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# Interdisciplinary studies programs: Developing a grounded theory through a framework of institutionalism

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INTERDISCIPLINARY STUDIES PROGRAMS:

DEVELOPING A GROUNDED THEORY

THROUGH A FRAMEWORK OF INSTITUTIONALISM

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A Dissertation

Presented to

The Faculty of the School of Education

The College of William and Mary in Virginia

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In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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by

Alan Francis Edwards, Jr.

December 2000

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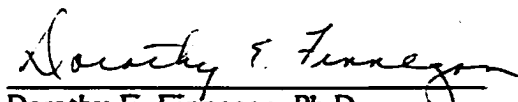
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Alan Francis Edwards, Jr.

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## ABSTRACT

A grounded theory of interdisciplinary studies (IDS) program establishment and maintenance is developed and tested through qualitative analysis using the perspectives of organizational institutionalism. This exploratory study first employs constant comparative methodologies to generate paradigm models by categorizing and analyzing data collected in 1996 from 404 undergraduate IDS programs. The "old" and "new" institutional theories are then evoked to frame a rationale for selecting the features of the establishment and maintenance models that are most central to the story lines of the program data.

Time period of program founding (founding period) is identified as the core establishment property; number of IDS programs on campus (institutional frequency) is identified as the core property of the maintenance story. Those program, institutional, and environmental features that are common or constant across these key properties are then distinguished from those that vary. Eight data-grounded premises and a general theoretical rationale for understanding the relationships between these factors result from this analysis.

The postulates and body of this emergent theory are then evaluated against a sample of 32 additional program cases. Based on comparative analysis of this sample set and evidence from four sample-extracted case studies, this new perspective on IDS programs in American higher education is judged to explain plausibly establishments

across and within founding periods; it is also judged to predict usefully maintenance strategies and outcomes across and within institutional frequencies.

Stated succinctly, this grounded theory asserts that: (a) issues of fit between programs and their internal (campus) and external (state, regional, and national) environments lie at the center of the IDS program establishment and maintenance stories; (b) program establishment is impacted by the presence of advocates or champions on campus coupled with funding conditions (the national economy and/or the availability of grants) and questions of interdisciplinarity's legitimacy within the external environment; and, (c) program maintenance is impacted by the adequacy of resources (internal and external funding) and the number of additional IDS programs on campus.

ALAN FRANCIS EDWARDS, JR.

PROGRAM IN EDUCATIONAL POLICY, PLANNING AND LEADERSHIP

WITH AN EMPHASIS IN HIGHER EDUCATION

THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA

INTERDISCIPLINARY STUDIES PROGRAMS:

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# CHAPTER 1

## INTRODUCTION

As complex organizations, colleges and universities are comprised of innumerable departments, programs, and offices which often appear connected solely by telephone lines and utilities (Klein, 1990). However, researchers such as Baldwin and Austin (1995) and Blackburn et al. (1976) are finding that disciplinary linkages and faculty collaboration are becoming more common. And while disciplinary structures continue to dominate American higher education, interdisciplinary connections are increasingly being forged, installed, and upgraded within the infrastructure of the academic landscape (Newell & Klein, 1996).

Interdisciplinary curricula currently span a wide range of possible forms in American higher education. Interdisciplinary universities, four-year undergraduate programs, core curricula and cluster courses, individual courses, independent studies, and graduate and professional studies are evidenced on campuses (Casey, 1994; Klein, 1990). Although each of these forms represent complex endeavors requiring research, this study focuses only on interdisciplinary education as it is manifested in American undergraduate academic programs.

Interdisciplinary studies (IDS) programs generally offer curricula centered on Western civilization and culture, national issues and experiences, contemporary social problems and topics, and important scientific discoveries and debates. Courses within these programs tend to focus on particular themes, ideas, problems, people, or eras. The programs and their courses usually promote breadth of knowledge at the lower levels of institutions' curricula, while working toward synthesis of knowledge at higher curricular levels. Often, social science disciplines, natural science disciplines, and humanities

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disciplines are clustered within courses. Specific subject matter is at the discretion of the faculty and administrators involved (Klein, 1990).

While the content of IDS programs is institutionally-specific, founders encounter common problems in the establishment and administration of these programs, which eventually share a number of common characteristics. One characteristic is that IDS programs tend not to fit into the conventional departmental-structure model; IDS programs are often found floating "on the white space of the organizational flowchart" (Eckhardt, 1978, p. 2). As a result, these programs often suffer from problems associated with misperceptions and prejudices (from faculty, administrators, and/or students), inadequate funding, and fierce competition for resources, faculty slots and faculty rewards. Some programs survive and flourish in such environments; some transform to fit the traditional departmental mold; and some do not survive.

## Statement of the Problem

Given the dominance of the disciplinary structures in modern American higher education, the small amount of scholarly attention focused on IDS programs, as compared to that on more traditional academic departments, is not surprising. Research on departments (McHenry & Associates, 1977), departmental leadership (Brightwell & George, 1989; Lucas, 1984), and departmental chairmanship (Tucker, 1992) is broad, deep, well-known and growing. The same cannot be said of IDS programs. Beyond descriptions of history (Edwards, 1996b; Newell, 1988), curricula (Klein, 1990) and form (Casey, 1990, 1994), few scholars have explored the dynamics of the establishment and maintenance of IDS programs. This void is only slowly being filled (see Eckhardt, 1978; Baker & Marsden, 1986; and Hartzog, 1986).

Klein (1990) contends that IDS programs, both during their early-1970s heyday and today, are limited in three major ways. First, such programs face obstacles due to the lack of a long-standing tradition for interdisciplinary education. With most IDS programs having existed for a few decades or less, there are sparse successful models to follow and

few senior faculty with training from similar programs to champion the cause. Second, IDS programs are limited by the power of disciplinary and departmental boundaries. These boundaries are clear (at least at the institutional level), well-entrenched, and well-guarded by their attendant constituencies; attempts to cross or challenge these lines of academic demarcation can be professionally hazardous.

And third, these programs are constrained by the influence of political and economic conditions originating outside the college or university. An overall ideological and fiscal conservativism has replaced the ideological liberalism, academic flexibility, and general economic largess that predominated during the early years of interdisciplinarity in American higher education (Klein, 1990). Bailis (1986) sees evidence of a "disquieting" trend of structure- and process-erosion in the institutional track record of IDS programs: disciplinary career patterns pull faculty away from IDS; departmental and disciplinary lines often come to shape and modify IDS; and institutional commitments to interdisciplinarity tend to gradually shrink.

However, an IDS renaissance may have begun in the mid-1980s and appeared to be gaining strength at the end of the twentieth century. From the first national directory of undergraduate IDS programs, Newell (1988) tallied 235 programs in 205 institutions in 49 states (based on the 1985-86 academic year) and projected that the rate of program establishment was accelerating. I replicated Newell's survey for the second edition of the directory (Edwards, 1996a), finding 410 undergraduate IDS programs in 280 institutions in 43 states and the District of Columbia (during 1995-96). In research comparing the two directories (Edwards, 1996b), I offered several findings worth noting here.

First, intra-institutional growth in IDS programs was found to be occurring faster than growth across institutions. While the number of institutions containing IDS programs increased by "only" 37 percent between 1986 and 1996, the total number of programs increased by 75 percent. Individual institutions in 1996 were found to be almost as likely to possess two IDS programs as to have one (a program-to-institution ratio of 1.46 to 1),

and the existence of multiple programs on a campus appeared to be much more common. For example, seven institutions offered five or more IDS programs in 1996 (Edwards, 1996b); Newell (1988) found none offering more than four in 1986.

Second, private-institution growth of IDS programs was found to be outpacing public-institution growth. While the majority of programs identified by Newell (1986) were in public institutions, slightly more than 50 percent were located in private colleges and universities in 1996 (Edwards, 1996b). And while the majority of programs in public institutions were concentrated in universities having Carnegie classifications of Research and Doctoral, the majority of private-institution programs were clustered in Master's- and Baccalaureate-level colleges. Third, I found that intra-state growth in IDS programs, rather than growth across states, was increasingly common. Although four fewer states contained IDS programs in 1996, those states that contained programs exhibited more of them than in 1986. While two-thirds of the states identified by Newell in 1986 contained five or fewer programs each, this ratio had dropped to a little more than one-third by 1996; moreover, while only eight percent of states had 11 or more programs in 1986, the figure had risen to 34 percent by 1996.

Fourth, new-program growth and existing-program revision were found to be continuing at paces similar to those of 1986. Over 25 percent of the programs identified in each survey had been established during the preceding six years, and almost one-half of the 1996 programs reported having been founded, revised, or restructured within the preceding 10 years. Fifth, new interdisciplinary topics and study areas (e.g., neuroscience, applied science, and film studies) appeared to be growing faster than traditional interdisciplinary topics and areas (e.g., general education, honors, humanities, and women's studies) in the 1990s. Of the 31 program categories identified in 1996, 11 were new (not listed in the 1986 edition). Sixth, new forms of interdisciplinary programs were found to be emerging in the 1990s—programs spanning institutional and/or state borders and others promoting inter-institutional cooperation, collaboration, and consortial relations. I concluded that

interdisciplinary studies were not only "alive and well," but also "surviving and evolving" and "taking root and prospering" (Edwards, 1996b, p.3).

Newell (1988) and I (1996a) both contend that one of the major reasons for IDS program establishment and revision is widespread faculty concern over the relevance and connectedness of their institutions' curricula to the "real world." In attempting to make their curricula more integrated and responsive, faculties (and administrators) in similar types of institutions tend to make similar decisions about the establishment, structure, and curricula of undergraduate IDS programs. This trend is probably not a coincidence. Scholars such as Trow (1985) offer more complex explanations of program establishment, form, and administration linking faculties' and administrators' curricular concerns with questions of resources (finances, material, and personnel), structural problems and conflict (institutional, departmental, and programmatic), and program status (ad hoc, formalized, or institutionalized).

Institutional similarities in other organizational fields, such as grass-roots organizations and industrial bureaucracies, have been explained by organizational scholars using theories of institutionalism (Selznick, 1949; Gouldner, 1954; Meyer & Rowan, 1977; DiMaggio & Powell, 1983). These theories may be equally applicable to IDS program establishment and maintenance. Faculty members and administrators undoubtedly look to similar successful programs at peer institutions for models for new IDS programs. Such cross-fertilization may help explain the tendency for similar types of institutions to make similar decisions about the structure, form, and administration of their IDS programs.

Therefore, the problem of this exploratory study was first, to distinguish those administrative and organizational problems that are ubiquitous in the establishment and maintenance of undergraduate interdisciplinary studies (IDS) programs from those that are institutionally idiosyncratic, and second, to utilize the theories of institutionalism in an attempt to explain and understand how American institutions of higher education address and resolve these ubiquitous and idiosyncratic problems.

Research Questions

Several research questions arose from this problem:

1. What are the administrative and organizational problems that colleges and universities encounter during the establishment and maintenance of undergraduate IDS programs?

2. What is the nature of these administrative and organizational problems?

    (a) Are some problems ubiquitous, while others are more idiosyncratic?

    (b) If some problems are more idiosyncratic, are certain variables associated with identifiable institutional characteristics?

3. To what extent is the establishment and maintenance of individual undergraduate IDS programs distinctive (original) as opposed to common (mimetic)?

    (a) Do institution- and individual-specific patterns of interaction contribute to the similarities in the patterns of establishment and maintenance of undergraduate IDS programs?

    (b) To what extent does the diffusion of ideas and/or structural models contribute to the similarities in the establishment and maintenance of undergraduate IDS programs?

Statement of Purpose

In postulating a distinction between organizations and institutions, Selznick (1957) created what has come to be known as institutional theory, or institutionalism. In 1996 he defined this theory in terms of tracing "the emergence of distinctive forms, processes, strategies, outlooks, and competencies as they emerge from patterns of organizational interaction and adaptations. Such patterns must be understood as responses to both internal and external environments (Selznick, 1996, p. 271)." Selznick's original theory is now deemed "old" institutionalism—a normative, structural-functional, internally-focused theory

of rational actors. An emergent interpretation—deemed "new" institutionalism—offers a more externally focused cognitive awareness of cultures and legitimization (Powell & DiMaggio, 1991). Together, these two quite different manifestations of institutionalism offered a promising framework for this analysis.

The promise of institutionalism for this project rested in large part in its potential for framing an explanation of interdisciplinarity's current popularity. Casey (1994) proffers that several recent developments have uniquely positioned IDS programs to provide answers to the two basic internal and external issues at the heart of contemporary reform movements in higher education: questions of quality and cost.

First, as trends in liberal- and general-education curricular reform have emphasized integration and synthesis, interdisciplinarity has become more mainstream. It has become institutionalized as an indicator of quality—of a high-quality curriculum or institution in general. Second, as IDS program enrollments have grown dramatically, they have created new demands for resources (old institutionalism) as well as new means of meeting these costs (new institutionalism). Third, as curricular fragmentation and specialization have become increasingly costly, institutional and curricular restructuring has become more interdisciplinary in seeking coherence and economy (when this restructuring is internally-focused, old institutionalism may offer useful insights; when the restructuring looks externally for guidance and ideas, new institutionalism may be preferable). Casey concludes that IDS programs that mesh and fit with their host institutions' structures (old institutionalism), processes (new institutionalism), and politics (both institutionalisms) might be expected to flourish and contribute greatly to the future of higher education (1994, pp. 53-56).

By their nature, IDS programs are models of cooperation and collaboration. It is both ironic and unfortunate, therefore, that these most integrative of structures are often institutionally isolated and/or marginalized. Lessons learned from the identification of, and distinguishing between, the ubiquitous problems and idiosyncratic problems that contribute

to institutional processes in the establishment and maintenance of IDS programs can inform: (a) institutions making initial, formative IDS program decisions; (b) administrators and/or faculty charged with creating and/or building these programs; (c) consultants and/or local experts employed to advise and counsel on IDS program decisions; (d) IDS program heads and/or institutional committees assessing and evaluating IDS programs; (e) organizational scholars interested the theory of institutionalism and its application to sub-institutional entities; and, (f) higher education scholars interested in organization and administration, the politics of the curriculum, or the prospects for the future of American higher education.

<div align="center">Delimitations and Limitations</div>

This study is limited to undergraduate IDS programs in American higher education. Graduate programs, individual undergraduate courses, and collections of disciplinary courses grouped under interdisciplinary headings are not considered. More specifically, only those 410 programs identified for inclusion in Interdisciplinary Undergraduate Programs: A Directory (Second Edition) (1996, Copley Publishing) are considered in the initial analysis. In addition, only programs meeting that index's eligibility criteria are considered in the secondary analysis.

This study is also limited by the decisions (e.g., survey format and content; mailing list; inclusion criteria) and data collection that shaped the 1996 directory of programs and its survey. Thus, the selection of programs to be surveyed was complete prior to the initiation of this project. Also, this study and the aforementioned directory are dependent upon self-reported data from the programs; they rely on objective as well as subjective information supplied on written questionnaires by personnel (deans, directors, faculty, assistants, secretaries) involved in some way with the programs in question. Therefore, the accuracy of some program information cannot be verified.

These limitations impact the generalizability of the findings herein. This study's results should not be expected to be applicable to discussions of IDS programs outside the

U.S. Within this country, research on graduate-level interdisciplinary programs, centers, or institutes—as different and perhaps unique administrative structures—may gain little from these findings. Results from this study are most generalizable to, and particularly relevant for, contemporary U.S. undergraduate IDS programs—those listed in the directory, those eligible for but not listed in the directory due to omission or lack of information, and those established since the directory's publication. Ideally, the results are of most relevance to those who are currently contemplating the establishment of IDS programs and who are reasonably aware of and attuned to their campuses' pertinent idiosyncratic and ubiquitous impediments to such program foundings.

# CHAPTER 2

## REVIEW OF LITERATURE

### Overview

Literature directly and indirectly related to undergraduate IDS programs in American higher education is reviewed in this chapter. Research in some areas is found to be sparse or lacking; in other areas, incomplete. The presentation begins with a general consideration of IDS programs as academic programs, then turns to consider these units as innovative programs. Scholarship on IDS program establishment and maintenance is then addressed. A subsequent review of previous research on problems related to program founding and administration is followed by a discussion of current research on these issues. The final section summarizes this literature and relates it to the problem under study in this analysis.

### IDS Programs as Academic Programs

This analysis treats IDS programs as organizational structures—as identifiable units akin to departments, centers, and institutes within colleges and universities. However, in much of the higher education literature, the term "academic program" is used to describe an institution's general curriculum or a subset of its curricular offerings. The majority of the research on academic programs (e.g., Conrad, 1985; Conrad & Pratt, 1983, 1986; Karseth, 1995) takes this broad, general, curricular process approach to *the* academic program, as opposed to this study's more narrow, specific, organizational structure approach to *an* academic program.[1] Nonetheless, all academic programs have curricular and structural components. Discussions of curricular substance quickly become discussions of appropriate form as well (Pirsig, 1976). Thus, the general literature on

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[1] The discussion of departmental and institutional renewal by Toombs & Tierney (1991) is a notable exception.

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academic programs provides a useful starting point in this analysis of IDS programs.

American higher-education faculty and administrators have historically been much slower and/or less willing to engage in focused and directed curriculum planning and development than in program evaluation; only in the past few decades has the idea of "deliberative" and "systematic" program planning become common and popular (Conrad, 1985, p. 4). Ultimately, this reluctance—perhaps predicated on the perception that curricular growth in higher education is innate (Seymour, 1988)—may have actually functioned to belittle the true significance of programs.

> Broadly defined, academic programs or curricula denote those educational experiences that encourage purposeful learning. Academic programs are forms at the core of higher learning that organize the acquiring, transmitting, and applying of knowledge. Moreover, by housing and defining academic knowledge, [programs] ... serve as the major arena for academic decision-making and expression of institutional values, the focal point in the professional lives of most students and faculty, and the *raisond'être* of American colleges and universities. (Conrad & Pratt, 1986, p. 235)

Until the 1980s, no authors conducted comprehensive reviews of the research on academic programs. This void began to be filled by Toombs in 1982 and by Conrad and Pratt in 1986. These reviews approach educational research on academic programs as being analogous to social science research on field study. Conrad and Pratt utilize a field-study classification framework developed by Zelditch (1962) to group research on academic programs into three categories: (a) incidents and histories, (b) distributions and frequencies, and (c) generally known rules and statuses. Into the first category, Conrad

and Pratt place case studies of academic program innovations,[2] histories and "sequences of incidents" of academic programs,[3] and multiple-case, repeated-observation studies of academic change.[4]

At a very basic level, this analysis uses information from IDS programs fitting Zelditch's first two categories (incidents/histories and distributions/frequencies) to create initial IDS program research fitting the third category (rules/statuses). Given that IDS program distributions and frequencies have already been discussed herein, and given the innovative nature of IDS program structures and curricula, a discussion of IDS programs as innovative academic programs is the logical next area for this review.

<center>IDS Programs as Innovative Academic Programs</center>

Beyond the case study research surveyed by Conrad and Pratt exists a body of literature on the development and maintenance of new academic programs, and much of this research focuses on innovation and innovative programs (e.g., Seymour, 1988; Curry, 1992). Although definitions of "innovative" tend to be highly subjective, in American higher education the term is generally used to describe new and/or creative means of facilitating the learning of new or previously-ignored knowledge, perspectives, or topics—something beyond the traditional, departmentally-based, disciplinary approach to education. Seymour (1988) advises a strategic planning approach to developing innovative academic programs, while Curry (1992) calls for a proactive organizational (cultural) change approach.

In Seymour's model, the institution's internal and external environments must be assessed prior to matching any particular innovation to any particular institution. He

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[2] Such as Brick & McGrath, 1969; Riesman et al., 1971; Heiss, 1973; Levine & Weingart, 1973; Belknap & Kuhns, 1977; Conrad, 1978; Bush, 1979; Grant et al., 1979; Conrad and Wyer, 1980; Fitzgerald, 1980; Bergquist et al., 1981; Gaff, 1983, Lehmann & Ristuben, 1983; and, Gamson et al., 1984.

[3] Such as Butts, 1939; Rudy, 1960; Rudolph, 1962, 1977; Thomas, 1962; Veysey, 1965; Handlin & Handlin, 1970; Sloan, 1971; Brubacher & Rudy, 1976; Wegener, 1978; Oleson & Voss, 1979; Potts, 1981; Burke, 1982; Thelin, 1982; and, Blackburn & Conrad, 1986.

[4] Such as Hefferlin, 1969; Ladd, 1970; Conrad, 1978a, 1980; Lindquist, 1978; Manns & March, 1978; Dill & Friedman, 1979; Gaff, 1980; Ighodaro, 1980; Parker, 1980; Newcombe & Conrad, 1981; Nordvall, 1982; and, Pratt, 1984.

concludes his summary with a list of 12 "practical prescriptions" for "developing new programs at most institutions" (p. vii):

1. Create and maintain a climate for innovation of programs.

2. Bring innovative people into the institution.

3. Move innovative people around in the institution.

4. Guard against the trend toward increasing fragmentation.

5. Develop the means to look outward.

6. Separate the idea stage from the approval stage.

7. Coordinate all activities related to program development through a limited number of persons or offices.

8. Integrate institutional research into all procedures for program development.

9. Visualize the development of new programs as a continuos, dynamic process.

10. Develop a selective strategy.

11. Integrate planning for academic programs with planning for finances and facilities.

12. Coordinate internal and external processes for approval. (Seymour. 1988, pp. vii-x)

This analysis attempts to develop a similar set of guidelines specifically for IDS programs but through application of the theories of institutionalism rather than through strategic planning. Some research on IDS programs as innovative academic programs already exists.

Although prominent interdisciplinary programs were established at prestigious institutions such as Harvard, Columbia, and the University of Chicago following World War II, researchers such as Casey (1990) argue that truly innovative IDS programs and curricula did not begin to appear on the American higher-education landscape until the

cultural transformations of the 1960s. As the Vietnam conflict led to a "rediscovery" of Asia, as environmental problems came to be defined as widespread crises, and as the rise of mass education led to increased student diversity, some education leaders came to the conclusion that American colleges and universities were out of touch with the real world.

The creation of innovative interdisciplinary programs was one reaction to the perception that the modern U.S. university was too aligned with the military-industrial complex, too dominated by disciplinary perspectives, and too dedicated to specialization. In short, it was just another impersonal bureaucracy during an already depersonalized time (Casey, p. 87). Newell (1990) describes the new academic curricula and structures that emerged in the 1970s as representing an "interdisciplinary renaissance" coupled with a desire "to revitalize the core of the liberal arts" (p. 180).

In her article on the administration of interdisciplinary programs, Casey (1990) offers several "principle[s] of good practice." The first principle is "the need to think as creatively as possible in collaborative groups about the goals, structure, or praxis of the curriculum. This principle is important for all interdisciplinary development. Interdisciplinary curricula cannot be evolved without innovation and careful group planning (p. 89)." Similar to the ideas of Seymour and of Curry regarding academic programs in general, Casey also makes a connection between innovation and planning. This planning for innovation is recommended to begin long before programs are established.

<div align="center">Program Establishment and Maintenance</div>

<u>Establishment</u>

The origins of IDS programs are as varied as the myriad programs themselves. Some arise from student requests; some, as "pet" projects of individual (and influential) faculty members, administrators, or alums; some, as desired outcomes of institutional planning and curricular reform efforts; and some, as formal manifestations of informal campus activities, discussions, and groups. As Huber (1992) notes, although

interdisciplinarity appears to be on everyone's agenda in American higher education, actual implementation in institutional settings can be a difficult proposition.

The purposes, goals, and reasonings behind IDS programs can greatly impact the fit of programs with their host institution, their success in attracting students, faculty, and resources, and their ultimate survival on campuses. In 1985 Trow explained:

> ... I am interested in why some interdisciplinary programs ... succeed while others fail. And I have come to believe that the success or failure of these programs is only in part related to their quality or to the demand for them locally. To a great extent, I think, the success and failure of interdisciplinary programs are a function of their relation to the rest of higher education, in their own institutions and elsewhere. My reading of the history of innovative programs in higher education ...--and interdisciplinary programs especially at the undergraduate level have appeared most of the time as innovative programs--is that the fate of any given program has depended heavily on whether its founders saw American higher education as a failure which they would try to repair or redeem, or as a system of greatness and diversity to which they would add additional richness and diversity, seeking their own ecological niche in the jungle of American colleges and universities. If their founders were sure that the rest of higher education, and that includes the rest of their own university, was incompetent or venal, then their innovative programs were created to stand in witness to that failure, and to their own calling to provide alternative models....
>
> On the whole, programs that have abused their hosts while claiming unique and almost ethereal virtues, have failed. Those that have claimed a place in the spectrum of higher education to serve that segment of the student population which wants and can profit from what interdisciplinary programs ... can offer, have on the whole survived and flourished. (pp. 2-3)

To be successful—perhaps to survive—IDS programs must achieve a degree of "fit" within their institutions.

Klein (1996) offers additional suggestions for ensuring that IDS programs are well-established and well-suited for their institutional and educational settings. Her research and personal experience indicate that three sets of factors are key to the advancement of interdisciplinarity: (a) identity and visibility, (b) the dynamics of institutional change, and (c) knowledge and information. Identity and visibility can be crucial elements toward ensuring that fledgling IDS programs have a "public face" and are therefore less likely to be marginalized, overlooked, neglected, or forgotten. These elements can be provided through securing permanent physical space or facilities, establishing interdisciplinary task forces or commissions to survey interdisciplinarity institution-wide as well as to oversee new programs, hiring directors or coordinators for new programs, and creating various printed representations of interdisciplinary opportunities to be made available to students, faculty, administrators, prospective students and donors, alumni, and the community at large (Klein, 1996, pp. 225-228).

Other keys to establishing IDS programs that will fit and survive center on what Klein and Newell (1996, p. 400) identify as intervening variables in institutional change:

1. the nature of the institution (size, mission, financial base);

2. institutional culture (past experience with reform, and new initiatives, patterns of interaction among faculty and administration, the nature of the academic community, assumptions about the learning styles of students and the importance of education);

3. the level of the desired change (institutionwide, program, or course);

4. the nature of the desired change (general education, interdisciplinary majors and concentrations, department and program enhancement, faculty development, hybrid research and teaching communities, research centers, megaprojects, a general

loosening of structural barriers);

5. faculty capabilities and interests; and,

6. knowledge cultures (disciplinary, professional, and interdisciplinary).

For Klein and Newell, the single most productive step is to provide for access to knowledge and information. They advise that a resource bank of literature, sources, and resources be assembled in conjunction with efforts at contact identification and networking. Having a broad and deep nonfinancial resource base during a program's start-up years can prove more important than a financial resource base, especially in terms of being able to access a variety of ideas, experienced people, narratives and histories of successful and unsuccessful programs, and perspectives on academic innovation and institutional change (p. 401).

Based on his experience, Trow (1985) also offers several typical characteristics of IDS programs in their start-up years. First, these program are typically able to be highly selective in recruiting both faculty and students, and these recruits tend to be very enthusiastic. Second, resources—especially financial resources—tend to be unusually abundant initially, as institutional commitments are strong and administrative enthusiasm is also high. Third, these programs generally start out relatively small and are therefore very communal and consensual in their procedures and decision-making. Fourth, because of their newness and uniqueness, these programs tend to treat each student and problem as unique and make efforts to treat all matters with great care and deliberation. And fifth, again partly due to their newness, most of these programs are not seen as threats by others--even potential competitors (for faculty, students, and resources) within their institutions. Trow points out that many of these characteristics can become quite problematic for programs because they may prove to be only temporary. To understand how and whether IDS programs survive the establishment phase, it is important to understand the decisions that go into how the program will be administered and maintained in the long term.

## Maintenance

The dearth of research on the administration of IDS programs, as compared to that on departments, is documented above. Perhaps the administration and maintenance of IDS programs is assumed to parallel departmental administration or to be so basic and mundane as to warrant no closer investigation. This analysis argues that such assumptions would be invalid and misinformed. Trow (1977) would probably agree, given his admission in an article on *departments* as teaching and learning contexts that:

> At its very best, a carefully thought out program of interdisciplinary studies, involving ... professors possessing great breadth of learning across disciplinary lines, is arguably the best introduction to higher learning that able and motivated undergraduates can experience. (p. 23)

This investigation begins from the premise that IDS program coordinators should not be compared to department chairs, since they are animals of a very different stripe. They cope with many of the same problems as department chairs, as well as a set of unique problems, concerns, and challenges that extend beyond those experienced by department chairs. Some of these problems include decisions about the curriculum, change and development in their programs over time, and dealing with campus politics.

Compared to disciplinary departments, IDS programs require much more faculty consensus about what knowledge is most worthwhile given the countless possible interdisciplinary connections within an IDS curriculum. "It is difficult enough to reach agreement on an undergraduate curriculum within a department, almost impossible across departments" (Trow, 1977. p. 24). In addition, IDS programs can make very large demands on the time and energies of their faculty, time and energy necessarily taken from their research and their work with graduate students and advanced undergraduates. Moreover, in research and doctoral institutions, the academic reward system is often tied to

a professor's published work. For a variety of reasons it is difficult for a university to assess and reward IDS teaching and "teaching ability."[5]

Perhaps more importantly, the quality and breadth of faculty learning and expertise that make really strong IDS programs are very rare (Armstrong, 1980, p. 56). Few academics, even those renowned in their fields, have been found to possess the intellectual qualities needed to be first-rate interdisciplinary teachers. One of these intellectual qualities is the ability to search for, recognize, and teach others to recognize negative evidence (evidence contrary to one's disciplinary perspective) or what Weber (1946) called "inconvenient facts." Trow (1977) contends that when IDS courses and programs are created in the face of such faculty shortcomings, they are often short-lived failures; a genuine integration of perspective and knowledge around a problem or issue is rarely achieved, and such courses often degenerate into relatively uninformed discussions among faculty and students, none of whom has a solid mastery of the topic or its problems. He quotes an unnamed scholar/cynic who concludes that interdisciplinary programs can be "devices for bringing creative people together and arranging for them to be less creative," at least in the short term (p. 24).

Implicit in Trow's (1985) description above of the characteristics and advantages of programs' start-up years is the assumption that IDS programs may go through life cycles, which are different from cycles of departmental growth and development (see Murray, 1964 and Tucker, 1992). Trow relates how some program-founding faculties, motivated by their commitment to a distinctive mission, are ignited with the zeal of a "secular religion" (1985, p. 6). Although during the early years resources are often abundant, recruitment of staff and students is selective, and problems are handled communally, as time passes, so does the creation euphoria. Work becomes more and more exhausting, and less and less exhilarating. Routines come to be viewed with hostility. Characteristically, by the third and fourth years the loss of extra resources, structural difficulties, internal conflicts, and

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[5] Although much rhetoric may be generated on the subject (see Armstrong, 1980; Gaff & Wilson, 1971).

pressure to move from ad hoc status to permanent budget lines cause serious problems, tantamount to a "loss of Eden." The start-up years come to be viewed as the Golden Age in the mythology of such programs (pp. 7-8). Latter years bring increased involvement in, and problems with, campus politics.

Trow (1985) also offers advice on dealing with campus politics. He contends that, while IDS programs can often serve as critics of the disciplines (because departments' fragmentation and compartmentalization of knowledge may not always be the best way of organizing study), IDS programs should not be disciplines' or departments' enemies either; in political struggles over resources and other institutional "goods," making enemies who are well-entrenched can prove fatal (p. 14). Additional advice from Trow for understanding campus politics includes paying careful attention to individual career development patterns and making certain that IDS programs are not in direct competition for funds with traditional departments (pp. 14-15). He concludes that IDS projects are more readily sustained when they are focused on concrete objectives, rather than on general idealized mission statements (p. 15). Obviously, IDS programs can be fraught with administrative and maintenance problems.

## Problems of IDS Programs

The research questions of this analysis attempt to distinguish between ubiquitous and idiosyncratic problems for IDS programs—between problems common to all programs and problems specific to individual institutions. Using a different level of analysis, Scott (1979, p. 306) summarizes a rather complex set of six "personal and institutional problems" encountered in being interdisciplinary:

1. Almost everyone already believes in interdisciplinary education.

2. Almost everyone also believes in specialization.

3. Interdisciplinarity can occur on many levels and consequently involves choices of level for concentration.

4. Interdisciplinarians must persuade others to cooperate with them.

5. Interdisciplinary education and research must be administered.

6. Higher education involves students and students must be involved.

Within Scott's fifth problem, two sets of institutional problems can be identified. The first set of problems arises from the fact that interdisciplinary research and education must be administered as local units but must also function in the larger administrative setting of the college or university. The second set of problems reflects the reality that programs must be established, and once established, maintained administratively (1979, p. 321). These two collections of broad, ongoing problems for institutions manifest themselves into three narrower, day-to-day problems for programs: (a) the problems of personnel, (b) the problems of funding, and (c) the problems of faculty recruitment and reward.

All new academic programs, including to IDS programs, may face considerable difficulties if they are perceived as threats or ill-conceived curricular fads by other institutional constituencies. These difficulties may be exacerbated by negative perceptions of those involved in IDS programs. Scott argues that some academics who are attracted to IDS programs possess rather rebellious personalities and may lack adherence to established protocols and to the persons and institutions that symbolize them (1979, p. 321). When IDS program faculty are apt to disparage both administrative functions and those who perform them, the programs may suffer as a result (p. 321).

To counteract such problems, Scott recommends that a campus administrator—as opposed to a faculty member—be recruited to lead an IDS program in its early development (1979, p. 321; see also Ross & Emmert, 1990). Scott argues that administrators—to the degree that they are often considered "marginal" persons (disparaged for lack of insight, foresight, and courage)—may be made a part of a new IDS program more easily than would be assumed at face value; in fact, administrators might be especially prone to support IDS

programs because, in becoming administrators, they often cease to function as specialists in their various disciplines. Moreover, they may be more likely to appreciate the relationships between disciplines through their dealings with varied interests (p. 321; see also Brightwell & George, 1989). In addition, having administrators on board may also assist in dealing with problems of funding.

"[T]he basic function of college and university administration is probably to get and distribute money" (Scott, p. 322). The task of keeping existing programs funded is often so enormous that administrators have very little discretionary money. Departmental administrators in traditional disciplines know that funds for new programs are difficult to find. Their knowledge makes them competitors for new funds and suspicious of new programs as future competitors. This suspicion is often intensified when advocates of new programs appear to be making claims that would obviate what departmental administrators consider to be their traditional functions. In short, advocates of IDS programs and interdisciplinary education in general find themselves thinking much more carefully than departmental personnel about the advantages and disadvantages of striking poses that may be viewed as threatening to established interests (Scott, pp. 322-323).

However, funding agencies—governmental and private—frequently see themselves as being primarily adapted to encouraging new growth rather than maintaining well-established research or educational functions (Scott, p. 323). Often such agencies announce special goals to be achieved and listen gladly to proposals to meet these goals in fresh ways (Kozell, 1986). Therein, interdisciplinary programs often have special advantages. But in all cases the active cooperation of the administration of one's own institution is vital; these outside agencies are not generally found to be interested in supporting activities and enterprises that cannot count on future support from within their own immediate environment (Scott, p. 323). How funding problems are addressed can have significant impact on faculty-related problems.

One of the most serious administrative problems stems from IDS programs' adaptation of the faculty evaluation and reward systems commonly used by disciplinary departments (Armstrong, 1980; Gaff and Wilson 1971). According to Scott, IDS teaching and research is apt to be highly time-consuming, producing outcomes and end results that are not as readily assessed as those of more traditional programs (p. 324). These difficulties often prove preemptive for younger, untenured faculty members with low rank and relatively low salaries. He proffers that the primary responsibility for breaking through such impasses may lie with interdisciplinarians. Department chairs, deans, vice presidents, and provosts may be understandably cool if they are simply asked to exempt from ordinary evaluation persons who are active interdisciplinarily, but may well accept (at least tentatively) concrete proposals for alternatives that will enable negative as well as positive judgments to be made (Scott, p. 324).

### Current Research on IDS Programs and their Problems

In the past few years, the literature on interdisciplinarity in general, and on IDS programs specifically, has begun to evolve from narrative essays and opinion papers toward more empirical and theoretical approaches. In their chapter in the revised Handbook on the Undergraduate Curriculum (1996), Klein and Newell present origins, motivations, and contemporary conceptualizations of interdisciplinary studies. They summarize the 1990 AAC&U Interdisciplinary Studies Task Force report which confirmed interdisciplinarians' claims that knowledge has become "increasingly interdisciplinary," and that far more interdisciplinary activities exist on campuses today than actually carry formal labels or receive formal recognition. They conclude that "IDS and the problems at stake are largely pragmatic or organizational, not theoretical" (p. 397), and that, since the 1978 edition of the Handbook, "interdisciplinary approaches have become essential, not peripheral, in thinking about institutional structure, about curriculum, and about faculty development" (p. 398).

Klein and Newell's discussion of interdisciplinary forms and structures utilizes general systems theory to point out a shift in the structure of higher education from simple and complicated systems to complex systems. Their claim is that the combination of old and new interdisciplinary perspectives, structures, and activities has created greater heterogeneity and complexity in higher education.

Paralleling this structural development, metaphors of knowledge description have shifted, in kind, from foundation and linear structure to networks, webs, and complex systems. IDS, consequently, is no longer a simple matter of adding a few formal interdisciplinary programs to the existing structure of the institution. Simple and complicated structures still exist, but the multiplicity of hybrid interdisciplinary forms has fueled a fundamental shift in how many faculty think of knowledge and the academy. (Klein & Newell, 1996, p. 399)

Klein and Newell point to a growing category of interdisciplinary communities and interactions that are less visible, if not invisible, as compared to traditional "bridging structures" such as IDS programs. These new "hybrid" forms include learning communities, problem-focused research projects, shared facilities, data bases, and instrumentation, training in collaboration and teamwork, and inter-institutional consortia and alliances (pp. 400-401). They conclude that contemporary "[i]nterdisciplinary structures may be interconnected in a shifting matrix, replete with feedback loops and unpredictable synergistic relationships" (p. 401).

Klein (1996) builds on many of these ideas by bringing together interdisciplinary study and boundary-crossing disciplinary scholarship within the conceptual framework of "boundary work." She asserts that, while "previous studies have tended to treat [disciplinary] boundary crossing as an anomaly, a peripheral event, or a developmental stage," today "the interactions and reorganizations that [disciplinary] boundary crossing

creates are as central to the production and organization of knowledge as boundary formation and maintenance" (p. 2). Klein identifies and utilizes many of the distinctive conceptual tools of boundary work—hybrid roles and communities, boundary blurring and genre mixing, and cross-fertilization—to illustrate that scholarship at the margins of disciplinary knowledges is not necessarily "marginal" scholarship. Cross-fertilization in this context is a form of borrowing from other disciplines; the concept has a somewhat different connotation in the theories of organizational institutionalism used to frame this analysis.

## Summary

Although little research exists on IDS programs as academic programs, Zelditch's (1962) classification framework offers this study a useful way to conceptualize programs at both the individual and collective levels. The works of Seymour (1988) and Casey (1990) illustrate not only the innovative nature of IDS programs, but also the importance of pre-establishment planning and the influence of internal and external environments on both program foundings and subsequent administration.

The general literature on IDS programs suggests that these units are different, if not unique, within American higher education. Innumerable reasons and motivations lead to IDS program establishments. Trow (1985) argues that programs must fit within their institutions. In 1996, this line of reasoning was developed further in two major pieces by Klein (writing with Newell in one) in which she contends that better fit is achieved when institutional decision-makers are provided with relevant knowledge and information about interdisciplinarity during the program-planning stage. This educating of key people is argued to facilitate greater institutional acceptance of IDS programs. From his personal experience, Trow (1985) also suggests that programs go through lifecycles during their ongoing administration and maintenance. This organic analogy provides an illustrative as well as meaningful perspective for this study.

The work of Scott (1979) begins to reveal the broad, ongoing problems and the narrower, day-to-day problems faced by IDS programs. His research informs this analysis on matters of local (campus) legitimacy in terms of: (a) program acceptance vs. perception as a threat; (b) attracting and maintaining internal and external funding; and (c) attracting and rewarding faculty. Recent scholarship from a systems theory perspective (Klein and Newell, 1996) argues that interdisciplinary studies is growing in its heterogeneity and its complexity. Such a perspective might also be offered by the old institutional theory; however, new institutionalism would predict more homogeneity of IDS program structures and processes over time.

The literature reviewed here reveals a dearth of empirical as well as higher-level theoretical research on IDS programs. This study is intended to at least partially fill this void. A more comprehensive analysis of common and unique factors related to program establishment and maintenance should integrate this diverse scholarship and add new knowledge and understanding. Toward this goal, an institutional-theory perspective is evoked to frame this study.

# CHAPTER 3

## METHODOLOGY

### Conceptual Framework

Formal organizations are the preeminent manifestation of social organization in modern society, structuring and organizing the daily activities of most people (Zucker, 1983). These omnipresent social units—representing collective attempts to regulate and promote human interaction, satisfaction, and survival—are involved in almost every possible sphere of human action. Not only do organizations have direct impacts on the lives of all people, they may also be treated as "corporate actors" having "immense power" over "natural persons" (Coleman, 1974, p. 35).

<u>Organizational Theory</u>

The study of organizations began with the study of bureaucracy in government, political parties, and labor unions. Within sociology, the hallmark of the classic tradition of organizational analysis is the assumption that the rise of bureaucratic organization was crucial in shaping modern societies. According to Scott (1987, pp. 4-5),

> the two great German sociologists, Max Weber and Robert Michels, were among the first to insist that the central political issue for all modern societies was no longer what type of economic structure prevailed—whether capitalist, socialist, or communist—but the increasing dominance of public bureaucracy over the ostensible political leaders.

> Although organizational sociology initially consisted mainly of micro-level research on coordination, control, and management issues (e.g., Taylor, 1911; Weber, 1946;

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Simon, 1956), more-generic macro-level organizational processes arose as central issues

for American scholars in the 1950s. Two lines of research emerged: the work of Robert

Merton and his students at Columbia University emphasized the impact of bureaucracy on

participants, clients, and community; while the work of Herbert Simon, James March, and

their students at the Carnegie Institute of Technology (now Carnegie-Mellon University)

focused on decision-making within organizations. Both lines of research sought and found

connections with mainstream research in the social sciences, including sociology, political

science, and economics (Hannan & Freeman, 1989, p. 29).

During the 1960s, the main thrust of organizational theory and research was a

consideration of the processes by which organizations adapt to changing and uncertain

environments (e.g., Burns & Stalker, 1961; Perrow, 1961; Lawrence & Lorsch, 1967;

Thompson, 1967; Hage & Aiken, 1970). The basic premise of this macro-level work was

that organizations adjust their strategies and structures to match the contingencies of the

flow of work and of the external environment. Although this line of theory and research

expanded the study of organizations considerably, it also began to isolate organizational

analysis from mainstream sociology and mainstream social science in general (Hannan &

Freeman, p. 29).

As a result, organizational research as a specialty moved beyond universities'

departments of sociology into various professional schools and fields, including business

and education. Not surprisingly, the scholarship on organizations coming from the

professional schools turned the focus back toward managers and the micro level of analysis

in the 1970s.

In reaction to the organizational theories of the 1970s, several new perspectives

were developed. Ecological theory or population ecology (Hannan & Freeman, 1974)

emphasizes organizational selection and replacement at the population level; neo-Marxian

theory (Braverman, 1974; Benson, 1977; Burawoy, 1979) emphasizes inter- and intra-

organizational power, dominance, and dependency; and, neo-institutional theory or "new"

institutionalism (Meyer & Rowan, 1977; Meyer & Scott, 1983; DiMaggio & Powell, 1983) emphasizes the role of rules, traditions, and other normative prescriptions in determining organizational structures. These theories "all emphasize links between organizations and macro-sociological processes. All deny the primacy of the logic of efficiency as a rationale for explaining organizational variability" (Hannan & Freeman, 1989, p. 35).

Because of its explanation of organizational structures as responses to normative prescriptions, new institutionalism may be a particularly useful component of a conceptual framework for analyzing the problems of college and university academic programs. According to this theoretical perspective:

> Organizations, especially those whose outputs are difficult to measure directly, are constrained to follow such prescriptions, at least at the surface level, in order to acquire legitimacy. ...[T]hese normative prescriptions often have little relationship to considerations of technical efficiency. Instead of striving for efficiency, organizations seek institutional isomorphism with prevailing normative standards about appropriate structures. Structures serve a ceremonial purpose, signaling the competence and worth of the organization as a social actor. (Hannan & Freeman, p. 34)

A general overview of institutional theory is required before it can be accepted as a suitable theoretical perspective for this analysis. This overview should reveal that, when taken together, the "old" and "new" theories of institutionalism form a useful conceptual framework for understanding the problems encountered by colleges and universities in establishing and maintaining IDS programs.

Institutional Theory

"[T]he institutional school is the closest to a truly sociological view of organizations," (Perrow, 1986, p. 157). This perspective derives from structural-

functionalism, the dominant theoretical framework in sociology, and the proposition that functions determine the structure of organizations and that structures can be understood by analyzing their functions. Institutional analysis utilizes an "organic" focus on the entire organization, permitting a better understanding of how the specific structures and processes are linked to the rest of the organization (Perrow, 1986).

The concept of "institution" has often been applied to the study of organizations in a vague fashion, referring loosely to the pressure of the institutional environment (Selznick, 1948), the infusion of "value beyond the technical requirements of the task at hand" (Selznick, 1957, p. 17), and the relative institutional status of types or classes of organizations (Clark, 1956).

> Basic to Selznick's view of organizations is the distinction between the rational, means-oriented, efficiency-guided process of administration and the value-laden, adaptive, responsive process of institutionalization. Some organizations are merely organizations—rational tools in which there is little personal investment and which can be set aside without regret. Others become institutionalized. They take on a distinctive character; they become prized in and of themselves, not merely for the goods and services they grind out. The process of institutionalization is the process of organic growth, wherein the organization adapts to the strivings of internal groups and the values of the external society. (Perrow, p. 167)

Table 1 summarizes Selznick's distinctions between organizations and institutions.

Philip Selznick first offered his distinction between organizations and institutions in Leadership in Administration (1957). This rather brief text is often cited as the source of the original theory of institutionalism, what is now referred to as "old" institutionalism. Selznick recently explained that Leadership was an attempt to "make sense" of his previous research on the Tennessee Valley Authority and on Leninist organizations:

Table 1

Selznick's Distinction Between Organizations and Institutions

|  | Organization | Institution |
|---|---|---|
| Nonflexible, internal source of values | The tool view; a rational engineered instrument, with technicians directing it | The committed polity, with clear identity and purpose, serving the selfish strivings of its participants |
| Flexible, external source of values | The drift view; opportunism without goal-directed leadership | Adaptability, responsiveness, impregnated with community values |

Note. From Complex Organizations: A Critical Essay (3rd. Ed.) (p. 168), by C. Perrow, 1986, New York: Random House. Copyright 1986 by Random House.

Those studies focused on two key ideas: character and competence. The character of the Tennessee Valley Authority was formed ... in the course of responding to external threats.... The Organizational Weapon tried to show how Leninist organizational methods created a distinctive competence to turn members of a voluntary association into disciplined and deployable agents.

Reflecting on these findings, ... I postulated a distinction between 'organization' and 'institution.' As an organization is 'institutionalized' it tends to take on a special character and to achieve a distinctive competence or, perhaps, a trained or built-in incapacity.... Thus institutional theory traces the emergence of distinctive forms, processes, strategies, outlooks, and competencies as they emerge from patterns of organizational interaction and adaptation. Such patterns must be understood as responses to both internal and external environments. (Selznick, 1996, p. 270-271)

As was common of sociological and organizational research of the time, Selznick's institutionalism focused on specific organizations at the micro level. A general shift toward

macro analysis in the social science research of the 1970s contributed to a new institutionalism.

In their review of the state of institutional theory, Powell and DiMaggio (1991) point to the year 1977 as the birth date of "new" institutionalism. In that year John Meyer[6] published two seminal papers, "The Effects of Education as an Institution" and "Institutionalized Organizations: Formal Structure as Myth and Ceremony" (with Brian Rowan). These works continued Selznick's shifting of emphasis away from "materialist forces" (e.g., technology, resources, and production) and toward "ideational forces" (e.g., knowledge systems, beliefs, and rules) in the structure and operation of organizations (Scott & Christensen, 1995, p. xiii), but at a macro level.

Whereas issues of influence, coalitions, competing values, power, and informal structure are central to old institutionalism, the new approach emphasizes legitimacy, the embeddedness of organizational fields, and the centrality of classification and routines (Greenwood & Hinings, 1996). Furthermore, new institutionalism stresses the role of cognitive processes, symbols, and socially constructed meaning (Scott & Christensen, 1995; see also Weber, 1968). As reflected in Figure 1, participants in a roundtable discussion at the 1993 annual meeting of the Social Science History Association placed new institutionalism at the center of a social-science research continuum configured to order scientific-to-discursive methods for studying formal-to-informal organizations. old institutionalism was placed closer to the discursive methods end of the x axis and closer to the formal organizations end of the y axis (Ethington & McDonagh, 1995).

The old and new theories share a skepticism toward rational-actor models of organization; both emphasize the relationship between organizations and their environments; both are useful in revealing aspects of reality that are inconsistent with organizations' formal accounts; and, each stresses the role of culture in shaping

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[6] Meyer's thoughts on institutionalism are also evident in his 1970 paper on school "charter effects" and his preoccupation with macro influences on local phenomena is evident in his 1968 work on contextual effects in organizational research.

Figure 1. A social-science research continuum offering a relational configuration of methods for studying organizations.

SCIENTIFIC METHODS

Behavioralism            Rational Choice

INFORMAL  ←———— "New" Institutionalism ————→   FORMAL
INSTITUTIONS                                                 INSTITUTIONS

Hermeneutics            "Old" Institutionalism

DISCURSIVE METHODS
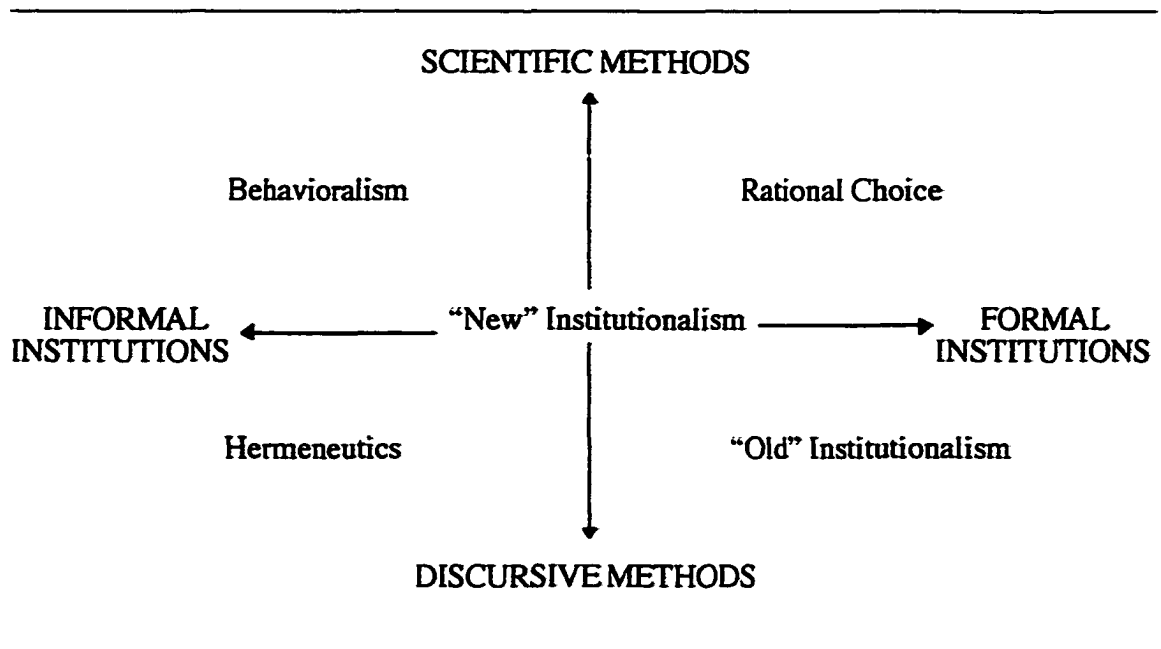
Note. From "The Common Space of Social Science Inquiry," by P. J. Ethington and E. L. McDonagh, 1995, Polity, XXVIII, p. 83.

organizational reality (Powell and DiMaggio, 1991, p. 12). Given the decidedly rational and materialist conceptualization of most other approaches to organizations, these similarities reveal much continuity between the old institutionalism and the new. Yet, as revealed in Table 2, the latter departs from the former in significant ways. In delineating some of these differences, attempts will also be made to delineate how the new theory can be used to explain ubiquitous problems of IDS program establishment and maintenance and how the old theory is employable in explaining idiosyncratic problems of such programs.

Old institutionalism is straightforwardly political in its analysis of group conflict and organizational strategy (Powell & DiMaggio, p. 12). For example, the TVA leadership co-opted external constituencies intentionally, trading off its creators' more populist agricultural designs to protect the rural electrification program (Selznick, 1949). By

Table 2

<u>Some Relevant Differences Between the "Old" and "New" Institutional Theories</u>

| | Old Institutionalism | New Institutionalism |
|---|---|---|
| Conflicts of interest | Central | Peripheral |
| Sources of inertia | Vested interests | Legitimacy imperative |
| Structural emphasis | Informal structure | Symbolic role of formal structure |
| Organization embedded in | Local community | Field, sector, or society |
| Nature of embeddedness | Co-optation | Constitutive |
| Locus of institutionalization | Organization | Field or society |
| Organizational dynamics | Change | Persistence |
| Basis of critique of utilitarianism | Theory of interest aggregation | Theory of action |
| Evidence for critique of utilitarianism | Unanticipated consequences | Unreflective activity |
| Key forms of cognition | Values, norms, attitudes | Classifications, routines, scripts, schema |
| Social psychology | Socialization theory | Attribution theory |
| Cognitive basis of order | Commitment | Habit, practical action |
| Goals | Displaced | Ambiguous |
| Agenda | Policy relevance | Disciplinary |

Note. From <u>The New Institutionalism in Organizational Analysis</u> (p. 13), by W. W. Powell and P. J. DiMaggio (Eds.), 1991, Chicago: University of Chicago Press. Copyright 1991 by The University of Chicago.

contrast, new institutionalism usually downplays conflicts of interest within and between organizations, or notes how organizations respond to such conflicts by developing highly elaborate administrative structures (Scott & Meyer, 1983). To the extent that conflict is ubiquitous for colleges and universities—but that its specific manifestation and nature can be

quite unique to/for each institution, both theories may be useful in understanding how these institutions deal with internal and external conflict as a problem for IDS programs.

Although the old and new theories agree that institutionalization constrains organizational rationality, each identifies different sources of constraint. Old institutionalism emphasizes the vesting of interests within organizations as a result of political tradeoffs and alliances (Powell & DiMaggio, p. 12). New institutionalism stresses the relationship between stability and legitimacy and the power of "common understandings that are seldom explicitly articulated" (Zucker, 1983, p. 5). Therefore the sources of various constraints limiting IDS programs may help determine whether they represent common or unique problems.

These differences are reflected in the treatment of organizational structure in the two traditions. Old institutionalism highlights the "shadowland of informal interaction" (Selznick, 1949, p. 260)—very idiosyncratic influence patterns, coalitions and cliques, particularistic elements in recruitment and promotion—both to illustrate how the informal structure deviates from and constrains aspects of formal structure and to demonstrate the subversion of the organization's intended, rational mission by parochial interests (Powell & DiMaggio, p. 13). New institutionalism, by contrast, locates irrationality in the formal structure itself, attributing the diffusion of organizational structures and processes to interorganizational (ubiquitous) influences, conformity, and the persuasiveness of cultural accounts, rather than to the functions they are intended to perform (Meyer & Rowan, 1977; DiMaggio and Powell, 1983).

Another fundamental difference between the two institutionalisms is in their conceptualization of the environment. Authors of older works (Selznick, 1949; Gouldner, 1954; Dalton, 1959; Clark, 1960) describe organizations that are embedded in local communities, to which they are tied by the multiple loyalties of personnel and by idiosyncratic interorganizational treaties (co-optation) hammered out in face-to-face interaction. New institutionalism focuses instead on nonlocal environments, either

organizational sectors or fields roughly coinciding with the boundaries of industries, professions, or national societies (Scott & Meyer, 1983). Environments, in this view, are more subtle in their influence; rather than being co-opted by organizations, they penetrate the organization, creating common lenses through which actors view the world (Powell & DiMaggio, p. 13).

Because institutionalization is seen as a process in which constraining relations with local constituencies evolve over time, "old" institutionalists regard organizations as both the units that are institutionalized and as the key loci of the process. Conversely, "new" institutionalists view institutionalization as occurring at the sectoral or societal levels, and consequently as interorganizational in locus (Powell & DiMaggio, p. 14). Organizational forms, structural components, and rules, not specific organizations, are institutionalized. Thus, whereas old institutionalism views organizations as organic (idiosyncratic) wholes, new institutionalism treats them as loosely coupled arrays of standardized (common) elements (Powell & DiMaggio, p. 14). Other important differences follow from this one.

Institutionalization, in the older view, establishes a unique organizational "character ... crystallized through the preservation of custom and precedent" (Selznick, 1949, p. 182). Rooted in psychology, the notion of character implies a high degree of symbolic and functional consistency within each institution. Moreover, because the character-formation process is believed to operate at the organizational level, it can only increase interorganizational diversity (uniqueness). In the new view, institutionalization is seen as tending to reduce variety, operating across organizations to override diversity in local environments (DiMaggio and Powell, 1983). The organization's loosely-coupled, standardized components often display minimal functional integration (Meyer & Rowan, 1977). Not only does new institutionalism emphasize the homogeneity of organizations, it also tends to stress the stability of institutionalized components (Zucker, 1977). By contrast, for old institutionalism, change is an endemic part of an organization's evolving adaptive relationship to its local environment (Selznick, 1957).

Underlying these differences is a considerable gulf between old and new theories in their conceptions of the cultural, or cognitive, bases of institutionalized behavior. For old institutionalists, the salient cognitive forms are values, norms, and attitudes. Organizations become institutionalized when they are "infused with value" as ends in themselves (Selznick, 1957, p. 17).

New institutionalism departs markedly from this essentially moral frame of reference. "Institutionalization is fundamentally a cognitive process" (Zucker, 1983, p. 25). "Normative obligations ... enter into social life primarily as facts" that actors must take into account (Meyer & Rowan, 1977). Not norms and values—but taken-for-granted scripts, rules, and classifications—are the stuff of which institutions are made. Rather than concrete organizations eliciting affective commitment, institutions are macrolevel abstractions, "rationalized and impersonal prescriptions" (Meyer & Rowan, 1977), shared "typifications," independent of any particular entity to which allegiance might be owed.

To the extent that the old theories of institutionalism consistently focus on the specifics of specific organizations, while the new theories consistently focus on commonalties and standardizations at the macro level, these two perspectives were expected to provide an illustrative conceptual framework for this analysis of the idiosyncratic and ubiquitous problems of IDS program establishment and maintenance. These theories were employed in a comparative approach to develop a grounded theory.

## Methods

Given researchers' arguments that qualitative research methods—and case studies specifically—are a preferred method for studying relationships between the micro level (cases) and the macro level (environments or contexts) (e.g., Greenwood & Hinings, 1996), because these methods allow for "careful analysis" of complex systems (Orton & Weick, 1990, p. 219), I concluded that qualitative methods were the most appropriate and useful strategy for this attempt to inform college and university IDS program understanding using institutional theories. Specifically, this study first employs the constant comparative

method to glean descriptive categories of undergraduate IDS programs from the 1996 directory—building a grounded theory of program establishment and maintenance—based on the relationships between various characteristics of their respective institutions and the administrative and organizational problems they encountered during their establishment and maintenance. The study then employs an embedded case study approach to test these categories against the realities of additional programs.

However, before a discussion of the constant-comparative and case-study methodologies is presented, an overview of the 1996 program directory—its history, process, and contents—is warranted. This brief exposition should clarify the scope and logistics of the data collection processes that had taken place prior to this study. The criteria for programs' inclusion in the directory, as this study's data set, are also highly relevant.

## Pre-Study Data Collection

In 1994 I was selected by the Board of Directors of the Association for Integrative Studies to edit the second edition of the association's index _Interdisciplinary Undergraduate Programs: A Directory_. In lieu of payment, I was given permission to use the information collected for the directory in this research project. My first task was to develop a set of criteria on which to evaluate programs' eligibility for inclusion in the directory.

In consultation with the association's board, we established six eligibility criteria. To warrant inclusion, program information was required to indicate clearly: (a) _true_ interdisciplinarity—the program did not simply offer a collection of disciplinary perspectives organized under an interdisciplinary heading; (b) _explicit_ interdisciplinarity—there was no question from the information provided that the program was truly interdisciplinary; (c) _intentional_ interdisciplinarity—there was no question from the information provided that the program represented a conscious attempt to further interdisciplinary learning, knowledge, and understanding, and did not exist for some other reason; (d) _institutionally-recognized_ interdisciplinarity—the program was not so informal as to be outside the scope of the larger

institution's knowledge or review (e.g., a single faculty member's pet project); (e) *persisting* interdisciplinarity—the program was not one-time, temporary, or pending termination; and (f) *undergraduate* interdisciplinarity—the focus of the program was clearly on education at the undergraduate level (Edwards, 1996a, p. ix).

The second task was to develop a questionnaire for program personnel. My survey was patterned on the one constructed by Bill Newell for the first edition of the directory and was approved by the AIS board; it appears as Appendix A. The questionnaire was divided into three sections: (a) a mandatory section, in which answers would be brief and specific (such as titles, numbers, and answer-lines to be checked or left blank) and to which at least two syllabi or course descriptions were required to be attached; (b) an optional section, in which program personnel could provide more details and more subjective information; and (c) a request section, in which programs were encouraged to submit "any brochures, annual reports, planning documents, self-studies, etc. that bring out distinctive features of the program." This format was anticipated to facilitate a higher response rate given that the mandatory information could be provided quickly and easily.

Approximately 4,000 surveys were mailed to individuals, known programs, and institutions in late 1995. Second-round mailings were sent to selected non-respondents, particularly those non-responding programs that had been represented in the first edition of the directory. Total returns numbered over 750 by mid-spring 1996.

Initial reading and analysis of the responses indicated that many programs did not meet the eligibility criteria—many offered only collections of disciplinary courses grouped under interdisciplinary headings. While this manifestation did represent an attempt at interdisciplinarity, it did not fulfill the criteria for true and explicit interdisciplinarity. Such activities are often little more than "curricular Hamburger Helper,"[7] allowing institutions to serve more students while placing the onus of interdisciplinary thought and connection of

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[7]This vivid analogy was made by Beth Casey at a session of the 1996 annual meeting of the Association for Integrative Studies.

ideas on the students. Such programs were excluded from further consideration.

Other responses were too incomplete to permit reasoned judgments of their eligibility for the directory and required additional follow-up. The spring of 1996 was spent determining programs' eligibilities and requesting additional information from those whose completed surveys and supporting materials (if any were provided) did not provide sufficient information on which to base eligibility decisions. Follow-ups were also made to those eligible programs whose responses were unclear and/or in need of supporting materials, such as syllabi. In addition, over two dozen programs were excluded because they were outside the U.S.; apologies were sent for having overlooked them in the mailing list and thus for having wasted their time and postage in returning the questionnaires.

Over 350 programs were ultimately determined to be ineligible. These responses were shipped to the AIS officers for their perusal and scrutiny. They returned three dozen as possibilities, asking that I give them further consideration. They also suggested additional follow-up with programs from the first edition that had still not responded—follow-up in the form of offers to simply edit their first-edition descriptions. These follow-ups took place during the summer of 1996 concurrent with the faxing or mailing of draft descriptions to included programs for their comments and revisions. At the end of the summer, the directory contained 410 one-page descriptions of programs. These descriptions, and the plethora of supporting and supplemental documentation used to generate them, served as the data set for the constant comparative analysis.

Constant Comparative Analysis

Overview. The constant comparative method, as first developed by Glaser and Strauss (1967) and honed by Conrad (1978, 1982) and Strauss and Corbin (1990), is an inductive approach aimed at building a grounded theory, i.e., a theory grounded in the pre-existing data rather than data collected to verify a pre-existing theory. This method is a process by which the researcher systematically sorts and analyzes data while moving from the empirical to the conceptual and theoretical level through the identification of underlying

patterns in the data (Conrad, 1985). This analysis began with a systematic sorting and analyzing of program data from the 1996 directory.

As the constant comparative analysis progressed, it moved from comparison of data category-to-category to category-to-property comparison and eventually to property-to-property comparison. Further refinement of categories, subcategories, and their interrelations gradually led to the development of a grounded theory of IDS program establishment and maintenance based on the assumptions of old and new theories of institutionalism.

The constant comparative method was chosen for this analysis for several reasons. First, it is probably the most appropriate research strategy for building theories of academic process and change because it facilitates "the joint process of coding and analysis until theoretical saturation is reached" (Conrad, 1985, p. 340). Second, it is quite useful in the construction of grounded theories using comparisons of groups and maximization of differences (p. 340). Finally, this method is preferable because, while it rejects positivistic, deductive conventions, it also accepts the positivistic assumption that theory's primary function is explanation and prediction. The theoretical propositions (grounded theory) derived from the constant comparative analysis are used to make predictions about additional programs; these predictions are then tested through case study analysis.

Creating categories. According to Glaser and Strauss (1967, p. 105), the constant comparative method is composed of four distinct stages: (a) comparing incidents applicable to each category, (b) integrating categories and their properties, (c) delimiting the theory, and (d) writing the theory. In the first stage, I coded each incident (program) into as many categories of analysis as possible using Strauss and Corbin's (1990) guidelines for open coding. This information sorting and coding process generates categories defined in terms of their properties (characteristics/attributes) and dimensions (continua/ranges/rankings). Therefore, the categories created during open coding were very descriptive and rather

concrete. According to Strauss and Corbin, "[t[his is perhaps the most detailed type of analysis, but the most generative" (p. 72). Both pieces of this statement proved to be true.

As I gained more skill at sorting and coding cases, the process began to become more routine, and as foretold by Strauss and Corbin, the number of categories began to mount. Eventually, no additional categories could be identified from the program data; I then attempted to combine stages one and two. While sorting and coding additional cases, I began to consider possible larger theoretical properties of the categories and to look for relationships between the categories.

Integrating categories. As the analysis progressed to the second stage, I sought to group and link categories according to the different perspectives and assumptions of the old and new institutional theories using what Strauss and Corbin deem "theoretical sensitivity:"

> Theoretical sensitivity refers to a personal attribute of the researcher. It indicates an awareness of the subtleties of meaning of data. One can come to the research situation with varying degrees of sensitivity depending upon *previous reading* and *experience* with or relevant to an area. It can also be developed further during the research process. Theoretical sensitivity refers to the attribute of having insight, the ability to give meaning to data, the capacity to understand, and capability to *separate the pertinent from that which isn't*. All this is done in conceptual rather than concrete terms. It is theoretical sensitivity that allows one to develop a theory that is grounded, conceptually dense, and well integrated—and to do this *more quickly* than if this sensitivity were lacking. (1990, pp. 41-42, emphasis added)

Even though the lengthy open coding process had been a useful experience, and the many generated categories were interesting and informative, the theoretical sensitivity gained in planning and researching this study led me to anticipate that only a subset of the categories

were truly relevant to an institutional-theory framework and, thus, would prove promising for my purposes.

As this stage of the analysis progressed, I began to think about possible larger theoretical properties of the categories and to look for relationships between the categories. Initially, my theoretical sensitivity led me to consider only the most basic distinctions between the new and old institutional theories to frame the categories. Operationally defined, preliminary categories framed by new institutionalism would be quite broad and general, encompassing macro level (organizational and environmental) descriptive information available from all, or almost all, cases (programs). Preliminary categories framed by old institutionalism would be much more focused and specific, encompassing micro level (program and campus) descriptive information that might prove so idiosyncratic as to be available from only some, perhaps even only a few, cases (programs). Given these conceptual frames of reference, some categories were easily removed from further consideration.

As I further scrutinized the categories according to the basic-but-different theoretical perspectives and assumptions outlined above, additional categories were dropped from the remainder of the analysis. Eventually, two sets of open-coded categories revealed themselves as most promising and applicable: a set of two categories framed by new institutionalism and a set of six categories framed by the older theory.

In my subsequent attempts to integrate these categories and their properties, I utilized Strauss and Corbin's (1990) axial coding strategy.

In axial coding our focus is on specifying a category (*phenomenon*) in terms of the conditions that give rise to it; the *context* (its specific set of properties) in which it is embedded; the action/interaction *strategies* by which it is handled, managed, carried out; and the *consequences* of those strategies. These specifying features of a category give it precision, thus we refer to them as

*subcategories.* In essence, they too are categories, but because we relate them to a category in some form of relationships, we add the prefix "sub." (Strauss & Corbin, p. 97, emphasis in original)

This process involves putting data "back together in new ways" (Strauss & Corbin, p. 96) after the open coding process. In addition to looking for connections between properties within categories, I also sought patterns and connections across categories. Again the various assumptions of the new and old institutionalisms guided and framed this process. New institutionalism lead me to connect various categories and properties related to broad characteristics, especially those external to programs and/or institutions, while old institutional theory lead me to seek category and property connections between more specific characteristics, especially those internal to programs or at the program-to-institution level.

Delimiting and writing the theory. The final stage of data coding prior to delimiting the grounded theory was selective coding (Strauss & Corbin, p. 177). This process involves using the conceptual framework and the insight gained during previous coding to select the "core category" of the study. The core category is the central phenomenon around which all other categories and subcategories are integrated (p. 176). Selective coding typically involves a systematic process of relating the core category to other categories and subcategories in an attempt to give final clarification and validity to those relationships prior to constructing and postulating the grounded theory.

As I attempted to further integrate the coding data in searching for and analyzing the core category, smaller and more precise sets of higher-level concepts emerged. I employed these concepts and integrations as I continued to delimit or funnel the theory. When I was convinced that I had a comprehensive and integrated theory, I articulated it as a set of propositions about undergraduate IDS programs in contemporary American higher education. This resultant grounded theory was then tested using case study methodology.

## Case Study Analysis

Overview. According to Perrow (1986), "the carefully documented and analyzed case study" is "the forte of the institutional school" (p. 158). Thus, the appropriateness of case study methodology for this analysis should be clear. Its relevance for academic programs in colleges and universities is also rather obvious:

> The case study is the method of choice when the phenomenon under study is not readily distinguishable from its context. Such a phenomenon may be a *project* or *program* in an evaluation study. Sometimes the definition of this project or program may be problematic, as in determining when the activity started or ended— an example of a complex interaction between a phenomenon and its (temporal) context (Yin, 1993, p. 3, emphasis in original).

In general, case study methodology is the most suitable strategy when the primary research questions are "how" and "why," when the researcher has little or no control over the situation or events under analysis, and when "the focus is on a contemporary phenomenon within some real-life context" (Yin, 1994, p. 1; see also Caronna et al., 1997).

Yin (1993) identifies four important design issues that have guided this analysis. First, the major unit of analysis (or "case") must be identified. "Simple designs can have single units of analysis; more complicated designs can have multiple units, embedded within each other (e.g., a school might be the main single case, but an embedded unit of analysis might be the students in the school)" (Yin, 1993, p. 33). This analysis began with programs as the unit of analysis, but it expanded into an embedded case study as institutions and environments, administrators and faculty, and associations and non-profit organizations also came under scrutiny.

Vaughan asserts that "organizations do not exist in a vacuum. At the same time that they provide a context for individual behavior, they have a context—an organizational

environment—that must be taken into account" (1992, p. 178). In their embedded case study design principles[8] derived from this premise, Caronna et al. (1997) argue that researchers should incorporate this observation in multiple ways when attempting to systematically examine organizations:

> First, they should specifically identify multiple levels of analysis—such as individuals embedded in organizations, organizations embedded in environments (including organizational sets, populations, and fields), or individuals, organizations, and environments (e.g., Tosi, 1992; for a related discussion, see Klein et al., 1994). Second, they should conceptualize these levels as partially independent from one another, examining the characteristics and actions of a context that are (seemingly, perhaps) unrelated to an embedded case, and the elements of a case that seem divorced from its context. (p. 5)

I believe that my incorporation of the various "units" and levels listed above satisfies the criteria set by Caronna et al. and Yin.

Yin's second important design issue centers around the decision of whether a single or multiple cases will be the subject of study (1993, p. 33). He argues that the number of cases impacts the goals and design (exploration, description, explanation) of the study as well as the robustness of the findings (the more replications, the more robust the results). Obviously, given my goal of testing a grounded theory of IDS program establishment and maintenance in American higher education, this analysis required multiple cases.

The third case-study design issue for Yin is case selection. He offers several selection criteria—"critical" cases, "best example" cases, and "easily-accessible/feasible"

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[8] An embedded case study design: (a) identifies at least two distinct levels of analysis; (b) investigates the directions of influence between levels of analysis; (c) investigates the nature of influence between levels of analysis; (d) assesses the degree of coupling between and within levels of analysis; and, (e) utilizes data collected at each level of analysis, from independent sources.

cases (1993, p. 34) --as well as advice on screening preliminary case candidates. Given the extensive collection of programs in the data set, identification of additional relevant cases was more difficult than their selection. Almost 50 programs not represented in the directory (data set) were identified as potential case studies, and 32 were eventually selected. These identification and selection processes are described in detail in Chapter 7.

The final design issue for Yin is the necessity of multiple data collection strategies. While his advice centers on the timing of data collection--all at once, over an extended period, or longitudinally (1993, p. 35)--Caronna et al. argue that data should be collected at each level of analysis and from independent sources whenever possible. They contend that "without independent data sources, the portrait of case/context relations will be incomplete and biased" (1997, pp. 12-13). This analysis sought a variety of micro and macro data on programs from a variety of "case" (program) and "context" (program-external) sources. This triangulation of data was expected to provide a clearer image of the cases and to improve the overall reliability and validity of the analysis.

The case study analysis proceeded as follows: (a) Selected cases were sorted according to the deductions and propositions that arose from the comparative stage using only the most basic descriptive categories from the initial stages of the analysis; (b) the cases were then analyzed in depth using the strategies discussed above; and (c) dependent on how well the sorting was found to correspond to the realities of the full weight of the data, conclusions were reached as to soundness of the hypothesis and the expectations of the project. My expectation was that, if my assumptions about the usefulness of old and new theories of institutionalism for understanding the unique and common problems of IDS programs were correct, then the case-study programs would be found to have been appropriately placed in their various categories.

Participants. After having received approval by the School of Education Human Subjects Review Committee at the College of William and Mary (see Appendix B) in the fall of 1999, brief electronic mail and/or telephone interviews were used to supplement

analysis of written documents and other information either readily available to me or already in my possession. The program personnel contacted for information were not deceived nor placed at any personal or professional risk as part of their participation. They were fully informed: (a) that they were being contacted as part of a research study on IDS programs, (b) of the nature of this study, (c) of the nature of the questions they would be asked (program information and history), (d) that they were under no obligation to participate and were free to withhold information at their discretion, and (e) that the results of this study would be made available to them in a timely and convenient manner.

The specific interview items did not pose any risks to participants because the subject of the questions was programs, not people. Program personnel were surveyed about program history and demographics (e.g. type, size, faculty, budget). This information was concrete and objective, and was expected to be readily available to participants if not part of their general knowledge. Participants were free to provide their own subjective thoughts, opinions, and perspectives; however. from the outset this type of information was clearly defined as optional. Telephoned participants were also periodically reminded that they could decline to respond.

<div align="center">Overview of Subsequent Chapters</div>

Given this study's dual purposes of first distinguishing between common and unique establishment and maintenance problems for IDS programs and then utilizing an institutional-theory framework to explain how these problems are addressed by their institutions, the presentation of findings is separated into multiple chapters. Chapter 4 offers a step-by-step guide through the various data coding stages of the constant comparative analysis. Each stage is summarized separately and in depth. In Chapter 5, analysis and presentation of trends and significant findings are provided.

Chapter 6 delineates the analysis's movement from the empirical to the theoretical. The connections and relationships between categories identified in the data coding and analysis stage are utilized to delimit the premises of the theory. The process of developing

and refining the theory is discussed, culminating in a delineation of the grounded theory of IDS program establishment and maintenance.

The seventh chapter provides a précis of the second phase of the methodology—the case study analysis. An overview of the cases is offered for context and clarity, then data gleaned from these cases are compared to the grounded-theory predictions in an attempt to test the new theory. Chapter 8 combines the usual contents of more-traditional results and discussion chapters; it answers the study's research questions using the theory developed herein and discusses the theory's interpretations and implications.

Chapters 4, 5, 6, and 7 are written with a general academic audience in mind. As such, readers accustomed to strictly quantitative analyses are forewarned that these chapters contain more discussion of procedures and results than are common in more-statistical studies. I believe that the qualitative methods employed here warrant such exposition. In the interest of reader understanding—not to mention research validity and reliability—descriptions and explanations of cases, methods, and findings are frequently offered.

Likewise, readers well-versed in qualitative methods may find these four chapters rather involved and detailed. Again, I believe this level of disclosure and description are necessary, especially given my own lack of experience with these methodologies. Furthermore, qualitative researchers may be surprised by the amount of numeric information in these chapters. I found that displaying the coding results in tabular form often rendered them easier to conceptualize and comprehend. Overall, my guiding intent for Chapters 4, 5, 6, and 7 is that they should tell the story—fully and descriptively—of how I employed the methods chosen and introduced in the methodology chapter to reach the conclusions expounded in the concluding chapter.

# CHAPTER 4

## CATEGORIZING THE DATA

### Overview

This chapter provides a detailed synopsis of the data-coding process. Highlights of the constant comparative analysis are provided and discussed to illustrate the search for relevant data categories and connections. Each phase of the data coding and analysis process--open coding, axial coding, and selective coding--is given separate attention. This chapter is intended to move from a general understanding of the cases (programs) to an integrated cognition of the various relationships between the characteristics, realities, and problems of IDS program establishment and maintenance.

### Open Coding

The initial stage of the constant comparative analysis involved coding data from the 1996 directory of IDS programs into descriptive and concrete preliminary categories with special attention to and scrutiny for any program traits possibly connectable to the administrative and organizational problems sought in the first research question. The programs (cases) offered an interesting national snapshot of undergraduate IDS programs during the 1995-96 academic year. As was briefly discussed in Chapter 3, theoretical sensitivity to the data and the institutional-theory literature led me to focus on particular types of program-specific as well as external and contextual program information.

The conceptual framework provided by the New theories of institutionalism yielded six key program attributes addressing broad, general, often externally-focused program realities: (a) curricular form and/or program structure; (b) time since establishment (founding year and age of program); (c) institutional type (Carnegie classification); (d) institutional control (public or private); (e) institutional location (state, geographic region,

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and regional accrediting association membership); and, (f) institutional frequency (presence and number of additional IDS programs within the institution). Data related to these properties were available for most, sometimes all, cases (programs).

Employment of old institutionalism as a framework yielded a set of six additional attributes focused on more-specific, more internally-specific program information: (a) whether programs' establishments were led by specific people; (b) whether these establishments were funded by extra-institutional sources; (c) whether programs' structures and/or curricula were modeled on other phenomena; (d) whether these foundings were each institution's first, simultaneous-multiple, or subsequent IDS establishments; (e) whether any significant events—growth, reduction, or revision—were reported in programs' histories; and (f) whether respondents described any current program, administration, or institutional conditions, realities, and/or individual perceptions. Given the nature of these attributes, relevant data was generally available for only some, sometimes only a few, cases.

Using normal open-coding methodologies, these two sets of theory-derived properties were grouped together under three general categories: context, establishment, and maintenance. These categories, and the operationalization of the properties and their dimensions, are outlined in Table 3 and are discussed below.

## The Situation Category

The *Situation* category represents four basic properties (characteristics or attributes) of IDS programs' structural, institutional, and environmental realities in 1995-96.

Program form. The first property, *Program Form*, reflects the most basic structural and/or curricular characteristic of each program. In the directory, the programs had been grouped into 31 curricular types. However, in an effort to consolidate these diverse categories into more-manageable groupings using meaningful, shared structural and/or curricular features, I was further able to group the programs in these 31 types into four basic forms: (a) Major/Large Structures, (b) General Education, (c) Discipline-Based, and

Table 3

Preliminary Open-Coding Categories, Properties, and Dimensions

| Category Property | Dimensions | Explanatory Table |
|---|---|---|
| **Situation** | | |
| Program Form | Major/Large Structure; General Education; Discipline-Based; Applied | Table 4 |
| Institutional Type | Research; Doctoral; Master's; Baccalaureate; Associate | Table 5 |
| Institutional Control | Private; Public (Coordinating Board); Public (Governing Board); Public (Joint) | |
| Region (Accreditation) | New England; Middle States; Southern; North Central; Northwestern; Western | Table 6 |
| **Establishment** | | |
| Founding Period | Seed Years (1906-59); Early Growth (1960-67); First Boom (1968-79); Slowed Growth (1980-85); Mini-Boom (1986&87); Brief Repose (1988&89); Third Boom (1990-95) | Table 7 |
| Founding Order | Primary (First); Simultaneous; Subsequent | |
| Champions | Groups; Individual Faculty; Individual Administrators; | |
| Modeling | One Other Program; Multiple Other Programs; "Great Books" Tradition; Workshops/Conferences; Recent Scholarship; Institutional Courses | Table 8 |
| External Funding | Government Agencies; Non-Profit Organizations; Both | |
| **Maintenance** | | |
| Program Age | Ancients (1906-59); Seniors (1960-67); Adults (1968-79); Adolescents (1980-89) Infants (1990-95) | Table 9 |
| Institutional Frequency | Only IDS Program; One of Two; One of Three or More | |
| Lifecycle (Past) | Growth; Reduction; Revision | |
| Current Reality | Reported Problems; Reported Positives | |

(d) Applied forms.[9] The manner in which I grouped the directory's program headings within the four dimensions of the Program Form category is detailed in Table 4.

Table 4

Dimensions and Program Frequencies of the Program Form Property

| Dimension | Program Headings Contained | $f$ |
|---|---|---|
| Major/Large Structures | Institutions; Cluster Colleges; Major Programs; Adult Education; Honors Programs | 83 |
| General Education | Lower and Upper Division, Alternative; Lower and Upper Division, Institution-Wide; Lower Only, Alternative; Lower Only, Institution-Wide; Upper Only | 88 |
| Discipline-Based | Humanities; Peace/Justice Studies; Religious/Religion Studies; Social Sciences; Natural Science; Science, Technology, and Society; Liberal Arts/Studies; American Studies; Ethnic/Cultural/Area Studies; International Studies; Women's and Gender Studies; Environmental Studies; World/Global Studies; Interdisciplinary Courses; Study Groups | 170 |
| Applied | Human Development/Gerontology; Neuroscience; Applied Science and Technology; Urban Studies; Educational Studies/Teacher Prep; Film/Media Studies | 63 |

In 1995-1996, Discipline-Based forms were more than twice as common as any other program form, with Major Structures and General Education forms being about equally likely, and both being slightly more likely than Applied ones. Over sixty percent of

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[9] Six of the 410 programs were excluded from consideration because they were still in the planning stage in 1995-1996.

the Major Structures are Honors programs; almost forty percent of the General Education programs are Lower and Upper Division, Institution-Wide; and well over fifty percent of the Discipline-Based programs are a combination of Women's/Gender Studies, Ethnic/Cultural/Area Studies, and American Studies.

Institutional type. The second property of the Situation category is *Institutional Type*, representing five general characteristics of the 280 colleges and universities in which the IDS programs existed during the 1995-1996 academic year. For these five dimensions--Research, Doctoral, Master's, Baccalaureate, and Associate --I borrowed the rationale for differentiation and the general institutional classifications themselves from the Carnegie Foundation for the Advancement of Teaching; for complete definitions of each Carnegie classification. The 1994 edition of A Classification of Institutions of Higher Education was used, as its designations were the most recent to the year of data collection. The contents of these dimensions and the distribution of programs across them are presented in Table 5.

Table 5

Dimensions and Program Frequencies of the Institutional Type Property

| Dimension | Carnegie Classifications Contained | $f$ |
|---|---|---|
| Research | Research I; Research II | 118 |
| Doctoral | Doctoral I; Doctoral II | 57 |
| Master's | Master's I; Master's II | 134 |
| Baccalaureate | Baccalaureate I; Baccalaureate II | 84 |
| Associate | Associate of Arts; Specialized | 11 |

Institutional control. The third emergent property of the Situation category is *Institutional Control*. This attribute dimensionalizes institutions as public or private according to the presence of governmental or private institutional control. Data coding revealed that the programs represented in the directory are only slightly more likely to be private than public (204 programs in private institutions; 200, in publics).[10] This ratio of private host institutions to public ones is quite close to the national ratio of institutional control—about 55% of all American institutions of higher education are private; about 45%, public. Therefore, I concluded that this sample of IDS program personnel's voluntary responses to the directory's questionnaire is reasonably reflective of interdisciplinarity's distribution across American institutions of higher education.

Within the Public dimension, I found that states utilizing coordinating boards for their higher education systems are much more likely to contain programs in this sample than are states employing either governing boards or joint boards. While 26 states (52%) use coordinating boards, seventy percent of the public-institution IDS programs in the data set are located in coordinating-board states. While 19 states (38%) use governing boards, only a little over one-quarter of public programs are located in such states. Moreover, of the eight states (Alaska, Arkansas, Hawaii, Idaho, Kansas, New Mexico, and South Dakota) not represented at all by the directory's programs, four use governing boards.

Region. The geographic *Region* in which each program's college or university is located is the fourth property of the Situation category. Rather than basing regional groupings solely on geography, which could lead to subjective, if not arbitrary decisions about regional boundaries, I decided to use the states' memberships in accrediting associations as lines of regional demarcation. These groups represent both proximal and

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[10] The closeness of the public-to-private ratio was initially rather surprising to me given the perception that curricular innovation and freedom are easier and more common in private education. My surprise was tempered upon further review of Newell's 1988 analysis (of his 1986 program directory) in which he found the majority of IDS programs to be in public institutions.

administrative possibilities for the sharing and spreading of interdisciplinary ideas and forms. The specific states and program totals for each of the six U.S. regional accrediting associations are presented in Table 6.

Table 6

Dimensions and Program Frequencies of the Region Property

| Dimension | States | $f$ |
|---|---|---|
| New England | Connecticut; Maine; Massachusetts; New Hampshire; Rhode Island; Vermont | 47 |
| Middle States | Delaware; District of Columbia; Maryland; New Jersey; New York; Pennsylvania | 93 |
| Southern | Alabama; Florida; Georgia; Kentucky; Louisiana; Mississippi; North Carolina; South Carolina; Tennessee; Texas; Virginia | 84 |
| North Central | Arkansas; Arizona; Colorado; Illinois; Indiana; Iowa; Kansas; Michigan; Minnesota; Missouri; Nebraska; North Dakota; Ohio; Oklahoma; New Mexico; South Dakota; Wisconsin; West Virginia; Wyoming | 113 |
| Northwestern | Alaska; Idaho; Montana; Nevada; Oregon; Utah; Washington | 27 |
| Western | California; Hawaii | 40 |

Although the programs are spread across the U.S., they are most common in the North Central region. It appears that state's citizen populations impact the distribution of programs across the accrediting regions more than do the numbers of states per region. For example, while the North Central grouping contains twenty-eight percent of the programs in this sample, it contains almost forty percent of all states. Many of the 19 states in this region are low-population states. Conversely, the Middle States region contains almost twenty-five percent of this program sample, while containing only about ten percent

of all states. Several states in the Middle States region (e.g., New York and Pennsylvania) have large populations. Likewise, while the Northwestern region contains over thirteen percent of all states, it contains less than seven percent of all programs because its states tend to have lower population totals. And, the Western region contains only two states, but held almost ten percent of these IDS programs in 1995-1996 due to California's large population.[11]

## The Establishment Category

The second data category to emerge from the open coding process, *Establishment*, provides insight into internal (on-campus), external (off-campus), and temporal factors categorized as contributing to, facilitating, or impacting the establishment of the IDS programs in the data set. Program properties grouped under this category include Founding Period, Founding Order, Champions, Modeling, and External Funding.

Founding period. I created the Establishment category's first property, *Founding Period*, by grouping and separating programs' founding years according to the average number of founding dates per year. Establishment dates were separated according to high numbers of program establishments and low numbers of program establishments within certain time frames. Such coding allowed the founding dates of 387 programs to be considered.[12] Separating founding trends according to average numbers of establishments per specific time period revealed seven distinct dimensions, which I labeled: Seed Years, Early Growth, First Boom, Slowed Growth, Mini-Boom, Brief Repose, and Third Boom. The Founding Period property and its seven dimensions are presented in Table 7.

The Seed Years (1906-1959) dimension spans the first six decades of the twentieth century and reveals a slow germination of program establishments. The Early Growth (1960-1967) dimension reveals the early beginnings of the IDS movement in American higher education in the early- and mid-1960s. The First Boom (1968-1979) dimension is

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[11] All programs in the Western region are in California. In fact, California's total of 40 programs is the most for any state.

[12] Some programs provided no founding dates; others, dates too vague for coding.

Table 7

Dimensions and Distributions of the Time-Period Property

| Dimension | Founding Years | $f$ | Average Foundings/Year | Percent of All Foundings |
|-----------|----------------|-----|------------------------|--------------------------|
| Seed Years | 1906-1959 | 21 | 0.4 | 5.4 |
| Early Growth | 1960-1967 | 30 | 4.0 | 7.8 |
| First Boom | 1968-1979 | 152 | 12.1 | 39.3 |
| Slowed Growth | 1980-1985 | 42 | 7.5 | 10.9 |
| Mini-Boom | 1986 & 1987 | 30 | 14.5 | 7.8 |
| Brief Repose | 1988 & 1989 | 17 | 8.5 | 4.4 |
| Third Boom | 1990-1995 | 95 | 15.7 | 24.5 |

Note. The six programs reported as planned for initiation in 1996 are omitted here because, at the time of data collection, they had not yet been "founded."

labeled such due to the three-fold increase in average-foundings-per-year that occurred during this twelve year period as compared to the previous one. The Slowed Growth (1980-1985) dimension reflects a significant six-year reduction in average-foundings-per-year that occurred in the early- to mid-1980s. During the subsequent two-year Mini-Boom (1986-1987), average-foundings-per-year jumped significantly, almost doubling as compared to the previous period. Also reflecting a brief period, the Brief Repose (1988-1989) dimension represents two years during which average-foundings-per-year dropped to levels almost equal to the Slowed Growth period. The Third Boom (1990-1995) reflects a third significant increase in average-foundings-per-year. With the highest average of any boom period, the Third Boom has an average number of foundings per year more than double the Slowed Growth and almost double the Brief Repose period.

Founding order. The second program property, *Founding Order*, refers to program-establishment characteristics in terms of numbers and temporal relationships of single or multiple IDS programs within individual institutions. Thus, I separated this property into three dimensions: Primary (first or only IDS program on campus), Simultaneous (multiple programs on a campus sharing first-to-be-established status in terms of founding year), and Subsequent (programs founded after one or more others on campus). Of the 394 categorizable programs, 268 are primary establishments; only five are simultaneous establishments; and, 121 represent subsequent establishments.[13]

Champions. Programs are established by people. These *Champions* are grouped according to the roles and numbers of campus personnel identified as having been instrumental in programs' foundings and include: (a) individual faculty members; (b) individual administrators; and (c) groups of faculty, administrators, students, alumni, donors, and/or community members. Information about the people involved in programs' establishments was provided in 229 cases. Almost eighty percent (183) of these programs reported that their initial advocacy came from groups. Individual-administrator champions (26) appeared slightly more often than individual-faculty champions (20). When identified, administrative champions were often presidents or deans. Interestingly though, faculty champions often continue to serve as the program director/coordinator.

Modeling. The fourth Establishment property, *Modeling*, acknowledges the basis, pattern, and/or role model(s) for each program. Operationally, data for this property were coded by whether programs' role models are: one other program, multiple other programs, the "Great Books" tradition, workshops/conferences, recent scholarship, or courses within the institution. The distribution of programs across the six dimensions of this property are presented in Table 8.

Sixty-six programs indicated the presence of role models. Overall, other programs

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[13] Ten programs either did not report founding dates or reported general time frames indiscernible as prior or subsequent to others, and thus, were not included.

Table 8

Dimensions and Distributions of the Modeling Property

| Dimension | $f$ |
|---|---|
| One Program | 20 |
| Multiple Programs | 19 |
| Great Books Tradition | 7 |
| Workshops/Conferences | 6 |
| Recent Scholarship | 10 |
| Institutional Courses | 4 |

are by far the most common bases for the programs in this analysis, accounting for almost sixty percent of all modeling. The One Program dimension and the Multiple Programs dimension are practically equivalent in likelihood. The Great Books Tradition dimension and the Workshops/Conferences dimension each describe the model for about ten percent of the modeling. The Recent Scholarship dimension contains over fifteen percent of the modeled programs, while the Institutional Courses dimension contains only six percent.

External funding. The final general property identified from the establishment data is *External Funding*. The key dimensions of this property are characterized by any extra-institutional outlays and expenditures that served as programs' initial funding sources, distinguishing between governmental and private sources. These "patrons" are dimensionalized as: government agencies, non-profit organizations, or both. Forty-two programs provided information on the presence of external initial funding sources. Over two-thirds (29) of the group were established through non-profit organizational funds.

Governmental funds were received by nine programs, while only four programs received initial funding from both types of sources. The National Endowment for the Humanities was cited as a funding source in almost twenty-five percent of the External Funding cases.

The Maintenance Category

The third open-coding data category, *Maintenance*, pertains to the administrative and organizational realities faced by programs since their establishment. This category contains information on specific events (program developments such as revision, growth, or reduction) and/or respondents' perceptions (specific language describing programs' realities and relationships within their institutions).[14] Therefore, objective program information on past developments as well as more subjective information on then-current program situations were considered during data coding. Program properties grouped under this category include Program Age, Institutional Frequency, Lifecycle (Past), and Current Reality. Each is explained separately below.

Program Age. The *Program Age* property of the Maintenance category is another iteration of programs' founding years; it dimensionalizes programs according to their length of existence. Given consideration of programs' average ages and distributions of programs across similar ages, five dimensions were discernible. These dimensions correspond closely with the Founding Period dimension; however, this correspondence was not anticipated. Programs are dimensionalized as being either: Ancients, Seniors, Adults, Adolescents, or Infants. These dimensions and their distributions are outlined in Table 9.

The mean (average) age of the programs in the data set is 17.2 years; the median age, 17 years. About one-half of the programs were founded prior to 1979 and about one-half since. This chronology is reminiscent of the distinction between the end of the First Boom and the beginning of the Slowed Growth period. The modal age was only one year, with the two other most common program ages being six and four years. Therefore,

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[14] *In vivo* coding is the term Strauss and Corbin (1990) use for data categorization of specific words and wording.

Table 9

Dimensions and Distributions of the Program Age Property

| Dimension | Founding Years | *f* | Age Range | Mean Age | Median Age |
|-----------|----------------|-----|-----------|----------|------------|
| Infants | 1990-1995 | 95 | 1 to 6 | 3.5 | 4.0 |
| Adolescents | 1980-1989 | 89 | 7 to 16 | 11.1 | 10.0 |
| Adults | 1968-1979 | 152 | 17 to 28 | 20.9 | 23.0 |
| Seniors | 1960-1967 | 30 | 29 to 36 | 28.9 | 32.0 |
| Ancients | 1906-1959 | 21 | 37 to 90 | 42.6 | 48.0 |

an age grouping for these newest programs seemed appropriate. Thus, the five Age

dimensions were constructed as follows: (a) the Infants dimension contains the 95

programs found to be in existence for one to six years (corresponding to the Third Boom

period of foundings); (b) the Adolescents dimension contains the 89 programs existing

seven to sixteen years (corresponding to a combination of the Slowed Growth, Mini-

Boom, and Brief Repose periods); (c) the Adults dimension contains the 152 programs

existing 17 to 28 years (equivalent to the First Boom); (d) the Seniors dimension contains

the 30 programs in existence for 29 to 36 years (same as the Early Growth period); and (e)

the Ancients dimension contains the 21 programs in existence for 38 to 90 years

(synonymous with Seed Years).

Institutional frequency. The *Institutional Frequency* property of the Maintenance

category is similar to the Establishment category's Founding Order property in that both

provide insight into the amount of interdisciplinarity present on a campus. Here I

dimensionalized programs according to whether they are: (a) the institution's only IDS

program, (b) one of two programs, or (c) one of three or more programs. I found that 191

programs—almost one-half of the sample—are "Only" programs, with another 120 existing as "One of Two" and 93 existing as "One of Three or More."

**Lifecycle.** The third Maintenance property, *Lifecycle*, refers to any structural and/or curricular changes that program respondents reported having occurred since establishment, distinguishing between size and/or scope changes in terms of growth, reduction, and revision (without a change of size/scope). I found data codable as lifecycle events for 142 programs. Over one-half (78) of these events are contained within the Growth dimension, reflecting increases in size (courses, students, faculty, etc.) and/or scope (broadened curricular focus, addition of majors/minors, etc.). The Revision dimension contains an additional 62 cases, generally reflecting normal institutional or programmatic curricular reviews. I found only four cases containing events characterizable as Reductions (decreases in courses, students, faculty, curricular breadth, degree-granting status, etc.).[15]

**Current Reality.** I used open and *in vivo* coding to create the *Current Reality* property and its two dimensions: Reported Problems and Reported Positives. The Reported Problems dimension reflects either realities reported as problems by program respondents or language used in responses that was reflective of problematic situations and/or dissatisfaction. This dimension contains problems related to faculty,[16] budgets,[17] autonomy,[18] program heads,[19] enrollments,[20] and campus climate/politics.[21]

The Reported Positives dimension represents more-positive situations or language-

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[15] Of course the ultimate program reduction—termination—is not reflected in the data set's existing programs.

[16] Faculty problems generally related to the necessity of "borrowing" faculty from other institutional units.

[17] While many programs reported specific budgetary information, these figures lacked comparative context. Here, coding was driven by language describing budgets in relative and/or comparative terms, such as "small," "limited," and "modest."

[18] Problems related to program autonomy were noted when respondents used words such as "minimal," "partial," and "dependent."

[19] Such problems were often phrased in terms of inadequate release time for directors/coordinators to perform program duties and/or inadequate compensation.

[20] Enrollment problems were evidenced by revelation of intentional enrollment reductions as well as reports of declining student interest and numbers over time.

[21] Language describing campus climate/politics was some of the most vivid. These problems contained words such as "suspicion," "jealous," "indifferent," "skeptical," "haggling," and "opposition."

reflected satisfaction with current program realities. Here I categorized data in terms of positive current program situations and/or respondents' satisfactions related to funding, autonomy, and campus relations.[22] 106 respondents provided specific information or general comments codable as reflective of current program realities. I grouped 83 of these as Reported Positives; the other 23, as Reported Problems.

Following this construction and initial consideration of the three preliminary coding categories and their various properties, I sought further consolidation of the data in order to develop a more integrated understanding of IDS program realities. Given the breadth of these prefatory categories, most connections and associations between and among them (as well as their properties) were difficult to conceptualize. Therefore, I employed axial coding to further clarify relationships between cases, categories, and properties.

## Axial Coding

As I began the axial coding process, I sought methods of integrating the data in new ways. My goal was to put the disparate pieces of the puzzle (the categories and their properties) back together into a more informative and meaningful whole. This task was accomplished through three axial coding stages: (a) the development of paradigm models, (b) a search for connections between categories and properties using the models, and (c) the verification of these postulated connections within the data.

### Paradigm Models

The development of grounded theories through constant comparative analysis involves linking categories, properties, and dimensions through specifications of sets of relationships between them. These relationship, or paradigm, models specify each phenomenon (central idea, event, or incident) of the research problem in terms of its causal conditions, context, intervening conditions, action strategies, and consequences (see Figure 2). *Causal conditions* are those incidents, people, or forces that lead or contribute to the phenomenon's occurrence or development. The *context* is a collection of specific

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[22] The phrase "well-accepted" was common as a Reported Positive current reality.

Figure 2. Diagram of a paradigm model.
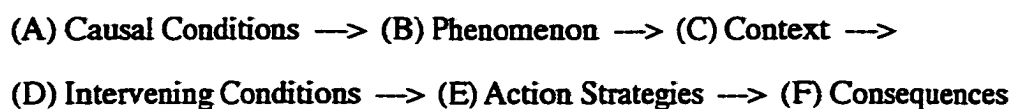
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(A) Causal Conditions —> (B) Phenomenon —> (C) Context —>

(D) Intervening Conditions —> (E) Action Strategies —> (F) Consequences

---

properties related to the phenomenon, organized along a dimensional continuum or range. *Intervening conditions* are those facilitative or constraining structural realities that come to bear on the action strategies taken within specific contexts. *Action strategies* are the measures and/or methods employed to carry out, manage, or respond to the specific phenomenon as it exists under specific conditions (contexts). *Consequences* are the outcomes of the action strategies for the phenomenon. Given this study's focus on both IDS program establishment and maintenance, a model was created for each category.

Establishment model. I used the perceived relationships between the properties of the Situation and Establishment categories to create a paradigm model of IDS program founding. For this model, program establishment is the phenomenon in question. The only causal conditions I could discern from the data were those contained within the Champions property (individual faculty, individual administrators, and groups). I defined the context in terms of the relative national popularity of interdisciplinarity at the time of establishment. Therefore, I included the Founding Period property to provide comparative information on the number of program establishments taking place across the country at the time in question and the Founding Order property as a indication of interdisciplinarity's

popularity on each campus. In other words, was this program to be a first IDS program, one of multiples founded that year, or subsequent to others?

The intervening conditions I perceived as aids or hindrances to IDS program establishment are the properties and dimensions of Institutional Type (Carnegie classification), Institutional Control (public or private), and Region (accrediting association). I found data categorizable as action strategies within the Modeling and External Funding dimensions, indicating specific actions and events associated with carrying out and managing IDS program establishments. I concluded that the consequences of this paradigm model of IDS program establishment are the programs themselves, operationalized in the model through the Program Form dimension (Major/Large, General Education, Discipline-Based, or Applied programs). This model is represented in the upper part of Figure 3; the maintenance model, in the lower part.

Maintenance model. I constructed a paradigm model of IDS program maintenance using perceived relationships between the properties of the Situation and Maintenance categories. Here, program maintenance is the central phenomenon, and program establishment is taken as the general causal condition. I placed the Program Age property within the context of this model as a temporal indication of campus and environmental conditions. The Program Form dimension and the Institutional Frequency dimension were also placed in the model's context subcategory; Program Form to distinguish between the nature of IDS programs and their administrative needs (some forms were perceived to need more administration than others), and Institutional Frequency to indicate the presence or absence of other IDS programs on campus in need of maintenance.

The intervening conditions in this model are the same as in the establishment model, categorized in the data as Institutional Type, Institutional Control, and Region. The perceived action strategies of IDS program maintenance are represented in the data by the information in the Lifecycle property, as it dimensionalizes program growth, revision, and reduction. The consequences subcategory of this model is defined as the Current Reality

**Figure 3.** Diagram of the establishment and maintenance models.

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Causal Conditions ---> Phenomenon ----------> Context -------------> Intervening Conditions ---> Action Strategies ---> Consequences

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Champions ------> Program Establishment ---> Founding Period ---> Institutional Type ---------> External Funding ----> Program Form
[Unknown]                               Founding Order       Institutional Control      Modeling
                                                      Region (Accrediting)

---

Establishment ---> Program Maintenance ---> Program Form ------> Institutional Type ---------> Lifecycle (Past) ------> Current Reality
                                          Program Age        Institutional Control
                                            Inst'al Frequency    Region (Accrediting)

---

property, representing current program problems and positives as outcomes of the maintenance strategies involved.

Following delineation of these paradigm models, I attempted to clarify the hypothetical subcategory and property linkages of each model through seeking answers to questions about the types and natures of these relationships.

## Linking Properties Using the Models

Developing the establishment model. In the next phase of axial coding, I posed questions about the nature of relationships between the subcategories and properties of the model(s). For the model of IDS program establishment, relational questions similar to the following were considered:

1. For programs established through the specific efforts of individuals or groups (Champions), how was the time period (Founding Period) and/or the establishment sequence (Founding Order) of their founding facilitated or constrained by factors and conditions within the institution (Institutional Type and Institutional Control) and outside the institution (Region)?

    (a) How did these contexts and intervening conditions impact any identifiable action strategies (Modeling and/or External Funding) used?

    (b) How were the consequences (Program Form) of program establishment impacted by these contexts, intervening conditions, and strategies?

2. Were the relationships and consequences of these properties different for programs championed by individual faculty, or by individual administrators, as compared to those backed by groups?

3. For those programs for which no causal conditions (Champions) were discernible, were the relations, contexts, and conditions leading to establishment strategies and program consequences significantly different from those of "championed" programs?

Questions then became more focused in an attempt to propose relationships that could be verified within the data. For example, the first question above led to specific questions such as: Were establishments through championing more common in some time periods than others? Were championed programs more likely to have been first or subsequent programs? Were championed programs more likely in some types of institutions and/or regions than others, and if so, did this variation relate to time period and founding sequence? Were championed programs more likely than others to have been established through action strategies (Modeling and/or External Funding), and if so, were these differences related to contextual and conditional differences. Were championed programs more likely to result in some program forms than others? Within championed programs, were there identifiable variations in these relationships when the champions were individual faculty, as compared to individual administrators, as compared to groups?

The two theories of institutionalism offer different perspectives on these relationships. New institutionalism suggests that the broader, more-externally (environmentally) focused, more common-to-all properties—such as Founding Period, Institutional Control, and Region—would be the keys to understanding the nature of the relationships within the model. Old institutionalism, a more structural theory, leads to the expectation that the narrower, more internally (campus) focused, more situation-specific properties—such as Champions, Founding Order, Institutional Type, Modeling, External Funding, and perhaps Program Form—would provide better insight into key relationships between subcategories in the establishment model.

While this study considers both perspectives, I am operating from the assumption that new institutionalism offers the better understanding of subcategorical relationships within the IDS program establishment model. Given the increasing attention placed on interdisciplinarity, and my own knowledge of program numbers from compiling the program directory, I expected the aspects of the new theory of institutionalism that focus on

common and shared realities to provide the most relevance in understanding program establishments.

Developing the maintenance model. In an attempt to further refine the connections between the model's subcategories, I developed relational questions for the maintenance model similar to those posed about establishment. Some questions considered included:

1. In considerations of IDS program maintenance, given different structural and/or curricular forms (Program Form), lengths of existence (Program Age), and the presence or absence of other IDS programs within institutions (Institutional Frequency), how have factors and conditions such as Institutional Type, Institutional Control, and Region impacted the presence and nature of maintenance strategies (Lifecycle—growth, revision, reduction), resulting in then-current consequences (Current Reality—problems or positives)?

2. For those programs for which no discernible data were available on action strategies and/or consequences, did identifiable connections and lines of demarcation between their properties still exist within the model's relational propositions?

Further, more-specific questions were created with an eye toward developing and refining the maintenance model through supposing data-verifiable relationships. Do some program forms of similar age more often result in positive consequences while other forms of different ages more often have negative outcomes? Are these relationships tempered by institutional (type, control) and/or environmental (region) conditions? Are program maintenance realities different for programs that are unique to their institutions versus those that are one of many IDS programs on campus? What are the most common characteristics of programs that experienced growth, or revision, or reduction during their pre-1995 past?

Again, the theories of new institutionalism suggest that the more general and contextual properties (Program Age, Institutional Control, and Region) will prove most useful in explicating the nature of the model's relationships. At the same time, the more inwardly- and idiosyncratically-focused old institutionalism offer the expectation that situation-specific properties (Program Form, Institutional Frequency, Institutional Type, Lifecycle, and Current Reality) will yield better understanding of the relationships between subcategories in the maintenance model.

My guiding assumption is that, given the diversity of program, institution, and environment realities, old institutionalism provides the preferable framework for gaining a better comprehension of IDS program maintenance. Therefore, in seeking answers to the questions arising from the maintenance model, I sought both connections within the data and between subcategories as well as instances of no connections and/or opposing relationships. I expected these different findings to add variation and depth of understanding to the analysis, and to validate my belief that the old theories of institutionalism are most applicable and useful in developing a grounded theory of IDS program maintenance.

## Verifying Relationships Within the Data

After these questions were offered to substantiate the relationships between the categories, subcategories, and properties, I returned to the data in search of information to support or refute the subcategorical relationships hypothesized within the questions. In this search for verification of the relationships proposed within the two paradigm models, many connections and trends were evidenced. These findings led me to further refine and link the categories, properties, and dimensions. At this point, I also began to move between inductive and deductive thinking; such alternation between proposing and checking ensures that a theory is grounded in the data. I have chosen to summarize these relationships in Chapter 5 as the initial bases for the premises and postulates of the grounded theory of IDS program establishment and maintenance. Following these preliminary verification stages of

axial coding, I accomplished final integration of the data through the constant comparative method's third phase—selective coding.

Selective Coding

The last phase of data categorization and analysis in the constant comparative method is selective coding. This phase involves a final integration of the data or, as Strauss and Corbin (1990) describe it, a "final leap between creating a list of concepts and producing a theory" (p. 117). In many ways, selective coding is very similar to axial coding, but at a higher, more abstract level of analysis. During this phase, the "story" contained within the data is extricated and told by relating the categories, properties, and dimensions of the paradigm model(s) to the "core category."

The core category is the central phenomenon of such a study; it is the focal point around which all other data categories are integrated. The "story" is the descriptive narrative that conceptualizes the core category and its relationships to everything else. Thus, the selective coding phase involves explicating the story line to the point that the core category becomes obvious, then relating the other categories of the paradigm model to this core category in a way that further refines the story accurately from the data, yielding relationships and findings useful for the construction of theoretical premises and postulates.

In the interest of maintaining continuity and avoiding redundancy, the specifics of the selective coding phase are presented and discussed in Chapter 5 following the description of the preliminary findings from my effort to verify the proposed relationships within the paradigm models. In Chapter 5, the "story line" of IDS program establishment and maintenance begins to be explicated, the core categories and properties are selected, and the story line is further developed. In Chapter 6, the full program-establishment and program-maintenance "stories" are developed and told, and the theory is developed.

# CHAPTER 5

# ANALYZING THE DATA

## Overview

The previous chapter describes the various phases of the constant comparative method, while also providing a general discussion of the specific data categories, properties, and dimensions that arose during categorization of the IDS program data. This chapter provides a more specific and detailed explication of the relationships found within the data, which serve as the bases for the development of the grounded theory of IDS program establishment and maintenance presented in the next chapter. The discussion herein moves from general to specific for both the establishment and maintenance models. First, preliminary findings from the data are described as they were made from basic differentiations across and between data categories. Second, the designation of the core category and properties of the models is discussed as each arose from the preliminary analysis. Third, the "stories" of establishment and maintenance are developed using specific findings from the targeted analyses of the core category and properties. My goal in organizing the chapter in this way is to clarify *that* the theory I am building is grounded in the data while also demonstrating exactly *how* it is grounded.

## Explicating the Story Line: Initial Verification

At the end of the axial coding phase, I attempted to verify the relationships between the categories, properties, and dimensions as proposed within the paradigm models. I was already aware that some properties and dimensions are more or less common than others across the data, and that considerable variation also exists within properties along dimensional lines. The goal of the verification stage was to begin to explicate the "story line" (Strauss & Corbin, 1990, p. 199) contained within the data. I sought to identify the

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variations between and within the properties and dimensions as well as to begin to understand the nature and possible explanations of the connections in the data. I also sought answers to the questions posed in Chapter 4's discussion of the axial coding phase.

The Establishment Model

Already, I could clearly see from the data that IDS program establishments are not random. My purpose in the initial verification stage was to better understand the factors that influence these program foundings as well as how these factors are related to one another. Toward this goal, I sought ways to compare programs across and within the properties and dimensions.

The champions property. Given that this model's causal condition is the reported presence (or absence) of champions, my first attempt to determine relationships centered on the Champions property. For each dimension of the model's various properties, I created two percentage-based distributions. One distribution compared the ratios of programs *across* those reporting champions and those not reporting champions; the second compared the ratios of programs *within* the Champions and Unknown (no reported champions) properties. These comparative percentages of the two distributions of the 229 championed and 175 "non-championed" programs are presented in Table 10. Consideration of the data in this way began to clarify the relationships and trends within the establishment model.

For example, I began to see a connection between the Champions and Founding Periods properties. I found the presence of champions to be more commonly reported in more-recent periods, both across and within the presence and absence of champions. While less than 40 percent of programs established in the Seed Years period report champions, subsequent periods contain progressively higher percentages of reported champions, culminating with over 80 percent of those during the Brief Repose. Although it is less strong across the Third Boom, this connection is still clearly evident from the percentage of programs within the Champions property for this period. My first basic conclusion from the initial verification stage was that, over time, the presence of champions has become an

Table 10

Distributions Across and Within the Champions Property

| Property<br>Dimension | Percent Across | | Percent Within | |
|---|---|---|---|---|
| | Champs | Unknown | Champs | Unknown |
| **Founding Period** | | | | |
| Seed Years | 38 | 62 | 4 | 7 |
| Early Growth | 50 | 50 | 7 | 9 |
| First Boom | 57 | 43 | 38 | 38 |
| Slowed Growth | 57 | 43 | 11 | 10 |
| Mini-Boom | 63 | 37 | 8 | 6 |
| Brief Repose | 82 | 18 | 6 | 2 |
| Third Boom | 62 | 38 | 26 | 21 |
| **Founding Order** | | | | |
| Primary | 55 | 45 | 64 | 70 |
| Simultaneous | 50 | 50 | 1 | 1 |
| Subsequent | 65 | 35 | 35 | 25 |
| **Program Form** | | | | |
| Major Program | 57 | 43 | 21 | 21 |
| General Education | 68 | 32 | 26 | 16 |
| Discipline-Based | 50 | 50 | 37 | 49 |
| Applied Program | 59 | 41 | 16 | 15 |
| **Institutional Control** | | | | |
| Private | 57 | 43 | 51 | 50 |
| Public | 56 | 44 | 49 | 50 |
| **Institutional Type** | | | | |
| Research | 56 | 44 | 29 | 30 |
| Doctoral | 40 | 60 | 10 | 19 |
| Master's | 66 | 34 | 39 | 26 |
| Baccalaureate | 52 | 48 | 19 | 23 |
| Associate | 64 | 36 | 3 | 2 |
| **Region** | | | | |
| New England | 57 | 43 | 12 | 11 |
| Middle States | 60 | 40 | 24 | 21 |
| Southern | 51 | 49 | 19 | 23 |
| North Central | 57 | 43 | 28 | 28 |
| Northwestern | 67 | 33 | 8 | 5 |
| Western | 53 | 47 | 9 | 11 |
| **Modeling** | | | | |
| Yes | 83 | 17 | 23 | 7 |
| No | 53 | 47 | 77 | 93 |
| **External Funding** | | | | |
| Yes | 71 | 29 | 13 | 7 |
| No | 55 | 45 | 87 | 93 |
| **AVERAGE/TOTAL** | 57 | 43 | 100 | 100 |

increasingly common impetus for these IDS program establishments.

Similarly, a connection between the presence of champions and founding order was evident from the distributions. While the ratio of championed to non-championed programs founded as first establishments approximates the overall championed-to-non distribution of 57 to 43 percent, the percentage of subsequent establishments is significantly higher for championed programs than for non-championed ones both across and within the properties. As the presence of champions at program establishment became more common across chronological time, it also appears to have become more common across institutional time. For these programs, I see a clear relationship between establishment champions and the presence of previous IDS programs; the presence of champions has been more common in subsequent foundings.

Two of the strongest connections I found from these comparisons center on the relationships between championing and the Modeling and External Funding properties. Over 80 percent of the programs that report Modeling and over 70 percent of those that report initial External Funding also report championing. Likewise, the percentage of all championed programs reporting modeling is three times that of those not reporting champions, and the percentage for those championed programs reporting external funding is twice that of those not reporting champions. For these programs, the presence of establishment champions appears to be strongly and positively related to the use of models and the securing of initial external funding for establishments.

From comparisons of the presence or absence of champions across other properties and dimensions, I found that the percentages of establishment champions for these programs are highest for General Education forms, for Master's and Associate institutions, and for the Northwestern and Middle States regions. Percentages for programs not reporting establishment champions are highest for Discipline-Based forms, for Doctoral and Baccalaureate institutions, and for the Southern and Western regions.

Looking within the Champions and Non-Champions (Unknown) properties, I found that: (a) while Discipline-Based forms have the highest percentages within both properties, the percentage is much higher for Non-Champions; (b) General Education forms have the second-highest percentage for championed programs while Major/Large forms are second-highest for non-championed ones; (c) for General Education forms, the percentage is much higher for Champions; (d) while Research and Master's institutional types have the highest percentages within both properties, Master's institutions are highest for championed programs while Research institutions are highest for non-championed ones; (e) for Doctoral institutions, the percentage is much higher for Non-Champions; (f) the North Central accrediting region has the highest percentage of programs for both properties; and (g) the Middle States region has the second highest percentage of championed programs, while the Southern is second-highest for non-championed ones.

I concluded that some establishment properties are either not connected to or not impacted by specific causal conditions such as champions, while others do appear to be related to champions' presence or absence. Across both championed and non-championed programs, establishments are most common in Research and Master's institutions, in the North Central region, and in Discipline-Based forms. A strong relationship appears to exist between champions' presence and establishments in smaller institutions, in the Middle States and Northwestern regions, and in General Education forms. Champions' absence appears connected to establishments in larger institutions, in the Southern and Western regions, and in Major/Large forms.

The champions dimensions. I took these preliminary findings as indications that championing is an important factor in some IDS program establishments. To further clarify the significance of this property, I compared and analyzed its three dimensions—Group Champions (GC), Individual Faculty Champions (IFC), and Individual Administrator Champions (IAC)—using similar comparative distributions. The ratios between and within the 183 GC cases, the 20 IFC cases, and the 26 IAC cases are detailed in Table 11.

Table 11

## Distributions Across and Within the Dimensions of the Champions Property

| Property Dimension | Percent Across | | | Percent Within | | |
|---|---|---|---|---|---|---|
| | GC | IFC | IAC | GC | IFC | IAC |
| **Founding Period** | | | | | | |
| Seed Years | 50 | 25 | 25 | 2 | 10 | 8 |
| Early Growth | 80 | 7 | 13 | 7 | 5 | 8 |
| First Boom | 81 | 12 | 7 | 38 | 50 | 23 |
| Slowed Growth | 75 | 4 | 21 | 10 | 5 | 19 |
| Mini-Boom | 79 | 5 | 16 | 8 | 5 | 12 |
| Brief Repose | 86 | 0 | 14 | 7 | 0 | 8 |
| Third Boom | 81 | 9 | 10 | 26 | 25 | 23 |
| **Founding Order** | | | | | | |
| Primary | 76 | 9 | 15 | 61 | 65 | 85 |
| Simultaneous | 50 | 0 | 50 | <1 | 0 | 4 |
| Subsequent | 88 | 8 | 4 | 39 | 35 | 11 |
| **Program Form** | | | | | | |
| Major Program | 77 | 2 | 21 | 20 | 5 | 39 |
| General Education | 87 | 3 | 10 | 28 | 10 | 23 |
| Discipline-Based | 77 | 14 | 9 | 36 | 60 | 31 |
| Applied Program | 81 | 14 | 5 | 16 | 25 | 8 |
| **Institutional Control** | | | | | | |
| Private | 79 | 9 | 12 | 51 | 50 | 54 |
| Public | 80 | 9 | 11 | 49 | 50 | 46 |
| **Institutional Type** | | | | | | |
| Research | 80 | 12 | 8 | 29 | 40 | 19 |
| Doctoral | 74 | 13 | 13 | 9 | 15 | 12 |
| Master's | 80 | 6 | 14 | 39 | 25 | 50 |
| Baccalaureate | 82 | 7 | 11 | 20 | 15 | 19 |
| Associate | 86 | 14 | 0 | 3 | 5 | 0 |
| **Region** | | | | | | |
| New England | 70 | 11 | 19 | 10 | 15 | 19 |
| Middle States | 75 | 7 | 18 | 23 | 20 | 39 |
| Southern | 81 | 5 | 14 | 19 | 10 | 23 |
| North Central | 80 | 14 | 6 | 28 | 45 | 15 |
| Northwestern | 88 | 6 | 6 | 9 | 5 | 4 |
| Western | 95 | 5 | 0 | 11 | 5 | 0 |
| **Modeling** | | | | | | |
| Yes | 76 | 7 | 17 | 22 | 20 | 35 |
| No | 81 | 9 | 10 | 78 | 80 | 65 |
| **External Funding** | | | | | | |
| Yes | 83 | 6 | 10 | 14 | 10 | 12 |
| No | 79 | 9 | 12 | 86 | 90 | 88 |
| **AVERAGE/TOTAL** | **80** | **9** | **11** | **100** | **100** | **100** |

By separating the Champions property into its dimensions and then considering these three dimensions both in relation to each other and each in relation to the various dimensions, I was able to add descriptive detail to the championing phenomenon. For example, in consideration of the three dimensions and founding periods, I saw that 75 percent of programs established by IFCs were founded during the first and third booms, with only 10 percent during the three 1980s periods (Slowed Growth, Mini-Boom, and Brief Repose). Programs founded by IACs, on the other hand, have consistently higher percentages than those founded by IFCs—both across and within dimensions—for each period after the First Boom. Moreover, programs with IACs have comparatively high rates of foundings for low-establishment-rate periods (Seed Years, Early Growth, Slowed Growth, and Brief Repose). Championing by individual faculty appears to have been more common before 1980 and/or during high-establishment-rate periods, while that done by individual administrators has been more common since 1980 and/or in lower-rate periods.

I also saw that the type of champions involved in these program establishments appears to have varied according to the institutional order in which programs have been founded. The majority of programs in this data set, regardless of the presence or types of champions, are first establishments on their campuses; however, for programs founded by IACs, the first-establishment ratio is consistently higher. Eighty-five percent of programs established by IACs are first-establishments on their campuses. When championed programs have been subsequent establishments, the percentage of IACs is lowest. Overall, when championed programs have been subsequent establishments for their institutions, almost 90 percent of this championing has been by GCs, while less than five percent has been by IACs. I concluded that lone administrators are much more likely to champion their institutions' first IDS program establishments than any subsequent ones; when subsequent establishments are championed, they are significantly likely to be group-championed.

The connections I found between the three Champions dimensions and the Program Form property were not surprising. For instance, 85 percent of IFC cases resulted in

Discipline-Based and Applied forms, while over 60 percent of IAC cases resulted in Major/Large and General Education forms. Given faculty members' specialized, disciplinary orientations, their propensity to establish Discipline-Based and Applied programs is not a startling finding. Neither is administrators' propensity for founding Major and General Education programs given their broader, less disciplinary, institutional responsibilities. Although I found GCs to be the most common champions for forms, their percentage is highest for General Education forms. Again, given the institutional scope and breadth of such programs, the influence of broad-based support in the form of group champions is not a surprise.

In terms of institutional types and accrediting regions, I found that individual champions—faculty or administrators—are not at all common when championing occurs in Associate institutions, as well as in the Northwestern and Western accrediting regions. Programs reporting IFCs are distributed across the various institutional types, with a concentration in Research institutions. Those reporting IACs, on the other hand, are concentrated in Master's and Baccalaureate institutions (but none in Associates). Similarly, while programs reporting GCs and IFCs are most common in the North Central region, those reporting IACs are most common in the Middle States region. Overall, over 40 percent of the individually-championed programs have been championed by IFCs; however, in the Southern region only two of the eight cases of individual championing are by faculty, while in the North Central region nine of the 13 such cases involve lone faculty. Overall, IACs appear to be most common in establishments in smaller institutions (but not Associate institutions) and thus, in regions with higher concentrations of such institutions.

I found that the distribution of champions for modeled and externally funded programs approximates the overall distribution of champions—about 80 percent GCs, slightly less than 10 percent IFCs, and slightly more than 10 percent IACs. However, taking these ratios as a baseline average, I saw that programs resulting from GCs are comparatively less likely to be modeled, but are slightly more likely to be externally

funded. The strongest connection I found between the Champions dimensions and the Modeling and External Funding properties centers on IACs and the use of models. When championed programs report modeling, the likelihood that their champions are IACs is much greater than expected from the overall distribution. I concluded that GCs are the most likely champions to seek external funding, while IACs are the most likely to use models.

The Maintenance Model

Program form. In my effort to clarify the relationships between properties and dimensions related to IDS programs' maintenance, and to find answers to the related axial-coding questions, I gave similar distributional consideration to the percentages across and within the various categories of the maintenance model. Given that this model's causal condition is program establishment, and that the final consequence of the establishment model is Program Form, I chose to differentiate programs by their form for each property and dimension of the maintenance model. Comparative ratios for the 83 Major/Large programs, the 88 General Education programs, the 170 Discipline-Based programs, and the 63 Applied programs are presented in Table 12.

Although I found the program-form distributions for Adults (ages 17-28) and Adolescents (ages 7-16) to be quite similar to the overall distribution of all programs across the four forms, also I saw clear connections between programs' forms and ages. For example, two-thirds of the Ancients (ages 38-90) in this sample have Discipline-Based and Applied forms, whereas two-thirds of the Seniors (ages 29-36) have Major/Large and General Education forms. For this data set's programs, interdisciplinarity appears to have begun in more narrow, specialized program forms, then became more common in broader, less specialized forms.

Infants (ages 1-6) are the only age group for which the percentage of programs having the Applied form is greater than that of those with Major/Large ones. And, of the five age groups, Infants have the smallest percentage of Major forms. In the 1995-96 academic year, the number of programs in existence six years or less having Applied forms

Table 12

## Distributions Across and Within Program Forms

| Property Dimension | Percent Across | | | | Percent Within | | | |
|---|---|---|---|---|---|---|---|---|
| | Major | GnEd | Dspln | App | Major | GnEd | Dspln | App |
| **Program Age** | | | | | | | | |
| Ancients | 14 | 19 | 57 | 10 | 4 | 5 | 7 | 3 |
| Seniors | 47 | 20 | 30 | 3 | 17 | 7 | 5 | 2 |
| Adults | 20 | 19 | 46 | 15 | 36 | 33 | 41 | 35 |
| Adolescents | 23 | 27 | 36 | 14 | 25 | 28 | 19 | 21 |
| Infants | 12 | 23 | 44 | 21 | 13 | 25 | 25 | 32 |
| **Institutional Frequency** | | | | | | | | |
| Only | 26 | 32 | 30 | 12 | 59 | 70 | 34 | 35 |
| One of Two | 19 | 16 | 46 | 19 | 28 | 23 | 32 | 36 |
| One of Three or More | 12 | 7 | 62 | 19 | 13 | 7 | 34 | 29 |
| **Institutional Control** | | | | | | | | |
| Private | 15 | 32 | 39 | 15 | 36 | 74 | 47 | 48 |
| Public | 27 | 12 | 46 | 16 | 64 | 26 | 53 | 52 |
| **Institutional Type** | | | | | | | | |
| Research | 16 | 9 | 62 | 13 | 23 | 12 | 43 | 24 |
| Doctoral | 21 | 17 | 40 | 22 | 15 | 12 | 14 | 21 |
| Master's | 27 | 25 | 35 | 13 | 43 | 37 | 28 | 29 |
| Baccalaureate | 15 | 38 | 30 | 17 | 16 | 36 | 15 | 22 |
| Associate | 27 | 27 | 18 | 27 | 4 | 3 | 1 | 5 |
| **Region** | | | | | | | | |
| New England | 13 | 23 | 47 | 17 | 7 | 13 | 13 | 13 |
| Middle States | 14 | 19 | 50 | 17 | 16 | 21 | 28 | 25 |
| Southern | 31 | 25 | 35 | 8 | 31 | 24 | 17 | 11 |
| North Central | 20 | 18 | 41 | 28 | 28 | 23 | 27 | 38 |
| Northwestern | 30 | 37 | 30 | 4 | 10 | 11 | 5 | 2 |
| Western | 18 | 20 | 45 | 17 | 8 | 9 | 11 | 11 |
| **Lifecycle** | | | | | | | | |
| Growth | 12 | 11 | 70 | 8 | 30 | 33 | 73 | 40 |
| Reduction | 50 | 25 | 25 | 0 | 7 | 4 | 1 | 0 |
| Revision | 31 | 24 | 31 | 14 | 63 | 63 | 26 | 60 |
| **Current Reality** | | | | | | | | |
| Reported Problems | 4 | 35 | 39 | 22 | 6 | 28 | 20 | 33 |
| Reported Positives | 18 | 25 | 45 | 12 | 94 | 72 | 80 | 67 |
| **TOTAL** | 21 | 22 | 42 | 16 | 100 | 100 | 100 | 100 |

was double the number of those having the Major form of the same age; for all programs over six years of age, the Major/Large form is more common than the Applied one. I concluded that, over time, the forms commonly given to IDS programs may go through cycles; here it appears that Discipline-Based forms gave way to Major/Large forms which gave way to General Education forms which began to give way to Applied forms.

Consideration of program forms according to their institutional frequency revealed clear differences and trends which I took as objective proof of some more-subjective "common sense" assumptions. For example, of all Major/Large and General Education programs, 65 percent are the only IDS programs within their institutions, while over 66 percent of all Discipline-Based and Applied programs are one of multiple IDS programs on their campuses. In fact, almost 60 percent of the One of Three or More programs have the Discipline-Based form, while less than 20 percent of such programs have either the Major or General Education form. These findings support the assumption that, when institutions initially establish larger, more-encompassing IDS programs—such as the Major and General Education forms, few or no additional programs follow. And when more-narrowly-focused programs—such as the Discipline-Based and Applied forms—are initially established, at least one additional program commonly follows.

These trends related to program form, age, and institutional frequency may also be related to program lifecycle. Analysis of the Lifecycle property using program forms revealed that programs having Major, General Education, and Applied forms report a much smaller combined percentage of the Growth dimension than do those with Discipline-Based ones. For Major and General Education programs, this lack of growth may be related to their size and breadth; they may have less room or need to grow. For Applied ones, it may be related to their age; younger programs have had less time to grow. In fact, Applied programs have comparatively low percentages of growth, reduction (none), and revision.

The larger size and breadth of programs having Major and General Education forms—coupled with these forms' tendency to be older programs—may also be related to

their comparatively high percentages of Revision; broader scopes and lengthier existences probably provide more opportunities for revision. Only 30 percent of the program revision evidenced in this data is reported by programs with Discipline-Based forms, but almost 70 percent of the program growth is. By definition, Discipline-Based programs probably begin smaller than Major and General Education ones, and thus have more room to grow.

I began to differentiate part of the above connections between Major and General Education programs when I compared program forms and institutional control. I found that the majority of these Major programs are in publicly-controlled institutions, while the majority of General Education programs are in privately-controlled ones. In fact, almost one-third of all programs in private institutions have the General Education form, but only about 10 percent of all public-institution programs are this form. When large, broad IDS programs are established, they appear to be commonly given the Major/Large form in publicly-controlled institutions and the General Education form in private institutions.

Likewise, differences between the Major and General Education forms were evident when I considered program forms in terms of the Current Reality property. I found that less than five percent (only one) of Major/Large programs report problems, while almost 30 percent of General Education programs report problems. Programs with Major forms account for 20 percent of this sample, but represent less than five percent of those reporting problems. General Education forms, on the other hand, account for 22 percent of the sample, but represent 35 percent of those programs reporting problems. I concluded that larger and broader programs are not consistently more or less likely to report positive or negative current realities; programs of the Major form report few problems, while those of the General Education form are much more likely to report problems.

I also found connections between programs' forms and their types of institutions. Over 60 percent of program forms in Research institutions are Discipline-Based, while less than 10 percent of Research-institution forms are General Education. Conversely, for Baccalaureate institutions, General Education is most common form. And for

Baccalaureates and Associates, Discipline-Based is the least common form. Overall, larger institutions (Research and Doctoral) contain over one-half of the more narrowly focused Discipline-Based and Applied forms, while smaller institutions (Master's, Baccalaureate, and Associate) contain over two-thirds of the broader Major and General Education forms.

Connections between programs' forms and the Region property were not as clear nor easy to see as those discussed above. I did note that the most common accrediting region for Major and General Education forms is the Southern region, but that this region is comparatively low in terms of Discipline-Based and Applied forms. For these latter two forms, the North Central and Middle States regions are most common. Of the distributions of program types for the six accrediting regions, the Northwestern's is the farthest from the average or expected distribution. This region is the only one for which General Education is the most common form and for which Discipline-Based and Applied are the two least common forms.

## Identifying the Story: Selective Coding

The initial verification of establishment and maintenance relationships discussed above added richness and density to the categories, properties, and dimensions of the IDS program data. To further clarify the story line in a conceptual, comprehensible, and data-grounded way, I needed to determine the "core category" of the study (Strauss & Corbin, pps. 116-124). I took the relationships between the various categories, and along the lines of their properties and dimensions, as indicators of what the core category is—of what this research is all about.

From these considerations, I concluded that the core category or categories of this study is/are to be found within the Context feature of the paradigm models. The properties and dimensions of the Context feature are the key, central pieces around which all other categories, properties, and dimensions revolve, make sense, and require integration into my stories and theory. The "story" of IDS program establishment and maintenance must be told in terms of the contexts in which these programs arise and in which they are

institutionally maintained. But within the Context feature, which property or properties is/are most central?

As I was deducing that the Context feature is at the core of *both* the establishment and maintenance models, I was also realizing that these stories are not as simple or similar as one might suppose. Eventually the data coding and verification led me to conclude that different properties are most central to the two different models. Specifically, I determined that the Founding Period property is the central piece of the program establishment story, while the Institutional Frequency property is the pivot point for the maintenance story.

In order to fully understand IDS program establishments in American colleges and universities, one must understand the temporal context (Founding Period) in which these establishments have taken place. To the degree that many of the relationships I had found between the various properties and dimensions vary according to programs' period of establishment, I determined that this property must be the key to understanding the establishment phenomenon. The model's other contextual property, Founding Order, does not appear to be as central to the story as does Founding Period because less variation exists within its dimensions and the distributions of these dimensions do not vary much in relation to other properties. This property appears to be mitigated by Founding Periods; thus, this latter contextual property must be more central to the overall story.

Similarly, I determined that, to complete the story of IDS program maintenance in U.S. higher education, one must understand the institutional context (Institutional Frequency) faced by these programs. Whether they are the only IDS programs on their campuses, or are one of two, or are one of three or more must be seen as integral to understanding the long- and short-term maintenance of these programs. Although these efforts are also impacted by contextual factors related to the Program Form and Age properties, Institutional Frequency seems to mitigate these properties. Programs that are campuses' only interdisciplinary manifestations often share form and age characteristics. Likewise, those that are one of an institution's multiple offerings often share different, age-

related form characteristics. Therefore, of the three contextual properties, Institutional Frequency appears to be most central; the other contextual (as well as non-contextual) properties are related to it in some way.

Once I had deemed these properties as the central phenomena of their respective models, I could then begin to "tell" the full establishment and maintenance stories.

Developing the Story Line

The Establishment Story

Overview. At its most basic level, the story of IDS program establishment in American colleges and universities is a story of changes and developments across time. Within my establishment model, the Founding Period property captures this temporal aspect. Therefore, I judged this property to be the central phenomenon around which the other properties and dimensions should be considered. My effort to develop the establishment story began with me grouping founding periods in different ways in hopes of revealing and highlighting trends, connections, and differences across and within similar founding-period groupings. I then considered the founding periods separately. Therefore, the discussion below compares: (a) founding periods containing programs established before 1980 (the "earlier" grouping) to periods of post-1980 establishments (the "later" grouping), (b) periods of higher rates of establishments (the "boom" grouping) to periods with lower rates (the "quiet" grouping), and (c) the seven individual founding periods.

Grouped founding periods. I concluded that one useful way to understand the influence of the temporal context on IDS program establishments is to compare programs' establishment information across time. I was certain I would find important differences between programs founded in more recent periods and those established in earlier periods. I attempted to illustrate this recency effect by comparing programs founded in periods prior to 1980 (Seed Years, Early Growth, and First Boom) with those established since 1980 (Slowed Growth, Mini-Boom, Brief Repose, and Third Boom). I chose 1980 as the separation point because it closely approximates the mean and modal founding year of

programs in this sample, as well as representing a demarcation year between two periods. Comparisons of program establishments in "earlier" and "later" founding periods are presented as distributional percentages in Table 13.

To further highlight connections between founding periods and the establishment model's other properties and dimensions, I also sought to compare and contrast periods with higher and lower establishment rates. Grouping the First Boom, Mini-Boom, and Third Boom periods as "boom" periods was obvious; I chose to group the Seed Years, Early Growth, Slowed Growth, and Brief Repose periods as "quiet" periods because each has comparatively low rates of establishments-per-year. I then created distributional comparisons across and within these grouped periods of higher and lower rates for the establishment model's various properties and dimensions. Comparisons of percentages for quiet- and boom-period establishments are presented in Table 14.

From my consideration of distributions of programs between the more- and less-recent founding periods, I found that 52 percent of these programs were established during the pre-1980 periods; 48 percent, during the post-1980 periods. Likewise, I determined that 72 percent of programs in the sample were established during higher-rate periods; 28 percent, during lower-rate ones. As I considered the various properties and dimensions of the establishment model, I compared not only total numbers and percentages across and within the properties and dimensions, but also each specific distribution in comparison to the overall distributions. I found some commonalties across all periods and many specific connections between periods based on the earlier-later and quiet-boom divisions. These findings are summarized in Table 15 and discussed below.

Analysis of these founding-period groupings began to build the story line of IDS program establishments by providing a common framework. Some of the previously-identified trends and connections within the data were found to hold true regardless of my attempts to categorize and differentiate the periods. Specifically, I found that for all period groupings: (a) when champions are reported, they are most likely to be group champions;

Table 13

Distributions Across and Within "Earlier" and "Later" Founding Periods

| Property | Percent Across | | Percent Within | |
| Dimension | Earlier | Later | Earlier | Later |
|---|---|---|---|---|
| **Champions** | **48** | **52** | **54** | **63** |
| Groups | 48 | 52 | 79 | 80 |
| Individual Faculty | 65 | 35 | 12 | 6 |
| Individual Administrators | 38 | 62 | 9 | 14 |
| **Founding Order** | | | | |
| Primary | 59 | 41 | 76 | 58 |
| Simultaneous | 60 | 40 | 2 | 1 |
| Subsequent | 37 | 63 | 22 | 41 |
| **Program Form** | | | | |
| Major Program | 59 | 41 | 23 | 17 |
| General Education | 47 | 53 | 20 | 25 |
| Discipline-Based | 55 | 45 | 45 | 40 |
| Applied Program | 43 | 57 | 12 | 18 |
| **Institutional Control** | | | | |
| Private | 49 | 51 | 47 | 54 |
| Public | 56 | 44 | 53 | 46 |
| Coordinating Board | 60 | 40 | 76 | 62 |
| Governing Board | 46 | 54 | 22 | 33 |
| Joint Board | 33 | 67 | 2 | 5 |
| **Institutional Type** | | | | |
| Research | 63 | 37 | 36 | 23 |
| Doctoral | 46 | 54 | 12 | 16 |
| Master's | 47 | 53 | 30 | 38 |
| Baccalaureate | 53 | 47 | 20 | 20 |
| Associate | 45 | 55 | 2 | 3 |
| **Region** | | | | |
| New England | 60 | 40 | 14 | 10 |
| Middle States | 47 | 53 | 20 | 26 |
| Southern | 43 | 57 | 17 | 26 |
| North Central | 57 | 43 | 29 | 24 |
| Northwestern | 59 | 41 | 8 | 6 |
| Western | 60 | 40 | 12 | 9 |
| **Modeling** | **43** | **57** | **14** | **20** |
| One Program | 47 | 53 | 32 | 27 |
| Multiple Programs | 47 | 53 | 32 | 27 |
| Great Books | 86 | 14 | 22 | 3 |
| Workshops/Conferences | 0 | 100 | 0 | 16 |
| Recent Scholarship | 40 | 60 | 14 | 16 |
| Institutional Courses | 0 | 100 | 0 | 11 |
| **External Funding** | **33** | **67** | **7** | **16** |
| Governmental | 33 | 67 | 21 | 21 |
| Non-Profit | 37 | 63 | 79 | 65 |
| Both | 0 | 100 | 0 | 14 |
| **AVERAGE/TOTAL** | **52** | **48** | **100** | **100** |

Table 14

Distributions Across and Within "Boom" and "Quiet" Founding Periods

| Property | Percent Across | | Percent Within | |
| Dimension | Booms | Quiets | Booms | Quiets |
|---|---|---|---|---|
| Champions | <u>73</u> | <u>27</u> | <u>59</u> | <u>55</u> |
| Groups | 74 | 26 | 81 | 75 |
| Individual Faculty | 80 | 20 | 10 | 7 |
| Individual Administrators | 58 | 42 | 9 | 18 |
| Founding Order | | | | |
| Primary | 68 | 32 | 64 | 75 |
| Simultaneous | 0 | 100 | 0 | 5 |
| Subsequent | 82 | 18 | 36 | 20 |
| Program Form | | | | |
| Major Program | 58 | 42 | 17 | 30 |
| General Education | 73 | 27 | 22 | 21 |
| Discipline-Based | 73 | 27 | 43 | 41 |
| Applied Program | 84 | 16 | 18 | 8 |
| Institutional Control | | | | |
| Private | 75 | 25 | 53 | 44 |
| Public | 68 | 32 | 47 | 56 |
| Coordinating Board | 69 | 31 | 71 | 66 |
| Governing Board | 60 | 40 | 24 | 34 |
| Joint Board | 100 | 0 | 5 | 0 |
| Institutional Type | | | | |
| Research | 71 | 29 | 30 | 30 |
| Doctoral | 81 | 19 | 16 | 9 |
| Master's | 66 | 34 | 31 | 40 |
| Baccalaureate | 75 | 25 | 21 | 17 |
| Associate | 64 | 36 | 2 | 4 |
| Region | | | | |
| New England | 77 | 23 | 13 | 10 |
| Middle States | 83 | 17 | 26 | 14 |
| Southern | 57 | 43 | 17 | 32 |
| North Central | 66 | 34 | 24 | 32 |
| Northwestern | 78 | 22 | 8 | 5 |
| Western | 80 | 20 | 12 | 7 |
| Modeling | <u>65</u> | <u>35</u> | <u>15</u> | <u>21</u> |
| One Program | 63 | 37 | 29 | 30 |
| Multiple Programs | 68 | 32 | 31 | 26 |
| Great Books | 43 | 57 | 7 | 18 |
| Workshops/Conferences | 67 | 33 | 9 | 9 |
| Recent Scholarship | 70 | 30 | 17 | 13 |
| Institutional Courses | 75 | 25 | 7 | 4 |
| External Funding | <u>88</u> | <u>12</u> | <u>14</u> | <u>5</u> |
| Governmental | 67 | 33 | 16 | 60 |
| Non-Profit | 93 | 7 | 74 | 40 |
| Both | 100 | 0 | 10 | 0 |
| AVERAGE/TOTAL | <u>72</u> | <u>28</u> | <u>100</u> | <u>100</u> |

Table 15

General and Specific Findings Related to Founding-Period Groupings

|  | EARLIER PERIODS | MIXED RESULTS | LATER PERIODS |
|---|---|---|---|
| QUIET PERIODS | General Findings: the majority of programs are: not championed; group championed when championed; primary establishments; Discipline-Based; in coordinating-board states when publicly-controlled; not modeled; not externally funded<br><br>Specific Findings: most likely to involve: absence of champs; simultaneous ests.; Great Books models | Specific Findings: | General Findings: the majority of programs are: championed; group championed when championed; primary establishments; Discipline-Based; in coordinating-board states when publicly-controlled; not modeled; not externally funded<br><br>Specific Findings: |
| MIXED RESULTS | Specific Findings: most likely to involve: primary establishments; Major/Large forms; public control; Research institutions; the North Central region | Specific Findings: most likely to involve: one-other-program models; gov'tal external funding | Specific Findings: most likely to involve: championing by individual-administrators; public control in governing-board states; Associate insts.; Southern region; models based on w'shops/confs. |
| BOOM PERIODS | General Findings: the majority of programs are: championed; group championed when championed; primary establishments; Discipline-Based; in coordinating-board states when publicly-controlled; not modeled; not externally funded<br><br>Specific Findings: most likely to involve: champs who are individual faculty members; Discipline-Based forms; public control in coordinating-board states; the New England, Northwestern, & Western regions; the absence of models | Specific Findings: most likely to involve: Master's & Baccalaureate insts.; models based on multiple programs; ext. funding from non-profit sources | General Findings: the majority of programs are: championed; group championed when championed; primary establishments; Discipline-Based; in coordinating-board states when publicly-controlled; not modeled; not externally funded<br><br>Specific Findings: most likely to involve: champs who are groups; subsequent establishments; Gen. Ed. & Applied forms; private control; public control in joint-board states; Doctoral institutions; Middle States region; models based on recent scholarship & inst'al courses; presence of external funding; ext. funding from combined sources |

(b) the majority of establishments are primary (first) establishments for their institutions; (c) the majority of program forms are Discipline-Based; (d) if the founding institution is publicly controlled, it is most likely in a state that utilizes a higher-education coordinating board; (e) more programs report the absence of models than the presence of them; and (f) more programs report the absence of initial external funding than the presence of it. The Earlier-Quiet grouping of founding periods is the only one for which the majority of cases did not report the presence of champions.

Other more-specific findings further explicated the story line of IDS program establishments by highlighting differences and delineating distinctions across and between the model's properties and dimensions. As evidenced in Table 15, significant differences were found between earlier and later periods; however, only a few of these differences could be seen between earlier and later quiet-period establishments. Earlier-Quiet period and Later-Quiet periods share the basic characteristics discussed above for all periods; the only clear differences I identified within the data center on Earlier-Quiets. Specifically, I found that this grouping is most likely to involve: (a) an absence of reported champions, (b) models based on the Great Books tradition when models are reported, and (c) multiple-simultaneous first establishments. The two latter factors are present in only a few cases. Given these numbers, the only difference I judged to be clear between quiet periods of IDS program establishments is that championing's absence is more common and likely in earlier quiet periods and its presence is more common and likely in later quiet periods.

Some program-founding properties and dimensions could not be easily categorized as more likely during earlier or later periods. Those properties and dimensions that are clearly more likely during boom periods but not clearly more likely in either earlier or later periods include: (a) establishments in Master's and Baccalaureate institutions, (b) the use of models based on multiple programs, and (c) the receipt of external funding from non-profit sources. I concluded that either these factors are not impacted by the relative recency of program establishments, or this type or level of analysis is not adequate and/or

appropriate for differentiating them. Similarly, the dimensions for which likelihoods are least clear both in terms of establishment recency and annual founding rates are: the use of models based on one other program, and the receipt of external funding from governmental sources. These factors appeared to cross-cut the earlier-later and quiet-boom dichotomies; however, I did not consider them as general findings true for all groupings because of the relatively small number of cases of each.

Most of the variation I found between earlier and later founding periods reveals itself along the quiet-boom dichotomy. Significant differences are evident between Earlier-Boom periods and Later-Boom periods. In addition to the general findings true for all groupings, the one Earlier-Boom period—the First Boom—is the most likely grouping to involve: (a) individual-faculty champions; (b) Discipline-Based program forms; (c) publicly-controlled institutions in coordinating-board states; (d) the New England, Northwestern, and Western regions; and (e) the absence of models. I take these factors as contributors to this period's high annual rates of programs establishments.

Later-Boom periods (Mini-Boom and Third Boom) appear to be fueled by different factors. These periods are the most likely groupings to involve: (a) champions in the form of groups, (b) subsequent establishments, (c) General Education and Applied program forms, (d) private institutional control, (e) publicly-controlled institutions in joint-board states, (f) Doctoral institutions, (g) the Middle States region, (h) models based on recent scholarship and institutional courses, (I) the presence of external funding, and (j) external funding from combined (governmental and non-profit) sources. In more-recent years these properties and dimensions appear to have become more important factors in times of high rates of IDS program establishments.

Some properties are clearly more likely in earlier periods, but are not clearly more (or less) likely in quiet or boom periods. These properties include: (a) primary/first establishments, (b) Major/Large forms, (c) public control, (d) Research institutions, and (e) the North Central region. Those properties and dimensions that are clearly more likely in

later periods, but not necessarily in quiet or boom periods, include: (a) championing by individual administrators, (b) publicly-controlled institutions in governing-board states, (c) Associate institutions, (d) the Southern region, and (e) models based on workshops and conferences. Again, differences between earlier and later periods are highlighted by these findings. I sought a better understanding of those properties and dimensions for which "mixed results" were found by considering the seven founding periods individually.

Individual founding periods. Consideration of the Seed Years and Early Growth founding periods revealed that, together, these periods fit the general findings for all period groupings. However, by analyzing each period separately, I began to clarify the differences between them and to make sense of the mixed results I had found from my comparisons of quiet and boom earlier periods. The differences I noted between the Seed Years and Early Growth periods include:

1. Less than 40 percent of program establishments during the former period involve champions; one-half of foundings during the latter period do. Obviously, the previous finding that champions are most likely absent in Earlier-Quiet period foundings is not completely accurate for the Early Growth period.

2. The Discipline-Based form is cumulatively the most common form for these two periods; however, the Major/Large form is actually the most frequent one for the Early Growth period. This finding may contribute to the mixed-result finding that Major forms are most common in earlier periods regardless of the quiet-boom distinction.

3. Two cases of multiple-simultaneous first establishments are present in the Early Growth period; one in the Seed Years. Thus, the previous finding that such establishments are most likely in Earlier-Quiet periods is especially true for the Early Growth period.

4. Of the 51 program establishments during these two periods, 25 are in publicly controlled institutions; 26, in private ones. However, two-thirds of the foundings during the Seed Years are in private institutions and almost two-thirds of those during the Early

Growth period are in publics. As the maintenance model has already indicated, the earliest program foundings are concentrated in private institutions.

5. Program establishments are most common in Research institutions during the Seed Years; foundings are most likely in Master's institutions during Early Growth. No foundings are reported in Master's institutions during the Seed Years. This finding may contribute to the mixed-result finding that Research-institution establishments are most likely in earlier periods regardless of bust or boom patterns.

6. The North Central accrediting region is the most likely region for programs established during either period.

7. Three of the six cases of Seed Years modeling are based on the Great Books tradition, while three of the five Early Growth modeling cases are based on one other program. The previous finding that Great-Books models are most likely in Earlier-Quiet periods is only true for the Seed Years period.

8. Only one report of external funding is found in these two periods; it is a case of funding by a non-profit organization during the Early Growth period.

The First Boom period is the only Earlier-Boom period. Therefore, its program establishment properties and dimensions were expected to match those discussed above for such periods. I analyzed this period nonetheless in order to verify these relationships as well as to clarify the mixed results found between earlier quiet and boom periods. The general and specific findings for the Earlier-Boom grouping listed in Table 14 were verified by my analysis of the establishments that occurred during this period. I then turned my attention to the mixed results for earlier periods. I found that, for the First Boom:

1. Seventy-two percent of program foundings are the first establishments on their campuses. But for the Seed Years and Early Growth periods, the percentage is over 90 percent. This difference explains the mixed-result finding related to founding order; while

the majority of foundings in earlier periods are first establishments, the ratio is highest for the two early quiet periods.

2. Major/Large program forms are the second most likely forms, accounting for 30 programs. Coupled with the 17 Major/Large programs established during the previous two periods, these 47 earlier-periods foundings represent over 56 percent of all cases of such forms. Major/Large program forms are most likely in earlier periods, namely the Early Growth and First Boom periods.

3. Over 53 percent of establishments are in publicly-controlled institutions. And 53 percent of all establishments in the three earlier periods are in such institutions. Public control is most likely in earlier periods, namely the Early Growth and First Boom periods.

4. Establishments in Research institutions are most likely, accounting for over one-third of all institutional foundings. Given that such foundings are also most likely in the Seed Years, and almost as likely as Master's-institution foundings for the Early Growth period, Research-institution establishments are most likely in earlier periods regardless of whether these periods are quiet or boom periods. (The mixed result related to Research institutions must be more connected to later quiet and boom periods.)

5. Over 25 percent of establishments were in the North Central region. The majority of establishments in the previous two periods were also in this region. Therefore, North Central region establishments are most likely in earlier periods regardless of whether these periods are quiet or boom periods. (The mixed result related to the North Central region must be more connected to later quiet and boom periods.)

6. Only 11 percent of establishments involved modeling. This percentage is the lowest of any period. Obviously, this period's higher rate of establishments occurred for reasons other than modeling.

As I moved to consider the remaining four periods, I reminded myself that these periods are represented by the later-periods grouping. I chose to analyze the Slowed

Growth and Brief Repose periods simultaneously, as I had done with the Seed Years and Early Growth periods. I saw that these two periods match the general characteristics of Later-Quiet period groupings from Table 15. Specifically, I found that:

1. Although the majority of programs established during both periods report the presence of champions, the Brief Repose period contains the highest percentage of such programs of the seven periods. For this period, over 80 percent (14 of the 17) of foundings are championed.

2. Although the majority of programs established during both periods have Discipline-Based forms, the Brief Repose period contains the highest percentage of such forms of the four later periods, and the second highest percentage (behind the Seed Years) of all periods.

3. Although the majority of programs established during both periods are not modeled on other phenomena, the likelihood that a program founded during Slowed Growth is modeled is more than twice that for one founded during the Brief Repose period. Twenty-four percent of Slowed Growth establishments are modeled; for Brief Repose establishments, only 12 percent are.

I concluded that the reasons for these periods' lower rates of program establishments are not directly connected to the presence of champions, to the Discipline-Based form, or to the absence of models; these traits are also true of higher-rate periods.

I then compared the Slowed Growth and Brief Repose periods in terms of the mixed-result findings for later periods. I found that:

1. In terms of the likelihood of champions being IACs, over 20 percent of championing cases in the Slowed Growth period are cases of individual-administrator championing. This ratio is higher than for any other later-period and higher than all periods

except the Seed Years. Fourteen percent of Brief Repose establishment champions are IACs, the third highest percentage of the later periods. Overall, 30 percent of all cases of championing by IACs during the four later periods are contained within the Slowed Growth period.

2. In terms of publicly-controlled institutions in governing-board states, almost 40 percent of public-control cases in the Slowed Growth period are cases in governing-board states. This ratio is not as high as for the Mini-Boom, another later period. Again, the Brief Repose contained the third highest percentage of the later periods. I could see that I would need to consider the two later boom periods before this factor was completely clear.

3. In terms of Associate institutions, only one program establishment is reported in such an institution during the Slowed Growth period and another during the Brief Repose. Obviously, consideration of the two later quiet periods was required before this factor would be clear.

4. In terms of the Southern accrediting region, almost 40 percent of all Slowed Growth establishments are found in this region, almost double the second most likely region. For no other later period is this region the most likely one, although the 30-percent finding for the Brief Repose is second only to the Slowed Growth period. I took this finding as an indication that these two quiet periods contribute to the mixed result that Southern-region establishments are more likely in later periods regardless of higher or lower establishment rates.

5. In terms of models based on workshops and conferences, while three of the ten models in the Slowed Growth period—and one of the two models in the Brief Repose—were multiple programs, two of the six cases of workshop/conference modeling for all later periods are contained in the Slowed Growth period. None are contained in the Brief Repose. The four remaining cases of workshop/conference modeling are in boom periods, which contributes to the mixed finding for this type of modeling.

I concluded that these properties and dimensions may be significant contributing factors to periods of fewer IDS program establishments.

I then turned my attention to the two later boom periods—the Mini-Boom and the Third Boom. Although significantly more program establishments are contained in the Third Boom than the Mini-Boom, the distributions of properties and dimensions across these two periods are quite similar. The commonalties and differences I found include:

1. About eighty percent of the championing reported during each period is group championing; the total number of group-championing cases reported during these two periods represents over 34 percent of all group-championing reports, almost equivalent to that of the First Boom (which contains significantly more establishments).

2. Although the majority of establishments during each period are primary establishments, the distribution for the Third Boom is only 50.5 percent primary and 49.5 percent subsequent establishments. Overall, over 38 percent of all subsequent establishments contained in the data are found in the Mini-Boom and Third Boom.

3. Cumulatively, the Discipline-Based form is the most likely form for these two periods. However, for the Mini-Boom period, the General Education form is slightly more common. In fact, one-third of all Mini-Boom forms are General Education, the highest percentage for this form of any period. Also in the Mini-Boom, the percentage for the Applied program form is the highest of any period. Overall, 36 percent of all General Education forms—and 43 percent of all Applied forms—are found in the Mini-Boom and Third Boom periods.

4. Sixty percent (or more) of establishments during both periods are in privately-controlled institutions. These are the highest percentages since the first founding period. Of the 37 establishments in publicly-controlled institutions during the Third Boom, four (about 11 percent) are in joint-board states. No other period has more than two, and the data indicate the presence of only seven such programs overall.

5. Establishments in Master's institutions are the most common types of institutional foundings during both periods; establishments in Doctoral institutions are the least common types for both periods. However, the total number of Doctoral-institution foundings contained in the Brief Repose and Third Boom periods represents over 37 percent of all such foundings.

6. Establishments in the Middle States accrediting region are the most common types of foundings during both periods. The Middle States percentage is over 30 percent for each period, and these two periods are the only ones for which such a high number is found. Almost 42 percent of all Middle States foundings are in the Mini-Boom and Third Boom periods.

7. Thirteen percent of Mini-Boom establishments involve modeling; 22 percent of Third Boom foundings do. Cumulatively, one program is the most common modeling basis for both periods. However, recent scholarship is the second most common basis for the Third Boom. Moreover, five of the 10 total cases of recent-scholarship modeling are found in this period. Likewise, three of the four total cases of institutional-course modeling are found in these two periods; one in the Mini-Boom, two in the Third Boom.

8. Thirty-three percent of Mini-Boom establishments, and 16 percent of Third Boom foundings, involve external funding. Even though the ratio for the Third Boom is half that of the Mini-Boom, the percentage for the latter period is still higher than for any other period. Non-profit organizations are the most common sources of external funding during both periods. One case of combined (governmental and non-profit) external funding is found in the Mini-Boom; three more in the Third Boom. Overall, these four cases represent all reported cases of combined external funding in the data set.

These findings highlight the differences between these later boom periods and the later quiet ones, as well as between these boom periods and the first one.

Following this further development of the establishment story through analysis of founding periods, I began to develop similarly the maintenance story line through analysis of the Institutional Frequency property of the Context feature of the maintenance model.

The Maintenance Story

Overview. Ultimately, the story of undergraduate IDS program maintenance in American higher-education institutions is a story of different—sometimes unique—contextual realities. As the central phenomenon of the maintenance model, the Institutional Frequency property is the core factor around which the model's other properties and dimensions must be organized. Toward developing the maintenance story line, I considered the three dimensions of the Institutional Frequency property in two ways. Initially, I considered the three dimensions in relation to one another. As this analysis progressed, I also differentiated between those programs that are the only IDS programs within their institutions and those that are not; I combined the two multiple-program dimensions. My goal in these considerations was to identify and clarify trends, connections, and differences across and within the "Only," "One of Two," and "One of Three or More" dimensions. In this way, I hoped to begin to tell the maintenance story.

Institutional frequencies. After identifying the Context feature as the core category of the maintenance model, I had sought a property that would best enable me to understand the impact of programs' context on IDS program maintenance. My decision on the Institutional Frequency property was based on this property's three dimensions of institutional involvement in and/or commitment to interdisciplinarity. I was confident that differences important in developing a grounded theory of IDS program maintenance would be identifiable between programs that are their institutions only IDS programs, those that are one of two on their campuses, and those that are one of three or more. I began to test this assumption by creating distributional comparisons for these three dimensions. Comparisons of the institutional contexts for single programs, pairs of programs, and triads or larger sets of programs are presented in Table 16.

Table 16

Distributions Across and Within the Dimensions of the Institutional Frequency Property

| Property Dimension | Percent Across | | | Percent Within | | |
|---|---|---|---|---|---|---|
| | Only | 1of2 | 1of3+ | Only | 1of2 | 1of3+ |
| **Program Form** | | | | | | |
| Major/Large | 59 | 27 | 13 | 26 | 19 | 12 |
| General Education | 70 | 23 | 7 | 33 | 17 | 7 |
| Discipline-Based | 34 | 32 | 34 | 30 | 45 | 62 |
| Applied | 35 | 36 | 29 | 11 | 19 | 19 |
| **Program Age** | | | | | | |
| Ancients | 57 | 14 | 29 | 6 | 3 | 6 |
| Seniors | 60 | 13 | 27 | 9 | 3 | 9 |
| Adults | 45 | 31 | 24 | 36 | 38 | 39 |
| Adolescents | 50 | 36 | 14 | 24 | 27 | 14 |
| Infants | 42 | 35 | 23 | 21 | 27 | 24 |
| **Institutional Control** | | | | | | |
| Private | 53 | 23 | 24 | 57 | 39 | 53 |
| Public | 41 | 37 | 22 | 43 | 61 | 47 |
| Coordinating Board | 41 | 37 | 22 | 70 | 70 | 70 |
| Governing Board | 38 | 38 | 24 | 24 | 27 | 30 |
| Joint Boards | 71 | 29 | 0 | 6 | 3 | 0 |
| **Institutional Type** | | | | | | |
| Research | 26 | 33 | 41 | 16 | 31 | 51 |
| Doctoral | 47 | 34 | 19 | 14 | 17 | 12 |
| Master's | 48 | 34 | 18 | 34 | 38 | 26 |
| Baccalaureate | 68 | 20 | 12 | 30 | 14 | 11 |
| Associate | 100 | 0 | 0 | 6 | 0 | 0 |
| **Region** | | | | | | |
| New England | 49 | 28 | 23 | 12 | 11 | 12 |
| Middle States | 42 | 23 | 35 | 21 | 18 | 36 |
| Southern | 55 | 38 | 7 | 24 | 26 | 6 |
| North Central | 50 | 27 | 23 | 29 | 26 | 28 |
| Northwestern | 56 | 22 | 22 | 8 | 5 | 6 |
| Western | 27 | 46 | 27 | 6 | 15 | 12 |
| **Lifecycle** | 42 | 32 | 26 | 31 | 38 | 40 |
| Growth | 38 | 32 | 30 | 49 | 52 | 62 |
| Reduction | 50 | 0 | 50 | 3 | 0 | 6 |
| Revision | 45 | 36 | 19 | 48 | 48 | 32 |
| **Current Reality** | 49 | 30 | 21 | 27 | 26 | 24 |
| Reported Problems | 57 | 26 | 17 | 25 | 19 | 18 |
| Reported Positives | 47 | 31 | 22 | 75 | 81 | 82 |
| **AVERAGE/TOTAL** | 47 | 30 | 23 | 100 | 100 | 100 |

The connections I identified between the Institutional Frequency and Program Form properties were presented previously in the discussion of the initial verification stage. To briefly reiterate: larger program structures such as the Major and General Education forms are concentrated in the Only program dimension, indicating that when such broadly focused programs exist, additional programs are unlikely; and more-focused and often smaller-sized programs such as the Discipline-Based and Applied forms are concentrated in the two multiple-program dimensions, indicating that the existence of other programs increases the likelihood of these forms (and those other programs are likely to be similar forms given the previous finding).

My analysis of the ratios for the three dimensions in relation to the Program Age property revealed that the majority of Ancient and Senior programs are the only IDS programs on their campuses. For the other age groups, a smaller majority of programs are one of at least two IDS programs within their institutions. Also for Ancients and Seniors, the presence of three or more programs is twice as likely as the presence of only two. I began to see that, while the majority of institutions containing older programs do not embrace interdisciplinarity beyond one program, when they do commit to multiple interdisciplinary opportunities, they are likely to opt for more than two programs. Beyond the basic realities of program form, I hoped that my continuing analysis would add to my understanding of what influences these decisions for one more, many more, or no more programs. Infant programs have the lowest percentage of single programs, indicating that they are the most likely age group to contain multiple programs. I took this finding as an indication that, at the time of data collection, interdisciplinarity was growing faster within institutions already involved in interdisciplinary endeavors than across those not involved.

The majority of single programs and triad-or-more programs are located in publicly-controlled institutions; the majority of program pairs are in privately-controlled institutions. Over one-half of all programs in private institutions are single programs on their campuses; the percentage for single programs in public institutions (41%) is below the average for the

distribution of all programs (47%). The distribution of programs in public institutions in coordinating-board states is remarkably similar across the three institutional frequencies; about 70 percent of programs in each dimension is such a program. I concluded that the more programs an institution contains, the more likely it is to be a public institution. And, regardless of the number of programs, if the institution is publicly-controlled, it is most likely in a coordinating-board state.

Seventy percent of single programs are in Master's, Baccalaureate, and Associate institutions. While pairs of programs are most likely in Master's institutions, the combined percentage of Research and Doctoral institutions for such programs is higher than for Master's institutions. Sixty-three percent of triad-or-more programs are in Research and Doctoral institutions. No multiple programs exist in Associate institutions, and only 30 percent of programs in Baccalaureates are multiples on these campuses. Clearly, smaller institutions tend to contain fewer programs, and larger institutions tend to contain multiple programs.

For two accrediting regions—the Southern and Northwestern, the majority of programs are single programs. The Western region is the only one for which the most likely frequency is two programs. Over one-third of programs in the Middle States region are triads-or-more on their campuses; in the Southern region, less than 10 percent have such frequencies.

Programs in the Only dimension are the only ones for which less than 50 percent report Growth on the Lifecycle property. These programs also have the highest percentage of Reported Problems on the Current Reality property. If these problems tend to be ongoing problems for institutions' only IDS programs, their presence may impede—and thus help explain the lack of—growth for these cases. Programs in the One of Three or More dimension are much more likely to report growth than are those in the One of Two dimension. Likewise, programs in the three-or-more dimension are least likely to report revision. If institutional frequency is related to program size, then perhaps programs that

are triads-or-more tend to be smallest at establishment, and thus are most likely to grow rather than simply being revised. No programs in the One of Two dimension report reduction; two in the Only dimension and two in the One of Three or More dimension report reduction. Regardless of their institutional frequency, IDS programs tend not to be reduced in size or scope.

As the establishment and maintenance findings further clarified relationships between the many properties of the two models, the establishment and maintenance stories also became clearer. In the next chapter I tell these stories in ways that reflect these findings and lend themselves to the development of a theory grounded in these data.

# CHAPTER 6

## DEVELOPING THE THEORY

### Overview

The data categorization and analysis of the previous chapters come together here as the grounded theory of undergraduate interdisciplinary studies programs in American higher education is developed from the paradigm models, the models' stories, and the two theories of organizational institutionalism. The Prologue recaps the establishment and maintenance models and sets the stage for the telling of the stories. The Dialogue tells the stories in terms of the commonalties and differences across and within the models and provides grounding for the theory's basic, establishment, and maintenance premises. The Denouement ties the models, stories, and premises to general institutional theory as well as its "old" and "new" iterations. From these presentations, the grounded theory is developed and presented first in diagram form. The chapter concludes with the formal statement of the theory in terms of its relational claims and overall perspective on IDS programs.

### Prologue: Grounding the Theory in the Models

#### Introduction

The theory of IDS program establishment and maintenance that arises from these data is best illustrated through relational (paradigm) models of causal conditions, contexts, intervening conditions, action strategies, and consequences. Relationships across and between the establishment and maintenance properties and dimensions identified within each models' features represent the story lines of the IDS programs studied here.

#### The Establishment Model

Collectively, the 404 IDS programs studied in this project offer an interesting and revealing glimpse into the establishment of such structures in American higher education.

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Between the founding of the data's first identified program in 1906 and the founding of the final 20 in 1995, interdisciplinary efforts and opportunities aimed at undergraduate students became incredibly diffuse and diverse, spreading throughout most states, all regions, and all types of public and private institutions in a variety of curricular and structural forms.

The ideas, motivations, and plans for these programs have sources; the only causal conditions for program establishments evident in these data however, are champions. The foundings take place within temporal and institutional contexts, within categorizable points in time, and as first or subsequent establishments on campuses. Foundings are impacted by intervening conditions (structural contexts); those identified in these data are institutions' types, the nature of their control, and the accrediting associations corresponding to their geographic (regional) locations. From these data, the action strategies employed to accomplish or at least assist establishments are the use of models and/or the securing of external funding. This model's consequences are the various program forms that result.

To begin to understand these program foundings and to begin to build a grounded theory from them, the characteristics of individual foundings as well as those general and specific conditions that influence them must be considered. Therefore, the central feature of this establishment model and story is the context in which these program foundings have occurred. A key property within the model's context is founding period—the relative timeframe during which these establishments take place. For these data, the average annual numbers of programs founded go through periods of comparatively high and comparatively low rates. Therefore, this establishment property is central to the model; the story must be told, and the theory developed, through the seven founding periods.

The Maintenance Model

Once established, IDS programs must be maintained. At the program level, myriad of idiosyncratic factors impact day-to-day and long-term administration. At the aggregate level, sets of more-common factors also influence these efforts. A paradigm model is a useful means of telling this story as well. For this model, the causal conditions are

program establishments; foundings necessitate maintenance. The context is composed of programs' forms, age groups, and institutional frequencies (only, one-of-two, or one-of-three-or-more). Maintenance is impacted by intervening conditions; those here are the same as in the previous model—institutional types, control sources, and accreditation regions. The action strategies employed in the maintenance of this these programs are categorized as past lifecycle events (revision, reduction, or growth). The model's consequences inhere respondents' descriptions of programs' then-current realities, that is, whether programs faced positive or negative institutional situations in 1996.

To envision and comprehend IDS program maintenance in a way that facilitates the further development of a grounded theory, program-specific factors as well as general conditions common to most maintenance efforts must be considered. Thus, as in the establishment model, the central feature is the context in which these efforts occur. Within the context feature, the core property is programs' institutional frequency. The maintenance story, which arises from these data, centers on whether each specific program shares its campus with one or more additional interdisciplinary curricula and/or structures.

Telling the Stories Through the Models

A variety of model features and establishment properties are related to the founding period property and its dimensions, influencing the nature of the establishment story as it develops. Some of these relationships are rather consistent across the time property, while others differ in terms of its dimensions (the seven periods or groupings thereof). Similarly, the story of IDS program maintenance arising from these data appears told best through the model's features and maintenance properties, which are the same across programs as well as those that vary in terms of programs' institutional frequencies (the three dimensions or combinations thereof). Thus, the contributions of the two stories to the grounded theory may be illustrated best through *constants* and *variations* in the properties and dimensions of their respective models' features in terms of each program's central property—across and between founding periods and institutional frequencies.

Dialogue: Grounding the Theory in the Stories

Introduction

The establishment and maintenance stories are told below in terms of the common and different relationships of their models' features. Those relationships that are constant or consistent across the establishment model's founding periods and/or the maintenance model's institutional frequencies provide a consolidated framework for these stories. The theoretical premises arising from these relationships begin to reveal some basic truths about interdisciplinarity in American higher education; the shared or similar underpinnings of many IDS programs' establishment and maintenance stories hold true regardless of time and/or programs' numbers on campuses.

Those relationships that vary between some or all establishment-related periods and/or maintenance-related frequencies give shape to the bodies of the stories. The aspects of the theory derived from these relationships begin to add explanatory detail to the overall story of interdisciplinarity; the disparate structurings of the establishment and maintenance stories for many programs are significantly impacted—if not determined—by programs' founding periods and institutional frequencies.

As the constants and variations in the stories are explicated, the theory's eight premises take shape. Each is numbered and discussed separately; some have multiple parts and are reflected in their numbering. I have given the premises and sub-premises axiomatic or aphoristic labels to quickly summarize their propositions as well as to allow easier reference in the remainder of the study. In developing the premises in sets within the frameworks and bodies of the stories, my goal is to connect them to their corresponding establishment and/or maintenance story lines in ways that clearly reveal the theory's groundedness in the data, the models, and the stories.

The Framework of the Stories: Constants and Consistencies

Overview. Those relationships between the models' causal conditions, contexts, intervening conditions, action strategies, and consequences that are constant or consistent

across their central properties reveal the basic framework of the stories. Commonalties within and/or across the establishment and maintenance stories are presented below for each feature of the two models. The discussion of each features' common relationships serve to ground the more-general theoretical premises that follow.

Causal conditions. The establishment and maintenance stories involve different causal conditions; to some degree the establishment story is the causal condition of the maintenance story. One causal-condition constancy is evident within the establishment story. Across the founding periods, when champions are reported as founding catalysts, these champions are consistently groups as opposed to individuals. Although the presence or absence of establishment causal-condition reports are probably impacted by problems in data collection and/or respondent knowledge, a somewhat constant relationship is evident within the data available on champions. Specifically, their presence is more commonly reported than their absence in all periods after 1960. Their absence is more common only in the first two periods, which may be related to these periods' possession of the two lowest annual founding rates. The presence of group champions especially—and perhaps the presence of champions in general—appear to be an important, though not required, causal condition in the establishment story.

Contexts. The models of the two stories have similar contexts. The founding period and founding order properties of the establishment model correspond closely with the age and institutional frequency properties of the maintenance model. The maintenance model's other contextual property, program form, is the consequence of the establishment model. Different but related contextual constants or consistencies are evident in each story.

Within the establishment model's context, the founding-order property reveals an ongoing dispersion of foundings into additional institutions. When programs' institutional founding sequences are discernible, first establishments are more common than subsequent ones across the periods. Although the subsequent foundings in the data tend to occur in more-recent periods, establishments as institutions' firsts are more common in these

periods as well. Moreover, the founding-period factor indicates that these establishments not only continued, but also became comparatively more common across period groupings over time. Considered chronologically, each successive boom period is categorized by a higher number of average annual foundings than the previous one; the same is true for each successive quiet period. And the most-recent period has the highest rate overall.

The age property of the maintenance context indicates that programs which met the inclusion criteria for this data set were consistently most common in the 17-28 year-old age group and consistently least common in the 29-36 and 37-90 age groups in 1996 across the various institutional frequencies. While these significantly different concentrations of programs in the Adults age group as compared to the Seniors and Ancients groups across the institutional frequencies may reflect variations in the establishment story, they are also related to the maintenance story. These programs have "survived" long enough to appear in this study; they have been maintained over time without being terminated or revised into non-interdisciplinary or otherwise inclusion-ineligible forms.

Intervening conditions. The intervening conditions of the two models are the same. Representing the structural contexts of IDS program establishment and maintenance efforts, these conditions center on institutional types, control, and accrediting regions. Few constants or consistencies in intervening conditions are evident in these stories; however, the two that are identifiable are true for both stories. First, establishments in Associate institutions are consistently least common across the founding periods; relatedly, IDS programs requiring maintenance in such institutions are consistently least common across the institutional frequencies. Second, establishments in publicly-controlled institutions are consistently more common in coordinating-board states across periods; this consistency is also true for programs across their frequencies on campuses. The second premise above is tempered by these intervening-condition commonalties.

Action strategies. The models of the two stories contain very different methods employed to establish and maintain IDS programs. Across the establishment story's

founding periods, reports of specific action strategies are rare. Although reports of modeling and external funding are consistently absent, this absence is probably more attributable to data-collection problems and/or respondent-knowledge imprecision than to a real trend in the data. A similar absence of reports of lifecycle events as action strategies is also evident. However, unlike the establishment story's action strategies, when such reports are present in the maintenance story, their distributions are consistent across institutional frequencies. Reports of growth are consistently more common than those of revision, which are consistently more common than reports of reduction.

Consequences. Regardless of action strategies, the models have consequences. Establishment efforts result in programs founded in different forms; maintenance efforts result in different current realities faced by programs within their institutions. The consequences of the establishment model and those of the maintenance model tend to be consistent within each story. Across founding periods, the Discipline-Based form is consistently the most common result of the establishment story. In addition, although relatively few reports of current realities are found in these data, positive descriptions of programs' current institutional situations or campus relations are consistently the most common result of the maintenance story across the three institutional frequencies.

Basic premises. Three theoretical premises arise from these constancies across the features of the establishment and maintenance models. The first two postulates are more specific to the establishment story, while the third applies more generally to both stories.

*Premise 1.0: There is strength (and success) in numbers.*

Successful program-establishment efforts are consistently associated with broad, specific support within their institutions. The word interdisciplinarity implies collaboration and interaction; program establishments may be more readily accomplished if and when these activities are present as well. Although all founding efforts have impetuses, the presence of multiple advocates (a group) for IDS programs appears more likely to result in

program foundings than is the presence of individual advocates. Although the relationship is less clear, the presence of advocates in general appears more likely to result in program foundings than does their absence (especially since 1960).

*Premise 2.0: When you're hot, you're hot.*

Interdisciplinarity has been—and continues to be—quite popular in American higher education. IDS program establishments are ongoing and expanding in U.S. colleges and universities. Across time, foundings consistently occur in institutions that are devoid of previous interdisciplinarity at rates greater than those of subsequent foundings on campuses that have at least one program. Although program foundings go through higher and lower annual rates, over time the highs get higher and the lows get less low. A general trend of relatively higher rates of annual establishments exists. Given the most recent period's ratios of first and subsequent establishments as well as its average annual founding rate, interdisciplinarity and IDS programs were at least as popular in the 1990s as they had ever been.

Interdisciplinarity's popularity is evidenced in the long-term maintenance of IDS programs as well. Interdisciplinary curricula and/or structures appear to be rather resilient for about two or three decades. Although a dearth of relatively old programs appears to exist, programs of all institutional frequencies in this analysis were consistently closer to age 28 than significantly below it in 1996. Once established, IDS programs tend to survive in interdisciplinary forms. Thus, interdisciplinarity is not the fad it is often perceived to be.

*Premise 3.0: Find what fits or works, use it, and stick with it.*

*3.1: If it doesn't fit, don't use it.* Regardless of interdisciplinarity's general popularity or resiliency, IDS programs must fit with specific structural contexts if they are to be established and/or maintained over time. For example, the rather basic, utilitarian, vocational and/or specialized nature of Associate institutions' curricula may cause them considerable trouble making interdisciplinarity fit into their academic programs. The very essence of these institutions may function to constrain IDS program maintenance by

inhibiting establishments in the first place. For other institutional types, interdisciplinarity and IDS programs may fit better.

Likewise, some states' more-involved, more-bureaucratic governing and joint public-higher-education boards may prevent or at least slow the establishment of IDS programs, and thus inhibit their maintenance. Almost one-half of all states have governing or joint boards, but less than one-third of this analysis' establishments occur in such states. Moreover, five of the eight states not represented here use either governing or joint boards. Interdisciplinarity and IDS programs may fit better for public institutions in coordinating-board states.

*3.2: If it does fit or work, use it.* The word interdisciplinary entails a connection to the disciplines; therefore, the Discipline-Based form may represent the most obvious, simplest, and/or easiest to establish. Most colleges and universities in the U.S. possess curricula organized along disciplinary lines. Thus, independent of the presence of champions, models, and/or external funds, more of such forms' start-up needs (particularly faculty) are probably already at hand. Establishment of Discipline-Based IDS programs may be achievable with comparably fewer commitments of institutional resources (less need for new or additional resources such as funding, faculty and staff, or physical space). In the end, this form appears to lie at the core of interdisciplinarity—or at least of IDS program establishments—in American higher education.

Similarly, across IDS programs of all institutional frequencies, perhaps they and/or their institutions are generally successful in facing the administrative and organizational challenges presented by interdisciplinarity. Or perhaps interdisciplinarity presents relatively few maintenance challenges when it is manifested in IDS programs as described above in the framework of the establishment and maintenance stories. The story of IDS program establishment appears to be a success story, and the IDS program maintenance story appears to be a positive story.

*3.3: If it fits or works well, try it on a larger scale.* IDS programs appear to be so successful that, regardless of their relative numbers on their campuses, they consistently report more growth than revision and more revision than reduction. All academic programs go through periodic internal and external reviews; as a result of these and/or other stimuli, broadenings appear to be more common than alterations or cutbacks in IDS programs' sizes and/or scopes. Likewise, alterations appear to be more common than cutbacks. Again, IDS programs' histories may be more positive than neutral or negative; the maintenance story may be a positive one.

## The Body of the Stories: Variations and Differences

Introduction. While framing the two stories, the constants and consistencies discussed above add little to understanding the complexities of IDS program establishment and maintenance. Why are the seven founding periods identifiable? Why do institutions maintain different numbers of programs? The stories' central features must be addressed before the full stories can be told and understood. To complete the establishment story, those features and properties that vary between some or all periods must be identified and connected to the model's other relationships. Likewise, to complete the maintenance story, those relationships between the model's features that differ between some or all institutional frequencies must be discerned and related to the model. These relationships clarify how the stories' central features impact, and are impacted by, the stories themselves.

As the establishment story unfolds, its complexities across the seven founding periods are revealed through variations and differences in its model's features between periods. Considered in this way, these data reveal that, as the *intervening conditions* and *action strategies* of the model change, so too does the story of IDS program establishment. Although the story did not indicate these features to be overly important in the model's constant relationships across periods, it does indicate that the intervening conditions (institutions' types, control, and regions) and action strategies (modeling and external

funding) present within some periods (e.g., earlier or later; boom or quiet) or all periods are the most significant factors in variations and differences of program establishments between periods.

The maintenance story's complexities across the institutional-frequency dimensions can be identified in the same way. These data indicate that variations and differences between single-program and multiple-program (pairs and larger sets) frequencies are more important for understanding the maintenance story than are variations and differences within the multiple-program frequency. When the single frequency is compared to the multiple one, various differences in their *contexts* and *intervening conditions* appear to be connected to significant variations in their *actionstrategies* and *consequences*. When multiple programs are differentiated as belonging to either pairs or larger sets, these programs tend to be more similar in their contexts and consequences, varying most along features related to *intervening conditions* and *actionstrategies*.

The bodies of the establishment and maintenance stories are presented below according to these significant variations and differences. Theoretical premises are also presented as they arise within these discussions. As the framework's premises clarified the more common aspects of interdisciplinarity in American higher education, the premises below explain the differences—and perhaps the difficulties—of IDS program establishment and maintenance.

Establishment intervening conditions and action strategies. The influences of intervening-condition differences and action-strategy variations on the establishment story are clear: (a) when program foundings are differentiated according to the periods' relative recencies; (b) when establishments are differentiated according to the periods' relative founding rates; and (c) when foundings are differentiated according to boom periods' specific differences. These differentiations are presented separately below, but come together within the premises that are developed from them.

The IDS program establishment story begins to unfold as earlier (pre-1980) and later (post-1980) founding periods clarify the intervening-condition differences and action-strategy changes between program establishments within these timeframes. These relationships begin to reveal the history or chronology of interdisciplinarity in American higher education. Earlier-period establishments are concentrated in more-prominent or first-tier (Research and Master's), publicly-controlled institutions in coordinating-board states, whereas those in later periods are concentrated in smaller (Master's and Baccalaureate), private institutions. When later-period foundings are in public institutions, they are comparatively more common in governing-board states than are those of earlier periods. Later-period establishments are also comparatively more common in Associate institutions and in the Southern region than in earlier periods.

As action strategies, the use of modeling and the receipt of external funding are relatively uncommon in earlier periods and somewhat more common in later ones. Specifically, the use of workshops and conferences as program models are much more common in later periods. Apparently, interdisciplinarity in the U.S. in the form of IDS programs got its start in more-prominent, public universities and colleges despite relatively little aid from models or external funds or champions as indicated previously.

Beyond the passage of time, the influences of intervening conditions and action strategies on the establishment story are also evident from founding-period distinctions based on average annual establishment numbers. Foundings during consecutive years of lower establishment rates—quiet periods—mirror the general establishment constants identified across periods. Boom periods—consecutive higher-rate years—differ from quiet periods primarily in terms of intervening conditions and action strategies. Specifically, during booms, foundings in smaller (Master's and Baccalaureate) institutions are comparatively more common, and when modeling and/or external funding are reported, the models are more commonly multiple programs and the funding sources are more commonly non-profit organizations than during quiet periods. As boom and quiet periods

add to the complexities of the establishment story, intervening-condition differences and action-strategy variations differentiate these periods; moreover, they appear to define and/or create boom periods.

Between the story's three boom periods, the clearest differences also center on intervening conditions and action strategies. In fact, the differences between the first boom and the two later booms are quite similar to those between earlier and later periods in general. The earlier boom is characterized by foundings in public institutions (especially in coordinating-board states); the two later booms, by foundings in privates. The accrediting region most common in the first boom is different than that in the latter two booms. Furthermore, the two later booms are characterized by comparatively more modeling based on both recent scholarship and institutional courses as well as comparatively more external funding (especially from combined sources). Over time, as intervening conditions and action strategies have changed, the story of IDS program establishments during boom periods has also changed.

This intervening-condition and action-strategy dependency of periods is further evident between the two later booms. Their most prominent differences spring from their intervening conditions and action strategies. For foundings in the first later-boom period: (a) public-institution establishments tend to be in governing-board states; (b) establishments are concentrated in smaller (Master's, Baccalaureate, and Associate) institutions, and in the Middle States and North Central regions; and (c) external funding is comparatively more common than in the latter boom period, especially from non-profit sources. The second later-boom period is characterized by: (a) public-institution establishments tending to be in coordinating-board states; (b) establishments concentrated in larger (Research and Doctoral) institutions, and in the Middle States and Southern regions; and (c) reports of modeling are comparatively more common than in the former boom period. For both later booms, foundings most commonly result in Discipline-Based forms.

Establishment conclusions. The IDS program establishment story is one of constancy and variation over time. The constants of some causal condition, context, and consequence features transcend time and are not heavily impacted by intervening conditions and action strategies. Conversely, the most important variations and differences are exactly those in the intervening conditions and action strategies involved in program establishments within and between different time periods. These fluctuations, changes, and trends in institutional and founding-process characteristics impact the annual rates of establishments; these rates distinguish the various founding periods; the periods tell the story.

Establishment premise. Three related propositions arise from the establishment story and are presented here as parts of a single premise. These sub-premises center on time, information/knowledge, money, acceptance, and legitimacy.

*Premise 4.0: Acceptance brings legitimacy.*

*4.1: Time and knowledge bring acceptance.* Earlier- and later-period establishments are probably indicative of how processes of diffusion and/or isomorphism spread information and knowledge about interdisciplinarity over time. As awareness of interdisciplinarity's persistence has increased in more-recent years, IDS programs may have become more acceptable in American higher education. For example, in the past two decades, more workshops and conferences clearly have informed more people (i.e., potential champions and state-board members) of others' experiences with interdisciplinarity. In later periods, these events have become more common program-establishment models as well.

This diffusion of knowledge probably also contributes to interdisciplinarity's apparent shift from earlier concentrations in public universities to later ones in private colleges. Private institutions tend to be smaller and more teaching-oriented (Finkelstein, 1984). Thus their faculties often possess an institutionally-internal, student-directed focus (Clark, 1988). If such faculties are less involved in more external matters (such as national

conferences), then as potential establishment champions or as real foils for others' championing efforts, they may have been less-informed about interdisciplinarity in its early years. Thus, their institutions had fewer IDS program foundings in these periods.

In earlier periods, governing boards appear to have served as obstacles for their state colleges' and universities' interdisciplinary efforts. Perhaps because such boards tend to be more institutionally influential and involved than most coordinating boards, their public institutions may have been slower and later in establishing IDS programs. Over time, governing boards may learn from the interdisciplinary experiences of somewhat more autonomous institutions in coordinating-board states. They appear to have become more willing to allow IDS programs in their public institutions in later periods. The presence of comparatively more champions--perhaps armed with models of successful programs and/or potential external-funding sources (less state-outlay requirements)--in later periods may help to sway these more-bureaucratic boards toward interdisciplinarity as well. In both general and specific forms, ongoing learning and acceptance by key decision-makers about past and present IDS program establishments may explain interdisciplinarity's ongoing diffusion as well as the replication of successful programs.

*4.2: Money brings acceptance.* The receipt of external funds, especially from non-profit sources, appears to fuel the establishment story. The comparatively fewer private-institution program foundings in earlier periods may be reflective of a scarcity of resources available for such efforts in these usually-smaller, often less financially well-off institutions. External funds, as well as internal funds from individual-administrator champions, may have become more available as information and knowledge about interdisciplinarity increased.

Boom periods' concentrations of establishments in smaller institutions may also reflect the importance of external funding. Given the large numbers of American Master's and Baccalaureate institutions, if they establish IDS programs at similar times (periods), then booms will probably result. Furthermore, in terms of non-profits supplying external

funding, if more money is available for such efforts, then more programs will probably be founded. Again, when more external funds are available, smaller (often less financially well-off) institutions appear to establish more IDS programs.

This connection between external funds and boom periods is illustrated clearly by the first later-boom. Although this two-year period has intervening-condition similarities to the second later-boom, it is unique within the booms in terms of action strategies. This period is characterized by comparatively more receipts of external funding (especially from non-profit organizations) than the two other booms. Again, availability of these monies is probably connected to the relatively high number of smaller-institution establishments of General Education forms during this period. Given the relative dearth of foundings in the periods immediately prior and subsequent, funding from non-profit organizations used to assist smaller institutions in establishing General Education programs/curricula appears to explain the first later-boom period.

*4.3: Time, knowledge, and money bring legitimacy.* Earlier-period foundings' tendencies to occur in first-tier (prominent) institutions probably gave these resultant programs more visibility and legitimacy than had they been in second-tier (usually less-prominent Doctoral and Baccalaureate) institutions. They may also have served as models for later establishments in these institutions. The concentration of comparatively more workshops and conferences (sponsored by respected academic groups) and the supply of relatively more external funds (especially from national non-profit organizations) in later periods may also lend legitimacy. Interdisciplinarity appears to have become more legitimate—maybe even "hip"—in American higher education as IDS program foundings became more common, diffuse, acknowledged, and financially supported in later periods.

Maintenance contexts and intervening conditions. The influence of contextual variations and intervening-condition differences on the maintenance story are clear when programs are differentiated as single or multiple frequencies. When multiple-frequency

programs are differentiated as pairs or larger sets (three or more), the influence of their rather-similar contexts and differing intervening conditions are also clear. These relationships are discussed jointly within the story.

In terms of the maintenance story's contexts, those of single and multiple programs differ much more than do those within the multiple-program frequency (pairs and larger sets). These similar and different contexts add to the maintenance story's complexities. For example, singles tend to be relatively large, broad (Major/Large and General Education forms), Adult (7-28 year-old) programs. Conversely, multiples tend to be comparatively smaller, more-focused (Discipline-Based and Applied forms), younger (17-28 year-old Adolescent and 1-6 year-old Infant) programs. Obviously the maintenance story is very different for single and multiple programs because their size, scope, and age tend to vary with their institutional frequencies. The same does not appear to be true within the multiple-program frequency.

By definition, multiples share institutional contexts with other specific programs. However, contextual similarities are also evident across all such programs in terms of the program form and age properties. For both institutional pairs and larger sets, the Discipline-Based form is most common and the General Education form is least common. For pairs, Major/Large forms and Applied forms are about equal; for larger sets, Applied forms are more common than Major/Large ones. By the same token, multiple programs tend to be of similar ages. In these data, programs in the 17-28 age group are most common for both paired and larger-set program frequencies. Moreover, the oldest programs are least common. For pairs, programs in the 7-16 and 1-6 age groups are about equal. For larger sets, those in the 1-6 age group are more common than those in the 7-16 group. Given these contextual realities, differences between the intervening conditions of single- and multiple-frequency programs, as well as within the multiple grouping, are not surprising within the maintenance story; they add to its complexity.

In terms of intervening conditions, Table 17 reveals singles to be concentrated in comparatively smaller (Master's and Baccalaureate, but not necessarily Associate), private institutions, while multiples are concentrated in comparatively larger (Research and Doctoral; no Associate), public institutions. Of the six regional accreditation associations, the North Central is most common for both single and multiple programs. However, for singles, the Southern region is second most common and the Middle States is third, while for multiples the Middle States is a close second and the Southern is a distant third.

Table 17

Intervening-Condition and Context Distributions Within Single and Multiple Frequencies

| Property | Percent Within | |
| Dimension | Single | Multiple |
| --- | --- | --- |
| **Institutional Control** | | |
| Private | 57 | 45 |
| Public | 43 | 55 |
| Coordinating Board | 70 | 70 |
| Governing Board | 24 | 28 |
| Joint Boards | 6 | 2 |
| | | |
| **Institutional Type** | | |
| Research | 16 | 40 |
| Doctoral | 14 | 14 |
| Master's | 34 | 33 |
| Baccalaureate | 30 | 13 |
| Associate | 6 | 0 |
| | | |
| **Region** | | |
| New England | 12 | 11 |
| Middle States | 21 | 26 |
| Southern | 24 | 17 |
| North Central | 29 | 27 |
| Northwestern | 8 | 6 |
| Western | 6 | 14 |
| | | |
| **TOTAL** | 100 | 100 |

Multiple-frequency programs differ much more in their intervening conditions than in their contexts. As Table 17 illustrates above, less-prestigious second-tier (Doctoral, Baccalaureate, and Associate) institutions are least common for all multiple-frequency programs. As Table 16 illustrated in Chapter 5, pairs tend to be in small-to-moderate-sized (Master's), public institutions. Larger sets tend to be in large (Research), private institutions. The Northwestern region is least common for pairs and larger sets. Although the Southern region ties with the North Central as most common for program pairs, it ties with the Northwestern as least common for larger sets.

Across the three institutional frequencies, intervening conditions (institutional size/scope, control, and region) appear to factor into the program-maintenance story. Specifically, when privately-controlled institutions are "small," they tend to offer only one program; when they are "large," they tend to offer at least three. In general, publicly-controlled institutions tend to offer more than one IDS program, but not large numbers of them. In these data, more publics offer exactly two programs than offer more than two. Similarly, the many large institutions belonging to the Middle States association constitute the only region containing more larger-set institutional frequencies than pairs or single frequencies.

Maintenance action strategies and consequences. The differences evident within the contexts and intervening conditions of single- and multiple-frequency programs are connected to variations in their action strategies and consequences. Within the multiple-frequency dimension, the action strategies of pairs and larger sets are clearly different while the consequences of their maintenance efforts are rather similar.

In this study the most commonly-reported action strategy (lifecycle event) is growth; a significant percentage of programs also report revision. However, single programs reporting action strategies tend to acknowledge comparatively less past growth and revision, and comparatively more reduction, than do multiple ones. In addition, for the data's multiple-frequency programs, pairs' reports tend to involve only slightly more

growth than revision and no reduction, while reports from larger sets tend to involve comparably more growth, comparably less revision, and some reduction.

In fact, larger sets represent the frequency within which individual programs are most likely to report growth. Such reports tend to come from programs that had existed for 17-28 years in 1996. Reports of past reduction by programs of larger-set frequencies are relatively more common for this institutional frequency than for the other two; revision reports are relatively uncommon from such programs. Reports of reduction within the larger-set frequency tend to come from older (ages 29 and over) programs. While growth is common within the three frequencies, the distributions of growth, revision, and reduction vary significantly across frequencies.

After experiencing lifecycle events, the programs tend to report more positive current realities than problems; almost eight in ten reports of consequences are positive. When these reports were made in 1996, interdisciplinarity appears to have been experiencing a positive position in American higher education. Not only do 1990 through 1995 represent the most prolific high-establishment-rate period, but the modal age in the data set is only one year (followed by six and four). To reiterate Newell's 1988 (p.1) assessment, interdisciplinary studies were still "alive and well" in U.S. colleges and universities in 1996.

Nonetheless, just as single programs tend to report lifecycles with comparatively more revision and reduction than multiple ones, singles are also comparatively more likely to report negative current realities. Programs existing as multiples appear to be quite similar in terms of consequences; pairs and larger sets in these data are almost identical in their ratios of reported problems to positive realities. Programs of both multiple frequencies tend to report positive situations much more than negative ones. Although reports of positive current realities are most common within the three frequencies, the distributions of positive situations and current problems vary more between single and multiple frequencies than within the multiple-program frequency.

Maintenance conclusions. The story of IDS program maintenance is one of commonalties and differences. Some commonalties transcend programs' institutional frequencies; others are shared across the contexts and consequences of multiple programs only. The maintenance story appears to turn on two different relationships between specific institutional frequencies. One is evident in contextual and intervening-condition differences between single and multiple programs, especially as they affect different action strategies and consequences. The second is evident in intervening-condition and action-strategy differences between pairs and larger sets. These differences related to program, institutional, and maintenance-process characteristics impact the numbers of programs institutions elect to establish and maintain (not terminate or render non-interdisciplinary), which distinguish the three institutional frequencies at the center of the story.

Maintenance premises. Just as the establishment story provides the groundwork for the maintenance story, the establishment premises frame the maintenance premises. The four premises below begin to reveal the interconnections between the establishment and maintenance stories. Premises 5 and 6 clearly connect the two stories; Premises 7 and 8 are more specific to the maintenance story but are predicated on all previous premises.

*Premise 5.0: Size matters.*

*5.1: Size of institutions matters.* To understand the relative size of the institutions in which IDS programs are established is to begin to understand the relative number of IDS programs requiring maintenance within them. Smaller institutions tend to offer fewer programs; larger ones, comparatively more. The smaller institutions in which single IDS programs are common probably have comparatively less space (academic and physical) and/or funding apportionable to the establishment and maintenance of multiple programs and thus opt for single ones. Conversely, larger institutions probably tend to establish and maintain multiple programs because their curricula, campuses, and budgets are large enough to accommodate them.

Smaller institutions tend to be privately controlled, which probably contributes to the concentration of single programs in private institutions. Larger institutions tend to be publicly-controlled, thus the publics' concentrations of multiple programs. Moreover, many state colleges and universities exist in sizes between very small and very large; pairs (moderate numbers) of programs are concentrated in such institutions.

*5.2: Size of programs matters.* To understand the relative size of the IDS programs established within institutions is to begin to understand these institutions' relative numbers of IDS programs. On individual campuses, smaller programs tend to occur in higher frequencies; larger ones, in lower frequencies. As institutions establish multiple IDS programs, the probability that additional programs will be given smaller, more-focused forms (Discipline-Based and Applied) appears to increase with each new establishment. Accordingly, the likelihood that second, third, or subsequent programs will be given larger, broader forms (Major/Large and General Education) appears to decrease with each addition. The presence of multiple programs probably precludes the need for subsequent large, broad programs; economy-of-scale principles, if not basic economics, is probably at work here.

*5.3: Size of institutions and programs within regions matters.* To understand the relative sizes of institutions and their IDS programs within accrediting regions is to begin to understand the relative numbers of IDS programs in these regions. Accrediting regions within which smaller institutions are comparatively common tend to have relatively fewer, usually-larger program forms; those with concentrations of larger institutions tend to have comparatively more, often-smaller forms.

Institutions in states belonging to the Southern association tend to be small private institutions and moderately-sized public institutions. A preponderance of the programs in this region are either single programs (relatively large forms in smaller private institutions) or program pairs (comparatively smaller forms in moderately-sized public institutions).

Similarly, institutions in the Middle States region tend to be relatively large (publics and privates), and thus the more common trait in this region is larger sets of multiple programs.

5.4: *Size of state or regional populations matters.* To understand the sizes of states' or regions' citizen populations is to begin to understand the relative numbers of IDS programs within their institutions. States and regions with smaller populations have fewer programs; those with larger populations, relatively more. The North Central accrediting region contains by far the most states, people, and institutions; it is also either the most or one of the most common regions for programs of all institutional frequencies. The Northwestern region, while containing more states than the New England or Middle States regions, contains the fewest people; it also consistently contains the fewest IDS programs of all frequencies. In fact, two of the region's seven states do not contain any of the IDS programs in this analysis, and over one-half of the programs in this region are single programs on their campuses. Interdisciplinarity appears to need higher concentrations of people—or at least their tax dollars to support higher numbers of smaller programs in public institutions.

### Premise 6.0: Blame the (1980s) economy.

To understand the state of the national economy during the 1980s is to begin to understand the relative numbers of IDS programs within institutions established during this time and requiring maintenance in 1996. This decade's weak economy meant less money for higher education, which appears to have translated into fewer IDS program foundings and probably fewer maintenance funds for pre-existing programs.

The establishment story indicates that all but two years of the 1980s represent quiet founding periods (comparatively fewer first establishments). The age distributions of programs in the maintenance story indicate that during this decade, when institutions did add IDS programs (creating or adding to multiple frequencies), the creation of pairs (adding only one) was more common than additions to already-multiple programs. After the 1980s, foundings of second, third, and/or successive programs were all comparatively

more common. Not only did relatively fewer first establishments occur in the 1980s, but comparatively fewer additional foundings also occurred. Moreover, the decade's brief two-year founding boom appears to have been fueled by the availability of external funds (see Premise 4.2).

*Premise 7.0: It's not easy being old or alone; but it's worse to be both.*

*7.1: It's not easy being old.* Older programs tend to report more past reduction. As discussed in the framework of the story, they are probably more likely to have "lived through" more periods of financial, academic, and/or administrative difficulties that have led to reduction. This trend may be exacerbated as institutions add subsequent programs. Resources may be taken from older IDS programs and redirected to newer ones to get them started. Similarly, perhaps relatively few programs in larger sets report revision because comparatively more of them are young programs and have not "lived" long enough to experience revision, which tends to occur at rather regular intervals in most institutions.

*7.2: It's not easy being alone.* IDS programs that exist as their institutions' only interdisciplinary opportunities appear to be precluded from growth in ways that multiples do not. For single-frequency programs, establishment in relatively larger forms and probability of less resource availability within usually-smaller, more-often-private institutions may constrain their growth opportunities. Moreover, more past revision and reduction do not appear to necessarily effect more positive current situations for single programs. This tendency of singles to experience less-positive action strategies *and* consequences as compared to multiples may indicate that the underlying reasons for the commonly-negative action strategies of the past (reduction and revision) were still present (as manifested in the negative current realities) at the time of data collection.

If this analysis is accurate in identifying contexts and intervening conditions as key factors in programs' different maintenance-related action strategies and consequences, then the prospects of single programs and/or their institutions overcoming negative lifecycles and current realities may be slim to nil. The problems appear inherent to the relationships

between those programs that tend to be singles (larger, broader, older interdisciplinary curricula and structures) and their most common hosts (smaller, often private institutions). Overall, the maintenance stories of single IDS programs may be not only different from those of multiple programs (especially in terms of contexts and intervening conditions), but also less positive (at least in terms of action strategies and consequences).

*7.3: It's worst to be old and alone.* Such factors may be worst for single-frequency programs of comparatively higher average ages (which most are); these factors appear to facilitate these programs' past revision and reduction. Moreover, the small, private institutions in which they are common may be most susceptible to such difficulties. Thus, older single programs have more time and more exposure to opportunities to experience reduction, as well as more recertification self-studies and other planning efforts that might lead to revision.

*Premise 8.0: Two's company; three's even better.*

*8.1: Two's company.* Programs existing as institutional pairs tend to experience more growth than single programs but less than larger sets. Perhaps the contextual and intervening-condition factors that lead or limit some institutions to establish two programs also make the growth of such programs relatively more difficult and thus their revision relatively more common. Likewise, pairs' absence of reduction reports may indicate that these programs are generally successful and fit well within their usually-moderately-sized institutions; otherwise, these institutions would probably have no or only one IDS program.

*8.2: Three's better company.* IDS programs existing as one of three or more on their campuses appear to be the most likely frequency to report growth and just as likely as pairs (and more than singles) to report positive current realities. Perhaps when interdisciplinarity "fits" and "works" on a campus, it *really* fits and works; when programs are successful and easily maintained over time, these experiences may lead institutions to develop more such programs. Only those institutions for which previous interdisciplinarity

has experienced positive lifecycles, and/or has positive current realities, may add more programs.

Possibly, as IDS programs grow and evolve, they spawn additional programs, leading to the higher frequency. The addition of more IDS programs to an institution's academic opportunities may not negatively impact the current situations of other programs on campus if room, resources, and acceptance exists. This proposition is supported by the previously-identified tendency of larger institutions to contain multiple smaller programs.

## Denouement: Grounding the Theory In Institutionalism

### General Institutional Theory

The old and new theories of organizational institutionalism contained within general institutional theory emphasize the relationships between structures and their environments. The establishment and maintenance stories told above illustrate the importance and impacts of structures and environments on IDS programs in American higher education. The central features of both stories are contextual features. The establishment story is related best through programs' (structures) founding periods (temporal environment); the maintenance story, through programs' (structures) institutional frequencies (campus environment). Similar contexts tend to yield similar results. In like fashion, different contexts tend to promote and/or constrain different program establishment and maintenance outcomes. As contexts change, so too do programs' founding and maintenance processes and realities.

The keys to understanding both stories appear to entail variations and differences in intervening conditions (more-general structural contexts/environments) and action strategies (structure-specific activities within environments). Within the maintenance story, consequences (structure-specific results) and contexts (non-structural environments) are also important. As structural and/or environmental features change, vary, or fluctuate, so too do the establishment and maintenance stories. Premises 3 and 5 appear to fit the

general institutional-theory framework. At its core, the theory of IDS programs derived here from their establishment and maintenance stories is an institutional theory.

## New Institutionalism

The "new" institutional theory involves macro-level analysis and organizational fields. Such a framework supports the conclusion that the contextual characteristic most central to understanding the establishment of IDS programs in American colleges and universities is the temporal context (time period) during which each program has been founded. Between 1906 and 1995, seven distinct periods of program establishments are identifiable. The consistencies, variations, and complexities of the establishment story are delineated and/or determined by these seven periods. Shifting trends across the periods are attributable to processes of diffusion, mimetic isomorphism, and structural (institutional) commonalties and similarities in the educational environment.

New institutionalism also supports the finding that variations and differences in intervening conditions are important factors in the establishment and maintenance stories. Structural contexts related to institutional characteristics such as control (public/private), Carnegie classification (size/scope), and accrediting association (geographic region) are analogous to the organizational fields at the center of the new institutional theory. Again this theory provides a useful perspective for understanding the stories of IDS program establishment and maintenance.

Premises 2, 4, and 6 fit directly with the viewpoint of the new institutional theory. These premises address factors such as commonalties, knowledge, legitimacy, nonlocal environments, formal structure, diffusion, isomorphism, and decreased diversity; all are foci or variables within new institutionalism. The theory of IDS programs in American higher education developed here has a significant new-institutionalism component.

## Old Institutionalism

"Old" institutionalism involves micro-level analysis and internal environments. Such a perspective supports the conclusion that the contextual feature most central to

understanding the maintenance of IDS programs in American higher education is the internal-population context (institutional frequency) within which each program is maintained. Three frequencies—one, two, and three or more programs—are created within this analysis. The constancies, differences, and complexities of the maintenance story are revealed and/or dictated by these three frequencies. Variations across the frequencies are attributable to factors internal to regions, states, institutions, and programs.
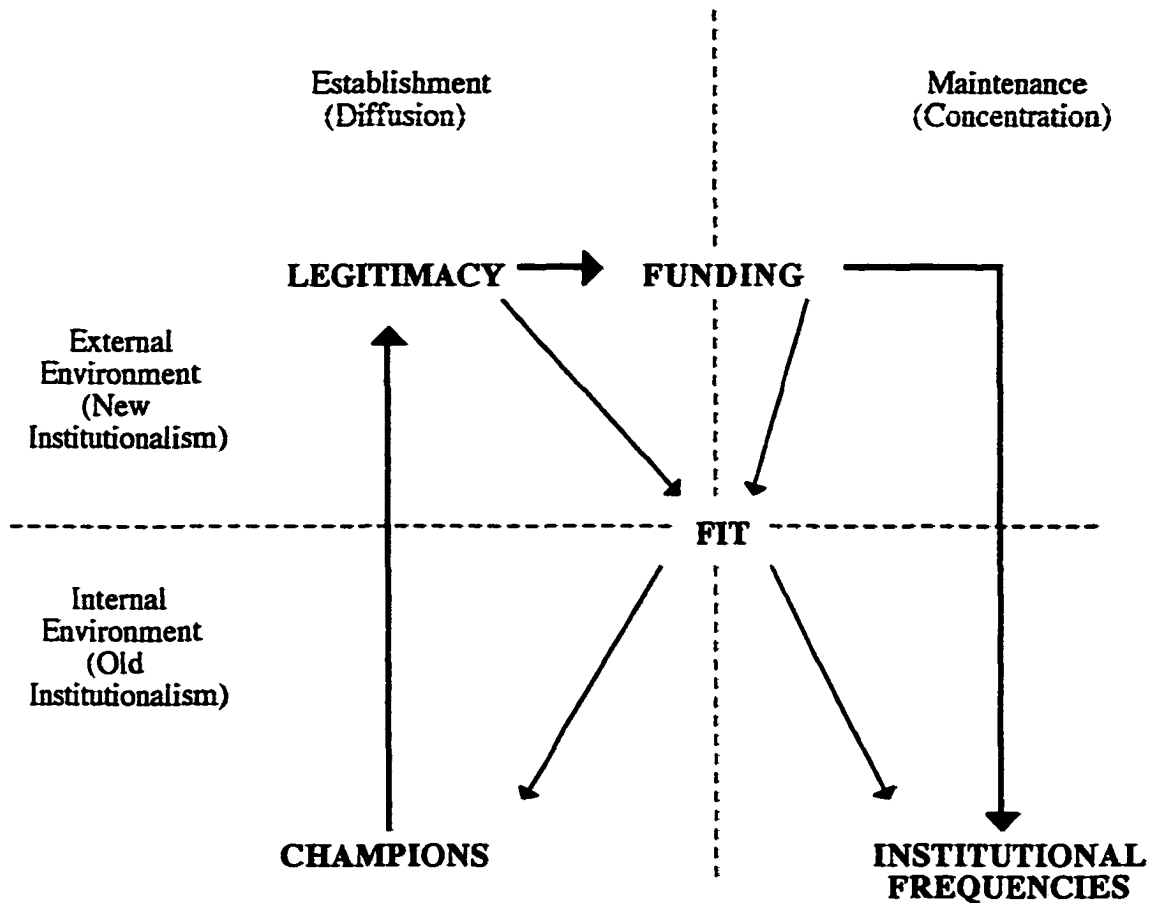
The old institutional theory also supports the contention that action-strategy variations and differences are important factors in IDS programs' establishment and maintenance stories. Specific strategies to assist program establishments (such as modeling and securing external funds) and to accomplish program maintenance (such as size/scope increases, revisions, or decreases) are compatible with the emphases on coalitions, politics, and change within local structures or environments at the center of old institutionalism. Given the significance of action strategies within the establishment and maintenance stories, this theory also provides a useful viewpoint from which to understand IDS programs.

Premises 1, 7, and 8 fit directly with the old institutionalism perspective. These premises involve informal processes, competing values, and resource-related struggles within local (institutional) environments; all are foci or variables within the new institutional theory. The IDS program theory developed here also has a significant old-institutionalism aspect.

## Presenting the Theory

Paradigm models have been used to tell the establishment and maintenance stories. These stories have been used to ground theoretical premises. Relationships between the models, stories, and premises have been connected in terms of general institutional theory as well as its old and new versions. These relationships come together to form the grounded theory of IDS programs in American higher education. The formal statement of the theory follows its presentation in diagram form (Figure 4). The chapter concludes with a summary of the IDS program story contained within the theory.

**Figure 4.** Diagram of the grounded theory of IDS programs.

Establishment (Diffusion)

Maintenance (Concentration)

External Environment (New Institutionalism)

LEGITIMACY ➔ FUNDING

FIT

Internal Environment (Old Institutionalism)

CHAMPIONS

INSTITUTIONAL FREQUENCIES

Legend
Champions = Premise 1
Legitimacy = Premises 2 and 4
Fit = Premises 3 and 5
Funding = Premise 6
Institutional Frequency = Premises 7 and 8

## The Grounded Theory of IDS Programs

Questions of fit lie at the center of the story of undergraduate interdisciplinary studies programs in American higher education. Whether and how these programs fit with or into their internal (local) and external (nonlocal) environments represents the connection between their establishment and maintenance. When IDS programs fit well within their local (institutional)—but especially their nonlocal (state, regional, national)—environments, program establishments become more diffuse over time. When IDS programs fit well within their nonlocal—but especially their local—environments, program maintenance becomes easier over time leading to concentrations of different program frequencies within different institutions.

Nonlocal funding is also central to the IDS program story. The presence of such funding impacts establishment patterns, which in turn impact maintenance patterns. When external funds are available or more available, more first and subsequent establishments occur. Subsequent establishments mean more competition for maintenance resources within these institutions. When external funds are less available, fewer establishments occur. Fewer subsequent establishments mean no additional maintenance-resource competitions for existing programs, but may also reflect time periods or environments in which local and nonlocal funds are more limited. When funding is more limited, program maintenance is more problematic.

The legitimacy of interdisciplinarity within American higher education (the biggest nonlocal environment) is at the center of the story of IDS program establishments. Over time, diffusion of knowledge/information about and external funding for interdisciplinarity led to its increased acceptance in various program forms in U.S. colleges and universities. This acceptance led to its legitimacy as a worthwhile curricular and/or structural option, which is reflected in its ongoing popularity. First and subsequent establishments were both occurring in high rates in the late 1990s, while the numerous IDS programs established in

the late 1960s and the 1970s were continuing to be maintained in "truly" interdisciplinary forms.

Interdisciplinarity's advocates or champions are at the center of the local story of IDS program establishments. Champions advocating IDS programs in groups are especially important. The presence of champions is impacted by questions of fit as well as issues of legitimacy. As champions tend to come from within institutions, they tend to have a good understanding of these local environments. This understanding increases their ability to copy or create program forms that will fit well within these contexts. As interdisciplinarity becomes more legitimate, these champions possess more ammunition—and probably face less local resistance—when fighting for their program ideas. The connections between external funds, acceptance, and legitimacy may also increase champions' likelihoods for success.

The frequencies in which programs become distributed within institutions are central to the maintenance aspect of the IDS program story. Whether programs are maintained alone, in pairs, or in larger sets on their campuses is impacted by questions of fit and availability of external funding. All types, sizes, and numbers of programs are establishable within all types and sizes of institutions. Larger and broader IDS programs can be founded in any institutions; however, they appear to fit best in smaller institutions and tend to be established and maintained in singular frequencies within these institutions over time. Such establishments appear to increase when external-funding availability increases. Economies of scale probably lead smaller institutions to establish and maintain singular, large/broad programs. Smaller and more-focused programs are also establishable in all institutions; however, they appear to fit best in larger institutions and tend to be established and maintained in multiple frequencies within these institutions over time. Such foundings appear to be less impacted by external-fund availability. Economies of scale may also be at work here. Faced with relatively fewer resource constraints than smaller

colleges and universities, larger institutions probably see benefits in establishing and maintaining multiple, small-but-varied, IDS programs.

## Summary: The Story within the Theory

The story of undergraduate interdisciplinary studies programs in American higher education is a story that begins and ends at the local or institutional level, but which is influenced by institutional and extra-institutional environments throughout. It begins within institutions with champions' program-establishment initiatives that are predicated on internal and external questions of fit as well as external questions of legitimacy. It continues to take shape as IDS programs become more diffuse over time. As the establishment and maintenance components of the story begin to overlap—as new programs continue to be founded while existing ones are maintained—funding factors within the nonlocal environment (e.g., the availability of external grants and/or the condition of the national economy) become more important within the story.

Although the IDS program story is ongoing in American higher education, the portion of it told here ends where it began—within the institutional environment. The maintenance component of the story closes with programs being maintained in various frequencies on their campuses predicated on external-funding availability and internal and external questions of fit. This part of the story indicates less program-institution diversity; over time concentrations of similar programs become evident in similar numbers within similar institutions, which leads to less diversity of maintenance options and outcomes.

# CHAPTER 7

## TESTING THE THEORY

### Overview

This chapter details my effort to test how well the grounded theory predicts IDS programs' establishment and maintenance stories. I employed comparative and case-study methodologies to apply the newly-developed perspective and its premises to a sample of additional programs in order to evaluate the theory's explanatory utility and accuracy. The presentation and discussion of these testing procedures are divided into two explicatory sections followed by a concluding section. The first part of the chapter describes the identification, selection, and preliminary analysis of a sample of programs amassed in preparation for the case-study analysis. This section and the beginning of the second section are more quantitative than most qualitative case-study analyses. Given the quantitative and/or comparative nature of several of the theory's premises, I judged such considerations to be necessary and worthwhile (but certainly not sufficient).

In the second section, the sample set and those programs within it, which provided the most comprehensive data are related to the premises and the overall theory. First, each of the eight premises are analyzed separately against the general properties of the full sample as well as against specific information from the most complete case descriptions. Then, these cases are placed within the diagram of the theory's hypothesized internal vs. external and establishment vs. maintenance relationships. Those programs that appear in multiple points on the model, which supplied sufficient and descriptive information relevant to more than one aspect of the theory's perspective, are then discussed in traditional case study formats. The chapter closes with my conclusions as to the adequacy and reasonableness of the grounded theory as indicated by these testing procedures.

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## Initiating the Case Studies

### Selecting the Sample

Case selection for this part of the study was limited by the initial data collection. Since the creation of a comprehensive index of all U.S. programs had been the goal behind the 1996 directory, additional cases were potentially rare. While I desired a sample adequate in quantity and quality—in number and descriptive information—for application to the theory, I also perceived little opportunity for purposeful or stratified sampling within founding periods or institutional frequencies. As a result, my strategy for creating this sample of ancillary programs centered more on case identification. Any programs meeting the original data set's inclusion criteria were eligible for selection. The identification and selection processes eventually resulted in a sample of 32 programs. How I achieved this number of cases is discussed below; the quality of the information gleaned from these cases is discussed subsequently.

A few eligible cases were immediately identifiable. Those six programs excluded from the constant comparative analysis because their foundings had yet to be completed in 1996 were obvious candidates. These programs had since accumulated establishment and maintenance histories relevant to this analysis, and thus were selected. Programs founded since the initial data collection and meeting its eligibility criteria were also sought. With assistance from the Association for Integrative Studies, several such programs were identified. Sufficient establishment and maintenance information was collected to warrant selection of two of these recently-established programs.

Any eligible programs not represented in the original data set were also candidates for selection. A comparison of the 1986 and 1996 directories revealed that 118 first-edition programs were not listed in the second. I investigated to ascertain which if any had been neither terminated nor revised into disciplinary forms. Over 30 such programs were eventually identified, and 24 ultimately provided enough information to earn inclusion in the sample.

A variety of data-collection strategies were employed as identified cases were considered for selection and as relevant information was gathered from selected cases. I already possessed at least some useful data for most programs. For six, I had folders of information submitted during the original data collection. For the 24 older programs from the first directory, I had the directory descriptions. Institutional characteristics (public/private, Carnegie classification) were readily available or part of my general knowledge (state, region).

I supplemented these data as much as possible, and collected data on the two recent establishments, through visual media (institutional and/or program catalogues, brochures, web sites) and interactions (electronic mail exchanges and/or telephone discussions) with program directors. The interactions were often simply program-related conversations, tending to be highly unstructured and usually following directors' stream-of-consciousness thought processes. My intent was to allow them to tell their programs' stories in their own words; my participation involved guiding the discussions toward establishment- and maintenance-related topics.

Analyzing the Sample

Despite my best efforts, all or most of the information I could gather regarding 19 programs was objective and/or lacking in descriptive program-lifecycle detail. Some directors were not cognizant of their programs' histories and/or were unwilling to discuss past or present maintenance issues. These programs proved useful in the comparative analysis of the sample, but did not receive as much attention in the more qualitative aspects of the analysis.

The distributions of these 32 programs across the founding periods and institutional frequencies are generally reflective of those of the original 404 programs. In terms of institutional frequencies, 59 percent of the sample cases are single programs, 25 percent are institutional pairs, and 16 percent are one of three or more. In the original data set, the distributions are 47 percent, 30 percent, and 23 percent respectively. In terms of founding

periods, later-period establishments outnumber earlier ones and boom establishments outnumber quiets in both the sample and the original data set. However, distributions of the sample's foundings within three periods were impacted by the selection methodology.

My selection strategy limited programs not identified from the 1986 directory to founding dates of 1996 or later. Therefore, no programs established during the Brief Respite (1988-1989) could be selected and relatively few from the Mini-Boom (1986-1987) could be expected. The former period occurred after the first directory was published; the latter, during that volume's creation. Only four percent of the original programs have founding dates during the Brief Respite, so the sample's absence of establishments during this period was not perceived to create a need for additional selections. Ten percent of the original programs have Mini-Boom dates, so the sample's five percent distribution was also deemed reasonably representative and acceptable.

The distribution of programs within the Slowed Growth (1980-1985) period also varied from the original data set. Almost one-third of the sample have establishment dates during this period, while only one-tenth of the original programs do. This difference may reflect a concentration of Slowed Growth programs in the first directory. Such programs had existed six or fewer years in 1986. People involved with them may have sought recognition for their new programs and responded to the first edition's survey in relatively higher rates than did other potential respondents. Or perhaps this difference indicates that the early 1980s were not as "quiet" as is evidenced in the original analysis. I did not foresee this distribution as problematic for the study either; in fact as discussed below, I considered the general founding-period ratios as well as those of the institutional frequencies to be positive findings.

Discussing the Sample

I was pleased to find that the central establishment and maintenance properties were reasonably reflected within the 32 programs sampled. I concluded that no additional cases were required before beginning to test the theory. Similarly, this finding provided support

for my creation of these two properties within the initial analysis. The accuracy of the distinctions I had drawn between periods and between frequencies was bolstered when these distinctions were sufficiently and non-purposefully reproduced in the sample.

Relating the Sample and the Cases to the Theory

Testing the Premises

The sample was used to test the eight premises of the grounded theory on two levels of inference. On the first level, the 32 programs were quantitatively analyzed to yield summative results comparable against the original data set as well as against those premises that are more quantitative. Although statistical generalization is not the goal of case-study methodology, I perceived this level of "analytic generalization" (Yin, 1994, p. 31) as a useful starting point for testing at least some of the premises. My goal was to identify those relationships suggested by the theory as important across founding periods, institutional frequencies, and/or programs. A higher level of inference was also sought.

On the second level, specific information from the most data-comprehensive individual cases in the sample was used to test each premise. The eight postulates served as templates with which to compare and scrutinize the empirical information from the sample. My goal was to identify the relationships proposed by the theory within the cases. At this level of analysis, programs are considered separately on their own merits; this methodology is closer to the original design and intent of case study research.

Therefore, in the following discussion of my efforts to test the premises, findings from both levels of inference are provided. For each premise, general consistencies, differences, and trends within the sample and between the sample and the original data set are presented first; relevant information gathered from the most-complete and illustrative case descriptions—a total of 13 programs—is then offered to ground these more-quantitative findings within individual programs. Each case is assigned a letter of the alphabet to identify it and to allow integrative discussion later in the analysis. Following this analysis of the premises, the general theory is addressed in the next section of the chapter.

Premise 1. The proposition that champions--and especially group champions--are key factors in IDS program establishments is supported by the 32 programs in the selected sample. Almost 70 percent of respondents in the sample report the involvement of champions in their programs' establishments, and over 80 percent of these championing reports indicate that these advocates were groups.

Only four programs in the sample are reported to have been championed by individuals. Three cases indicate championing by individual faculty; one, by an individual administrator. The director of Case A (a large-form program founded in the early 1980s in a large, private university) describes his programs' faculty champion as a "visionary," while the director of Case B (a large-form program founded in 1983 in a large, public university) refers to his program as its faculty-champion's "brainchild" and notes that this person was already very influential on campus. In the lone administrator-champion case, the director of Case C (a larger-form program established in 1969 in a small, private college) reports:

> My understanding is that the idea for [the program] ... came from the Dean.... The
> details were worked out by a faculty committee during a summer workshop. The
> Dean was very much involved, however. So I believe it was a top-down affair.

Not only the importance of support from champions but also that of legitimacy through champions' level of respect and influence (Premise 3) is evident in these three cases.

Eighteen case-respondents report group champions as the impetus for their IDS programs. Although these groups can be comprised of a variety of institutional and extra-institutional people, Cases D, E, and G indicate that small groups of faculty are common as group champions across program and institutional types. I was also struck by reports from Cases F and H of champion groups composed entirely of students. The director of Case F (a new Applied program in a large, public university) reports that the "momentum for the

program initially came from students who were frustrated with the limitations of single discipline study being all that is provided." Again, champions appear to be important in IDS program establishments; the popularity (Premise 2) and legitimacy (Premise 3) of interdisciplinarity are also evident as these factors appear to be trickling down to students.

Premise 2. This sample also supports the proposition that interdisciplinarity's popularity is ongoing and expanding in American higher education. Sixty-three percent of the sample's foundings during the most recent period (the 1990s) are first establishments on their campuses. Their establishment dates span almost 40 years (1952-1999) and all seven founding periods; however, their numbers in some periods are too few to permit comparison of the "higher highs and higher lows" hypothesis. Nonetheless, just as in the original data set, most programs in the sample are in the Adults age group. Within the sample, the mean and median ages are both 20 years, while the modal age is only four.

When asked if modeling had been a part of her program's 1977 establishment, the director of Case H (a smaller-form program in a large, public university) replied "there were lots of programs starting then." In both the original data set and this sample, interdisciplinarity and IDS programs appear to be very popular over time rather than brief or recurrent fads.

Premise 3. The proposition that issues of fit are important within the IDS program story is supported in various ways by the case sample. For example, the hypothesis that interdisciplinarity may not fit within Associate institutions' less-disciplinary curricula is evidenced by only six percent of these programs being located in these institutions; the lowest percentage of any other institutional type is 19 percent. Secondly, the idea that Discipline-Based forms may lie at the core of interdisciplinarity in American education is supported by this form's representation in 38 percent of the sample; the second highest form concentration is 25 percent. Thirdly, these cases' reports of lifecycle events mirror those of the original data set in indicating more growth than revision and more revision than reduction during their maintenance histories.

The hypothesis that governing- and/or joint-boards constrain establishments is the only one not clearly supported by these 32 programs. The sample's distributions of public-institution cases across coordinating-, governing-, and joint-board states is much closer to the national distributions of such states than in the original data set. However, as discussed below in Premise 4, a majority of the sample's public college and university establishments in governing- and joint-states occur in later periods. This finding may support the idea that these boards follow the earlier examples of coordinating-boards and/or that they were slower to accept interdisciplinarity and IDS programs prior to 1980.

The influence of issues of fit can be seen in the experiences of several programs in the sample. Two cases report efforts to make programs fit within the institutions in question. The director of Case B remembers that the program's champion in the late 1970s "was looking for a way to extend the [pre-existing large non-interdisciplinary program] ... experience into the students' last two years." And the head of Case I (a recently-created, smaller-form program in a moderately-sized, private university) reports that his program "uses structural elements of some other successful interdisciplinary programs here [on his campus]." For these cases the premise appears accurate in advising that a useful means of achieving fit between program and institution is to employ curricula/structures that have already proven to work or at least fit in on campus.

A third case illustrates how far some institutions will go to achieve fit and how, once an acceptable fit is achieved, IDS programs may work very well. The director of Case G recalls attempts to create a better fit between his program and the institution:

> The original plan was for an ever-increasing number of courses at all levels of the curriculum. There was simply not enough funding to have the program grow in this way. Since the courses on the whole didn't fit into any major nor did they serve as an introduction to any one discipline, they were viewed by the faculty as 'luxuries' and none would sacrifice courses in his or her department to teach these

courses.... Over time, for various reasons, [the core course] ... has become the only stable course in the program; other courses come and go and the program serves faculty who want to do interdisciplinary teaching but do not 'fit' intellectually into any of the other interdisciplinary programs on campus.... The result is that the program is no longer as clearly defined as it originally was but provides an important function as an inspiration for new and unusual combinations of teachers and disciplines.

When [the core course] ... worked it worked wonderfully, when it failed it failed miserably. As a result the number of faculty willing to take on the huge burden of teaching in it and able to do that kind of teaching got smaller and smaller. It is therefore a struggle to staff the course. On the other hand, it has been consistently extremely successful as a course largely for freshmen, and many students tell me that they wish there could be more courses like it. Faculty who are able to teach the course find it by far their most stimulating teaching experience.

Achieving fit appears to benefit IDS programs, as well as the faculty and students involved within them.

Premise 4. The 32 programs in the sample also uphold the theory's contention that questions of legitimacy are central to the IDS program establishment story. Premise 4.1 asserts that time and knowledge bring acceptance; it points to workshop- and conference-program models, private-institution foundings, and governing-board-state public-institution foundings being more common in later periods. Although the sample contains no reports of models based on workshops or conferences, its reports of modeling in general are more common in later periods. Establishments in private institutions and in governing-board states for public-institution foundings are also more common in later periods. In fact, a majority of the sample's later-period, public foundings are in governing-board states.

Premise 4.1 is clearly supported by the history of Case C. Its director reports that the interdisciplinary knowledge and experience gained by people within his small, private college over time has led to increased institutional acceptance of this large program.

One problem was getting the faculty to understand the meaning of 'integrative.' Some were very skeptical of it. Integrative studies did not seem to have a clear cut methodology, as did the traditional disciplines.... We struggled with these questions for years, slowing redefining the definition. After some years, it was accepted by most faculty members, but a small group never did accept it.

Premise 4.2 makes the claim that money brings acceptance. In the sample, more reports of external funding are found in later periods, as are reports of modeling and establishments in general. In fact, 57 percent of the sample's reports of external funding are from programs established in the 1980s. The hypothesis that external funding prompts smaller institutions to establish larger programs is supported by the significant number of such foundings in the Slowed Growth and Third Boom periods.

The connections between money and legitimacy are clearly evidenced in the stories of Cases B, J, E, and G. The four are all large programs established in the late 1960s and early 1970s. Cases B and J are a pair of programs in a large, public university in the Southern region. Cases E and G are in private institutions. The director of Case B (the first of the pair to be established) reports that, in addition to the efforts of the programs' faculty champion, "our major benefactor [a local businessman for whom the program is named] also played a major role in the [program's] design and philosophy." Not only was the institution willing to accept an IDS program funded by this benefactor, it was also willing to allow him considerable input into its curriculum and structure.

Case J (the second founding of the pair) was "established as result of Rockefeller Foundation and NEH grants but also chartered by the University Board of Trustees and

supported by institutional dollars." The director of Case E reports that the program "was initially supported by a grant (and again, was grant supported when the program was substantially restructured some years later)." Case G's director sums up his program's institutional acceptance when he reports "there weren't problems in the establishment phase, since the program was externally funded at first." Money appears to make IDS programs not only easier to accept, but perhaps easier to establish.

Premise 4.3 is the culmination of this premise's overall theorem that acceptance brings legitimacy. The proposition that early establishments in first-tier or prominent institutions added to interdisciplinarity's legitimacy in American higher education is reflected in the sample's distribution of institutional foundings in earlier periods. Over 60 percent of earlier-period program establishments are in Research and Master's institutions.

The experiences of Cases H and K (programs in large, public universities) illustrate this connection. The director of Case H reports:

> We have been a remarkably gregarious, energetic, and non-contentious group. [The program] ... now extends, to some degree across the university.... There is never enough money for the program to be very independent, but the faculty, on the whole, is so eminently respectable that we have gotten high levels of support for courses, speakers, programs, etc.

Over time, and evidently without the presence of significant funding, the efforts of this program's faculty have gained acceptance and legitimacy within the institution.

Case K's director foresees that additional and clearer administrative acceptance in the near future will add to his program's legitimacy. He states:

> It would help if the administration would declare the [program] ... a high priority and ... order deans and chairs to support the program. That hasn't happened, but

the outside evaluators who visited our campus as part of program review last year made a point of noting that the program needed a stronger endorsement from the administration, and I believe that we'll get that in the coming year.

Here, the knowledge and experience of outside influences are expected to influence institutional acceptance by giving the program additional legitimacy.

If this premise is accurate, then without acceptance, interdisciplinarity and/or IDS programs lack legitimacy. Such a situation is reflected in Case L (a smaller-form program established in the mid-1980s in a large, public university in the New England region). The director of this program says that, in his estimation:

> characteristic of [the institution] ... is establishment of 'names' of programs and too often little beyond that. It is not unknown, ... indeed, for such names to be established for personal advancement and little else—then essentially vanishing. Our [program has] ... never [been] ... in that category, but [we experienced] ... plenty of problems later.

Limited or superficial acceptance of and commitment to interdisciplinarity within this university appears to reflect an institutional lack of legitimacy for the paradigm and a problematic environment for this program.

Premise 5. The postulate that size is a key factor in program maintenance (and establishment) is also borne out in these 32 programs. Premise 5.1 draws a connection between an institution's size and programs' characteristics. This association is supported within the sample, as its smaller institutions tend to have larger programs (63 percent of larger programs are in the sample's smaller institutions), and its larger institutions tend to have smaller programs (54 percent of smaller programs are in the sample's larger institutions). Relatedly, the claim that institutional pairs are most common in moderately-

sized public institutions is generally reflected in the sample. Seventy-five percent of program-pairs are in publics, and more than one-half of these institutions are moderately-sized (Doctoral and Master's).

Comments from the director of Case E indicate how a small, private college initially established a usually-smaller form in a larger form, but has changed it over time:

> Initially, the program was modeled structurally (but not in content) upon two other [large, broad] interdisciplinary programs [within the institution].... Over the years, the program has moved away from those models, and now more closely resembles other interdisciplinary departments like Women's Studies or the area studies programs [on campus].

Smaller institutions appear prone to establishing programs as larger structures even when issues of fit indicate that these forms work better in smaller sizes.

Premise 5.2 supposes a connection between programs' sizes and institutional frequencies. The sample also supports this claim; its smaller programs occur in higher frequencies, while its larger ones occur in lower frequencies. Fifty-three percent of the programs in the sample are smaller (Discipline-Based and Applied forms). Moreover, 58 percent of its single-frequency programs are larger (Major/Large and General Education forms), and 80 percent of its three-or-more frequency programs are smaller ones.

The proposed connection in Premise 5.3 between institutional sizes within regions and programs' characteristics is supported by the Southern- and Middle States-region programs in the sample. As projected, cases in the Southern region are most commonly larger programs (56 percent), are comparatively likely to be single-frequencies (21 percent of all singles; the second-highest percentage of the six regions), and are very likely to exist as one of a pair (50 percent of the sample's pairs are in the Southern region). Likewise, in terms of the expectation that the Middle States region's concentration of larger institutions

is connected to a concentration of smaller programs in multiple frequencies, 67 percent of Middle States cases are smaller programs and 33 percent are one of multiples. When asked about any problems her program has experienced, Case H's director began her response: "Some things are specific to the size and location of [the institution]...."

Premise 5.4's proposition that the size of populations within regions impact IDS programs' distributions and characteristics is supported by the sample's programs in the North Central and Northwestern regions. As in the original data set, most cases are in the North Central region and the fewest are in the Northwestern. And, in accordance with (and beyond) the theory's projection, all Northwestern programs are the only IDS programs on their campuses.

Premise 6. The premise that interdisciplinarity is impacted by economics and that IDS program establishment and maintenance were significantly impacted by the weak economy of the 1980s is bolstered by the sample data. Although the connection between the Mini-Boom and external funds cannot be examined in the sample (only one program is a Mini-Boom establishment), the connection between the 1980s and these funds is clear—57 percent of the external-funding reports in the sample are from 1980s foundings. Although none of these foundings resulted in larger program forms, over one-half of the sample's 1980s foundings did result in larger programs. A connection may exist between the availability of external funds in the 1980s and IDS program establishments, especially in larger forms.

Many respondents in the sample bemoan their programs' level of funding and/or support; I would assume that very few program directors anywhere in the U.S. perceive their budgets to be adequate for their purposes. Cases M and B (both large programs in large, public universities) reflect the funding problems of the early 1980s. The former director of Case M remembers that:

We had a few problems during the establishment phase. ...Finding ways to expand the program so students would have financial support past their freshman year was a problem. We started the program with the incentive of receiving a faculty assistantship for the sophomore year for the top ten students.... Later this was expanded into what we called [workships] ... for all students who had performed satisfactorily.... Since the 'workships' were funded by academic and administrative departments, it was sometimes difficult to find positions as the program expanded.

Similarly, the director of Case B recalls:

The idea of the program was established in the late 1970s, but the creation of the program had to await funding, naturally. The program was announced and the first Fellows were chosen in the spring of 1983; the first class of Fellows began in the fall of 1984 ... .

Getting the funding was of course the major hurdle. [The program's champion] worked with [a private donor] for over two years to secure a donation of $500,000....

Larger programs no doubt require larger establishment expenditures. The concentration of such establishments during the economic recession of the 1980s probably indicates an influx of more external funds into American higher education during this decade. (Although Case E's establishment did not occur in the 1980s, it also illustrates the influence of external funds on IDS program foundings.)

Premise 7. Proposed constraints or obstacles associated with programs being older (Premise 7.1), single-frequency (Premise 7.2), and especially older and single-frequency (Premise 7.3) are also reflected in the sample. Fifty-five percent of the lifecycle events

reported by the sample's older programs do not reflect growth; moreover, 80 percent of older programs' reports of current realities reflect problems. Similarly, 75 percent of the sample's single-frequency programs report past revision and reduction (only 25 percent report growth), and all of those reporting current realities report problems. For programs in the sample that are "old and alone," only 20 percent report past growth (40 percent for both revision and reduction), and again none of those reporting current realities report positive situations.

Information from Cases H and J clearly support Premise 7.1's connection between older programs and less-positive lifecycles and current realities. Case J is a large program in the Southern region; Case H, a smaller program in the North Central region. Both are located in large, public universities. Comments from Case H's director on her program's experiences and history probably sum up the pasts and presents of many older programs, especially those established first on their campuses:

> Everything was a precedent and had to be argued. Like having our courses listed in the class schedule. Like being allowed to establish a minor. Cross-listed courses. Getting department heads to allow faculty to teach [the program's] ... courses. Having our own budget. Not be assigned every single thing pertaining to [the program's focus] ... in the whole institution.

Case J's director reports a "persisting problem with increasing institutional support to free up faculty" to work with the program, but that he has become "very successful in raising extramural funds." Again it appears that older programs have more problematic pasts and presents (external funding's importance for IDS programs is again indicated as well).

Case G supports Premise 7.2's connection between single-frequency IDS programs and more problematic lifecycles and current realities. The director of Case G (a large

program in a small, private college) tells the following story about the ongoing process of revising the institution's only interdisciplinary offering:

> There have been various shifts in the program since its inception, partly due to problems, partly due to natural evolution.... [O]ver time the course that was most successful ... had to be reduced to a one-semester course, instead of a year-long course, because the students weren't willing to commit themselves to a year. It seemed clear that the program would work best with a limited number of courses in any given year and could not grow as we originally planned.
>
> ... [The successful course's original manifestation] clearly was not achieving the interdisciplinary model we sought. As we developed a far more interactive model of discussion between faculty and between faculty and students, the course became harder and harder to teach. We also resisted defining a thematic focus for the course, in the belief that connections would be made between topics and texts in the course of discussion, and the course would begin to define itself. This also made it very difficult to teach.

Carrying an institution's full interdisciplinary weight may lead to more opportunities for problems for single-frequency programs.

Cases E and C reflect Premise 7.3's proposition that IDS programs' problems are compounded when they are older and alone on their campuses; both are in private institutions. In reflecting on his smaller-form program's history and current reality, the director of Case E reports:

> The biggest initial difficulty was securing permanent university support after the initial grant expired (this involved committing faculty positions at a time of cutbacks in faculty size). The second difficulty involved coordinating appointments with

departments, whose needs did not always correspond well to the needs of the program.

The biggest continuing difficulty has been coordinating staffing and curriculum needs with the commitments of our faculty to other departments (that involves not merely conflict with other departments, but also juggling by faculty members who have to support their own commitments in multiple places).

Case C's director, summarizing his larger-form program's story, indicates that:

After the academic year 1970-71, the graduation requirement in [the program's area] ... was dropped because that year's senior class objected strenuously to a capstone [IDS] course ... in the same year as the senior seminar in their majors. For several years [program courses] ... were elective. Then, by a narrow vote of the faculty, a scaled down requirement (one course) was approved.

[The institution's] ... faculty just adopted ... a new curriculum. It does not include a requirement in [the program's area].... It will go into effect in the fall of 2001. [The program] ... will again be an elective. The main purpose for the new curriculum was to reduce faculty teaching loads. [The program]..., because it does not have its own faculty, was vulnerable. This was done reluctantly, I believe, because members of our faculty have grown to respect [the program].

Apparently, even an IDS program's long history as the only interdisciplinary opportunity within an institution does not insulate it from problems and reductions, especially when the institution is small and private.

Premise 8. The proposition that the pasts and presents of multiple programs—both institutional pairs (Premise 8.1) and larger sets (Premise 8.2)—are brighter than those of single programs is also evidenced in the sample. For both institutional pairs and sets of

three or more, past growth is twice as commonly reported as revision, and no reports of past reduction are found for any multiple-frequency programs. The proposed advantage of existing as one of an institution's larger set of IDS programs is indicated in the sample by all reports of current realities from larger-set programs being positive while one-half of those from institutional pairs are not positive (problems).

Compared to the pasts and presents of the cases cited in Premise 7, the reflections of the director of Case B (one of a pair in a large, public-university) are quite illustrative and very different:

> I think the program has been remarkably free of ... problems.... We have no
>
> faculty directly attached to the program, but use faculty from a variety of
>
> departments, paying them a small honorarium for their trouble. As the director for
>
> the last two years, I have been constantly impressed with how anxious faculty
>
> members are to work [in the program].... We try to keep the [program] free from
>
> university politics as much as possible. University financial support has been
>
> strong, and has recently gotten stronger.

In Premise 7, older and/or single-frequency cases reported the lack of faculty appointments as being much more problematic, and none reported "stronger" financial support.

As projected in Premise 8.2, a similar positive story is told by the director of Case H. She recalls that when the program was the university's only interdisciplinary offering:

> the stability of the program came through ... faculty hires, a couple of sympathetic
>
> ... professors, a ... secretary who gave us enormous ... support, and of course [the
>
> dean].... We ran on lots of humanities ... grants, some curriculum development
>
> grants, and support from [two departments].... We were the first 'interdisciplinary
>
> program' in the college, and the first offering a minor, then a major.

The lifecycle of this case changed dramatically after the university began to add multiple IDS programs. The director continues, "But by 1984, there was a whole division of interdisciplinary programs in the college, and we worked together for committee representation and budget presentations." The axiom of strength in numbers applied initially in the grounded theory's first premise regarding the importance of champions in program establishments appears to also apply to the more-positive pasts and current realities of multiple-frequency programs' ongoing maintenance.
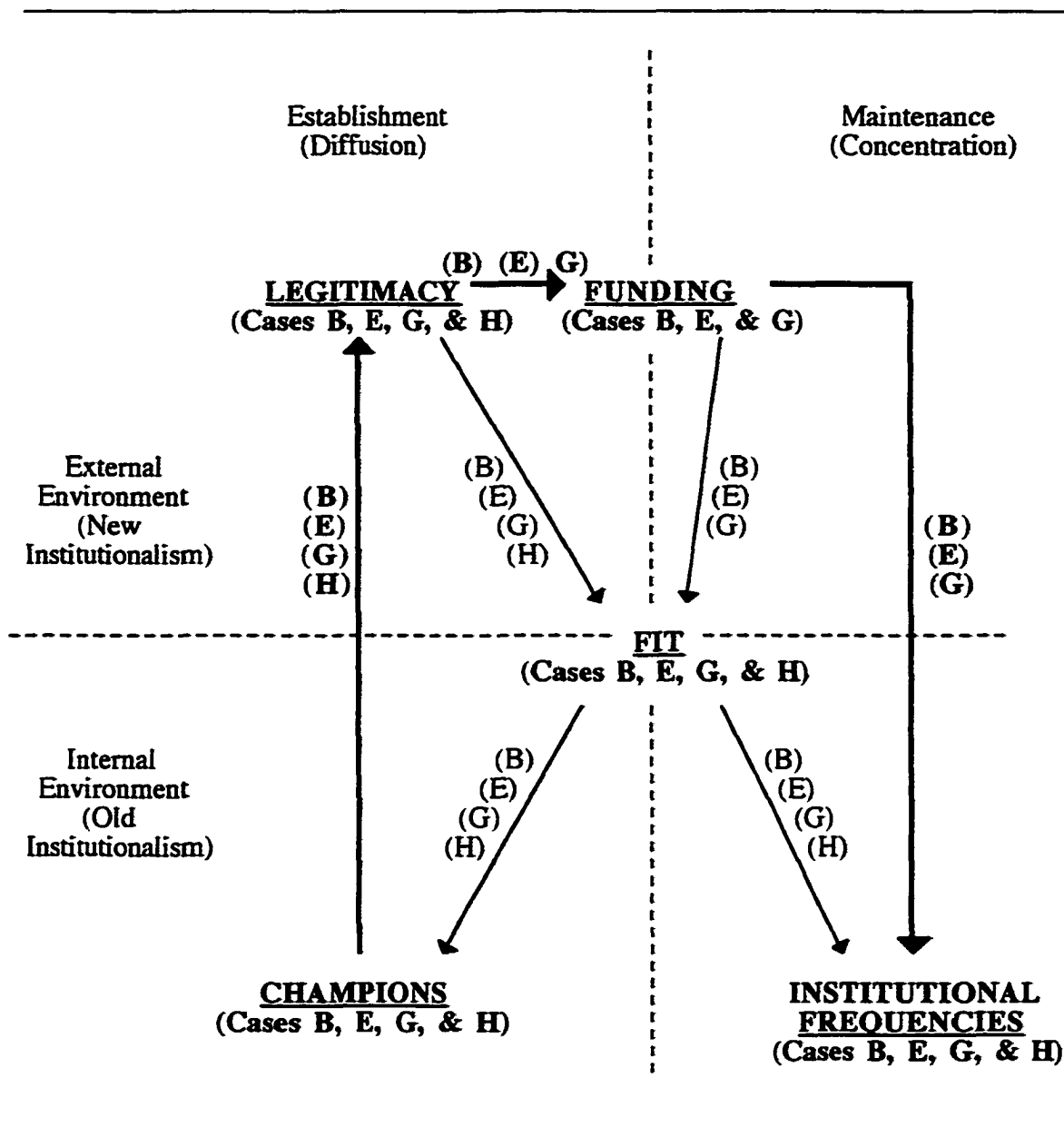
Summary. This more-comparative analysis of the sample of 32 programs yielded cumulative and case-specific results that support each of the theory's eight premises. In fact, the distributions of programs within the sample, as well as individual-case evidence, bolster and/or uphold almost all of the various, more-specific relationships projected within each of the postulates. The testing of the more-general body of the theory is discussed below in a manner more true to and consistent with traditional case study analysis.

Testing the Theory

Overview. As detailed above, I selected 32 programs for the sample. Comparisons and distributions of these cases were used in the initial analysis. Specific information from the most complete case descriptions (Cases A through M) was cited to support these preliminary findings related to the eight premises. In this section, my attempt to test the body of the theory itself is discussed.

To facilitate this higher-level verification process, I placed Cases A through M within the theory's relational diagram according to their connection to the various premises. As discussed in the remainder of the chapter, this diagram revealed four programs (Cases B, E, G, and H) with case-study descriptions comprehensive enough to span multiple aspects of the theory. This case diagram is presented in Figure 5 and is briefly discussed below. Consideration of the four cases in terms of the grounded theory of IDS programs then follows.

**Figure 5.** Theory-based diagram of four cases.



**Establishment** (Diffusion)    **Maintenance** (Concentration)

(B) (E) G)
**LEGITIMACY** ⟶ **FUNDING**
(Cases B, E, G, & H)    (Cases B, E, & G)

External Environment (New Institutionalism)

(B) (E) (G) (H)

(B) (E) (G) (H)

(B) (E) (G)

(B) (E) (G)

**FIT**
(Cases B, E, G, & H)

Internal Environment (Old Institutionalism)

(B) (E) (G) (H)

(B) (E) (G) (H)

**CHAMPIONS**
(Cases B, E, G, & H)

**INSTITUTIONAL FREQUENCIES**
(Cases B, E, G, & H)

**Legend**
Champions = Premise 1
Legitimacy = Premises 2 and 4
Fit = Premises 3 and 5
Funding = Premise 6
Institutional Frequency = Premises 7 and 8

The theory posits questions of fit at the center of the overall IDS program story. Premises 3 and 5 address questions of fit, and Cases B, E, H, and G are all shown above to support these premises. Funding is distinguished as the central aspect of the nonlocal (external) story. Premise 6 addresses external funding and is supported above by Cases B, E, and G (only Case H does not involve external funding). The theory places issues of legitimacy at the center of the nonlocal (external) IDS program establishment story. Premises 2 and 4 concern issues of legitimacy, and all four cases are discussed above as supporting these premises. The presence of champions lies at the center of the theory's local (internal) establishment story. Premise 1 addresses these advocates and is also supported above by the four cases. The theory posits institutional frequencies as central to the local (internal) IDS program maintenance story. Premises 7 and 8 address programs' relative numbers on their campuses, and these four cases support these premises as well.

The relationships between the theory's key aspects are also supported by these four cases. The hypothesized connection between questions of legitimacy and the presence of champions is evident from all four cases, as is the one between issues of fit and both championing and institutional frequencies. The connection between external funding and issues of fit is evident from Cases B, E, and G. Finding cases that correspond to each of the theory's key points as well as the relationships between them led me to conclude that the theory developed in this study is reasonable. Below I attempt to illustrate the theory within the discussion of these four cases.

<u>Case B.</u> Case B was established in 1983 in a Major/Large form within a public, Research university in a coordinating-board state in the Southern accrediting region. It was a subsequent establishment for its institution and continues to exist today as one of two IDS programs on its campus. The program was championed by an individual faculty member who was also instrumental in securing significant initial external funding. Its current director reports a past "remarkably free of problems" and that he is "consistently

impressed" with the level of acceptance the program continues to enjoy within the institution.

This program illustrates all aspects of the theory. The influence of external funding and the presence of a champion contributed to its fit and legitimacy. As is the apparent case for many IDS programs in public institutions in the Southern region, this one is part of an institutional pair. And pairs of IDS programs tend to have more-positive pasts and presents just as this one does.

Case E. Case E was established in 1975 in a Discipline-Based form within a private Baccalaureate institution in the New England region; it was the first and is the only IDS program on its campus. It was championed by "a small group of faculty, with active support from some students," who modeled it on other (non-interdisciplinary) programs on campus and secured an external grant to initially support the program. After this grant expired, the program experienced problems in securing institutional support.

Its lifecycle story is one of revisions (the most substantial of which was also externally funded) and reductions. These restructurings have been undertaken to produce a better fit between the program and the institution. The program was still experiencing problems at the time of data collection, which the director put in the following perspective:

Although all of these difficulties took specific forms characteristic of our institution, I suspect that interdisciplinary programs in any institution encounter variations on them. They seem endemic to the structure of programs whose faculty have departmental responsibilities.

He too appears to put issues of fit at the center of the IDS program story, and his program supports the theory I have developed to tell this story. Championing and external funding got the program started and gave it legitimacy, but it appears to have never achieved a good fit within its institution. When the external money was gone, the program

was revised and reduced, again toward a better fit. As tends to be the case of "old and alone" IDS programs, past and current problems are evident. These problems probably function to prohibit additional program establishments within this small, private institution.

Case G. Case G was established in 1982 in a Major/Large form within a private, Baccalaureate institution in the Middle States region. According to its current director, the impetus for the program "came from faculty during a curriculum review. There was a desire to establish a series of courses which would integrate students' intellectual experiences." The director also states that few problems arose during the establishment process *because* external funding had been secured. The program was not modeled on other phenomena, although "there was a kind of 'anti-model' in that faculty evoked the Columbia Great Books program as the sort of thing they didn't want to do."

The program has experienced a rather problematic past as its institution's first and only IDS program (as detailed in Premise 7.2 above). As the director concludes below, those problems as well as current ones appear to center on issues of fit.

Common to all institutions is the difficulty of maintaining a program in the curriculum which doesn't have an immediate, clear definition, purpose, or home in a single department. It takes a special effort to make it something both faculty and students are willing to commit themselves to. Peculiar to [this institution] ... is that we have designed the courses in the program to be very exciting but VERY difficult to teach, which puts an added burden on the already beleaguered situation.

This program also supports the theory. The presence of champions familiar with the institution and external funding sufficient to prevent establishment problems added to this program's initial fit and legitimacy. Single-frequency programs in smaller and/or private institutions appear prone to more-problematic lifecycles, and this one is not an

exception. The director points to the nature of this program in relation to this institution as one source of these problems; again issues of fit for IDS programs appear to be key.

Case H. Case H was established in 1977 in a Discipline-Based form within a public, Research institution in a joint-board state in the North Central region. The director reports that "our genesis was through students" and that the program "began as a student organization" through which disparate courses throughout the university eventually came to be organized. External funding is not reported to have been involved in the program's establishment; nonetheless, it has secured various internal and external grants during its existence, which have contributed to its maintenance.

As discussed regarding Premise 4.3 above, the prominence of the program's faculty has given it legitimacy on campus. Although its early history, like many first establishments, was contentious (see Premise 7.1), the program has experienced more growth as other IDS programs have been added to the curriculum. The director describes the program's current reality positively as well. Again the issue of fit appears central; once it was accepted, this program flourished even as it competed with newer IDS programs.

## Conclusions

Cumulative information from a sample of 32 additional programs, illustrative information from 13 of these programs (Cases A through M), and more-comprehensive case-study analysis of four specific programs (Cases B, E, G, and H) all support the premises and body of the grounded theory of undergraduate interdisciplinary studies programs developed in this study. From a structural (institutional theory) perspective, this theory appears to provide a reasonable and adequate explanation for IDS program establishments and maintenance in American higher education during the twentieth century.

# CHAPTER 8

## CONCLUDING THE STUDY

### Overview

The study's research questions are answered and its results discussed in this final chapter. These topics are often presented separately in such analyses; however, because many of the research questions' issues were raised and addressed within the theory's development and testing, I do not believe a separate, detailed "results" chapter is necessary. Therefore, results and discussion are combined here.

The chapter opens with consideration of the three research questions. Rather than simply restate the theory here, I attempt to provide more concrete answers. In a way, this section retells the IDS program story at a different level of specificity than in Chapter 6. In the next section, the study is summarized and discussed in terms of its problem statement, its grounded theory, and its limitations. The presentation concludes with advice for current and future IDS program directors and recommendations for further research.

### Answering the Research Questions

#### Research Question 1

*What are the administrative and organizational problems that colleges and universities encounter during the establishment and maintenance of undergraduate IDS programs?*

Institutions encounter a variety of such problems. Some are specific to program establishment; others, to program maintenance. And still others are common to both. These problems are best conceptualized as originating either within the local environment (internal to the institution) or within the nonlocal environment (external to the institution).

Establishment problems. The most common difficulties encountered during IDS program establishment arise from the outside the institution. Factors at the state, regional,

and national levels impact program foundings. The condition of the economy at one or more of these levels can create financial obstacles for program foundings. The degree of legitimacy afforded to interdisciplinarity in general by state's higher education boards, by national academic associations, and by organizations (and individuals) apt to supply grants, donations, and other types of funding to colleges and universities can prove troublesome as well. Prior to 1980, and especially before 1968, less knowledge about interdisciplinarity, perhaps coupled with fewer external-funding sources and fewer models on which to build, appears to have constrained program establishments. When external conditions are problematic, establishing programs that fit within their institutions is more difficult.

Program foundings are also impacted by administrative and organizational problems arising from within institutions. If interdisciplinarity is not accepted within the local environment, and/or if IDS programs are not considered legitimate therein, then more hurdles can be expected during efforts to establish programs. Program foundings also appear to benefit from the presence of local champions, especially groups of program-establishment advocates; thus the absence of champions means that no one will shepherd the program through the rocky fields of financial and political support. Relatedly, an absence of external funding and/or sufficient institutional funding can negatively impact program foundings. When institutional conditions are problematic, establishing programs that fit within these institutions is more difficult.

Maintenance problems. The most common administrative and organizational difficulties encountered during IDS program maintenance arise within the local environment. Commonly, availability or allocation of resources such as institutional funding, faculty, physical space and equipment are major problems. Such campus discord tends to spring from issues of fit and is often intensified when programs are perceived to not have legitimate claims to institutional resources. IDS programs that do not fit well within their particular college or university environments experience more maintenance difficulties than those that fit better.

Thus, maintenance problems often stem from establishment problems due to incompatibilities of fit between program and institutional characteristics present during foundings. These incompatibilities appear to arise from issues of program size and scope matched against institutional size and control. Poor fit can reflect less acceptance of the interdisciplinary paradigm within institutions. Programs whose establishments were ambitious in terms of size and scope, but whose initial external funding has since been depleted, have difficulty maintaining themselves solely on institutional funds.

One might assume that increased competition for resources between IDS programs within institutions would lead to more problems; however, this study does not indicate this scenario to be a common experience for multiple IDS programs on campuses. When these programs exist in multiple institutional frequencies, they tend to report fewer past and present difficulties than those existing in single frequencies. We may infer that institutions with more than one IDS program are more accepting of such curricula/structures; thus these programs receive more continuous support on these campuses. Thus, issues of fit appear to impact maintenance problems more than competition for resources.

Obstacles to IDS program maintenance result from external factors as well. Again, state, regional, and national conditions—especially economic conditions—can negatively impact program maintenance. Additionally, interdisciplinarity may have held less legitimacy in American higher education prior to 1980; thus, programs established in these earlier periods probably experienced more hurdles during and after their foundings than programs created in the past two decades.

Research Question 2

*What is the nature of these administrative and organizational problems?*

Question 2(a). *Are some problems ubiquitous, while others are more idiosyncratic?*

Some problems do appear to be common across most IDS programs, while others appear more specific to individual programs and/or institutions. Those obstacles discussed above as arising within the external environment are more ubiquitous; those arising within

institutions are generally idiosyncratic, although some of these can be relatively predictable. This predictability is addressed in the next part of the question.

All IDS programs share a national environment; therefore, issues and/or changes in the national environment can create ubiquitous problems. National economic conditions impact all higher education institutions as well as IDS programs. When the economy is weaker, everyone experiences more difficulties. On a more philosophical level, the general acceptance and legitimacy of interdisciplinarity within American higher education can impact IDS program establishment and maintenance. When interdisciplinarity was less acknowledged and popular, IDS programs experienced more opposition. All programs also face issues of fit. The issue-of-fit factor is common for all programs; however, how the issue is addressed and solved (or not solved) is an idiosyncratic matter.

Those difficulties that are more unique to specific programs and/or institutions are those discussed above in terms of local (institutional) environments. These problems can involve institutional resource questions, institutional acceptance questions, external funding questions, and program's institutional-frequencies. Nonetheless, each revolves around issues of fit between specific programs and their institutions. These questions often function to mitigate or exacerbate problems of fit.

Question 2(b). *If some problems are more idiosyncratic, are certain variables associated with identifiable institutional characteristics?*

For some more-idiosyncratic problems, certain variables are associated with identifiable institutional characteristics. And these variables generally center on issues of fit related to program size/scope, age, and institutional frequency in relation to institutional size, control, and geographic location.

Specifically, older programs tend to have been established as larger-form programs. Larger-forms are frequently maintained as institutions' only IDS programs. Single-frequency programs are often in smaller institutions. Smaller institutions tend to be privately controlled. To the extent that these various program variables are associated with

more establishment and maintenance difficulties, these various institutional variables are also associated with more such problems.

Likewise, younger programs tend to be established as smaller-form programs. Smaller-forms often exist as one of multiples on their campuses. Multiple-frequency programs are most common in larger institutions. Larger institutions tend to be publicly controlled. To the extent that these program variables are associated with fewer establishment and maintenance difficulties, these institutional variables are also associated with fewer problems.

Moreover, when public or private institutions are of moderate size, they frequently contain two IDS programs. Pairs of programs tend to report fewer past and present problems than single-frequency programs but more than larger sets. The moderate size of these institutions may constrain them from establishing more than two IDS programs even though the addition of more programs appears to be associated with fewer maintenance difficulties.

Another influential institutional characteristic involves colleges' and universities' state and/or regional populations. Geographic areas with fewer citizens witness fewer program establishments (possibly due to economic/taxbase constraints and/or the presence of bureaucratic governing or joint higher-education boards), and those foundings that are witnessed often involve larger, single programs. Once again, such programs tend to have undergone more revision and reduction during their lifecycles and tend to have less-positive current realities. These problems may function to discourage or constrain subsequent establishments. Again, the key to the IDS program story appears to be the issue of fit. When this issue is not addressed or resolved, a perpetual pattern of fewer foundings and more difficulties may result.

Research Question 3

*To what extent is the establishment and maintenance of individual undergraduate IDS programs distinctive (original) as opposed to common (mimetic)?*

Question 3(a). *Do institution- and individual-specific patterns of interaction contribute to the similarities in the patterns of establishment and maintenance of undergraduate IDS programs?*

Just as some problems are ubiquitous while others are idiosyncratic, the establishment and maintenance of individual IDS programs has distinctive as well as common aspects. Program foundings prior to 1968 had few opportunities for modeling on other IDS programs, and the idea of interdisciplinarity was not widely popular. Therefore, these programs were probably quite original and specific to their institutions when they were established. Even when programs have champions, these champions probably have specific ideas about program curricula, structure, and size. On some level each program is unique. However, this analysis finds that, in terms of both establishment and maintenance, individual IDS programs have tended to become more alike in recent decades.

As first articulated by DiMaggio and Powell (1983), isomorphism is new institutionalism's term for decreasing amounts of diversity in organizational fields over time. Mimetic isomorphism attributes such trends to intentional copying, patterning, or mimicking of other structures. This analysis finds evidence of such mimeticism in the use of models during program establishments. Models tended to be previously-successful programs as well as the Great Books tradition in earlier periods of interdisciplinarity, especially in the 1960s. However, the Great Books tradition was rather controversial in American higher education during these years, and interdisciplinarity was not widely accepted either. Therefore, less mimeticism is found in this analysis in earlier periods.

In later periods, large numbers of people have been reached simultaneously by workshops and conferences, and these events have become more common as IDS program models. Receiving similar information and guidance no doubt leads people to establish similar programs. In the same way, organizations such as the National Endowment for the Humanities may unintentionally promote similar forms of interdisciplinarity by offering

grants in specific areas. Competition for these funds may lead institutions to propose programs similar to those which successfully secured such grants in the past.

Beyond issues of modeling, external funding, and increased academic attention on interdisciplinarity, the influences of patterns of individuals' interaction on program similarities are left generally unaddressed by the data of this study. Unquestionably, specific people serving as consultants, advisors, experts, or external reviewers can function as academic "bees" cross-pollinating institutional "flowers" with similar interdisciplinary information and experiences. In fact, the goals of the Association for Integrative Studies are to serve as a clearinghouse of interdisciplinary information and as forum through which interdisciplinary ideas and experiences can be shared. However, such patterns of interaction are not evidenced in the analysis because the data collection did not seek such information.

Question 3(b). *To what extent does the diffusion of ideas and/or structural models contribute to the similarities in the establishment and maintenance of undergraduate IDS programs?*

This analysis indicates that processes of diffusion are associated with both similarities and differences in IDS program establishment and maintenance. In earlier periods, diffusion of ideas about interdisciplinarity led to higher rates of IDS program foundings in the late 1960s and throughout the 1970s. This diffusion created similarities that were more general (i.e., more programs with interdisciplinary perspectives), but it also created more diversity of program sizes, scopes, and forms (perhaps irrespective of issues of fit).

At the same time, processes of modeling were contributing to the replication of prominent and/or successful IDS programs. The pace and spread of interdisciplinarity during this period may indicate that even these "model" programs did not truly fit within their institutions. During my identification and selection of the case sample, I could find no current evidence of many programs cited in the first and second directories as models.

Their popularity may have been short-lived; the economic problems of the 1980s and/or their degree of fit within their institutions may have contributed to their termination. Thus, earlier modeling may have contributed to more diversity of IDS program establishment and maintenance as institutions attempted to rework prominent or successful program-models to fit their own institutions and environments.

This analysis indicates that, over longer periods of time, diffusion of ideas and/or models does lead to more similarities across IDS programs' establishment and maintenance stories. As noted above, program models based on information gathered at workshops and conferences are more common in later periods. This type of diffusion contributes to less diversity within the interdisciplinary world. Such opportunities are also likely to profile IDS programs that have been successful for longer periods of time, perhaps indicating higher degrees of fit with their institutions and environments. Thus more modeling in recent periods probably contributes to more establishment similarities between programs.

In these same ways, maintenance strategies can be shared. This sharing may contribute to less diversity of such strategies within institutions. If the theory's hypothesis concerning issues of fit is correct, then this factor probably also contributes to increasing levels of similarity within program maintenance activities. Programs whose size and scope fit well within their campuses' curricula appear likely to spawn or contribute to additional establishments with similar sizes and related scopes within these institutions. Such is not the case for programs that experience more problems of fit. In the end, similar types of institutions are found to establish similar numbers and types of IDS programs and to maintain them in similar ways.

<div align="center">Discussing the Study</div>

<u>Summarizing the Results</u>

Overview. This study develops a grounded theory of undergraduate interdisciplinary studies programs in American higher education using an institutional-theory framework. When applied to a sample of programs not considered during its

creation, this theory is found to represent reasonably the relationships between the program and institutional characteristics of these cases as well. The establishment and maintenance stories of four programs from the sample are told through the theory. The theory is found to reflect adequately the histories and current realities of these embedded case studies.

The theory is grounded in data from 404 IDS programs. The data were categorized and analyzed using constant-comparative methodologies. The old and new theories of organizational institutionalism were employed to frame the preliminary consideration of the data. These perspective were also found to frame the grounded theory. In the end, the theory developed here is an institutional theory.

The theory and its premises arise from the data and the data analysis. Other than the most basic aspects of old and new institutionalism, no previous scholarship was used to guide or shape the data analysis and theory construction. Nonetheless, the grounded theory developed here is reflective of much of the research reviewed in Chapter 2. This study is not the first to stress issues of fit (Trow, 1985; Seymour, 1988; Klein & Newell, 1996), questions of legitimacy (Klein, 1996), availability of external funding (Scott, 1979), or "collaborative groups" as champions (Casey, 1990).

Contributions. However, this study is the first to link directly and overtly these four factors. Application of both theories of institutionalism allows this analysis to move beyond individual programs and/or campuses to consider organization fields (internal and external environments). This more-structural perspective permits integration of information and concepts at higher levels of abstraction, above specific cases. Thus, the theory's key components reveal themselves and their relationships in ways not reported before in more case-specific analyses.

My study stands far enough from the "forest" (interdisciplinarity) to see the "trees" (IDS programs) clearly; this study offers an integrated understanding of the relationships and connections between: (a) the four factors above, (b) IDS programs' internal and

external environments, (c) IDS program establishment and maintenance, and (d) IDS programs' institutional frequencies and the stories of their establishment and maintenance.

Discussion of programs' institutional frequencies on their campuses is unique to this analysis as well. A new data category or variable is suggested here as important for understanding the IDS program story. Again, this study's unexampled application of the context-centered focus of institutionalism led me to this program characteristic. If interdisciplinarity continues to be popular and legitimate in American higher education, then relative numbers of IDS programs on some campuses will no doubt continue to increase. As institutions' numbers of programs rise, questions of fit and competition for funding (institutional and external) will become even more acute. The institutional-frequency program property identified in this study warrants inclusion in present and future discussions of IDS program establishment and maintenance.

Conclusion. This analysis not only integrates previous knowledge in new ways but also contributes new theoretical, as well as specific, perspectives on the understanding of the establishment and maintenance of undergraduate interdisciplinary studies programs. The study itself is quite interdisciplinary. Connections are made between the organizational and higher-education fields of study, between the divergent theories of old and new institutionalism, and between processes of diffusion (establishment) and concentration (maintenance) for interdisciplinarity and IDS programs in American higher education. Consideration of this study's grounded theory within the community of interdisciplinary scholars, higher education scholars, and organizational scholars is warranted.

Limitations of the Study

I perceive at least two sets of elements limiting this study; both are related to my use of qualitative methods to analyze the program data. These limitations are *not* inherent in the methodology. They are a product of my interpretation and manipulation of it and of my application of it to these particular data.

Questions of "why." The first set of limitations concern the grounded theory itself, especially those parts focused on internal environments. Qualitative methods--particularly case study analysis--have been touted as preferable when research purposes center on questions of "how" and "why." This grounded theory does not address the "why" question at all levels. It operates at a structural level, often leaving individuals' motivations unclear. The presence of champions as an important causal condition for IDS program establishment is identified, but these people's individual motivations are generally absent from the discussion. Also absent are explanations of why sources of external funding choose to support IDS program establishments and maintenance and why they have varied greatly in the quantity and quality of this support over time.

To some extent, these issues are beyond these data and the study's institutional-theory conceptual framework. Nonetheless, answers to such questions would greatly enhance our general understanding of IDS program establishment and maintenance. Moreover, an application of the constant comparative and case study methodologies different from the one I have employed here might better address these questions. A call for such research is made in the final section of the chapter.

Quantitative analysis. The second set of limitations concern how the grounded theory was developed and tested. Particularly, my repeated applications of rather quantitative considerations may lead some readers to question whether I have been true to the spirit of qualitative research.

Qualitative and quantitative methodologies "can be used effectively in the same research project" (Strauss & Corbin, 1990, p. 18). When qualitative analysis is a project's emphasis, quantitative data can still be used "to partially validate one's qualitative analysis" (p. 19). The potential limitation centers on the question of whether my utilization of distributions, ratios, and comparative trends has gone beyond partial validation. I do not believe that it has. Nonetheless, I do admit that my concerns about research reliability often tended to lie closer to quantitative analysis's concern for "literal consistency across different

observations" than to qualitative analysis's concern for "accuracy and comprehensiveness" of data (Bogdan & Biklen, 1992, p. 48).

Zelditch (1962) groups academic-program research into three categories: (a) incidents and histories, (b) distributions and frequencies, and (c) generally known rules and statuses. I believe that my methodology combines IDS programs' incidents and histories (qualitative data) with their distributions and frequencies (quantitative data) in a useful and illustrative manner. I also believe that the resultant grounded theory combines these categories with generally known rules and statuses (the premises' axioms and the theory's components—especially fit, legitimacy, and funding) to offer an accurate, comprehensive, and consistent explanation of IDS program establishment and maintenance in American higher education. Nonetheless, the degree to which this analysis leaves the qualitative vs. quantitative issue open for debate is a limitation of the study.

Recommendations for Current and Future IDS Program Directors

Advice for current and future IDS program directors is directly and indirectly provided in the literature reviewed in Chapter 2. Rather than restate these suggestions, I will provide additional counsel. First, the importance of questions of fit, issues of legitimacy, availability of external funds, the presence of champions, and institutional frequencies for IDS program establishment and maintenance should not be underestimated. Second, the influence of the external environment as well as the internal environment should not be underestimated either.

Third and more importantly, the connections and relationships between the factors and environments in the first two recommendations should be understood. Efforts toward IDS program establishments are facilitated by the presence of champions within the internal environment coupled with positive economic conditions and/or external funding as well as the legitimacy of interdisciplinarity within the external environment. Program maintenance efforts are facilitated by the availability of adequate resources (internal and external) and the degree of fit achieved between programs and their institutions. Fourth, these connections

and relationships should be monitored continually because changes in one factor can affect the entire dynamic.

Fifth and more practically, proposals for additional IDS programs on campus should not be rejected out of hand over concerns about competition for resources. Multiple frequency programs tend to experience more positive situations; in fact, it appears that the more, the better. (The presence of additional interdisciplinary allies within the institution might prove advantageous in the future as well). Sixth, external funding should be sought whenever possible. However, these funds should not be counted on, nor relied upon, too heavily.

Recommendations for Further Research

As with most social-science analysis, this study answers some research questions and generates others. Further research on IDS program establishment and maintenance is necessary to validate and/or refine this analysis. Given the nature of my data, I have treated the 1990s as a single founding period; perhaps it not. New programs have been founded, perhaps in new distributions. Relatedly, perhaps further refinement of the larger-set institutional frequency is warranted today as more institutions have added more subsequent programs. Beyond these three specific starting points, I see two broad areas requiring additional and/or different levels/types of consideration; these avenues for further research stem from the limitations of this study.

More research is necessary on the issues of "why." Why do champions champion? Why do external funders fund? Questions of nonlocal legitimacy offer a "pull" perspective; new institutionalism contends that forces and factors in the external environment pull institutions and individuals in similar directions. Additional research addressing more-specific local and/or internal factors and motivations (old institutionalism) that "push" individuals and institutions toward interdisciplinary is needed to balance and complete the story. Data related to these questions were generally absent in this analysis.

Further research is also warranted that provides more insight into the various parts of the theory; specifically, more qualitative analysis of IDS programs as well as other contexts and structures is necessary to fully understand the story of interdisciplinarity in American higher education. For example, subsets of the 404 programs in the original data set can be given closer scrutiny. Case study analyses on earlier-period or later-period establishments, on specific program forms, on specific institutional categorizations, or other data categories would add to our understanding of the IDS program story.

Likewise, more focused and detailed study of other structures in the higher education organizational field would delineate the story even further. Case-study histories of individual or subsets of coordinating, governing, and/or joint higher-education boards, as well as accreditation associations, educational associations, and external funding sources would give them more "voice" in the IDS program story. Investigation of establishment and maintenance strategies in different states and/or regions could also prove valuable.

The final area that I see as ripe for further research--the topic that repeatedly arose in my mind throughout the course of this project--involves both of the areas above. The issue that I will most likely address next in my ongoing quest to understand the IDS program story is the issue of program termination. Why are some programs terminated but not others? What were the unique and/or common characteristics of these programs in terms of their establishments, their maintenance, and their ultimate cessation. Is Trow (1985) correct in his postulation of IDS program lifecycles; or, are program terminations more random, more program- or institution-idiosyncratic, or more related to changes in the educational and economic environment? This study has analyzed program "birth" (establishment) and "life" (maintenance). Analysis of program "death" (termination) may be the next logical step.

# APPENDIX A

## QUESTIONNAIRE FOR THE DIRECTORY

Questionnaire for Inclusion in *Interdisciplinary Undergraduate Programs: A Directory*

PART 1: MANDATORY INFORMATION

**1. Interdisciplinary Program**
Name:
Name & title of program head:
Address:

Telephone:      Fax:      E-mail:

**2. Interdisciplinary Program Type** (Check all that apply):
  __ FORMAL
    __ College __ University
    __ Cluster College
    __ Division
    __ Center __ Inst. __ Program __ Dept.
    __ Institution-wide program
      __ Core curriculum
      __ Gen ed. program
      __ Honors program
      __ Major
      __ Minor
      __ Concentration
      __ Independent study
    __ Other (identify:)_____

  __ INFORMAL
    __ Learning Community
      __ Students __ Faculty __ Joint
    __ Study Group(s)
      __ Students __ Faculty __ Joint
    __ Research Project(s)
      __ Students __ Faculty __ Joint
    __ Collaboration
      __ Teaching __ Research __ Both
    __ Inter-institutional
      __ Alliance __ Consortium
    __ Symposium
    __ Lecture Series
    __ Brown Bags
    __ Other (identify:) _____

**3. Certification Offered** (Check all that apply):
  __ Degree in (identify:) _____
    __ BA or AB ___ Other (identify:) _____
  __ Major in (identify:) _____
  __ Minor in (identify:) _____
  __ Other (identify:) _____ in (identify): _____
  __ None

**4. Program History:**
  Founding Year: _____ Initial Mission:
  Year and Description of any major changes in mission:
  Key additional information:

**5. 1995-96 Program Staff:**
  a. Faculty formally appointed directly to program:
    # Full-time ___ # Part-time ___ Total FTE ___
  b. Other faculty involved in the program:
    # Full-time ___ # Part-time ___ Total FTE ___
  c. Nature of typical appointment in 5.b.(Check one):
    __ Joint __ On Loan __ Other (identify:)
  d. # Administrators of program ___ Titles (identify:)
  e. Ancillary staff:
    # Graduate Assistants ___ # Residence Hall Staff
    # Other Support Staff ___ (identify:)

6. 1995-96 Program Courses (if applicable):
   a. # Interdisciplinary Courses ___
      # Team-taught ___   # Individually-taught ___
      # Team-developed ___   # Individually-developed ___
      Process of Institutional Course-approval:
   b. # Non-interdisciplinary Courses ___
      Purpose of Non-interdisciplinary courses:
   c. List course titles & credit hours. Enclose at least two sample syllabi or course descriptions.


7. 1995-96 Program Student Participation/Enrollment
   a. # Total Participating ___
   b. Participation by class (if available):
      # Fresh.___   # Soph.___   # Juniors___   # Seniors___
   c. Participation for certification (if available):
      # Fresh.___   # Soph.___   # Juniors___   # Seniors___


8. Program Certification Requirements (e.g. courses, residency) if applicable; List and Explain:


9. Program Distinctiveness/Contribution (relative to rest of institution):


PART 2: NON-MANDATORY (Answer questions that best round out picture of program.)

10. Definition(s) of Interdisciplinarity Reflected in Program?


11. Why Interdisciplinary Approach Initially Adopted; why continued?


12. How Program Founded (primary instigators—faculty, administrators, students, others? program revision or conscious copying of model program at institution or elsewhere? identify)


13. Relationships and Major Interactions with Rest of Institution (how well accepted is program and participants?)


14. Administrative Autonomy (what is the scale and source of the operating budget; how are decisions made concerning faculty appointments, tenure, salary; how are curricular decisions made; to whom does the program administrator report)?


15. How are Faculty Selected? How does this process compare to more discipline-based programs?


16. Characterize (professionally, personally, demographically) Current faculty, Administrators, and Students (relative to founders or to institution at large)


17. Important Aspect(s) of Program Not Addressed Above


Include any brochures, annual reports, planning documents, self-studies, etc. that bring out distinctive features of the program. One-page program descriptions will be written on the basis of information submitted. We wish to make them interesting and revealing as well as accurate.

## APPENDIX B

HUMAN SUBJECTS REVIEW COMMITTEE APPROVAL

*The College Of*
# WILLIAM&MARY

**School of Education**

P.O. Box 8795
Williamsburg, Virginia 23187-8795

November 4, 1999

TO: Dorothy E. Finnegan

FR: Thomas J. Ward
    Human Subjects Research Committee

RE: Alan Edwards's Research Précis

The proposal from Alan Edwards has been reviewed and approved.

If there are changes to the methodology, Alan should contact the Committee.

Please pass this approval on to Alan and convey our wishes for a successful project.

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# VITA

## Alan Francis Edwards, Jr.

**Birthdate:** October 19, 1965

**Birthplace:** South Boston, Virginia

**Education:**

| | |
|---|---|
| 1992-1993 | The College of William and Mary<br>Williamsburg, Virginia<br>    Educational Specialist<br>    (Higher Education) |
| 1988-1992 | University of North Carolina<br>Chapel Hill, North Carolina<br>    Master of Arts<br>    (Sociology) |
| 1984-1988 | The College of William and Mary<br>Williamsburg, Virginia<br>    Bachelor of Arts, with Honors<br>    (Interdisciplinary Studies: Social<br>    Justice) |