofit status would not be necessary. The definition of nonprofit connotes a special set of conditions, one of which is that the enterprise is deemed worthy even though it cannot support itself. Planetariums certainly fulfill these conditions.

Furthermore, major college or university planetariums are located in population settings that limit their ability to generate revenue. Major planetariums cannot be self-supporting without a minimum population base from which to draw audiences. Ten to 25% of the local population is the typical yearly range for attendance at planetariums representative of major college or university planetariums (Schafer, 1975, p. 52). Twenty-five percent of the population of most college or university towns is insignificant compared to what a large-city planetarium draws. No major college or university planetarium has ever been totally self-supporting. No major college or university planetarium would ever have been built without the implicit commitment of financial support from the parent institution. Any long-range plan must recognize this commitment.

Implications for Practice

Keeping the foregoing general conclusions in mind, the research and subsequent telephone interviews support particular strategies for reducing marginality. The last research question can now be addressed.

> Research Question 3: Are there strategies that can be inferred from the study which planetariums can successfully use to overcome the negative effects of marginality?

The area of administrative structure and goals shows the most promise for successful intervention. The planetariums' low acceptance and, to some extent, the low legitimacy and lack of ability to influence are clearly affected by the various groups' lack of knowledge about the planetarium. The major constituents on campus--the central administration, the faculty, and the college students--are all less than "somewhat knowledgeable" about the planetariums' activities. Without involvement from these groups, the planetarium can expect to remain marginal.

Therefore, improved communication should be given first attention because the planetarium director has most control over this intervention. Every possible effort should be employed to increase the campus's knowledge of the planetarium, to help reduce the isolation. Many ideas have been suggested in the literature: notices in publications, public-service announcements to various media, advertising, coupons, brochures, and mailings. All the ways the planetarium currently distributes information should be examined in light of its marginality within the college or university setting and changes made where appropriate.

Some additional procedures, aimed at improving the planetarium's legitimacy and acceptance, are suggested from this study. Each planetarium ought to have an approved mission statement. Although the purpose of such a statement is meant to organize the planetarium's goals and resources, in this context it will better serve to announce the planetarium as an official college or university function. It will provide legitimacy while

transferring knowledge about the planetarium to the higher levels of the administration.

For similar reasons, an annual report ought to be produced, whether required by the supervisor or not. The document should be as professional and attractive as resources allow. It should be widely circulated. All levels of appropriate administrators should receive copies, as should any other constituent groups or individuals. In some cases, excerpts will suffice. Everyone who comes in contact with the report, whether he/she reads it or not, will have a vision of the planetarium as a well-run, professional unit. This benefit is in addition to whatever image building the data in the report may provide and the implicit value derived from self-evaluation.

Another tactic to improve knowledge of the planetarium within the campus community is a carefully composed advisory committee or board. Most often such boards are assembled to provide advice from the public. Such a conventional board might be useful to the planetarium and may already be in place. But the group suggested by this study should consist of administrators, faculty, and students--those individuals whose presence and guidance can reduce the planetarium's marginality.

A more traditional means of involving faculty and students is also indicated by this study. Because planetariums are outside the college teaching structure, effort must be expended to bring them into that structure to the extent possible. This means encouraging

faculty to have their classes use the planetarium. It probably means that the planetarium director must sell the benefits of the planetarium to each faculty member on a person-to-person level. In some cases this task is more difficult because students and faculty must be charged for class use of the planetarium. Because the faculty are probably not familiar with how the planetarium can enhance their classes, the planetarium director must investigate the class and present the instructor with suggested ways the planetarium would be useful. One major college planetarium director took this approach as a result of receiving preliminary findings from this study, and reported a successful increase in college class attendance (Linton, 1990).

An outgrowth of the faculty/class participation is the stimulation of joint projects and faculty research in the planetarium. Encouraging planetarium staff to conduct research is unrealistic except in rare cases. They do not have the time, the interest, or the expertise. Faculty, however, are frequently searching for research projects. The planetarium provides a unique environment that may well lend itself to certain kinds of research, once faculty are familiar with its features. Some research topics have been proposed in the literature (Bishop, 1975; Jettner, 1975). Cooperative research effort might produce grant money for the planetarium in addition to reducing marginality.

Grant writing was mentioned earlier as a means of decreasing marginality as well as providing operating revenue. But it is an extremely time-consuming, risky undertaking for the planetarium

staff alone. The typical staff has neither the time nor the expertise to be successful without assistance. Recall that lack of sufficient time was the second most frequently mentioned problem by the planetarium directors. The first was lack of sufficient funding (cf. Table 21).

Establishing and building an endowment, also cited earlier, has the same benefits and obstacles as grant writing, with the additional impediment of competing with the greater university or college endowment priorities. These two needs, grant writing and endowment, coupled with the planetarium director's perceived importance of marketing and public relations and the positive effect marketing has had on other nonprofit organizations (cf. Lovelock & Weinberg, 1984), lead to the most radical recommendation of this study. Every major college or university planetarium should have at least a half-time staff position devoted to marketing, development, and public relations. That person must be chosen carefully, not only for his/her marketing expertise, but for his/her thorough understanding of the planetarium's mission and operation and sensitivity to the academic environment. Such a person will not be found easily nor come cheaply. But the results could well be worth the effort. This person would free up the director to work more on the academic side of the equation, to concentrate on the interventions with administrators, faculty, and students. All new planetariums should have a marketing position built into the initial staff roster.

Most established planetarium budgets will not stretch enough to hire a marketing person, so the initial year's salary must come from another source. The parent institution is the most logical choice. Presenting the proposal as a nonrecurring budget item that has the potential of paying for itself and improving the planetarium's long-term financial picture should garner administrative interest, if not support. After the first year, if the position does not pay for itself, other sources can be pursued. The use of a professional marketer and development specialist is a strategy that many nonprofit organizations have found useful in recent years (cf. Lovelock & Weinberg, 1984). Only two planetariums known to this investigator have exclusive marketing personnel; neither one is a major college or university planetarium.

The recommendations offered in this report are based on the assumption that marginality can be reduced sufficiently to ensure the health of the planetarium. This is an unvalidated assumption. Another course of action for a marginal unit, as suggested by Toombs and Lindsay (1982, p. 11), is to create a self-contained satellite operation. In compiling information for this project, the investigator encountered two examples of marginal units that represent the two alternate approaches of dealing with marginality: reduce it and become "institutionalized," or accept it and work toward becoming self-sufficient. Brief synopses of these two cases are presented in Appendix D to provide additional insight into alternate ways auxiliary units on campus handle marginality.

Implications for Research

Exploratory research generates many ideas for further study; this project is no exception.

The concept of organizational marginality has proven useful in thinking about a variety of auxiliary units, including, now, planetariums. The next logical step, if further progress is to be made in understanding organizational marginality, is to develop and validate a more concrete definition of the concept in the form of an "index of organizational marginality," using the factors found in the literature. No such index now exists. One would have proven most useful for this study.

Another facet of organizational marginality that has not been adequately treated in the literature is the positive aspects of marginality. Robledo (1978) alluded to these when he stated that new activities for marginal units occur outside the core activities of the organization. Ikenberry and Friedman (1972) more directly expressed the advantages when they discussed the flexibility of mission afforded a center or institute (p. 39). Marginal units are often less directly supervised by central administration, they pointed out. Such units have the ability to be more responsive to particular needs or conditions. They can tolerate less conventional methods and allow a higher degree of creativity to accomplish tasks. They can more easily hire marginal people--minorities, for example. These positive attributes allow some marginal organizations actually to flourish. The football programs of most major universities are powerful examples.

Further research specifically related to planetariums is also suggested. This investigator examined only major college or university planetariums. How do these findings relate to other college planetariums? To public or school planetariums, specifically those that have suffered financial hardships?

The nature of the planetarium director's job is somewhat vague, particularly in regard to the marketing, public relations, and business expertise that this study indicates is needed. Menke (1985, 1990) is currently involved in a longitudinal demographic study of the people holding the title of planetarium director, but no one has looked in detail at the tasks required of that office. The results of such a study could provide valuable comparative data for Menke's work, allowing the qualifications for the job to be compared to the characteristics of the people holding the job.

Several experimental research projects are suggested by the interventions inferred from this study to reduce the marginality. For example, in what ways can an annual report increase a target group's awareness or support of the planetarium? What information should be included? Are some formats more effective than others? In what situations? What does the business literature say about this? Another example: Determine successful methods to increase faculty use of the planetarium, expanding on Linton's (1990) and Schwitters's (1975) work.

Marketing and development are areas that this study suggests are important to planetariums. Only one rather specific marketing

analysis has been reported in the planetarium research literature. The opportunity to make a significant contribution in this field exists. What marketing activities are planetariums currently carrying out? In what ways are they successful? Why do so few planetariums have endowments? This situation is curious because many of the planetariums were built using large contributions from wealthy donors.

Another curious observation from this study is the lack of consensus that exists about where the planetarium best fits in the administrative structure. Although nearly all planetarium directors and supervisors thought their planetarium was properly placed, there was little agreement across institutions. Why is this so? What is the best place for planetariums to be?

Finally, one of the clearest outcomes of this study is the strong link between the public schools and the planetariums. This interaction, because it is so strong, deserves further exploration. How can it be used to solidify the planetarium's position in the community, beyond the obvious visits by school children to the planetarium? How might it be used to improve the planetarium's overall function?

Reflections

In assessing the results of this project, the investigator was struck by several points that, although not formal conclusions based on the data, should be considered by anyone contemplating implementation of the findings or extending the research.

Initially, the role marketing might play in the operation of a major college planetarium was not considered in this study. The strong marginality found, however, suggested that marginality-reduction strategies alone would not be sufficient for successful management of the facility. The literature advocated marketing as the likely tactic to try.

The writer observed that most planetarium directors know little about formal nonprofit marketing procedures and, in fact, are reluctant to investigate them, despite the clear perception that marketing is a responsibility of the planetariums. The reasons for this reluctance include those noted earlier in Espy (1986, p. 4): They do not have the expertise; they do not have time; the staff is too small; they just survive day-to-day, and so on. But there exists a deeper reason--the same reason many shun the business world in favor of academe. Most planetarium directors' satisfactions come from the intangible rewards associated with communicating ideas to others--teaching, in a broad sense. They are not well equipped intellectually or emotionally to be marketers, at least not when initially becoming planetarium directors. If the incentives are appropriate, many appear willing to learn. This study suggests all planetarium directors would be well served to acquire familiarity with nonprofit marketing techniques and resources.

Emphatically, marketing is not the complete answer; it is only part of a potential solution. To think that increasing attendance alone can solve a planetarium's difficulties is to miss the significance of organizational marginality. The key point is that

the institutional administration and planetarium staff must acquire a realistic vision of the role of the planetarium and its resource potential. Then an effective means can be developed for carrying out the planetarium's mission.

The investigator also was intrigued with the importance supervisors placed on outside evaluation. This suggests the desirability of accreditation and review by outside evaluators. Currently the only source of accreditation for planetariums is the American Association of Museums, but the process is directed at museums and not completely appropriate for planetariums. The obvious body to sanction accreditation procedures for planetariums is the International Planetarium Society. It is also this group from which professional evaluators are most likely to come. To this investigator's knowledge, no accreditation procedures or standards are being discussed among the people who work in planetariums, although a committee has been compiling criteria for new planetarium construction. Perhaps it is time for the profession to develop a means to accredit planetariums.

Endowments are a common and natural budgetary component for some types of institutions. Apparently, planetariums are not among these types, although no a priori reason excludes them. Once a planetarium is built, an endowment is difficult to acquire, particularly in a college or university setting. The time to establish the endowment is at the onset, when the initial negotiations for building the planetarium take place. Potential

donors must understand the peril of constructing a major planetarium and leaving it to the college or university to provide long-term operating funds. This writer now believes that no new major college or university planetarium ought to be built without endowment support to provide a minimum operating budget. Another writer, Henry King (1978), seemed to understand the importance of an endowment to a major planetarium. In the closing lines of his exhaustive treatise on the evolution of various astronomical demonstration devices, he wrote, regarding the planetarium:

> All too often the generosity of a donor or group of promoters has stopped short at providing an impressive building, interior furnishings, and technical installations. Nothing has been done to establish a trust fund by way of long-term endowment. Yet a large planetarium or planetarium-type institution requires adequate financial support and other forms of help not only for its proper maintenance and day-to-day operation but also for its development. Only then can it attract high-calibre staff in sufficient numbers, extend its facilities and outreach, and meet the challenges and obligations imposed by rapid social, scientific, and technological changes. (p. 368)

APPENDICES

APPENDIX A

LIST OF PARTICIPATING INSTITUTIONS

List of Participating Institutions

Directors and supervisors from various units at the following institutions participated in the final survey for this study:

Troy State University, Montgomery, Alabama

University of Arizona, Tucson, Arizona

DeAnza College, Cupertino, California

Broward Community College, Fort Lauderdale, Florida

Parkland College, Champaign, Illinois

Triton College, River Grove, Illinois

Western Kentucky University, Bowling Green, Kentucky

Eastern Kentucky University, Richmond, Kentucky

Arrowhead Community College, Hibbing, Minnesota

Montana State University, Bozeman, Montana

University of Nebraska, Lincoln, Nebraska

Clark County Community College, North Las Vegas, Nevada

University of Nevada, Reno, Nevada

Ocean County College, Toms River, New Jersey

University of North Carolina, Chapel Hill, North Carolina

Bowling Green State University, Bowling Green, Ohio

Particular thanks to the following planetarium directors who helped mold this study through discussions with the investigator, by completing the pilot study, or by participating in the final survey:

Garry Beckstrom

Bart Benjamin

Thomas Britton

Paul Campbell

Peter Davis

Jack Dunn

Paul Engle

Dale Etheridge

Jack Fletcher

Charles Hagar

Ron Hartman

Brad Holcomb

Art Johnson

David Linton

Jim Manning

Jordan Marche

David Menke

Lee Shapiro

Ray Shubinski

Dale Smith

Mark Sonntag

Gary Tomlinson

Robert Walker

Carl Wenning

Erik Zimmermann

APPENDIX B

SURVEY INSTRUMENTS

PLANETARIUM DIRECTOR QUESTIONNAIRE

Please answer each question. If, in order to give a more complete answer, you need to write on the questionnaire, please do so. If you find something is unclear, mark it with a capital "U". Similarly, if a question is not applicable or inappropriate for your situation, mark it with a "N/A" or "NA".

Note that if you are part of a university, the term "college" throughout this questionnaire refers to the parent institution, not a subunit of the university. The terms "college" and "university" are interchangeable.

* *

1. Would you state your name and title, please?

   Name:_____

   Title:_____

2. What is the name, title, address and phone number of your direct supervisor?

   Name:_____

   Title:_____

   Address:_____

   _____

   Phone:_____

3. What is the name, title, address and phone number of the director (chief administrator) of the unit most similar to yours in function and administration on your campus?

   Name:_____

   Title:_____

   Address:_____

   _____

   Phone:_____

4. How many years of experience do you have in the planetarium profession? In your current position?

____ Years in profession

____ Years in current position

5. How many full time staff (including you) work at the planetarium?

____ Number of staff

6. Do you or any of your staff teach college credit courses as part of your regular duties?

[ ] Yes [ ] No

If yes, how many credit hours per year? ____

7. Are you or any of the planetarium staff in the tenure stream?

[ ] Yes [ ] No

8. Do you or any of the planetarium staff hold joint appointments with other departments?

[ ] Yes [ ] No

9. Are you a member of any college-wide committees?

[ ] Yes [ ] No

If yes, please list:

10. Has the planetarium been involved in any joint projects with other departments on campus within the last year?

[ ] Yes [ ] No

If yes, please specify:

11. Does your planetarium give information to or receive information from the academic governance system?

[ ] Yes [ ] No

If yes, describe briefly:

12. What percent of your time is spent in the following activities? (Total need not add to 100 percent.)

____ Direct administration of your planetarium

____ General college administration activities

____ College teaching

____ Student academic advising

____ Publishable, scientific research

13. To what extent do you consider the following areas a function of your planetarium? (Check <u>one of five</u> boxes ranging from "Definitely" to "None".)

	Definitely 5	4	Somewhat 3	2	None 1
Public service	[ ]	[ ]	[ ]	[ ]	[ ]
College Instruction	[ ]	[ ]	[ ]	[ ]	[ ]
Scientific Research	[ ]	[ ]	[ ]	[ ]	[ ]

14. What professional organizations do you belong to?

[ ] International Planetarium Society

[ ] Regional planetarium association

[ ] National Science Teachers Association

[ ] Society for College Science Teaching

[ ] Phi Delta Kappa (Education fraternity)

[ ] American Astronomical Society

[ ] American Association of Museums

[ ] American Association for the Advancement of Science

[ ] Others. Please list:

15. What do you consider to be your professional "journals"?

[ ] Science

[ ] Science News

[ ] Scientific American

[ ] The Planetarian

[ ] Sky and Telescope

[ ] Astronomy

[ ] Astrophysical Journal

[ ] Astronomical Journal

[ ] Icarus

[ ] Museum News

[ ] Research in Science Teaching

[ ] The Science Teacher

[ ] Phi Delta Kappan

[ ] Others. Please list:

16. With whom do you feel the strongest professional ties?

[ ] Other planetarium professionals

[ ] Other faculty or staff in your discipline on campus

[ ] Other faculty or staff not in your discipline on campus

[ ] Science or education colleagues at other colleges

17. Who do you consider your peers on campus?

[ ] Faculty

[ ] Department chairmen/women

[ ] Vice presidents or deans

[ ] Others. Please specify:

18. In the course of your work, how frequently do you communicate with the following individuals?

	Daily 5	Weekly 4	Monthly 3	Seldom 2	Never 1
Faculty member	[ ]	[ ]	[ ]	[ ]	[ ]
Supervisor	[ ]	[ ]	[ ]	[ ]	[ ]
Vice president or provost	[ ]	[ ]	[ ]	[ ]	[ ]
President	[ ]	[ ]	[ ]	[ ]	[ ]
College board member	[ ]	[ ]	[ ]	[ ]	[ ]

19. How important is approval of your planetarium's activities by the following individuals or groups? (5-choice scale)

	Very Important 5	4	Somewhat Important 3	2	Not Important 1
Faculty	[ ]	[ ]	[ ]	[ ]	[ ]
College students	[ ]	[ ]	[ ]	[ ]	[ ]
General public	[ ]	[ ]	[ ]	[ ]	[ ]
Supervisor	[ ]	[ ]	[ ]	[ ]	[ ]
Central administrators	[ ]	[ ]	[ ]	[ ]	[ ]
State legislators	[ ]	[ ]	[ ]	[ ]	[ ]
Staff of other planetariums	[ ]	[ ]	[ ]	[ ]	[ ]

20. How knowledgeable about activities at the planetarium would you say the following individuals or groups are? (5-choice scale)

	Very Knowledgeable 5	4	Somewhat Knowledgeable 3	2	Not Knowledgeable 1
Faculty	[ ]	[ ]	[ ]	[ ]	[ ]
College students	[ ]	[ ]	[ ]	[ ]	[ ]
General public	[ ]	[ ]	[ ]	[ ]	[ ]
Supervisor	[ ]	[ ]	[ ]	[ ]	[ ]
Central administrators	[ ]	[ ]	[ ]	[ ]	[ ]
State legislators	[ ]	[ ]	[ ]	[ ]	[ ]
Staff of other planetariums	[ ]	[ ]	[ ]	[ ]	[ ]

21. Has your planetarium had a formal evaluation in the last three years?

[ ] Yes [ ] No

If yes, by whom:

22. To what extent do you believe your job entails securing support from the following people?

	Definitely 5	4	Somewhat 3	2	None 1
Faculty	[ ]	[ ]	[ ]	[ ]	[ ]
Supervisor	[ ]	[ ]	[ ]	[ ]	[ ]
Provost or president	[ ]	[ ]	[ ]	[ ]	[ ]
College board	[ ]	[ ]	[ ]	[ ]	[ ]

23. To what extent do you believe your job entails securing monetary resources?

Definitely 5	4	Somewhat 3	2	None 1
[ ]	[ ]	[ ]	[ ]	[ ]

24. In your judgment, under which of the occupation categories do the following groups fall?

	Professional 5	4	Semi-Professional 3	2	Non-Professional 1
College faculty	[ ]	[ ]	[ ]	[ ]	[ ]
Planetarium personnel	[ ]	[ ]	[ ]	[ ]	[ ]
Public school teachers	[ ]	[ ]	[ ]	[ ]	[ ]

25. To what extent do you agree that the purpose of the planetarium and its staff includes each of the following items?

	Strongly Agree 5	Agree 4	Unde-cided 3	Dis-agree 2	Strongly disagree 1
Provide service to community	[ ]	[ ]	[ ]	[ ]	[ ]
Act as resource to other faculty	[ ]	[ ]	[ ]	[ ]	[ ]
Act as resource to local school teachers	[ ]	[ ]	[ ]	[ ]	[ ]
Act as resource to news media	[ ]	[ ]	[ ]	[ ]	[ ]
Conduct research in an academic discipline	[ ]	[ ]	[ ]	[ ]	[ ]
Conduct research in education/learning	[ ]	[ ]	[ ]	[ ]	[ ]
Teach college classes	[ ]	[ ]	[ ]	[ ]	[ ]
Teach adult/ continuing ed. classes	[ ]	[ ]	[ ]	[ ]	[ ]
Provide academic experiences for college students	[ ]	[ ]	[ ]	[ ]	[ ]
Provide inservice training for local teachers	[ ]	[ ]	[ ]	[ ]	[ ]
Publish articles, pamphlets, books	[ ]	[ ]	[ ]	[ ]	[ ]
Promote image of parent institution	[ ]	[ ]	[ ]	[ ]	[ ]

26. Where did the major capital funding to build your planetarium come from?

[ ] State appropriations to parent institution

[ ] Private donations designated for planetarium

[ ] Undesignated donations to parent institution

[ ] Other. Please specify:

27. If education is on one end of a scale and entertainment is on the other, where does your planetarium fall?

Education				Entertainment
5 -------	4 -------	3 -------	2 -------	1
[ ]	[ ]	[ ]	[ ]	[ ]

28. Are you directly involved in negotiating the planetarium budget with someone at the vice-presidential or presidential level of administration?

[ ] Yes [ ] No

29. What <u>percent</u> do the following sources contribute to your total budget (including all salaries)?

____ College or university general fund

____ Self-generated revenue

____ Gifts and grants

____ Endowment

____ Other. Please list:

30. What is your total operating budget for the most recent fiscal year (including all salaries)?

_____ Operating budget for 19_____

31. Which of the following expenses are paid out of the planetarium budget directly?

[ ] Custodial

[ ] Building maintenance

[ ] Utilities
[ ] water [ ] heat [ ] electric [ ] phone

[ ] Grounds maintenance

[ ] Security

[ ] Liability insurance

[ ] Property insurance

[ ] None

32. Are there expectations for the planetarium to be more self-supporting than it currently is?

[ ] Yes [ ] No

If yes, by whom?

33. The planetarium staff pay compared to similar units on campus is:

[ ] Higher than other units

[ ] Same as other units

[ ] Lower than other units

34. Comparing 1978 to 1988 figures, over the last ten years your planetarium's operating budget has:

[ ] Increased. Approximate percent ____

[ ] Remained level

[ ] Decreased. Approximate percent ____

35. Over the last ten years the parent institution's financial support of your planetarium has:

[ ] Increased. Approximate percent ____

[ ] Remained level

[ ] Decreased. Approximate percent ____

36. Over the last ten years the parent institution's general fund has:

[ ] Increased. Approximate percent ____

[ ] Remained level

[ ] Decreased. Approximate percent ____

37. In the hypothetical event that your parent institution has a 10 percent loss in revenues next year, how much of a cut in support from the parent institution would you expect the planetarium to receive?

[ ] More than 10% [ ] 10% [ ] Less than 10%

38. If your planetarium's budget were <u>greater</u> than it currently is, are there activities now performed that the planetarium would choose to <u>no longer do</u>?

[ ] Yes [ ] No

If yes, please list:

39. Does your planetarium currently present "light shows"?

[ ] Yes [ ] No

If yes, list reason(s): [ ] for exposure

[ ] for revenue

[ ] other:

40. How important is good attendance to the vitality of your planetarium?

Crucial		Somewhat		Not important
5 -------	4 -------	3 -------	2 -------	1
[ ]	[ ]	[ ]	[ ]	[ ]

41. To what extent do you consider public relations and marketing a responsibility of the planetarium?

Definitely		Somewhat		None
5 -------	4 -------	3 -------	2 -------	1
[ ]	[ ]	[ ]	[ ]	[ ]

42. Does your planetarium have someone on staff whose primary duty is public relations or marketing?

[ ] Yes [ ] No

43. If the planetarium did not exist, how would the following groups be affected?

	Strongly		Moderately		None
	5 -----	4 -----	3 -----	2 -----	1
Core departments	[ ]	[ ]	[ ]	[ ]	[ ]
College students	[ ]	[ ]	[ ]	[ ]	[ ]
Faculty	[ ]	[ ]	[ ]	[ ]	[ ]
Central administration	[ ]	[ ]	[ ]	[ ]	[ ]
Community	[ ]	[ ]	[ ]	[ ]	[ ]
Public school students	[ ]	[ ]	[ ]	[ ]	[ ]
Public school teachers	[ ]	[ ]	[ ]	[ ]	[ ]

44. What do you use as indicators of quality for the planetarium?

[ ] Increased attendance

[ ] Increased revenues generated

[ ] Amount of financial support from parent institution

[ ] Number of college classes taught

[ ] Positive self appraisal

[ ] Letters of support

[ ] Positive feedback from supervisor

[ ] Positive professional evaluation by outside specialist

[ ] Favorable media reviews

[ ] Number of media articles or interviews generated

[ ] Positive verbal feedback from audiences

[ ] Positive feedback from planetarium colleagues

[ ] Number of grants received

[ ] Others. Please list:

45. Has your planetarium ever applied for an Institute of Museum Services Operating Grant?

[ ] Yes [ ] No

If yes, how many times? ____

If yes, how many times have you been awarded a grant?

46. Does your planetarium have an endowment?

[ ] Yes [ ] No

47. What accreditation does your planetarium hold?

[ ] American Association of Museums

[ ] Other accreditation. Please specify:

[ ] None

48. Is your parent institution a member of:

Association of American Universities [ ] Yes [ ] No

Land-grant institutions [ ] Yes [ ] No

49. How closely do you see the function of your planetarium tied to the purpose of your parent institution?

Closely		Somewhat		Adjunct
5	4	3	2	1
[ ]	[ ]	[ ]	[ ]	[ ]

50. Does your planetarium have an approved mission statement or charter by which it operates?

[ ] Yes [ ] No

If yes, please enclose a copy.

51. Is an organizational chart showing administrative reporting lines available for your planetarium?

[ ] Yes [ ] No

If yes, please enclose a copy.

52. Do you feel your planetarium is properly placed in the administrative system of the parent institution?

[ ] Yes [ ] No

53. Does your planetarium have its own advisory committee or board?

[ ] Yes [ ] No

54. Does your planetarium produce an annual report?

[ ] Yes [ ] No

If yes, please enclose a copy.

55. What are the three biggest problems you face in the performance of your job?

56. What are the three greatest satisfactions you receive from your job?

Please indicate a phone number (including area code) where you may be reached during the day:

Would you like a copy of the research results when they are completed?

[ ] Yes [ ] No

REMINDER

Please check the items you are able to enclose:

[ ] Mission Statement

[ ] Organizational Chart

[ ] Annual Report

Your willingness to assist in this project is sincerely appreciated.

SUPERVISOR'S QUESTIONNAIRE

Please answer each question. If, in order to give a more complete answer, you need to write on the questionnaire, please do so. If you find something is unclear, mark it with a capital "U". Similarly, if a question is not applicable or inappropriate for your situation, mark it with a "N/A" or "NA".

Note that if you are part of a university, the term "college" throughout this questionnaire refers to the parent institution, not a subunit of the university. The terms "college" and "university" are interchangeable.

* *

1. Would you state your name and title, please?

Name:_____

Title:_____

2. To what extent do you consider the following areas a function of the planetarium? (Check <u>one of five</u> boxes ranging from "Definitely" to "None".)

	Definitely 5	4	Somewhat 3	2	None 1
Public service	[ ]	[ ]	[ ]	[ ]	[ ]
College Instruction	[ ]	[ ]	[ ]	[ ]	[ ]
Scientific Research	[ ]	[ ]	[ ]	[ ]	[ ]

3. Who do you consider are the planetarium director's peers on your campus?

[ ] Faculty

[ ] Department chairmen/women

[ ] Vice presidents or deans

[ ] Others. Please specify:

4. How important is approval of the planetarium's activities by the following individuals or groups? (5-choice scale)

	Very Important 5	4	Somewhat Important 3	2	Not Important 1
Faculty	[ ]	[ ]	[ ]	[ ]	[ ]
College students	[ ]	[ ]	[ ]	[ ]	[ ]
General public	[ ]	[ ]	[ ]	[ ]	[ ]
Supervisor	[ ]	[ ]	[ ]	[ ]	[ ]
Central administrators	[ ]	[ ]	[ ]	[ ]	[ ]
State legislators	[ ]	[ ]	[ ]	[ ]	[ ]
Staff of other planetariums at other colleges	[ ]	[ ]	[ ]	[ ]	[ ]

5. How knowledgeable about activities carried out by the planetarium would you say the following individuals or groups are? (5-choice scale)

	Very Knowledgeable 5	4	Somewhat Knowledgeable 3	2	Not Knowledgeable 1
Faculty	[ ]	[ ]	[ ]	[ ]	[ ]
College students	[ ]	[ ]	[ ]	[ ]	[ ]
General public	[ ]	[ ]	[ ]	[ ]	[ ]
Supervisor	[ ]	[ ]	[ ]	[ ]	[ ]
Central administrators	[ ]	[ ]	[ ]	[ ]	[ ]
State legislators	[ ]	[ ]	[ ]	[ ]	[ ]
Staff of other planetariums at other colleges	[ ]	[ ]	[ ]	[ ]	[ ]

6. To what extent do you believe the planetarium director's job entails securing support from the following people?

	Definitely 5	4	Somewhat 3	2	None 1
Faculty	[ ]	[ ]	[ ]	[ ]	[ ]
Supervisor	[ ]	[ ]	[ ]	[ ]	[ ]
Provost or president	[ ]	[ ]	[ ]	[ ]	[ ]
College board	[ ]	[ ]	[ ]	[ ]	[ ]

7. To what extent do you believe the planetarium director's job entails securing monetary resources?

Definitely 5	4	Somewhat 3	2	None 1
[ ]	[ ]	[ ]	[ ]	[ ]

8. In your judgment, under which of the occupation categories do the following groups fall?

	Professional 5	4	Semi-Professional 3	2	Non-Professional 1
College faculty	[ ]	[ ]	[ ]	[ ]	[ ]
Staff in the planetarium	[ ]	[ ]	[ ]	[ ]	[ ]
Public school teachers	[ ]	[ ]	[ ]	[ ]	[ ]

9. How important is good attendance to the vitality of the planetarium?

Crucial 5	4	Somewhat 3	2	Not important 1
[ ]	[ ]	[ ]	[ ]	[ ]

10. If education is on one end of a scale and entertainment is on the other, where does the planetarium fall?

Education 5	4	3	2	Entertainment 1
[ ]	[ ]	[ ]	[ ]	[ ]

11. To what extent do you agree that the purpose of the planetarium and its staff includes each of the following items?

	Strongly Agree 5	Agree 4	Unde-cided 3	Dis-agree 2	Strongly disagree 1
Provide service to community	[ ]	[ ]	[ ]	[ ]	[ ]
Act as resource to faculty	[ ]	[ ]	[ ]	[ ]	[ ]
Act as resource to local school teachers	[ ]	[ ]	[ ]	[ ]	[ ]
Act as resource to news media	[ ]	[ ]	[ ]	[ ]	[ ]
Conduct research in an academic discipline	[ ]	[ ]	[ ]	[ ]	[ ]
Conduct research in education/learning	[ ]	[ ]	[ ]	[ ]	[ ]
Teach college classes	[ ]	[ ]	[ ]	[ ]	[ ]
Teach adult/ continuing ed. classes	[ ]	[ ]	[ ]	[ ]	[ ]
Provide academic experiences for college students	[ ]	[ ]	[ ]	[ ]	[ ]
Provide inservice training for local teachers	[ ]	[ ]	[ ]	[ ]	[ ]
Publish articles, pamphlets, books	[ ]	[ ]	[ ]	[ ]	[ ]
Promote image of parent institution	[ ]	[ ]	[ ]	[ ]	[ ]

12. Are there expectations for the planetarium to be more self-supporting than it currently is?

[ ] Yes [ ] No

If yes, by whom?

13. The planetarium's staff pay compared to similar units on campus is:

[ ] Higher than other similar units

[ ] Same as other similar units

[ ] Lower than other similar units

14. Over the last ten years the parent institution's general fund has:

[ ] Increased. Approximate percent ____

[ ] Remained level

[ ] Decreased. Approximate percent ____

15. In the hypothetical event that the parent institution has a 10 percent loss in revenues next year, how much of a cut in support from the parent institution would you expect the planetarium to receive?

[ ] More than 10% [ ] 10% [ ] Less than 10%

16. To what extent do you consider public relations and marketing a responsibility of the planetarium?

Definitely		Somewhat		None
5	4	3	2	1
[ ]	[ ]	[ ]	[ ]	[ ]

17. What do you consider to be indicators of quality for the planetarium?

[ ] Increased attendance

[ ] Increased revenues generated

[ ] Amount of financial support from parent institution

[ ] Number of college classes taught

[ ] Positive self appraisal

[ ] Letters of support

[ ] Positive feedback from supervisor

[ ] Positive professional evaluation by outside specialist

[ ] Favorable media reviews

[ ] Number of media articles or interviews generated

[ ] Positive verbal feedback from clientele

[ ] Positive feedback from professional colleagues

[ ] Number of grants received

[ ] Others. Please list:

18. How closely do you see the function of the planetarium tied to the purpose of the parent institution?

Closely		Somewhat		Adjunct
5 -------	4 -------	3 -------	2 -------	1
[ ]	[ ]	[ ]	[ ]	[ ]

19. If the planetarium did not exist, how would the following groups be affected?

	Strongly 5	4	Moderately 3	2	None 1
Core departments	[ ]	[ ]	[ ]	[ ]	[ ]
College students	[ ]	[ ]	[ ]	[ ]	[ ]
Faculty	[ ]	[ ]	[ ]	[ ]	[ ]
Central administration	[ ]	[ ]	[ ]	[ ]	[ ]
Community	[ ]	[ ]	[ ]	[ ]	[ ]
Public school students	[ ]	[ ]	[ ]	[ ]	[ ]
Public school teachers	[ ]	[ ]	[ ]	[ ]	[ ]

20. Is the parent institution a member of:

Association of American Universities [ ] Yes [ ] No

Land-grant institutions [ ] Yes [ ] No

21. Do you feel the planetarium is properly placed in the administrative system of the parent institution?

[ ] Yes [ ] No

Please indicate a phone number (including area code) where you may be reached during the day:

Would you like a copy of the research results when they are completed?

[ ] Yes [ ] No

Your willingness to assist in this project is sincerely appreciated.

Telephone Survey Guidelines

1. What strategies have you used to evaluate the planetarium?

   What strategies have you thought about?

   Do you believe a more formal means is necessary to determine if the planetarium is doing its job, meeting its goals?

2. Do you survey your audiences on a regular basis?

   For what purpose? or Why not?

3. What kind of advertising do you do for the planetarium?

   Any paid advertising? Why not?

   Other means of getting information out about the planetarium?

4. Have you considered hiring a PR person?

5. [Why] does the planetarium [not] have an official mission statement?

   Do you think such a statement would be useful?

6. Have you considered forming an advisory board?

7. Is it true that the planetarium is more grade school and high school oriented than college oriented? Why is this so?

   What strategies are employed to get public schools to use the planetarium?

   What strategies are used for college classes?

8. Have you applied for IMS or other grants?

   What are the obstacles to successful grant writing?

9. Should the faculty and students be more involved in the planetarium?

   What strategies could be used to accomplish this? What are the impediments?

10. Are there ways the planetarium could be more involved in research?

    Should the staff conduct research?

    Should they encourage other faculty members to use the planetarium in research?

11. Should the planetarium staff be in the tenure stream?

    Are there other means of according them the professional perquisites the faculty receive?

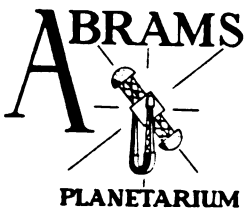
13. Why does the planetarium not have an endowment?

    What strategies could be used to start one? What are the obstacles?

14. Are there other ways you see that the planetarium can improve its status on campus?

APPENDIX C

QUESTIONNAIRE COVER LETTER AND ABSTRACT FOR RESEARCH PROJECT



TALBERT AND LEOTA ABRAMS PLANETARIUM
MICHIGAN STATE UNIVERSITY EAST LANSING • MICHIGAN 48823

TELEPHONE: (517) 355-4676 PUBLIC PROGRAM INFORMATION: 355-4672

QUESTIONNAIRE COVER LETTER (AND CONSENT FORM)

Dear _____:

Thank you for agreeing to participate in this study. Its purpose is to examine the administrative relationship between the college planetarium, its parent institution, and other similar units on campus. This relationship has never been studied before, despite the prevalence of planetariums and other non-academic units on college campuses.

As chief administrator of _____ your input is earnestly solicited. You are probably aware that the number of appropriate subjects for this study is limited, and therefore your response is invaluable.

The survey should be straightforward. Instructions are found at the top of the first page. Estimated time to complete the questionnaire is 30 to 45 minutes. A self-addressed, stamped envelope is provided for you to return the completed form. Following analysis of these questionnaires, you may be asked to respond to a brief followup phone interview.

All answers will be kept strictly confidential. The first page of the questionnaire with your name will be removed before analysis. Only aggregate results will be reported. If you would like a copy of the results, check the appropriate response at the end of this questionnaire.

Your participation is voluntary, and you indicate your agreement to participate by completing and returning this questionnaire. If you have any questions or concerns about your participation, please do not hesitate to contact the undersigned as principal investigator at the address and phone number indicated in the letterhead.

Again thank you for your participation.

Sincerely,

David Batch
Director

ABSTRACT FOR RESEARCH PROJECT ON THE ORGANIZATIONAL MARGINALITY OF MAJOR COLLEGE AND UNIVERSITY PLANETARIUMS

Major college and university planetariums straddle two worlds. They have clear organizational ties and commitments to their academic institutions, and yet they function in many ways like independent major planetariums. This dual "personality" can create functional stress on the planetarium that limits its ability to carry out its intended goals. Several examples of "stressed" college planetariums have been well known to the planetarium community in recent years.

No study has ever examined the relationship of the college planetarium to its parent institution, or to other non-planetarium units on campus. This project will attempt to look at those relationships using the theoretical concept known as "organizational marginality." This concept arose out of the study of adult education programs and how they fit into the administrative scheme of their parent organizations. It has also proven useful in examining other "marginal" higher education units, such as centers and institutes. I believe it will be helpful as a framework for studying the unique role and stress conditions of the major college or university planetarium.

Specifically, the proposed research project will seek traits that mark a planetarium as organizationally marginal with respect to its parent institution. It will compare planetariums to other campus units in three broad areas: administrative structure, personnel reward system, and resource allocation system. The purpose is to discover methods which planetariums can employ to reduce the effects of marginality, improve their administrative status and goal performance.

Data will be gathered through mailed surveys (questionnaires) to all major college or university planetarium directors and their immediate supervisors. A similar set of questionnaires will be sent to the directors of other units on each of the campuses that have been chosen by the planetarium directors as similar to the planetarium in administrative status, and to the immediate supervisors of these "similar units." So four questionnaires will go to each campus: one to the planetarium director, one to the planetarium director's supervisor, one to the director of a unit similar to the planetarium, and one to the supervisor of the similar unit's

director. A limited number of telephone interviews of the same persons will be used to follow up points revealed in the surveys.

Utmost care will be exercised to keep all responses confidential. No names will be associated with any reported data. Aggregate results will be made available to all respondents and eventually to the planetarium community.

Summarizing the expected results of this research, the project will: provide detailed demographic data on major college or university planetariums; improve the ability of major college or university planetariums to function within the context of their institution's administrative structure; broaden the conceptual base of "organizational marginality"; produce a list of traits that label a planetarium or other unit as organizationally marginal; discover techniques that any marginal planetarium or unit can employ to improve its ability to carry out its goals.

David Batch
Abrams Planetarium
Michigan State University
(517) 355-4676

APPENDIX D

EXAMPLES OF TWO MARGINAL UNITS: THE MICHIGAN STATE UNIVERSITY MUSEUM AND WKAR-TV

Examples of Two Marginal Units

The Michigan State University Museum

(The information for this synopsis was provided by Dr. Kurt Dewhurst, museum director.)

The museum conducted a self-study in 1979 in which the staff examined the various functions of the museum and its place within the university structure. This report concluded that the museum is an academic unit of the university and that its position in the administrative organization should clearly recognize the role of the museum as an academic unit. The museum currently reports to the vice-president for research.

Of the 17 curators, 12 are faculty with joint appointments in academic departments. There is a conscious effort to appoint curators from all the major colleges in order to make the museum more broadly in touch with the university.

The staff spends 40% of their time on research, 40% on teaching, and 20% on public service. The museum staff recognizes that "the museum is one of the doorways to the university for the public. The truth of this should not obscure the fact that the primary role of the museum is the educational and research functions of the university" (MSU Museum, 1979, p. 2). The university currently provides approximately 50% of the museum's operating funds.

The museum has a formal mission statement, which was approved by the Michigan State University Board of Trustees in 1983. The museum has an advocacy board that also functions as the volunteer

group. They are expressly not a governing board; their job is to assist and advise.

WKAR-TV

(The information for this synopsis was provided by Steven Meuche, Director of Broadcasting Services at Michigan State University.)

WKAR-TV station is one of three units in broadcasting services. The other two are the radio division, consisting of an AM and FM radio station, and instructional television (TV classes). Broadcasting services reports to the Vice-President for Computing and Technology, primarily because of the instructional television function.

Of 90 full-time staff, 19 (about 20%) are full-time marketing people, with many additional students and volunteers to assist. "Marketing is the name of the game in broadcasting," according to Meuche. The staff does not teach credit classes or conduct academic research. About 8% of the WKAR-TV budget is provided by the university.

The unit has a mission statement, although it has not been officially approved. It produces an annual report that is brief, glossy, and widely distributed. The TV station has an active advisory board that is independent and has no official university sanction. Its task is to give advice on programming.

The viewers are clearly WKAR-TV's reason for being. Students and faculty have no special contact or influence. Meuche noted, "We reach more people in a week than MSU teaches in a term."

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