

## CHARACTERISTICS OF EXTENDERS: Full-Time Students Who Take Light Credit Loads and Graduate in More Than Four Years

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The existing enrollment management and student-institution fit literature generally concentrates on two student populations: persisters and dropouts. This study investigates a third population that we call extenders—those ostensibly full-time students who take longer than normal to complete a bachelor's degree. By analyzing the transcripts and survey responses of undergraduates at a public research university, we identify three groups of extenders: financial need extenders, grade-conscious extenders, and special situation students. While all three types are visible in our transcript analysis, we find empirical support in the multivariate analysis only for the first two.

Extender behavior that is based on financial need is congruent with Cabrera's integrated model of student retention. However, there are few other congruencies between these findings and the student-institution fit literature. We found little influence exerted by the usual measures contained in other studies that have used concepts in the Tinto, Bean, Nora, and Cabrera models, such as academic and social integration, goal clarity, and encouragement by family and friends. Apparently these concepts and measures have little to do with student decisions to take lighter academic loads and to lengthen their graduation date. Extenders in this study are not negative about taking longer to graduate and are generally satisfied with their experiences.

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### BACKGROUND AND PURPOSE

This research addresses two types of behaviors by full-time undergraduate students: taking longer than normal to graduate, and registering for less than a full load of 15 credits. Three related public policy concerns interact to form the basis for this study. The first is a concern about the cost and productivity of higher education—a concern expressed both by the parents of college students and by the tax-paying public (Burke, 1993). Virtually every sector of the econ-

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omy except education has made substantial gains in productivity over the years, and delays in college completion produce costly inefficiencies in the educational system (Johnstone, 1993). The second policy concern is an almost universal need for the efficiencies of good enrollment management by campuses. Considerable resources are devoted to the processes of recruiting, retaining, and graduating diverse populations of students in a competitive environment. The third concern focuses attention on effective academic advisement and access to courses that enable students to graduate on time. TQM and other customer-oriented management practices direct our campuses to become more flexible and responsive to student needs.

There appears to be a rising tendency for many full-time undergraduate students to take more than four years to graduate. National Center for Education Statistics data show that less than one-third of the college class of 1990 had graduated within four years. Large numbers of students who enter college as full-time freshmen are taking five and six years to complete a bachelor's degree, so many that most national databases and college guidebooks no longer report four-year graduation rates, opting instead for five- and six-year rates. The Federal Student Right to Know Act requires two-year campuses to report a three-year graduation rate and four-year campuses to report a six-year rate. Does the longer time to graduation reflect a flexible system or a flawed one?

Certainly colleges and universities in the last 25 years have become more open and flexible institutions. Recognizing the diversity of today's students and the complexity of modern life, many campuses make it easier than ever before for students to study abroad, to obtain work experience, to transfer to another campus, and to "stop out," for a variety of personal reasons.

At the same time, state budget pressures in recent years have forced many campuses to reduce the numbers of both teaching faculty and support staff. One hears on the campus and reads in the *Chronicle of Higher Education* student complaints about access to needed courses, and about poor advisement. Ironically, these conditions come just as there is renewed interest in making it possible for students to speed up their studies and graduate in less than four years (Johnstone, 1993). Parents, legislators, and educators alike are concerned that students make satisfactory progress toward degree completion.

Those students we have chosen to call "extenders" have attracted much attention over the last several years. Several states—California, Florida, Oregon, and Texas among them—have taken or have proposed to take action against students characterized as staying in college too long and accumulating excessive credits. Policies aimed at charging students a higher tuition when they take more courses than needed to graduate have been introduced. Florida has set state caps on the number of credits that can be required of students in particular program areas. The University of Texas is concerned that its seniors are taking class seats away from new freshmen. While some lawmakers see this as a

potential money-maker on the assumption that these malingers are from families that can afford to pay for this luxury, lawmakers in Oregon expect that an excess credit surcharge will change students' behavior and make room for an expected increase in high school graduates who will need to be accommodated. In the California State University system, students enrolled for six or fewer credits are charged one fee, rather than charged by the credit.

Particularly striking is the apparent absence of any research evidence about why students are lingering. Indeed, each of the separate state plans hypothesizes a different behavioral impact from a tuition surcharge on targeted students, further suggesting that legislators have no research on which to base their policy assumptions. The Oregon State Board of Education initially proposed that undergraduate students who took more than 24 credits beyond what was necessary to complete their major be charged nonresident rates that are roughly three times the resident rate. Subsequently, research prepared by the board found that the assumptions underlying this proposed policy were grossly exaggerated and the proposed policy was dropped.

While there is a good deal of research on persisters and dropouts, there is little empirical investigation on extenders in the literature. One earlier study (Volkwein, 1993) suggests that most extenders take lighter than average credit loads and fall into two types: vocational and collegiate. Vocational extenders are those who have higher levels of financial need and loan indebtedness, more frequently report that they are "required" to work in order to meet expenses, and have lower grade-point averages (GPAs). Collegiate extenders are those who indicate that they often take a light credit load because they desire more free time, or that they dropped one or more courses after the semester began because it was too difficult and/or because they were dissatisfied with their grade.

## THEORETICAL FRAMEWORK

The public concerns about productivity and cost and customer service set the policy framework for this study, but the student-institution fit literature provides the theoretical underpinnings. A variety of outcome models have been developed in the past 20 years (Pascarella and Terenzini, 1991). Based on Astin's earlier work (1970), a number of scholars like Tinto (1975, 1987) and Pascarella (1985) and Weidman (1989) have developed outcome models containing a variety of relevant concepts. These various models emphasize the importance of obtaining a correct fit between the student and the institution as a key to student persistence and development. The student's adjustment to college is facilitated by his or her involvement and integration into the academic and social structures and climate of the institution, producing both institutional

commitment and learning. We incorporate these elements into this study of extenders.

Research on retention and persistence has received the most attention over the years, and scholarship in this area has been dominated by two models that have recently been combined to form a third more comprehensive model. Tinto's student integration model (1975, 1987) has been the most widely researched. Studies at a variety of institutions using diverse populations of subjects have developed measures for the concepts in Tinto's student attrition model and found support for the underlying theories (Pascarella and Terenzini, 1980, 1983; Pascarella and Chapman, 1983; Pascarella, Duby, and Iverson, 1983; Terenzini et al., 1985; Terenzini and Wright, 1987; Volkwein, King, and Terenzini, 1986; Nora, 1987; Nora, Attinasi, and Matonack, 1990). Another model advanced by Bean and his associates, the model of college student attrition, has also found support (Bean 1980; Bean and Metzner, 1985; Bean and Vesper, 1990; Metzner and Bean, 1987).

More recently, Cabrera and his associates (1992, 1993) have combined the best elements of these other models and developed refinements that explain as much as half the variance in persistence between the freshman and sophomore years. Cabrera's integrated model of student retention, while relying heavily on Tinto's concepts of academic and social integration, institutional and goal commitment, also incorporates concepts from Bean's student attrition model, from the ability to pay model (Cabrera, Stampen, and Hansen, 1990), and from Nora's models that address the role of friends and parents (Nora, 1987; Nora, Attinasi, and Matonack, 1990). Cabrera's new model is especially valuable for increasing our understanding of the role of family, friends, and financial aid in retention and persistence.

Several authors have demonstrated that the concepts and measures in Tinto's student integration model can be applied to other college outcomes, as well as to persistence. Pascarella and Terenzini (1982), Terenzini et al. (1984a, 1984b, 1987a, 1987b), and Volkwein et al. (1986, 1991, 1994) are among the researchers finding a variety of cognitive and noncognitive student development outcomes influenced by the measures of student academic and social integration utilized within these studies. This raises the possibility that Cabrera's integrated model may also explain more than persistence behavior. Since Cabrera's integrated model of student-institution fit incorporates many of the concepts from the earlier models by Tinto, Bean, and Nora, we use the Cabrera model as the conceptual foundation for developing the variables in this study of extenders.

The current study, then, examines the relevance of concepts and measures from the Cabrera model to other outcomes, such as taking longer to graduate. What are the reasons that some students take longer than normal to complete a bachelor's degree? Are students who extend their programs more like those

who take only four years to graduate, or are they more like those who drop out? How important are various academic, social, and financial factors in the longer time-to-degree by some students?

Because of the individual nature of the student's adjustment to college, several of the above scholars stress the importance of institution-specific studies as the appropriate means to investigate the dynamics of student-institution fit. Moreover, it is now widely accepted that there are wide variations in these dynamics among different groups of students based on their age, sex, ethnicity, and social class, as well as on the curriculum and type and size of institution attended (Pascarella and Terenzini, 1991). Just as Mallette and Cabrera (1991) found that not all student departers are the same, we constructed this study with the assumption that not all extenders are the same.

## METHODOLOGY

This research examines why full-time students take longer than the normal four years to graduate. The study is conducted at a research university offering programs at the bachelor's, master's and doctoral levels in Arts and Sciences, Business, Education, and Public Affairs. The matriculated undergraduate population numbers just over 10,000 students, with graduate enrollment of about 5,000. This multimethod research is conducted in two phases. The initial descriptive phase of the study draws upon a transcript analysis of freshmen who entered in Fall 1988, as well as upon a similar transcript analysis of selected respondents to a special student outcomes survey administered in Spring 1991 to 428 undergraduates. The second analytical phase of the study uses multivariate regression analysis to examine the Spring 1994 responses to the same outcomes survey by 229 juniors and seniors. This survey is part of the university's ongoing assessment program and is administered every three years. It contains over 180 items of information in four categories:

1. Background information about age, class year, sex, ethnicity, employment, admissions status, type of enrollment, major, financial aid, and residence
2. Student plans, goals, and reasons for attendance
3. Levels of student satisfaction with an array of campus services and facilities, as well as with various aspects of the institution's academic, administrative, and social environment or climate
4. A variety of cognitive and noncognitive experiences and outcomes, including classroom experiences, faculty contact, course-taking patterns, graduation plans, anticipated loan indebtedness, grade-point average (GPA), and self-reported growth

## PHASE I: TRANSCRIPT ANALYSIS

### Sample, Variables, and Procedure

Phase I, the descriptive aspect of this research, has two parts. First, there is a review of the 64 transcripts of all traditionally admissible first-time, full-time freshmen who entered in Fall 1988 and graduated in five years, rather than four. These students are full-time students in the sense that they generally register each semester for a minimum of 12 credits, which is full-time for enrollment-reporting and for tuition (there are no charges for additional credits) and financial aid purposes. These are not part-time students who, for example, register for only one or two courses a semester. The transcripts contain a variety of information about course enrollments each semester, grades, academic standing, and credits earned elsewhere.

The second part involves a similar transcript review of students responding to our 180-item 1991 survey described above. Respondents are divided into three groups: those graduating in four years, those graduating in more than four years, and those not graduating. The number of respondents who fit into each of the three groups is 119, 27, and 25, respectively. While all transcripts from the last two groups are studied, only 41 randomly selected transcripts from the first group are reviewed. These data are compared to the students' responses to questions on the Spring 1991 survey about their plans to graduate, their employment during the academic year, and their reasons for taking fewer than 15 credits. We use bivariate descriptive statistics to summarize the findings of the transcript analysis.

## PHASE II: MULTIVARIATE ANALYSIS

### Sample, Variables, and Procedure

The regression analysis for this study is conducted on 229 representative juniors and seniors who entered the university as first-time, full-time freshmen and who responded to the 1994 outcomes survey by completing at least 90% of the questions. The 229 are representative with respect to age, gender, and race. While not all majors are present in the sample, the 15 largest majors are represented in approximate proportion to their numbers in the undergraduate student body. Compared to 1991, the 1994 university outcomes survey contains a more complete battery of relevant measures, so the multivariate analysis utilizes the 1994 responses. Table 1 lists the variables that are assembled for the regression models.

#### *Dependent Variables*

This research focuses on two types of undergraduate behaviors: taking longer than normal to graduate and registering for less than a full load of 15 credits.

These are two of the four dependent variables in the multivariate analyses. As shown in Table 1, the number of semesters with fewer than 15 credits and taking longer than normal to graduate are self-reported items on the survey. To establish a comparison between these dependent variables and other outcome measures in the survey, we also report the regression results on two other dependent variables: self-reported growth and overall satisfaction with the university. The growth and satisfaction scales have been used for over a decade at this university, are derived from the work of Terenzini et al. (1984) and Volkwein (1991, 1994), and have alpha reliabilities of .86 and .77, respectively. The dependent measures of growth, satisfaction, and number of semesters with fewer than 15 credits are analyzed using three OLS regression models.

The fourth dependent variable is analyzed using logistic regression. Those who judged themselves to be graduating "later" were dummy coded "1," while "early" and "on time" received "0." Such student self-reporting has generally been quite accurate in the past and allows students in the fifth year of a four-year program to be treated the same as students in the sixth year of a five-year program. Since the "later than normal" dependent variable is dichotomous, we examine the influences on this behavior by a series of logistic regression models. Logistic regression has been shown to be the most appropriate analytical tool for handling a data set with a dichotomous dependent variable and a mixture of categorical and interval data among the independent variables (Feinberg, 1983; Cabrera, 1994). We tested alternative regression models for goodness of fit, and variables in the conceptual model are dropped from the analysis when they do not improve the fit. (See Cabrera, 1994, for a more complete description of the recommended technique.)

### *Independent Variables*

The constructs and variables used in the analysis are shown in Table 1 and are drawn directly from the student-institution fit literature in general, and from the Cabrera model in particular. The specific measures listed in the table for academic integration, social integration, encouragement, finances, and goal commitment are borrowed not only from Cabrera et al.'s work (1992, 1993), but also from studies by Pascarella and Terenzini, 1982; Terenzini et al., 1982, 1984; Nora, 1987; Nora et al., 1990; Volkwein et al., 1986; Volkwein, 1991; and Volkwein and Carbone, 1994. The alpha reliabilities for the various multi-item scales are recalculated for this population and, as shown on the first half of Table 1, many exceed .80 and all but one are above .70.

In addition, we examined a number of other items contained in the 1991 and 1994 surveys that might be related to the dependent measures associated with longer than normal graduation and a lighter than 15 credit load. Thus, we drew from the survey various measures of campus life and campus climate (course

**TABLE 1. Measures Used in the Multivariate Analyses**

Constructs and Variables from Student-Institution Fit Literature	Nature of Measure	Cronbach's Alpha	Examples of Key Items in Each Scale
<b>Independent Measures</b>			
<b>Academic Integration</b>			
Classroom experiences	7-item scale	.86	How frequently have you been intellectually stimulated by the material covered in class?
Faculty contact	1 item		#times met with faculty outside class this year.
Faculty advisement	2-item scale	.86	Availability of your advisor.
Faculty concern	2-item scale	.74	Faculty respect for students.
Student effort	2-item scale	.76	In general, I exercise good study habits.
Academic performance	1 item		Cum GPA.
<b>Social Integration</b>			
Peer relations	2-item scale	.87	I have developed strong friendships with other students.
Social involvement	4-item scale	.70	Opportunities for involvement in campus activities.
<b>Encouragement</b>			
Family	1 item		Family is solid source of personal support.
Friends	1 item		Friends are solid source of personal support.
<b>Finances</b>			
Financial need	1 item		Has been difficult to finance my college education.
Grants	3-item scale	.81	Grants & scholarships = major source of aid.
Employment	1 item		Hours per week.
Savings/work	2-item scale	.67	My own savings & work = major source of funds.
<b>Goal Commitment</b>			
Goal clarity	3-item scale	.72	My purpose in going to college is clear.
Highest degree expected	1 item		Bachelor's, master's, doctorate.
<b>Quality of Campus Life</b>			
Course availability	3-item scale	.85	Availability of courses needed for graduation.
Multicultural environment	6-item scale	.84	Satisfaction with gender/racial diversity of faculty/staff/students.



**TABLE 1. (Continued)**

Constructs and Variables from Student-Institution Fit Literature	Nature of Measure	Cronbach's Alpha	Examples of Key Items in Each Scale
<b>Independent Measures (continued)</b>			
Perceptions of prejudice	2-item scale	.89	Acts of racial prejudice by faculty toward students seldom occur.
Harmony/tolerance	5-item scale	.67	Satisfaction with racial harmony at this college.
Campus responsiveness	6-item scale	.71	Satisfaction with campus response to crime.
Facilities	6-item scale	.76	Satisfaction with condition of buildings/res. halls.
Clear rules & regs.	2-item scale	.74	Satisfaction with clarity of rules governing student conduct.
Student voice in decisions	4-item scale	.69	Satisfaction with student voice in college policies.
<b>Why Registrat. &lt; 15 Credits</b>			
<b>Reasons given on survey:</b>			
Protect GPA/free time	4-item scale	.61	Took less credit to maximize success/protect GPA.
Work/family responsibilities	6-item scale	.69	I am required to work to pay expenses. I need time for family activities/responsibilities.
Course access a problem	6-item scale	.73	Could not get course at time I wanted.
Dropped course/in difficulty	6-item scale	.67	Dropped a course that was too difficult for me.
<b>Dependent Measures</b>			
Self-Reported Growth	6-item scale	.86	Campus contribution to your intellectual growth (acquiring information, ideas, concepts, and analytical thinking).
Overall Satisfaction	3-item scale	.77	If I had it to do all over again, I would still attend this college.
<b>Extender Behaviors</b>			
Longer graduation time than normal	1 item		Self-reported on scale of "early," "on time," "later" than normal.
Lower registration load	1 item		Number semesters < 15 credits.

availability, perceptions of prejudice, racial harmony, and student satisfaction with campus responsiveness, rules and regulations, facilities, and student voice in decisions). These diverse items about student life were treated to a principle components analysis and reduced to eight scales with Cronbach's alpha reliabilities ranging from .67 to .89, as shown in the second half of Table 1.

We were particularly interested in a set of 26 reasons the students gave for taking fewer than 15 credits—reasons that were designed for the 1991 survey and expanded in the 1994 version. These also received a principle components analysis and were reduced to four scales with alpha reliabilities ranging from .61 to .86. First, we were surprised that desiring more free time and protecting a high GPA forms a common factor of reasons for a lighter load. A second scale reflecting work and family responsibilities seems to have more obvious face validity. A third scale reflects course access problems, and a fourth scale forms around various reasons for dropping courses after the semester's beginning.

## RESULTS OF THE TRANSCRIPT ANALYSIS

As Table 2 shows, the percentage of students taking longer than four years to graduate, while small, has grown as a percentage of the entering cohort over the last several years from less than 10 percent for the Fall 1984 cohort of new freshmen to nearly 14 percent for the Fall 1988 cohort. These students are full-time students in the sense that they are generally registered for a minimum of 12 credits, which is full-time for enrollment reporting and for tuition (there are no charges for additional credits). These are not part-time students who, for example, register for only one or two courses a semester.

A transcript analysis of 64 first-time, full-time, Fall 1988 traditionally admitted freshmen who took five years to graduate reveals the following:

1. The most apparent reason for students to take longer than four years to graduate was that they attempted fewer than 15 credits a semester. All except 8

**TABLE 2. Graduation Patterns for First-Time Full-Time Freshmen at This University**

Cohort	N	Graduated in			
		Four Years		Five Years	
		N	Percent	N	Percent
Fall 1984	2128	1094	51.4%	207	9.7%
Fall 1985	2177	1194	54.8%	238	10.9%
Fall 1986	2403	1205	50.1%	276	11.5%
Fall 1987	2147	1086	50.6%	227	10.6%
Fall 1988	2152	1077	50.0%	292	13.6%

of the 64 had at least one semester in which they attempted fewer than 15 credits. In semesters in which they attempted at least 15 credits, significant numbers of these students withdrew during the semester from courses and/or did not receive passing grades and thereby did not earn 15 credits for the semester.

2. Nearly every student did successfully complete one or more semesters with more than 15 credits. This, however, did not compensate for the greater number of other semesters with fewer than 15 credits.

3. For many students, pre- and postmatriculation credits earned elsewhere are an important factor in completing their program requirements for graduation. Thirty-six percent entered with prematriculation credit (mostly Advanced Placement). Nearly 50 percent of the students earned summer session credits at the university, an average of 8 credits each, while 22 percent took summer courses elsewhere.

4. Credit accumulation beyond the 120 required for graduation was a significant factor for one student in five. Of the 64 students studied, 13 had accumulated 140 or more credits. Nine of the 13 students were in the sciences, mathematics, or computer science. The additional credits for 7 of 13 students were earned as pre- or postmatriculation credits at other institutions (three of these students were in dual-degree engineering programs).

5. Sixteen students took longer to graduate because they withdrew for one or two semesters and returned. Four of these students had been placed on academic probation, while the remaining students left for a time, indicating that the reason was financial, medical, personal, death in family, or transfer. Moreover, a number of students took only one additional semester at the university and often their registration during this last semester was for less than 15 credits.

6. Academic performance was at least a temporary problem for nearly one out of every five graduates. However, 42 (65%) of the 64 students graduated with a grade-point average of 3.0 or higher.

This transcript analysis of the Fall 1988 cohort of new freshmen provided some insight into the course-taking behavior of students who took five years to graduate. What it could not provide was information on the reasons and motives for students' course-taking behavior. Why did students so often attempt fewer than 15 credits a semester? Among the possible reasons were course availability, changing major, personal problems, finances, work, attempts to improve grade-point average, and desire to have an easy semester. Only in the few circumstances where a student withdrew from university and had an exit interview was there an opportunity to gain understanding. Indeed, looking only at transcripts it is not clear whether extenders planned to take longer and whether they were satisfied with the situation.

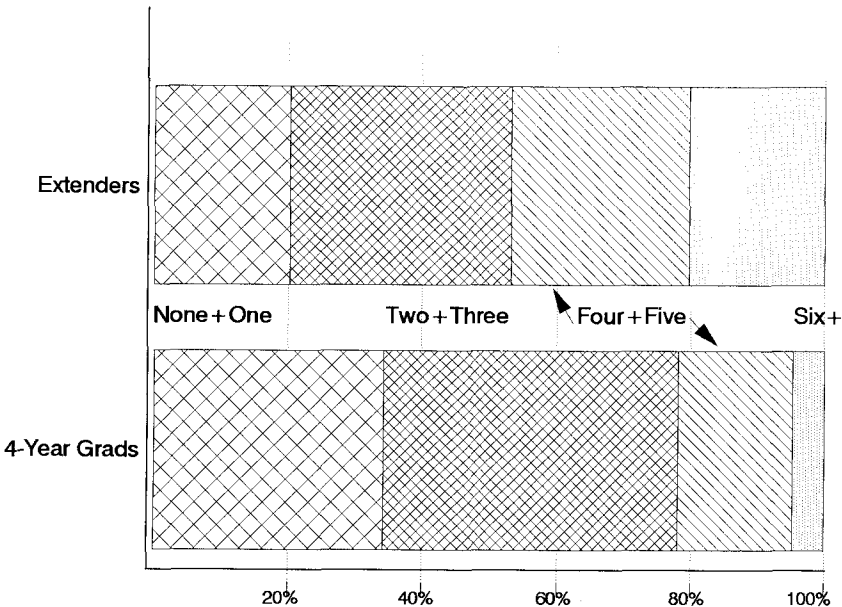
The survey administered on the campus in Spring 1991 presented an opportunity to compare student enrollment behavior with their responses to survey

items that dealt directly with their plans to graduate and reasons for taking fewer than 15 credits. Items were built into the university surveys in 1991 and 1994 to facilitate this investigation.

Analyses of the 1991 survey responses and transcripts indicate a steady increase from the freshman to the senior year in the number of semesters with a light course load. Only 4 out of 10 freshmen and 1 out of 10 seniors have completed 15 or more credits in every semester of study. While the majority of freshmen and sophomores have less than 15 credits in one or none, the majority of juniors and seniors have two, three, or more such semesters.

Congruent with the transcript analysis on the 1988 cohort, completing fewer than 15 credits per semester seems to be a major factor in extender behavior for the 1991 group as well. Figure 1 shows that 78 percent of those graduating in four years reported three or fewer semesters in which they completed under 15 credits. On the other hand, almost half the extenders had four or more such semesters.

In both the 1988 cohort and the 1991 survey respondents, we find that attempting fewer than 15 credits a semester is not restricted to students who take longer to graduate. Indeed, a large number of students in our study adapt to college by using a combination of advanced placement and summer session credit to enable a lighter credit load during the regular academic year.



**FIG. 1.** Comparison of extenders and four-year completers on the number of semesters registered for fewer than 15 credits.

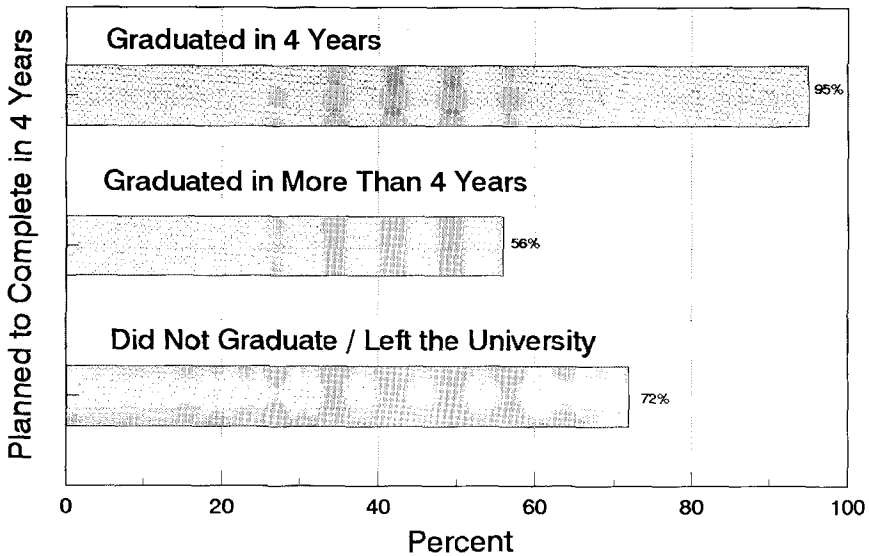
**TABLE 3. Credits Earned by Students Outside of the Regular Academic Year**

	Extenders from Fall 1988 Cohort ( <i>N</i> = 64)	Spring 1991 Respondents		
		Graduated in		Did Not Graduate ( <i>N</i> = 25)
		Four Years ( <i>N</i> = 119)	Longer Than Four Years ( <i>N</i> = 27)	
Prematriculation Credits				
Percent of Students	35.9%	53.6%	45.4%	52.4%
Average Credits	8.9	11.2	7.9	9.3
Home-Campus Summer Session				
Percent of Students	47.0%	31.7%	36.3%	4.0%
Average Credits	8.0	6.9	10.0	7.0
Summer Session Elsewhere				
Percent of Students	21.8%	24.3%	40.9%	0.0%
Average Credits	5.8	6.6	3.9	0.0
Regular Semesters Elsewhere				
Percent of Students	15.6%	4.8%	22.7%	0.0%
Average Credits	12.1	15.0	14.6	0.0

Table 3 compares some of the sources of course credits earned by students in the transcript study. The 1988 freshmen extenders were most likely to enroll in summer session courses at the university. The 1991 survey respondents who graduated in four years entered the university with the most prematriculation credits and participated much less in regular and summer sessions elsewhere. Those who did not graduate entered with greater amounts of advanced placement credit but left the university without accumulating summer session or other transfer credit.

Figure 2 shows some interesting differences in the graduation predictions of those in the 1991 survey. Ninety-five percent of the survey respondents who eventually graduated in four years accurately predicted in 1991 that they would. Among the extenders who took longer than four years to graduate, 56 percent indicated in the 1991 survey that they would need only four years, and the other 44 percent knew that they would extend their length of stay. Four out of five extenders were satisfied with this situation. Seventy-two percent of the respondents who did not graduate indicated in 1991 that they would need only four years to earn a degree.

Next, we examined the reasons these students gave for taking fewer than 15 credits. Figure 3 contrasts those students who graduated in four years with extenders and with those who left the university without a degree. Those who left without a degree indicated in significantly greater proportions that they were not satisfied with their academic grade, and that they had problems with



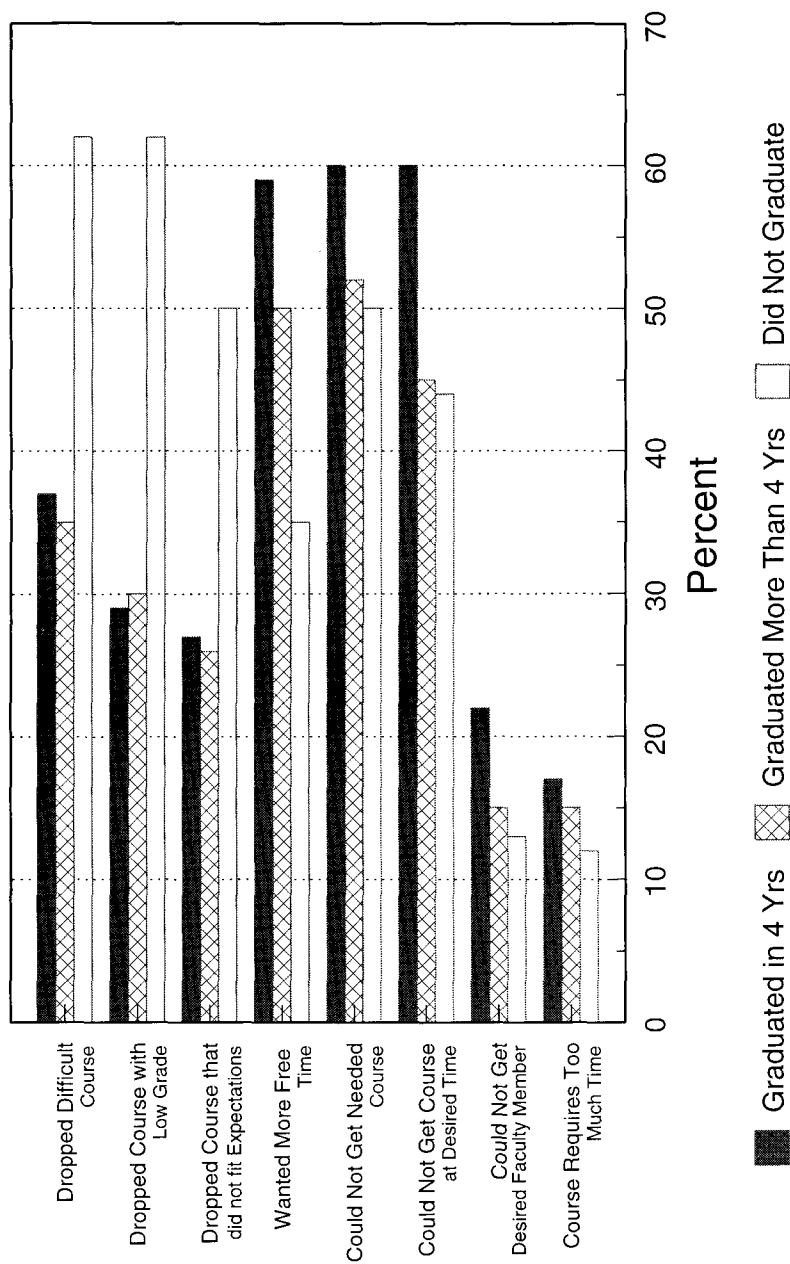
**FIG. 2.** Percent students indicating in 1991 survey that they would graduate in four years compared to actual results.

courses that were too difficult or did not fit their expectations. These students had more academic difficulties than other students. Indeed, seven of these students were later academically dismissed, and all but four have left the university and not returned.

Wanting more free time was a significant reason for both four-year completers and extenders, but completers gave the reason more often. Not getting into needed courses or at the desired time slot was a reason given by many students in all three groups, but the four-year completers made the complaint more often.

On the basis of our combined analysis of survey results and transcripts for the 1988 cohort and 1991 respondents, we identified three major circumstances that contribute to taking more than four years to graduate:

1. Students who want more free time and therefore choose to attempt fewer than 15 credits a semester. These students report being quite satisfied with the arrangement, and many have higher than average academic records.
2. Students who have higher than average levels of financial need. Some of these work 20 or more hours a week in addition to receiving financial aid. But since some of the four-year completers also work, the differentiating factor is their financial need, not their part-time employment during the academic year.



**FIG. 3.** Percentage of students in each group that rate these as major reasons for taking less than 15 credits.

3. Students in special circumstances, e.g., those whose academic careers are interrupted by a withdrawal from the university for personal, family, or medical reasons, and those who participate in dual-degree programs.

A fourth significant population is composed of students who cannot get the course(s) they want, the course time(s) they want, the course(s) are too difficult, and/or they are not satisfied with their progress. These are often students who are struggling academically and who give multiple reasons for their difficulties. Unlike four-year completers and extenders, some of whom also experience academic problems, they are not able to rebound and graduate. Rather than becoming extenders, these students usually drop out.

Neither of the two transcript studies suggest the relevance of precollege characteristics such as age, sex, race, and high school grades as factors in extender behavior. (We treat financial need as a college student variable, rather than as a precollege characteristic.) To the contrary, our descriptive analysis reveals that four-year completers and extenders have many of the same characteristics. Both groups come to the university with advanced placement credit (but four-year completers have more). Both complete fewer than 15 credits in some semesters (but extenders do it more often). Both groups earn additional summer session credits to supplement their academic year programs (but extenders earn more). Both groups express some problems with course and faculty availability (but four-year completers indicate more problems).

## RESULTS OF THE MULTIVARIATE ANALYSIS

Compared to 1991, the 1994 university outcomes survey contains a slightly larger population of juniors and seniors and a more complete battery of relevant measures, so the multivariate analysis utilizes the 1994 responses to generate four regression models.

The first two OLS models, shown in Table 4, examine the variables associated with two outcomes: self-reported growth and satisfaction. These models are developed to examine and confirm the extent to which the measures used in this study are useful predictors with the 1994 population. A series of earlier studies at the university has successfully employed many of these same measures as significant predictors of these two outcomes (Volkwein, 1991; Volkwein and Carbone, 1994).

The third and fourth models (in Table 5) directly address our research questions about extender behaviors. What measures are most strongly associated with taking longer than normal to graduate and with registering for fewer than 15 credits per semester?

Table 4 displays the significant beta weights from the stepwise OLS regression results using student self-reported growth and satisfaction as dependent



**TABLE 4. OLS Regression Results for Self-Reported Growth and Satisfaction**  
(*N* = 229 Juniors and Seniors)

Student-Institution Fit Variables	Growth Model		Satisfaction Model	
	Significant Betas with Other Outcomes		Significant Betas with Other Outcomes	
	IN	OUT	IN	OUT
Academic Integration				
Classroom experiences	.22	.41	.25	.44
Faculty contact				
Faculty advisement				
Faculty concern			.14	.14
Student effort				
Academic performance				
Social Integration				
Peer relations	.13	.24	.12	.21
Social involvement				
Encouragement				
Family	.11			
Friends				
Finances				
Financial need				
Grants				
Employment				
Savings/work		-.13		
Quality of Campus Life				
Course availability				
Multicultural environment				
Perceptions of prejudice				
Harmony/tolerance			.13	
Campus responsiveness				
Facilities				
Clear rules & regs.	.12	.12		
Student voice in decisions		.16		.16
Goal Commitment				
Goal clarity	.11	.16		
Highest degree expected			-.11	
Dependent Outcomes Variables				
Self-reported growth	—	—	.39	—
Overall satisfaction	.39	—	—	—
Graduating later than normal		—		—
# Semesters < 15 credits		—		—
Total <i>R</i> <sup>2</sup>	.49	.43	.52	.42

**TABLE 5. Regression Analysis Results for Two Extenders' Behavior**

Student-Institution Fit Variables	Logistic Regression Model for Taking Longer than Normal ( <i>N</i> = 190)		OLS Regression Model for Semesters <15 Credits ( <i>N</i> = 229)	
	Significant Delta <i>Ps</i> with Other Outcomes		Significant Betas with Other Outcomes	
	IN	OUT	IN	OUT
Academic Integration				
Classroom experiences				
Faculty contact				
Faculty advisement				
Faculty concern				
Student effort				
Academic performance	.050	.050		
Social Integration				
Peer relations				
Social involvement			-.13	-.13
Encouragement				
Family				
Friends				
Finances				
Financial need				
Grants	.053	.053		
Employment				
Savings/work				
Quality of Campus Life				
(These 8 variables not significant)				
Goal Commitment				
Goal clarity				
Highest degree expected				
Reasons for Multiple Semesters with <15 Credits				
Protect GPA & free time	—	—	.43	.43
Work/family responsibilities	—	—	.21	.21
Course access a problem	—	—		
Dropped course/in difficulty	—	—		
Outcomes Variables				
Self-reported growth		—		—
Overall satisfaction		—		—
Graduating later than normal	—	—	—	—
# Semesters < 15 credits	.032	.032	—	—
Logistic Regress. Stats				
	Intercept	- 5.372	OLS <i>R</i> <sup>2</sup>	.27
	PCPs	90.5%		.27

variables. The betas are standardized coefficients that indicate the relative strength of each variable in the final model controlling for all others. Since it is possible to argue that the dependent variables interact with each other (e.g., growth influences satisfaction and vice versa), each of these two dependent variables is run with the other dependent variables in and out of the analysis. The regression models produce results that are similar to investigations of other student populations at this university, thus suggesting that there is nothing atypical about these 1994 respondents.

Turning first to the growth model in Table 4, satisfaction (.39) is most strongly associated with the self-reported growth scale, followed by classroom experiences (.22) and peer relations (.13). Other significant variables include clear rules and regulations (.12), family encouragement (.11), and goal clarity (.11). When satisfaction and the other outcomes are out of the analysis, classroom experiences (.41) and peer relations (.24) again are highly influential, followed by goal clarity (.16), student voice in decisions (.16), clear regulations (.12), and little financial support from own savings/work (−.13). These measures account for 43% of the variance with satisfaction out of the model and 49% with it in. Not only are background variables like age, sex, and race not significant, but neither are graduating later than normal and registering for fewer than 15 credits.

The satisfaction model in Table 4 displays results that are generally similar to the growth model. When growth is in the analysis, it constitutes the largest influence on satisfaction (.39) followed by classroom experiences (.25). When growth and the other dependent measures are out of the analysis, classroom experiences (.44) have the largest influence followed by peer relations (.21). Other statistically significant influences are exerted by faculty concern (.14), student voice (OUT = .16), harmony/tolerance (IN = .13), and highest degree expected (IN = −.11). The explained variance shown by the  $R^2$  increases from 42 percent (OUT) to 52 percent (IN). Again, graduating later and having multiple semesters of light credit load are not significantly associated with the student satisfaction outcome.

These results in Table 4 are extremely consistent with the student-institution fit literature and with other investigations at this university (Volkwein, 1991). Measures of academic integration, especially classroom experience, exert the strongest influences on student growth and satisfaction. With the outcomes variables out of the analysis, classroom experiences are approximately twice as strong as peer relations and three times stronger than any other significant variables. Peer relations are at least 50 percent stronger than any other measures. However, extender behavior itself seems to be unrelated to the outcomes and experiences associated with student development and satisfaction.

What then are the variables most strongly associated with longer graduation time and lighter than average credit loads? Table 5 displays the regression re-

sults for the outcomes related to these extender behaviors. The logistic regression model in Table 5 shows the significant delta- $p$  values with extended graduation as the dichotomous dependent variable, and correctly predicts 90.5 percent of the cases. Delta- $p$  values indicate the changes in the probability of taking longer to graduate that each significant variable makes, controlling for all other variables in the analysis.

With all 30 academic, social, financial, campus life and other variables potentially included, only three exert a significant influence on extended graduation, and the results are the same with the growth and satisfaction outcome measures in or out of the analysis. As we expected from the transcript analyses, each semester of course load below 15 credits increases the likelihood of longer graduation by 3.2 percent. In addition, receiving a financial aid grant increases the probability of extending by 5.3 percent. However, we did not expect that increases in grades would influence the probability of later graduation, but they do by 5 percent for each one-point increase in GPA. This finding may seem puzzling, but it is consistent with an earlier study that found many extenders take reduced loads in order to protect a high GPA (Volkwein, 1993).

We are especially interested in the reasons why juniors and seniors have experienced multiple semesters with fewer than 15 credits, so we address this concern in the second model in Table 5. The dependent variable in the OLS regression model in Table 5 is the number of semesters that each student completed fewer than 15 credits, and we include in the model the four factors that summarize their reasons for doing so, as discussed in the methodology.

This OLS model is approximately half as robust as the OLS models shown in Table 4. Very few of the variables in the other regression analyses prove significant. Only three variables significantly affect this extender behavior. The scale reflecting student desires to protect a high GPA and have more free time ( $\beta = .43$ ) is twice as influential as the scale reflecting work and family responsibilities ( $\beta = .21$ ). Finally, social involvement ( $\beta = -.13$ ) is associated with fewer semesters of reduced credit load. With an  $R^2$  of .27, this model leaves almost three-fourths of the variance unexplained by any of the 30 measures in the study.

## CONCLUSION AND DISCUSSION

The existing enrollment management and student-institution fit literature generally concentrates on two student populations—persisters and dropouts. This study investigates a third population that we call extenders—those ostensibly full-time students who take longer than four years to complete the B.A. We address this topic by applying a transcript analysis to two student populations and a multivariate analysis to a third.

Both the transcript analysis and the multivariate analysis suggest that stu-

dents become extenders by completing too many semesters with fewer than 15 credits. The multivariate analysis further suggests that there are two dominant reasons why extenders, as distinct from dropouts and four-year finishers, complete fewer than 15 credits in a semester: (1) they want more time to enjoy college life and protect a high GPA; (2) they need more time for work and family responsibilities.

The first, descriptive phase of this research is a transcript analysis finding that students who take longer to graduate have some of the same characteristics as those students who graduate in four years—both have semesters in which they attempt fewer than 15 credits, both report similar college work experiences, and both express similar problems with course availability. Four-year graduates and extenders also employ roughly similar strategies in earning additional credits to supplement regular semester credits. Students who take longer to graduate are generally as satisfied with this outcome as those who graduate on time. Those students who do not graduate tend to experience more academic adversity. Unlike four-year completers and extenders, some of whom also experienced academic problems, dropouts are not able to rebound from difficulty and to complete a degree at this university.

The second, analytic phase of this study finds that taking longer to graduate is significantly associated with only three out of 30 measures in our analysis: financial need great enough to qualify for grants, possessing a high GPA, and completing fewer than 15 credits in multiple semesters. Our other measures of academic integration, social integration, campus climate, encouragement by family and friends, and goal clarity are not significantly related to extender behavior. Thus, students who take longer to graduate or who tend to register for fewer than 15 credits are not significantly different from students who graduate in four years on most variables developed in other studies to measure academic, social, and administrative aspects of the campus. Even the measures of self-reported growth and overall satisfaction appear to be unrelated to delayed graduation. Extenders appear to have neither more nor less academic and social integration and goal clarity than nonextenders. These students appear not to be negatively impacted by taking longer to graduate and are generally satisfied with their experiences.

A regression analysis of those who register for fewer than 15 credits produces a similar result in that only three variables are significant: protecting a high GPA, work responsibilities, and lack of social involvement. The financial need to work and the lack of social integration are consistent with Cabrera et al.'s integrated model of student retention (1993), but there are few other congruencies between these findings and the student-institution fit literature. Even the measures of campus climate and course availability proved nonsignificant in explaining lighter registration loads among extenders.

On the other hand, our study of this population produces models that are

quite robust in predicting student growth and satisfaction. Indeed, the regression results for the 1994 survey respondents are extremely consistent with the student-institution fit literature and with other research conducted at the university. Our measures of academic and social integration, institutional and goal commitment, and campus climate predict between 42 percent and 52 percent of the variance in self-reported growth and satisfaction. Thus, it is all the more surprising that these factors explain so little extender behavior.

In recent years, Tinto (1988, 1993) has expanded his theory of student departure to include the anthropological perspectives of Arnold Van Gennep (1960). This perspective views student adjustment to college as moving through distinct stages or rites of passage from membership in one community to another. Our findings may be consistent with this perspective. Extender behavior may be a needed coping mechanism that assists some students in successfully making the transition into and through college.

The multivariate analyses of the survey data do suggest that student coping mechanisms are at work in this population. Not only is longer than normal graduation linked to multiple semesters of less than 15 credits, to financial need, and to high GPAs, but the number of semesters with fewer than 15 credits itself is linked to protecting a high GPA and needing to work. Interestingly, course availability and dropping courses because of difficulty are not significant factors in extender behavior, although they may be significant for dropouts.

That course availability is not a significant factor is an important finding for campus management. While these results are somewhat reassuring, there remain several concerns. While extenders appear not to be harmed or dissatisfied with having to take longer to graduate, the number of students taking less than 15 credits has important institutional implications that need to be addressed. State-supported institutions at which full-time-equivalent (FTE) enrollments are an important (if not sole) determinant of funding must recognize the impact of lighter credit loads. While these students are paying full-time tuition and require "full-time" support services, they generate less than 1.00 FTE per student and, therefore, less than full state support per student. Even if students want to register for 15 credits, a quick review of current academic policies and procedures at our own and other campuses suggests an implicit message that 12 is good: full-time tuition is based on 12 credits; full-time status is defined as 12 credits; it takes only 24 credits (not 30) to advance from freshmen to sophomore status.

Financial need is an important factor in taking longer to graduate in this study. We expected that financial aid would help a student graduate in four years, but qualifying for grants also is associated with students from poor and disadvantaged backgrounds that have a more difficult adjustment to college life. With changing financial aid policies and decreasing resources from federal and state government, we may find that more students will take longer to graduate

because financial aid will be insufficient and they will be required to spend more time working. What impact do extenders have on the financial aid resources of an institution? More semesters enrolled means financial aid not available for other (new) students, especially since financial aid entitlements under many programs increase with class year.

In these four models, student precollege characteristics (except for financial need) consistently fail to prove significant. This is the latest in a series of studies suggesting that students' college experiences exert far more significant influences on student development outcomes than the demographic characteristics they bring with them (Pascarella and Terenzini, 1991). Previous studies at this university have found weak relationships between student precollege characteristics and outcomes such as those in this study (Volkwein et al., 1986; Volkwein, 1991). Nothing in our transcript analysis suggests that age, sex, or race would be helpful in explaining extender behavior. Moreover, our theoretical framework, Cabrera's integrated model (Cabrera, Nora, and Castaneda, 1993), suggests a rather modest role, if any, for precollege measures.

Two measures that ideally should be included in such studies are not present in this research. The first, entering student quality, as measured by average SAT score and high school grade-point average, was not accessible from the survey data and was not included in the study because previous research at the university found a low relationship between precollege scores and grades and college outcomes. (This can be explained in part by the lack of sufficient variance in this university's selective population and the tendency of the brightest students to enter the most difficult majors.) The second measure, changing one's major or intended major, was considered in an earlier, preliminary study of this topic, but not included here because almost all students on this campus change their intended major at least once between entry and the official declaration that is not required until the junior year. Prior to that time, the major intentions of students are generally not captured by the university's student record-keeping system.

As with most studies, we find in concluding this one that there are at least two recommended additional lines of inquiry. First, it would be helpful to have a multi-institution study of this phenomenon. A limitation of any single institution study is knowing whether the results are generalizable to others, and the number of extenders at this university are relatively modest. Second, our study examined only traditionally admissible students who are expected to graduate in four years. What are the course-taking patterns of students who are admitted under special admissions programs? What effect will changes in financial aid policies and resources have upon these populations and their course-taking behavior and time to graduation?

While these findings have enormous implications for enrollment management, they also have implications for scholarship and theory development. Tinto (1987), Cabrera et al. (1993), and Mallette and Cabrera (1991) are among

those calling for an application of their models to various student subpopulations. We need to understand that dropouts, stop-outs, and extenders are not all alike. Moreover, within each group there are likely to be variable reasons for student behavior. Extenders are an important student population for additional research precisely because we found so little influence exerted by the usual measures contained in other studies that have used concepts in the Tinto, Bean, and Cabrera models. Apparently, academic and social integration, goal clarity, and levels of satisfaction with the campus have little to do with student decisions to take a lighter academic load and to lengthen their graduation date. Rather, extender behavior is likely to represent one of many strategies that students develop in order to cope successfully with the transition into and out of college.

Our transcript study suggests the presence of three major groups of extenders, and our multivariate analysis confirms the presence of two of them among the 1994 juniors and seniors. The relatively small number of *special situation* students who withdraw temporarily to take care of unpredictable family, health, or personal circumstances are not captured by our regression model, or otherwise identifiable in advance, but campuses need to construct appropriate policies and support services to assist them. A larger group of *financial need extenders*, confirmed by our multivariate analysis, lends support to those theories and campus practices that highlight the importance of student financial need as a factor in a variety of college outcomes. Finally, our largest group, *grade-conscious extenders*, may present difficult policy problems for campus and system administrators, as well as theoretical challenges for scholars.

*Acknowledgment.* This is a revised version of paper presented at the Annual Forum of the Association for Institutional Research, May 1995, Boston, MA. The authors give special thanks to Michelle Napierski, a doctoral student at Albany, for her technical support in this research project.

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