



1992

The Multiple Transfer Student in Higher Education: Background Characteristics and Interinstitutional Movements of a Sample Population

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LOYOLA UNIVERSITY OF CHICAGO

THE MULTIPLE TRANSFER STUDENT IN HIGHER EDUCATION:
BACKGROUND CHARACTERISTICS AND INTERINSTITUTIONAL MOVEMENTS
OF A SAMPLE POPULATION

VOLUME I

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

BY

GRETCHEN WARNER KEARNEY

CHICAGO, ILLINOIS

JANUARY, 1992

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ACKNOWLEDGEMENTS

I want to express my utmost appreciation to Dr. Barbara Townsend, director of this dissertation, for her patience, support, understanding and guidance throughout the dissertation process. I would also like to thank the other members of my committee: Dr. Terry Williams, who was an excellent advisor throughout the doctoral program and who provided thorough, perceptive analyses of my writing; Dr. Don Fouts, who served as a valuable and insightful reader and supported this research project financially through the Federation of Independent Illinois Colleges and Universities; and Dr. Jack Kavanagh, who assisted with the statistical aspects of this study. I want to acknowledge the contributions of Dr. Gene Laczniak (Marquette University), an extremely helpful outside reader; and Drs. Don Hossler (Indiana University) and Ernest Pascarella (University of Illinois at Chicago), who reviewed my survey instrument.

This project would not have been possible without the support and technical assistance of the following individuals from the University of Illinois at Chicago: Julie Smith and Julia Thomas (Office of Planning and Resources Management); Michael Ginsburg and Tom Beckham (Office of Student Affairs).

Throughout my doctoral studies, I have received an incredible amount of encouragement from my professional

colleagues, many of whom convinced me to keep going when I felt like throwing in the towel. I would like to acknowledge a small but significant sample of these individuals: Dr. Felice Dublon and Sue Haldemann (School of the Art Institute of Chicago); Dr. Patricia Thrash (North Central Association for Colleges and Schools); Dr. Steve Helfgot (Oakton Community College/ Cerritos College); Sr. Charlene Endecavage (Montay College); Drs. Lucy Morros, Elizabeth Fischer and Donald Yannella (Barat College); and Sandra Cook (Loyola University of Chicago).

Finally, I want to express my appreciation to my friends and family, who have shown incredible tolerance and understanding in the face of countless negative responses to social invitations over the past few years. My parents, R. Douglas and MaryLee Warner, have never wavered in their support of my educational and professional goals. My husband, Dr. Terry Kearney, has been my best friend and emotional support, and in addition has assisted me immeasurably by contributing ideas, reactions, statistical and computer expertise throughout my doctoral program and most recently for this dissertation.

I dedicate this dissertation to R.D. Warner, whose steadfast belief that his daughter could do anything and do it well will be with me always.

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CHAPTER I

INTRODUCTION

Introduction to the Problem

Numerous studies completed during the past three decades have confirmed the growth and significance of the transfer student population in American colleges and universities (Anderson, 1983, 1984; Knepper, 1989; Peng, 1977, 1978; Peng & Bailey, 1977; State of Illinois Board of Higher Education, 1990a). Today, 34% of full-time, entering freshmen to the two-year and four-year sectors leave their original institution after one year (Noel, Levitz, Saluri & Assoc., 1987) and only one-third of undergraduate degree recipients graduate from the institution at which they first matriculate (U.S. Department of Education, 1986). Data from the National Longitudinal Study of the High School Class of 1972 indicate that 56 out of every 100 freshmen entering the four-year college sector leave their first institution without receiving a degree, 44% within two years of matriculation. Of these departures within two years, 42% transfer to another higher education institution; 14% stop out (leave for a time and then re-enroll or transfer to another college); and the remainder drop out completely from the system of higher education (Tinto, 1987). In the two-year

college sector, approximately 73% of the entering students leave their first institution without completing a degree. Of these departures, 42% transfer to other institutions within two years. The vast majority of these (81%) transfer to four-year colleges or universities (Tinto, 1987).

While the transfer population is clearly a significant one in higher education today, existing research on transfer students is extremely narrow in focus. Most studies have been limited to single institutions or geographical areas and have therefore failed to analyze the factors involved in student transfer from one college to another. Much of the research on transfer students was conducted during the 1960s and 1970s, and is sorely in need of updating. The bulk of these studies has examined the experiences, background characteristics, academic performance and persistence of community college students who transfer to four-year institutions. A few studies have looked at transfer among four-year colleges (Anderson, 1983, 1984; Hendel, Teal & Benjamin, 1984; Holahan, Green & Kelley, 1983; Kocher & Pascarella, 1990; Peng, 1978), or from four-year to two-year institutions (Anderson, 1970; Kuznik, 1972; Peng, 1978). All of these studies, however, have concentrated upon first-time transfers who have moved from their original college or university to a second institution.

Common to national, state and institutional studies is the aggregate presentation of data, which makes it

impossible to track the transfer movements of individual students or to distinguish transfers from dropouts. This results in a gross overstatement of attrition rates and understatement of transfer rates (Gilbert & Gomme, 1986; Lenning, Beal & Sauer, 1980; Metzner, 1984; Noel et al., 1987; Tinto, 1987). Included in these data are a substantial number of students who transfer not just once, but several times during the course of their collegiate careers (Kearney, 1988; Kuznik, 1972; Trent & Ruyle, 1965).

Although no studies describe the multiple transfer student or the movements of this population, the large numbers of multiple transfers moving among colleges and universities today hold important implications for the students themselves, the institutions they transfer among, the states and the system of higher education.

Implications Regarding the Individual Student

Researchers have examined the positive and negative implications of transfer behavior for the individual student and have reached contradictory conclusions. Some studies show that transferring from college to college entails numerous costs to the student, including 1) "transfer shock," the well-documented drop in students' grade point averages which occurs upon transfer to a new institution (Alba & Lavin, 1981; Anderson, 1983, 1984; Hills, 1965; Nolan &

Hall, 1978; Williams, 1973); 2) higher attrition and lower graduation rates than native students (Anderson, 1983, 1984; Astin, 1975; Campbell, 1980; Knoell & Medsker, 1965); 3) a longer time period to earn a degree (Anderson, 1983, 1984; Goodale & Sandeen, 1971; Knepper, 1989; Knoell & Medsker, 1965; Tinto, 1987); 4) lowered early occupational attainment (Kocher & Pascarella, 1990); 5) lower grade point averages and lower levels of academic ability than students who do not transfer (Campbell, 1980; Cross, 1968); and 6) increased economic burdens, including difficulty obtaining financial aid and foregone earnings due to delayed entry into the full-time labor force (Peng, 1977; Richardson & Bender, 1987; Van Alstyne, 1974; Wechsler, 1989).

These findings have bolstered long-standing negative societal and institutional attitudes toward transfer students. Dearing (1975) reported that "...transfer students are somehow alien, immigrant, adopted, nouveau riche, converted or Johnnies-come-lately whose claims and credentials are subordinate, inferior, or suspect" (p.1). Some of these beliefs concerning the supposed inferiority of transfer students may arise from traditional expectations that college students will enter the institution of their choice immediately after graduating from high school, remain there for four years and emerge with a baccalaureate degree in hand (Dearing, 1975; Knepper, 1989). Any deviation from this carefully programmed, sequential pattern of learning,

including transferring, is suspect.

For every negative finding concerning transfer students, a study showing positive effects of transfer behavior can be cited. Over the past several decades, the presumption that most college students graduate within four uninterrupted years of their matriculation has been contradicted repeatedly (Campbell, 1980; Carroll, 1989; Eckland, 1964; Knepper, 1989). Contrary to popular belief, there was a substantial amount of dropout, transfer and stopout activity even in the late nineteenth and early twentieth centuries (Thelin, 1984). Today, less than half of degree completers graduate within the expected four-year time frame. The average baccalaureate degree completion time is now four and one-half years (Knepper, 1989). While it is true that many of these delayed degree completions reflect the effects of transfer upon the time required to graduate (Knepper, 1989; Tinto, 1987), this longer time period does not discourage degree completion (Holahan et al., 1983; Knepper, 1989). In fact, transferring among colleges has been shown by some researchers to improve the likelihood of degree attainment (Carroll, 1989; Knepper, 1989).

Other positive aspects of transfer behavior which contradict the negative findings reported earlier have also been identified. Richardson and Bender (1987) found that attrition rates for black and Hispanic students who

transferred from community colleges to four-year institutions were lower than those of native minority students at the four-year institution. Alba and Lavin (1981) reported that two-year to four-year college transfers not only performed as well as natives in their junior year at the new institution, but were more likely to return for their senior year than the natives. Related studies have found that "transfer shock," the tendency of students' grades to drop following transfer, is mitigated by a corollary phenomenon entitled "transfer ecstasy," in which transfers' grade point averages predictably recover during their first year at the new institution (Nickens, 1972; Nolan & Hall, 1978). Transfers' grades sometimes improve to the extent that they exceed those earned by native students (Holahan et al., 1983). Once they enroll at a new institution, transfer students experience less problems than native students, and are better able to cope with difficulties when they arise (Conroe, 1976).

Cope and Hannah (1975) and Tinto (1982b) believe that transfer is often a very positive experience, which results from students' maturation and goal clarification processes. Students are more likely to transfer when their socioeconomic status, academic achievement, motivation and creativity levels are high (Carroll, 1989; Knepper, 1989; Peng, 1977; Tinto, 1982a; Velez & Javalgi, 1987). In terms of occupational attainment, Smart and Ethington (1985) found

that there were no differences in job stability, status or satisfaction between two-year college transfers and native four-year students in their sample who earned baccalaureate degrees.

For the individual student, the economic and societal rewards of a college education have been well documented (Blau & Duncan, 1967; Leslie & Brinkman, 1986). However, the manner in which the transfer process fits into the educational attainment scenario has not been fully explored or understood (Campbell, 1980). Only recently has attention been focused on how students weigh the costs and benefits of attending a particular college, and how this weighing process influences the decision to re-enroll there or to transfer to a different institution. The decision to transfer from one college to another may be influenced by personal, institutional, or environmental factors (Bean, 1982b). College students are becoming more sophisticated, better-informed consumers who do not hesitate to leave an institution when they perceive that the costs of remaining outweigh the benefits of transferring elsewhere (Janasiewicz, 1987; Noel et al., 1987).

While a good fit between student and institutional characteristics along several dimensions can contribute to persistence (Cope & Hannah, 1975; Williams, 1984), researchers have identified a number of factors which can cause

incongruency between the student and institution, thus leading to transfer, stopout or dropout. Among these are institutional characteristics such as size, selectivity, type, control, level of bureaucracy, class size, quality of teaching, and social life; and individual factors such as educational aspiration, academic performance, and socioeconomic status (Cope & Hannah, 1975; Fetters, 1977; Peng, 1977).

Incongruency between the student and the degree of academic challenge at an institution may lead to transfer to a more or less selective college or university (Noel et al., 1987). Tinto (1987) theorized that a student's experience at her/his original college could lead to upward or downward transfer, depending upon how committed the student is to the goal of graduation and whether the student's goals are enhanced or diminished by positive or negative experiences at the first institution.

Poor college choice has been identified as one of the primary reasons that students transfer out of their original institution (Bean, 1982a; Cope & Hannah, 1975; Hossler, 1984; Peng, 1977; Tinto, 1987). Poor choice can cause incongruence, because it results in inaccurate student expectations of a college (Tinto, 1987). On the other hand, poor choice may result from entering students' inflated and unrealistic expectations of academic and social life at an institution (Hossler, 1984; Noel et al., 1987; Peng, 1977).

This tendency on the part of students to misunderstand a college's social and academic environment has been shown to occur in both freshman and transfer student populations (Buckley, 1971; Donato, 1973; Litten, Sullivan & Brodigan, 1983; Stern, 1968; Wisner, 1984; Zultowski & Catron, 1976). Unrealistic expectations can also result from college recruitment literature which is difficult to comprehend, inaccurate, or misleading (Comm & Schmidt, 1986; Johnson & Chapman, 1979; Litten, 1981).

Inconsistencies between students' expectations and the institutional environment have been found to increase the likelihood of attrition (Shaw, 1968; Wisner, 1984). Peng (1977) suggested that expectation incongruency concerning faculty quality and social life may contribute to transfer, and is most likely to result in transfer from one four-year college or university to another. Students who transfer, and particularly those who transfer several times during their collegiate careers, apparently do not attain the degree of linkage with their original institution(s) that will induce them to persist to graduation. This lack of congruency has generally been attributed to some form of failure on the part of the student or the institution (Tinto, 1982b).

Implications for Institutions

Higher education institutions stand to benefit

substantially from the enrollment and retention of multiple transfer students - particularly in an era when many states' college-going populations are shrinking, federal and state policies concerning support of higher education are shifting, and tuition is rising faster than the rate of inflation. If the number of these students increases, the impact of the multiple transfer population on college enrollment management systems will grow. As competition between institutions intensifies, colleges which can most effectively identify multiple transfers' needs and expectations will attract these students from the institutions in which they are currently enrolled.

Colleges and universities are beginning to realize that many students previously thought to be dropouts are actually transferring to other institutions (Bean, 1982a; Lenning et al., 1980; Metzner, 1984; Noel et al., 1987; Tinto, 1987). Researchers have estimated that between 20% and 75% of four-year college "dropouts" are really transfers (Cope, 1969; Everett, 1979; Iffert, 1957; Kowalski, 1977; Trent & Medsker, 1968), and that a large number of these students entered their first institution with the intention of transferring (Tinto, 1987; Wisner, 1984). Since transfers often possess high levels of academic achievement, motivation and socioeconomic status (Carroll, 1989; Knepper, 1989; Peng, 1977; Tinto, 1982a; Velez & Javalgi, 1987), continuing losses of these students could adversely affect

the quality of an institution's student body. Tinto (1982a) referred to the voluntary withdrawal/transfer behaviors of such students as a "brain drain" on the institutions they decide to leave (p. 697). Colleges are understandably interested in retaining potential transfers and in discovering why they may decide to transfer.

The loss of students through transfer affects colleges economically, cutting into tuition revenues and increasing recruiting costs. This is particularly true since transfer students are less likely to receive financial aid and more likely to pay full tuition than native students (Goodale & Sandeen, 1971; Peng, 1977; Richardson & Bender, 1987; Van Alstyne, 1974; Willingham & Findyikan, 1969). Ultimately, academic program quality and institutional survival itself may be threatened by a net outflow of transfer students. Private colleges and universities, with comparably higher tuitions and enrollment-dependent budgets, are particularly vulnerable when they lose students (and potential future donors) to less expensive public institutions (Cope & Hannah, 1975; Dearing, 1975; Peng, 1978; Willingham & Findyikan, 1969). A number of studies indicate that transfers, like other students today, are increasingly choosing to attend large, public, urban institutions (Carnegie Council on Policy Studies in Higher Education, 1982; Desler, 1985; Peng, 1978; Willingham & Findyikan, 1969; Wisner,

1984).

There is evidence of the importance of the transfer student population to individual institutions in the State of Illinois. Of all new undergraduate enrollments in Illinois colleges and universities (excluding public two-year institutions) in fall 1989, 38% were transfer students. Although nearly identical percentages of transfer students and first-time freshmen were accepted into the four-year public and private sectors of Illinois higher education, a much higher percentage of accepted transfers was actually enrolled. In public institutions, 68% of transfer applicants were accepted and 67% of those accepted were enrolled in fall 1989 as opposed to 67% and 41% respectively for first-time freshmen. In multiple purpose private institutions, 79% of transfer applicants were accepted and 67% enrolled, as compared to 73% accepted and 44% enrolled for freshmen (State of Illinois Board of Higher Education, 1990a).

The above data suggest that transfer students are a significant collegiate population. While transfers are as likely to be admitted to most institutions (at least in Illinois) as first-time freshmen, once accepted they are much more likely to attend the college to which they are admitted. In addition, institutions that advertise specifically for transfer students enroll twice as many and have lower reject and no-show rates of transfers than colleges

that do not advertise (Willingham & Findyikan, 1969). It may be that the experienced transfer student has a more specific view of what she/he desires in an institution and consequently applies to fewer colleges than the first-time freshman. Recruiting efforts which target transfers would appear to be highly rewarding to colleges and universities, perhaps even more so than those which focus on attracting students from the declining traditional age freshman population. Recruitment of transfers, many of whom have attended a number of different institutions, will become a growing concern of enrollment managers in the years ahead.

Researchers have identified several institutional factors that contribute to high attrition and/or transfer-out rates. These include the curriculum (availability of a specific program of study or of preferred courses); quality of faculty and faculty availability outside the classroom; likelihood of obtaining financial aid; ease of using university services; membership in campus organizations and communication of college policies (Bean, 1982b); as well as perceived academic quality; institutional selectivity; type; size; control; cost; location and religious affiliation (Fetters, 1977; Lenning et al., 1980; Peng, 1978; Wisner, 1984). Many of these same factors have been shown to influence students' college choice (D. Chapman, 1981; Hossler, 1984). It follows that alteration of some of these

characteristics, when possible and appropriate, by an institution could improve its recruitment and retention rates of transfer students, while at the same time enhancing overall program quality.

Implications for the States

When examined from the viewpoint of a given state, the transfer issue takes on a different perspective. If students transfer among institutions within the state (and particularly within the public sector), they are generally not considered dropouts from the state's point of view (Tinto, 1982b). However, when students transfer from an in-state public college to an in-state private institution, or to any out-of-state institution, they are often labeled as dropouts. Heavy state subsidization of public higher education is aimed at encouraging resident students to enroll (and re-enroll) in public institutions, with the hope that these individuals will ultimately reside and work within the state (Fouts, 1990). Thus, migration of students to private or out-of-state institutions is viewed as undermining state goals. Out-of-state student migration is an especially crucial issue in states such as Illinois, which is a net exporter of students and is facing a projected enrollment decline (Davis, 1986). It has been reported that transfers account for 34% of interstate college migration within the United States, and that transfers migrate out of state at

twice the rate of new freshmen (Armenio, 1978).

System-Wide Implications

The transfer issue is important to public policy makers in that student transfer patterns influence aggregate enrollment figures at both the state and federal levels. National and statewide postsecondary participation rates are frequently used as indices of quality of life and of economic competitiveness (Hossler, Braxton & Coopersmith, 1989). From the national perspective, the public interest is best served by maintaining a college-educated citizenry. The Carnegie Council on Policy Studies in Higher Education (1982) stated that in addition to the higher incomes earned by college graduates and their larger representation in managerial and professional occupations, "the participation of college-educated adults in the cultural, political and organizational aspects of community life are important assets in a democratic society" (p. 237).

In terms of the national interest, whether students graduate from their original institutions is of far less importance than the fact that they eventually do graduate, and transferring has been shown to improve students' chances of earning the baccalaureate degree (Carroll, 1989; Knepper, 1989). Students exhibiting lower levels of academic achievement are more likely to persist within the system if they

are able to transfer downward to institutions which are less demanding academically, and the reverse is true for high achieving students who are in need of a greater degree of academic challenge (Janasiewicz, 1987; Kuznik, 1972; Tinto, 1987). Transfer can thus be viewed as very positive behavior, in that it enables students who would otherwise drop out to stay within the system of higher education. Anderson (1970) argued that "provisions should be made in a diversified system of higher education that will allow and encourage each student to move freely from one institution to another and to locate the program, student mix, and institutional climate that would allow him to realize his full potential" (p. 34).

It is imperative that individual, institutional and state perspectives on the significance of transfer behavior be informed by a national, system-wide view. As Tinto (1982a) pointed out, it is vital to distinguish between behaviors leading to transfer among institutions and those leading to permanent withdrawal from the wider system of higher education (p. 689). One failing of the persistence research is the continued reference to all departing students as dropouts, regardless of their intentions. Most institutional studies fail to follow "dropouts" to find out whether they have transferred to other institutions, and instead include transfers in aggregate attrition statistics. However, Campbell (1980) suggested that "while the number of

persons dropping out of a particular school may be of great local interest, it is of far more theoretical interest to know what happens to persons after they drop out" (p. 225).

While the use of current attrition models may be appropriate in studying transfer from an individual institution, they do not allow researchers to look at the variety of interinstitutional transfers taking place within the system of higher education. Tinto (1982a) encouraged the development of models to "assess the interactive effects of external educational opportunities (pull) upon the dropout/transfer decisions of persons currently experiencing higher education in specific institutional settings (push)" (p. 691). Such an understanding is particularly important from a system-wide perspective, as national attrition rates will remain grossly overstated until dropouts can be distinguished from transfers (Gilbert & Gomme, 1986; Tinto, 1987).

Summary of Perspectives on Multiple Transfer Behavior

The tendency for many students to transfer several times during their collegiate careers raises several important issues concerning these students, the institutions that they transfer among, the states, and the system of American higher education. It is clear that multiple transfer behavior is a multidimensional process, and as such cannot easily be classified as completely positive or negative in

nature. Researchers have demonstrated that there are numerous benefits, as well as costs, which can accrue to the student who chooses to transfer. Individual colleges and universities, along with the states in which these institutions are located, stand primarily to benefit if they succeed in attracting and retaining transfers, and have a great deal to lose if these students transfer to other institutions or migrate out-of-state. From the national, systemic perspective, transferring is a positive phenomenon. The great diversity of American colleges and universities in terms of location, size, tuition costs, academic programs and competitiveness, among other factors, is a major national strength. This diversity allows students to transfer out of institutions which do not meet their needs and from which they probably would not graduate, and to transfer into colleges which provide a better student-institution fit and enhance their chances for graduation.

Nearly all studies of transfer students to date have examined the behavior of first-time transfers, focusing on specific institutions or geographic regions (Fetters, 1977; Peng, 1977). In addition, most research has concentrated on students who transfer from two-year to four-year institutions. These limitations have prevented the development of a system-wide perspective of transfer behavior such as that recommended by Tinto. This study attempts to broaden existing knowledge of the transfer phenomenon through an

examination of the characteristics and interinstitutional movements of multiple transfer students within the system of American higher education.

Purpose of the Study

The primary purpose of this study is to examine individual and institutional factors influencing past choice and withdrawal behaviors of undergraduate multiple transfer students who enrolled at a large, public, urban, midwestern university in fall 1989. This research is exploratory in nature, as are all studies which examine new areas. Therefore, objectives and related research questions have been developed in place of hypotheses to provide a framework for the study design. Related research questions appear in Chapter III.

The four major objectives of this study are as follows:

- 1) To identify the most common interinstitutional enrollment/transfer patterns, in terms of institutional types, of multiple transfer students who enrolled at the subject institution in fall 1989, and to infer from the data patterns which could be used to predict interinstitutional movement of these student populations;
- 2) To identify background variables (demographic and

academic) of multiple transfer students who enrolled at the subject institution in fall 1989, and to infer from the data background variables which could be used to predict the likelihood of multiple transfer behavior;

3) To delineate the multiple transfer students' self-reported reasons for choosing (transferring to) previous institutions attended;

4) To delineate the multiple transfer students' self-reported reasons for leaving (transferring from) previous institutions attended.

Method

The population for this study is composed of 906 undergraduate students who transferred to the University of Illinois at Chicago (UIC) in fall 1989, and who had earned transfer credit from at least two other postsecondary institutions prior to enrolling at UIC. From this population, 453 multiple transfer students were randomly selected for inclusion in the research sample. The sample size was later reduced to 424 due to institutional record keeping errors that incorrectly classified some first-time transfers as multiple transfers; supplied incorrect mailing addresses, resulting in undeliverable surveys; and included students

who never matriculated at UIC.

Data concerning students in the sample population were collected from UIC's official records and from a questionnaire developed and pilot-tested by the researcher. Surveys were mailed to students at their home addresses and a followup process was used as recommended in Dillman's Total Design Method (1978).

Since the multiple transfer student has not previously been studied, the primary focus of this research is to provide descriptive data concerning the characteristics and interinstitutional transfer patterns of this population. Frequency analysis and crosstabulations are used to categorize and graphically depict background data, institutional enrollment/transfer patterns and reasons for transferring; and chi-square analysis is used to identify significant differences among multiple transfer groups in terms of individual characteristics and institutional enrollment/transfer patterns.

Definition of Terms

The following descriptive terms are used throughout the study. Several of these terms have been derived from the research literature on college student transfer and attrition. Terms for which no sources are identified have been created specifically for use in this study. It is

important to note that these terms are not mutually exclusive. For example, a horizontal transfer student may also be an upward transfer, and a student may be classified as a multiple transfer, a reverse transfer and a downward transfer.

1) **Dropout** - a student who leaves the system of higher education prior to completing a specified course of study.

2) **Stopout** - a student who leaves the system of higher education for a semester or more and then reenrolls at his or her original institution (Tinto, 1987).

3) **Horizontal transfer** - a student who transfers from a four-year to another four-year, or a two-year to another two-year institution (Peng, 1977).

4) **Vertical transfer** - a student who transfers from a two-year to a four-year institution (Peng, 1977; Peng & Bailey, 1977).

5) **Downward transfer** - a student who transfers to a less selective institution (according to the average ACT/SAT scores of its entering class) (Janasiewicz, 1987; Kuznik, 1972; Tinto, 1987).

6) **Upward transfer** - a student who transfers to a more selective institution (according to the average ACT/SAT scores of its entering class) (Janasiewicz, 1987; Kuznik,

1972; Tinto, 1987).

7) **Reverse transfer** - a student who transfers from a four-year to a two-year institution (Kuznik, 1972; Peng, 1978).

8) **Native student** - a student who remains continuously enrolled at the institution at which she/he originally matriculated (Anderson, 1983, 1984; Conroe, 1976; Knoell & Medsker, 1965).

9) **Multiple transfer** - a student who attended and received transfer credit from two or more colleges or universities prior to attending the subject institution.

10) **Sandwich multiple transfer** - a student who either attends two institutions simultaneously or who matriculates at one institution, transfers elsewhere and then returns to her/his original institution at some point in time.

11) **Conventional multiple transfer** - a student whose movement from one institution to another is sequential and distinct.

Significance of the Study

No previous research has been conducted on multiple transfer students, despite indications that this population is a significant one in American colleges and universities.

Although researchers are beginning to acknowledge that students frequently do transfer more than once (e.g., Kocher & Pascarella, 1990; Smart & Pascarella, 1987), no published studies have addressed the background characteristics of this population, types of institutions that multiple transfer students move among, or reasons for their behavior. The identification of variables related to multiple transfer among institutions is of interest to colleges and universities that receive large numbers of these students, as well as to those experiencing net losses of such populations. More knowledge of the factors involved in multiple transfer behavior would enable both groups of institutions to design appropriate intervention programs. As described earlier, the multiple transfer phenomenon also has implications for higher education systems insofar as it involves student migration among states.

As no single body of literature describes the multiple transfer population, several streams of research have been brought together to provide a theoretical framework for this study. The literature on student persistence, college choice, college student migration and transfer student behavior contains a number of overlapping variables and concepts. Congruency or incongruency between the student and institution has been shown to interrelate with student expectations, college choice and persistence (Cope & Hannah,

1975; Hossler, 1984; Peng, 1977; Williams, 1984).

Various student and institutional characteristics have been linked to initial college choice, transfer behavior, and withdrawal from the system of higher education. While Bean's (1982b) and Tinto's (1975, 1987) theoretical models account for some of the factors involved in a student's decision to transfer from an institution (referred to earlier as the "push" variable by Tinto (1987)), they fail to address the factors which might "pull" the student to a subsequent college or university. Conversely, while little of the literature on college choice focuses on transfer students, the theory-based models which have been developed (D. Chapman, 1981; Hossler, 1984; Hossler & Gallagher, 1987; Kotler & Fox, 1985) have been shown to apply to first-time transfers (Becker, 1988; Smith, 1987).

While transfer students are often considered dropouts from the standpoint of individual institutions, they are ultimately persisters within the system of higher education (Tinto, 1987). A study of multiple transfer students, who experience the choice and attrition cycle several times over the course of their collegiate careers, may be a valuable tool for bringing together theory and its practical application in the areas of student persistence and college choice.

Limitations of the Study

This study is limited in certain ways, as all research projects are. First of all, generalizability of the study is limited due to its use of one student cohort from a single institution (a public, urban commuter university located in the midwest). However, this limitation is mitigated to some extent by the fact that individual students within the cohort have transferred to the subject institution from a large number and variety of other colleges and universities. This characteristic provides a comprehensive, longitudinal, system-wide perspective lacking in other studies of transfer student behavior.

Another limiting factor is the post hoc nature of the responses given to the survey by multiple transfer students. As explained by Peng (1977) in his national, longitudinal study of transfer movement between higher education institutions, "...to accept post hoc explanations provided by students for transferring may be a questionable practice because of the complexity of the transfer phenomenon and the natural tendency for persons to rationalize behavior which might be regarded by others as failure" (p. 39). However, as Peng pointed out, such data can be extremely useful in that they suggest some of the prior factors which may be responsible for transfer behavior.

Other potential limitations result from the use of

survey research, and include response selectivity (whether respondents differ significantly from nonrespondents); social desirability bias (tendency for respondents to provide socially desirable answers); and instrument bias due to the local design of the survey (Dillman, 1978). Response selectivity was reduced from the outset because of the homogeneity of the population, its high level of education, and its inherent interest in the topic of multiple transfer. In addition, characteristics of nonrespondents available through institutional records were compared to those of respondents in order to ascertain the degree of difference between the two groups. Social desirability bias was carefully monitored, since multiple transfer behavior could be inferred by respondents to be socially undesirable behavior. Avoidance of this form of bias was accomplished through careful wording and placement of survey questions. Finally, the internal validity of the instrument was assured through submission of proposed questions to experts in the areas of persistence and college choice and through pre-testing of a representative sample of the fall 1988 entering multiple transfer student population at the subject institution.

Organization of the Study

Chapter I has presented an introduction to the study, provided a conceptual framework and delineated research

objectives. Chapter II will review the relevant literature on college student attrition, transfer behavior, the college choice process and student migration in order to provide a theoretical rationale and context for this study. Chapter III will present a detailed description of the research design utilized in conducting the study; Chapter IV will describe the analysis of data and results of the study; and Chapter V will summarize the study, describe conclusions drawn from the research, and discuss the practical applicability of the findings.

CHAPTER II

REVIEW OF RELATED LITERATURE

Beyond a few references to the fact that some college students transfer more than once (Holahan & Kelley, 1974; Kocher & Pascarella, 1990; Smart & Pascarella, 1987; Trent & Ruyle, 1965), no literature exists concerning multiple transfer students in institutions of higher education. The purpose of this chapter is to combine what little is known about this population with research in the areas of transfer students, student migration, college choice and persistence in order to construct a theoretical base for the study.

The Multiple Transfer Student

Today's multiple transfer student population may well trace its origins to a unique group of students who attended German universities in the seventeenth century as part of the *Lehrfreiheit*, or "freedom of learning" tradition. As Rudolph (1962) described it, this system

...freed the German student to roam from university to university, to take what courses he would, and to be free from all those restrictions, characteristic of the English and American collegiate way, that were hostile to an atmosphere of dedicated study and research (p. 412).

While it is possible that today's multiple transfer student is an heir to the *Lehrfreiheit* tradition, it may also be the case that multiple transfer behavior is a complex phenomenon which reflects the increasingly mobile nature of American society (Dearing, 1975; Willingham & Findyikan, 1969).

The first mention of multiple transfer in the literature appeared in 1965. Trent and Ruyle (1965), in a nationwide study of attendance patterns of students who entered college in 1959, were surprised to find that a number of students in their sample had transferred two or more times. In a study which described the demographic characteristics of students transferring to the University of Texas at Austin (UTA), Holahan and Kelley (1974) discovered that over 29% of survey respondents had attended at least two other colleges prior to transferring to UTA. Finally, Kuznik (1972) surveyed reverse transfer students who had moved from four-year institutions to Iowa community colleges. He found that 74% of male and 55% of female reverse transfers planned to return to a four-year college or university to finish their baccalaureate degree. However, only 16% of the males and 7% of the females planned to return to their original four-year college.

Conroe (1976) and Zultowski and Catron (1976) excluded multiple transfers from their examinations of transfer student problems and expectations. While Zultowski and

Catron did not explain the exclusion, Conroe stated that the removal from his population of students who had attended more than one institution was designed to "rule out the influence of factors other than simple adjustment" (1976, p.320).

The multiple transfer phenomenon has been referred to in recent studies by Kocher and Pascarella (1990) and Smart and Pascarella (1987). In their study of how transferring among four-year colleges impacts educational, occupational and economic achievement of black and white college students, Kocher and Pascarella included a quantitative variable entitled "transfer behavior" (defined as the number of four-year colleges attended). These researchers collected their data from Cooperative Institute Research Program (CIRP) surveys completed by students who entered college in 1971, and who were surveyed again in 1980. Results showed that transfer among four-year institutions negatively impacted educational attainment. Indirect negative effects included an inhibiting influence on social involvement; less interaction with faculty and staff during college; and lower occupational status upon graduation. However, Kocher and Pascarella found that transfer to a more selective college or university could potentially enhance, rather than diminish, a student's level of educational attainment (p. 175). This study was limited by Kocher and Pascarella's

quantitative operational measure of transfer behavior, defined as the number of colleges attended. Even though this measure was used, the researchers did not address the manner in which multiple transfer among institutions would affect educational and occupational attainment.

Like Kocher and Pascarella, Smart and Pascarella (1987) took the number of institutions attended by each individual into account in their study. These researchers examined the factors associated with adults' intentions to resume their college education, using 1971 and 1980 CIRP survey data. In contrast to Kocher and Pascarella's study, Smart and Pascarella's findings reflected multiple transfer behavior. They discovered that "the intention of men and women to resume their college education is strongly influenced by the number of colleges they have attended," and that this intention "appears to be strongly influenced by the unfulfilled attainment of degree aspirations at the time they were freshmen and their persisting efforts to realize these aspirations reflected in their sustained enrollment at several colleges during the intervening nine-year period" (1987, p.317).

The need to examine the multiple transfer student population more closely was suggested in a study of transfer students to the School of the Art Institute of Chicago (Kearney, 1988). This study revealed that many of the students were not first-time transfers, but had attended two or

more other institutions prior to transferring to the School of the Art Institute. When surveyed regarding their reasons for attending and leaving their previous colleges, virtually all the respondents described institutional characteristics that had failed to meet their initial expectations. Reasons for transferring included the unavailability of specific courses or academic programs, perceived lack of quality of the faculty or of the institution overall, cost and location. Reasons for choosing subsequent institutions focused positively on these same characteristics and emphasized, in addition, the academic reputation of the chosen college(s).

The Transfer Process

The literature on first-time transfer students has primarily examined the experiences of community college students who transfer to four-year institutions, rather than those of transfers among four-year colleges or from four-year to two-year institutions. In addition to being narrow in focus, most of this research was conducted during the 1960s and 1970s, and is sorely in need of updating. Most studies which have been conducted have been limited to single institutions or geographical areas. These single institution studies have generally failed to analyze the factors involved in student transfer from one college to another. Once an individual transfers to another

institution, she or he has rarely been followed to determine the type of institution entered, subsequent academic performance or progress toward graduation. Even community colleges, which promote transfer to four-year institutions as a primary part of their missions, have generally failed to monitor the progress of their transfer students (Nora & Rendon, 1988).

There are few statewide or nationwide studies of transfer students in existence. Those states that do collect transfer data generally do not present it in a uniform manner (Kintzer & Wattenbarger, 1985). Common to national, state and institutional studies is the aggregate presentation of data, which makes it impossible to track the transfer movements of individual students (State of Illinois Board of Higher Education, 1990b). This scenario is complicated by a failure to define the term "transfer student" in a consistent manner in national, state or institutional reports (Burt, 1972; The Chronicle of Higher Education, March 28, 1990).

Research which has been done on the first-time transfer student has concentrated on student background characteristics, academic performance and expectations of this population. The bulk of this research has compared characteristics of community college transfer students with those of native four-year college students who entered the

institution directly from high school. Other studies have examined transfer rates according to institutional type, and have looked at the bureaucratic, economic and academic barriers students face when transferring among colleges.

Background Characteristics of Transfer Students

Several comprehensive studies conducted during the 1970s attempted to identify demographic and academic background characteristics of community college transfer students. Holmstrom and Bisconti (1974) used national, longitudinal CIRP data to examine the characteristics of students who transferred from two-year to four-year institutions. These transfers were compared to two-year college students who did not transfer. Holmstrom and Bisconti found that transfers to four-year institutions differed from nontransfers in their high financial, academic and professional aspirations, characteristics shared with native four-year college freshmen. Additional background factors which transfers in this study had in common with four-year natives were good high school grade point average, high socioeconomic status, and well-educated parents. Finally, two-year to four-year transfers, like their native four-year college counterparts, tended to be younger; male; and from urban backgrounds.

Another researcher who employed CIRP data in an attempt to differentiate transfer students from nontransfers

was Van Alstyne (1974). Unfortunately, she lumped graduates, persisters (students who were still working on their undergraduate degree) and dropouts together into a category entitled "nontransfers." In addition, she failed to differentiate between transfers from two-year and four-year institutions, instead classifying as transfers "all those who indicated....that they had transferred to another institution within the four years after college entry" (p.12). Van Alstyne found that the transfers were primarily white; male; had better educated parents; and had higher college grade point averages (but lower high school grades) than nontransfers. Overall, transfers and nontransfers were found by Van Alstyne to be similar in terms of demographic characteristics, academic performance, attitudes and socioeconomic status.

Peng and Bailey (1977) compared community college transfers to four-year college natives, using data from the National Longitudinal Study (NLS) of the high school class of 1972. They found that native students who attended four-year institutions immediately after graduating from high school had higher aptitude levels, high school grade point averages, educational aspirations and socioeconomic statuses than the community college transfers. Also using 1972 NLS data, Velez and Javalgi (1987) assessed the effects of various background characteristics on a student's odds of

transferring from a two-year to a four-year institution. These researchers found that blacks and Hispanics were more likely to transfer than similar white students, and that transfers were most likely male; Jewish; of high socioeconomic backgrounds; had good high school and college grades; and had high educational and occupational goals. They also found that transfers were generally given high amounts of parental encouragement to pursue a college education, tended to have work/study positions and lived on campus.

The only studies which examined how background characteristics of transfers from community colleges and four-year institutions differed from one another and from those of nontransfers were authored by Peng (1977, 1978). Peng classified nontransfers into three groups: persisters (those who were enrolled in the same college from October 1972 through October 1974); graduates (two-year college students who had completed an Associate's degree but who did not continue their education in October 1974); and withdrawals (students who were enrolled in college in October 1972, were no longer enrolled in October, 1974, and had not received a degree).

Peng, using NLS of 1972 data, categorized transfer students into four groups: transfers from four-year to two-year institutions; from two-year to four-year institutions; from four-year to four-year institutions and from two-year to two-year institutions. When these four categories of

transfer students were examined, Peng found that their background characteristics differed. His findings were similar to those of Holmstrom and Bisconti (1974) in that two-year to four-year college transfers had higher socioeconomic and academic aspiration levels, better high school and college grades, and were more likely to be white and to major in academic fields - characteristics resembling those of four-year college freshmen - than their counterparts who remained in two-year colleges without transferring. In contrast, four-year to two-year (reverse) transfers included more Hispanics and students with lower high school and college grade point averages. When compared with four-year college withdrawers, reverse transfers had higher socioeconomic status levels, aptitude scores and educational aspirations; but when compared with four-year college persisters, reverse transfers earned lower high school and college grades.

Peng found that four-year to four-year college transfers differed from native four-year students who persisted on a number of background dimensions. Four-year to four-year college transfers were more likely to be female; white; of higher socioeconomic status backgrounds; and to have better college grades and higher educational aspiration levels than persisters. However, these transfers generally had lower aptitude test scores than persisters. Overall, Peng found that transfer students differed from those who

persisted and those who withdrew on socioeconomic status, aspiration and academic performance variables. The pattern of these differences, however, depended largely upon the type of transfer movement taking place.

A number of other studies, primarily conducted at single institutions, have sought to identify characteristics of transfer students. The majority of these have echoed the findings of the national, longitudinal studies described above. Although findings have varied somewhat depending upon the type of transfer movement (e.g., two-year to four-year college as opposed to four-year to two-year) and the student populations being compared (e.g., two-year and four-year college transfers as opposed to four-year college natives and two-year college transfers), the following characteristics have been identified by researchers seeking to describe transfer students:

- 1) **Male** (Holmstrom & Bisconti, 1974; Knepper, 1989; Lee & Frank, 1990; Van Alstyne, 1974; Velez & Javalgi, 1987);
- 2) **White** (Peng, 1977; Van Alstyne, 1974);
- 3) **Young (traditional age)** (Holmstrom & Bisconti, 1974; Preston, 1976; Wisner, 1984);
- 4) **High socioeconomic status** (Carroll, 1989; Holmstrom & Bisconti, 1974; Lee & Frank, 1990; Peng, 1977; Velez & Javalgi, 1987);

5) **Highly educated parents** (Holmstrom & Bisconti, 1974; Metzner, 1984; Nora & Rendon, 1988; Van Alstyne, 1974; Wisner, 1984);

6) **High high school grade point average** (Holmstrom & Bisconti, 1974; Lee & Frank, 1990; Peng, 1977; Velez & Javalgi, 1987);

7) **High college grade point average** (Peng, 1977; Van Alstyne, 1974; Velez & Javalgi, 1987);

8) **High academic aspirations (plans to attain at least a bachelor's degree)** (Holmstrom & Bisconti, 1974; Lee & Frank, 1990; Peng, 1977; Tinto, 1987; Velez & Javalgi, 1987; Wisner, 1984).

Other descriptions of transfer student characteristics in the literature have centered on personality attributes. A study conducted by Rose and Elton (1970) examined the personality characteristics of transfers from community colleges to four-year institutions, as well as those of transfers among four-year colleges and universities. When these researchers administered the Omnibus Personality Inventory to students transferring to the University of Kentucky, they found that the personality factor scores of two-year and four-year transfers were very similar to one another.

In studies that have not differentiated between community college and four-year college transfers, these students have been described as being "highly motivated and

determined" (Knepper, 1989); "creative" (Tinto, 1982a); "ambitious, high achievers, careful planners, curious and fun-loving" (Wisner, 1984); and as "self-selected persisters" who possess maturity as well as specific academic and career goals (Volkwein, King & Terenzini, 1986, p. 427). Dearing (1975) referred to transfer students as "venturesome young who for many reasons desire to vary the location of their academic study rather than being constrained by loyalty, timorousness, or economy to remain in a single institution" (p. 4). In this respect today's transfer student may indeed be reminiscent of the seventeenth century students of the *Lehrnfreiheit* movement.

To balance these glowing descriptions of transfer student characteristics, a number of negative traits have appeared in the literature. The majority of these studies have concerned community college transfers to four-year institutions. Cross (1968), in her study of transfers from two-year colleges, found that these students came from lower socioeconomic backgrounds; possessed less academic ability; received poorer grades; and had lower confidence levels than their native four-year college counterparts. In another, more recent study, Johnson (1987) described transfers from community colleges to a large, urban commuter university as less confident socially and academically and more vocationally oriented than native four-year students. Finally, Campbell (1980) found that students who transferred out of

the University of Wisconsin at Madison had lower levels of academic ability and lower grades than those who persisted.

Although a number of student background characteristics have been identified as predictors of transfer behavior, several researchers have maintained that these characteristics are less important in determining transfer than a student's experiences at the institution from which she/he transfers. In their study of the intellectual growth of transfer students at SUNY Albany, Volkwein et al. (1986) concluded that student background and pre-college variables had little importance in determining students' intellectual growth when compared to the influences of college experiences and student-faculty interaction. Volkwein et al. posited that "as students advance in their college years, the influence of differences in their backgrounds becomes less and the influence of college experiences becomes greater" (p. 428). Holmstrom and Bisconti (1974) found in their national, longitudinal study that "background factors, about which we know a great deal, are less important determinants [of transfer] than experiences at the junior college, about which we know considerably less" (p.35). Finally, in her longitudinal study of the high school class of 1972, Knepper (1989) found that the type of postsecondary institution a transfer student entered and the associated opportunity for success at that institution were more important to the

student's chances of graduation than individual background factors (p. 22).

Academic Performance of Transfer Students

Like the research on transfer student background characteristics, most studies on the academic performance of transfers have been conducted at single institutions and have examined students who transfer from community colleges to four-year institutions. Frequently, the performance of these transfers has been compared with that of native four-year college students.

The earliest research in this area described a phenomenon known as "transfer shock;" the tendency for community/junior college transfer students' grade point averages to drop following their matriculation at a four-year institution. Transfer shock was first documented by Hills (1965), who reviewed 20 existing studies of junior college transfer performance and found that transfer shock occurred in the great majority of cases. Although their grades generally improved after their first semester at the four-year institution, junior college transfers did not do as well academically as native students or transfers from four-year colleges.

Since Hills' research was published, the existence of transfer shock has been substantiated by many other individuals (Alba & Lavin, 1981; Anderson, 1983, 1984; Hartmann

& Caple, 1969; Illinois Community College Board, 1986; Nolan & Hall, 1978; Peng, 1977; Sheehan & Reti, 1974; Webb, 1971). Findings from Peng's (1977) national, longitudinal study of transfer students confirmed the existence of transfer shock in students who transferred from two-year to four-year institutions. However, Peng qualified his findings by pointing out that community college transfers tend to have lower high school grades and lower scores on academic aptitude tests than students who go directly to four-year institutions, and therefore could be expected to achieve lower college grades than native students.

There is evidence that transfer shock varies according to student ability level and the type of institution students attend prior to transferring. In his study of transfers to the University of Illinois at Chicago, Anderson (1983, 1984) discovered that the grade point averages of transfers from four-year institutions recovered more quickly than those of two-year transfers. These findings agreed with those of Hills (1965). Holahan and Kelley (1978) studied the academic achievement of three groups of transfers to a large state university: transfers from two-year public, four-year public and four-year private institutions. They discovered that the transfers from four-year, private colleges were best able to cope with the academic demands of the university.

Holahan et al. (1983) used longitudinal data collected over a six-year period at a large state university to analyze the academic performance of transfer students. These researchers found that community college transfers consistently earned lower grade point averages than native students. However, four-year college transfers earned grades superior to those of the natives. Holahan et al. concluded that the best predictor of a transfer student's academic success at the new institution was the student's grade point average at the time of transfer.

Verifying a phenomenon named "transfer ecstasy" by Nickens (1972), Nolan and Hall (1978) reported that community college transfers who completed at least 30 hours before and 30 hours following transfer earned grade point averages almost identical to those of four-year native students. These students were found to perform better at the four-year institution than they had at the community college. Similar results were reported by Richardson and Douchette (1982), who studied two-year college transfers to three Arizona public universities.

Given the predictable recovery of most students' grades following transfer to a new institution, researchers have questioned whether transfer shock can be attributed to something other than a lower level of academic ability or poorer preparation on the part of transfer students. Hills (1965), Nickens (1972) and Willingham (1972) agreed that

transfer shock could be a function of lower grading standards prevalent in the community colleges. Richardson and Bender (1987) theorized that liberal, norm-referenced grading standards, when combined with liberal withdrawal policies, might contribute to disparities between grades earned by community college transfers before and after transfer. Willingham (1972) suggested that transfer shock could simply be the result of students' entering a new and different academic environment. Finally, the Illinois Community College Board (1986), in a five-year study of transfers from Illinois two-year to Illinois four-year institutions, concluded that the magnitude of grade point decline experienced by transfer students may have been influenced by the large number of student withdrawals shortly after transfer to four-year institutions. Students who withdrew at this time tended to demonstrate the greatest grade point declines; those who remained and eventually graduated experienced the lowest declines.

Expectations of Transfer Students

Like new freshmen, transfer students from both community colleges and four-year institutions appear to have idealized, unrealistic expectations of what a college will be like academically and socially. This phenomenon was described as the "freshman myth" by Stern (1968), who

developed an instrument entitled the College Characteristics Index (CCI) to measure student expectations. Stern found that although upperclassmen "are aware of the striking and distinctive characteristics of their own schools as compared with others" (p.42), freshmen have no idea of how their college is unique. Chapman and Baranowski (1977) used Stern's CCI to compare the experiences of freshmen with the perceptions of upperclassmen at Syracuse University. They found that freshmen who completed college courses during high school were closer to upperclassmen in their expectations of the academic environment of the college, but were no more advanced than other freshmen in their expectations of the college's social atmosphere.

Chapman and Baranowski's study might lead one to speculate that transfer students, who have experienced both the intellectual and nonintellectual components of college life, will have more realistic expectations than first-time freshmen. However, according to several researchers this is not the case. Buckley (1971) compared freshman and transfer student expectations of a large state university, using Stern's CCI. This researcher did not differentiate between transfers from two-year and four-year institutions. Buckley found that the transfers in his sample, like the new freshmen, greatly exaggerated their expectations of the academic and social climate of the university, and labeled this phenomenon the "transfer myth." Buckley's study was

replicated by Zultowski and Catron (1976), who also used Stern's CCI. These researchers attempted to find out whether the transfer myth was specific to community college transfer students, or whether it extended to transfers who originated in four-year institutions. Students who had transferred from more than one institution were excluded from this study. Zultowski and Catron concluded that the transfer myth was common to transfers of all types, and was not influenced by the type of institution a student transferred from. Pate (1970) speculated that the reason transfers' expectations are so inflated is that these students are still searching for an institution to fulfill their image of the "perfect college;" an image their previous institution failed to live up to (p. 461).

The existence of exaggerated transfer student expectations has been confirmed by several researchers since it first came to light in 1971, including Donato (1973) using Stern's CCI and Anstett (1973) using the College and University Environmental Scales (CUES). However, the literature has been unclear concerning the source of inaccurate transfer student expectations. Pervin (1966) speculated that accurate, as well as inaccurate, expectations emerge from demographic, personality and intellectual variables. Stern (1968) and Chapman and Baranowski (1977) cited family, friends and high school counselors (all of whom tend to

perceive college life in idealistic terms) as the sources of student expectations. More recent research in the area of college choice has identified the importance of college recruitment publications in forming students' perceptions of what life at a given college will be like. When these publications are misleading, difficult to comprehend or inaccurate, unrealistic student expectations may result (Comm & Schmidt, 1986; Johnson & Chapman, 1979; Litten, 1981; Noel et al., 1987; Peng, 1977). Inaccurate information may compound a student's already exaggerated expectations, causing the student to choose an institution that is incongruent with her/his needs academically or socially. Incongruency between a student's initial expectations and the actual college environment has been shown to be a precondition to transfer behavior (Moore, 1981; Peng, 1977; Shaw, 1968). Students who are dissatisfied with college life academically and socially will be more likely to transfer than satisfied students, if their academic ability and performance levels are equal (Peng, 1977).

In Peng's national, longitudinal study of transfer students, transfers from one four-year institution to another reported that they were dissatisfied with faculty quality and campus social life. Shaw (1968) administered the CCI to freshman engineering students and found that greater proportions of students with inaccurate expectations of the university environment transferred than did their

counterparts with more realistic expectations. Moore (1981) characterized transfer students as "educational adventurers" with extremely high expectations which are frequently not met by the receiving institution.

Problems of Transfer Students

Despite the fact that transferring has become a commonplace activity, transfer students frequently encounter a variety of roadblocks - attitudinal, bureaucratic, environmental and academic - in moving among institutions (Anderson, 1970; Dearing, 1975; Hendel et al., 1984; Remley & Stripling, 1983; Richardson & Bender, 1987; Wechsler, 1989; Willingham & Findyikan, 1969). The transfer student continues to be regarded as an "educational oddity" (Burt, 1972) and as a less than desirable student by many institutions of higher education, despite copious evidence to the contrary (Carroll, 1989; Knepper, 1989; Peng, 1977; Richardson & Bender, 1987; Tinto, 1987). Burt (1972) conducted a nationwide study of problems experienced by transfer students, and concluded that "while a number of colleges and universities welcome the transfer student as a means of filling class vacancies created by normal upperclassmen attrition, most institutions of higher education appear less than enthusiastic" and relegate transfers to "second class status" in the admissions process as well as in services

provided once the student is enrolled (p.1-2). Willingham and Findyikan (1969) surveyed administrative officers at 146 nationally representative, accredited four-year institutions to ascertain admissions patterns and problems of transfer students. These researchers reported that "clear-cut recruiting of transfer students is still the exception," with admission of transfers taking a back seat to attracting freshmen at most institutions.

It could be conjectured that since these studies were conducted during a period when higher education institutions were experiencing rapid expansion, their findings would not be applicable to today's environment of heavy interinstitutional competition and downsizing. However, recent research in the area of transfer problems has identified many of the same barriers to access and success as the previous studies. Even though most of the urban universities included in Richardson and Bender's (1987) study enrolled over half of their junior classes as transfers, these institutions continued to concentrate their recruiting efforts in the high schools, which constituted their preferred source of new students. Barriers to transfer identified by Wechsler (1989) and by Richardson and Bender (1987) are virtually the same as those described in the literature of the past three decades. These problems may be categorized as credit loss following transfer, institutional bureaucracy, and economic barriers to transfer.

Credit Loss Following Transfer

In Knoell and Medsker's nationwide study (1965), over half of the 10,000 community college students in the research sample lost college credit when they transferred to a four-year institution, and 8% lost an entire semester of credit. Willingham and Findyikan (1969) estimated that 13% of transfers lost a semester's worth of credit when they moved from one institution to another, and discovered that transfers to small institutions were twice as likely to lose a semester of credit as those who transferred to large colleges and universities. Credit loss was experienced by 60% of transfer students overall but by 75% of blacks in Richardson and Bender's (1987) study of urban universities. Hendel et al. (1984) surveyed students at four public universities and found that loss of credit was perceived as the single most important problem involved in the transfer process by potential transfers. Hendel et al. theorized that these perceptions (realistic or not) of the difficulty of transferring credit "may prevent some students from exploring the transfer option, thereby possibly resulting in dropping out of higher education" (p. 19).

Fewer than 15% of the transfers in Knoell and Medsker's study viewed their credit loss as serious, and most students surveyed by Hendel et al. claimed that they only lost five credits during transfer. However, it appears

that there are longer-term problems associated with credit loss that students may not realize immediately after transferring. One of these problems is delayed graduation from college. Van Alstyne (1974) collected data using the nationally administered CIRP surveys from 1967 and 1971, and identified loss of credit as a primary factor in transfers' delayed degree completion. In a study of University of California - Los Angeles (UCLA) students between 1976 and 1978, transfers took 1.4 years longer to finish their baccalaureate degrees than the natives who began their freshman year at UCLA (Menke, 1980).

Reasons for credit loss during transfer include the tendency for institutions to count transferred credits as electives rather than required credits (Wechsler, 1989); poor or failing grades earned at the sending institution (Knoell & Medsker, 1965); limits set on the amount of credit transferable to the receiving institution (Knoell & Medsker, 1965); refusal of the receiving institution to accept credits from nonaccredited or nontraditional colleges (Burt, 1972) and reluctance of the receiving institution to accept credits it regards as remedial (Knoell & Medsker, 1965).

Institutional Bureaucracy

The bureaucratic atmosphere of receiving institutions, particularly large ones, is frequently troublesome and

frustrating for transfer students (Cope & Hannah, 1975). Selective private colleges and universities are notorious for strict admission standards and deadlines (Wechsler, 1989) and restrictive deposit policies (Willingham & Findyikan, 1969). These policies and procedures constitute barriers to transfer students, who tend to apply to colleges later than their native freshman counterparts (Richardson & Bender, 1987; Willingham, 1972). In addition, admission procedures are often more complex for transfers than for natives (Wechsler, 1989). Burt (1972) found that even though transfers submitted transcripts from previous colleges with their applications, 25% of four-year institutions still required the high school record, and at least 40% required SAT scores. Thus, transfers who had performed poorly in high school but whose academic performance had improved at their first college were frequently rejected by more selective institutions on the basis of their high school records. To add to this confusion, most four-year institutions do not publish admissions materials specifically for transfer students. Guidelines that are provided are often vague concerning deadlines, degree requirements, transferability of courses and other issues (Burt, 1972; Wechsler, 1989).

It appears that once an institution manages to attract transfer students to its campus, these students are often left to fend for themselves. Perhaps since transfers have

already attended college, it is assumed that they will intuitively find their way around and be able to deal with institutional bureaucracy. Tinto (1987) pointed out that although transfers comprise a significant portion of enrollments at many institutions, they are frequently forgotten in terms of orientation and retention programs. Often, transfers receive the same orientation programs as freshmen, as though the needs and interests of these student populations are identical (p. 164). Knoell and Medsker (1965) reported that transfers from community colleges found orientation programs at the receiving four-year institutions to be unsuccessful. Transfer students frequently find that advisors and counselors are unavailable, uninterested or poorly informed (Kintzer, 1973; Knoell & Medsker, 1965; Williams, 1973). As Wechsler (1989) pointed out, advising and counseling services are especially important for transfers from community colleges, due to the abrupt change in institutional culture that students experience when they transfer to a four-year institution.

Economic Barriers

Particularly for students who transfer to private colleges and universities from community colleges, the high cost of tuition can be prohibitive (Wechsler, 1989). Knoell and Medsker (1965) identified low cost as a primary reason

that students initially chose to attend a community college. These researchers found that the most serious problem for transfers from community colleges was the increased cost of attending a four-year institution. Among students who dropped out of college following transfer, the students in Knoell and Medsker's sample ranked financial problems as their primary reason for leaving. Cope and Hannah (1975) noted the serious implications for private colleges of students transferring to public institutions in order to reduce costs.

The lack of financial aid available to transfer students compounds these students' problems of affording attendance at their new institution. The recent federal shift in emphasis from grants to loans discourages transfer to more expensive institutions where students will accumulate large amounts of debt (Wechsler, 1989). Even when grants and scholarships were more plentiful, transfer students did not receive these awards in proportion to native students. Willingham and Findyikan (1969) reported that only 14% of transfers nationwide received aid, compared to 33% of freshmen. In large institutions, only 10% of transfers received any form of aid. In terms of institutional aid, only 20% of four-year colleges offered any form of aid specifically for transfers.

Peng (1977), using 1972 NLS data, found that a much greater proportion of native students received college

funded scholarships, state scholarships or grants than transfers, although more transfers than natives received federal guaranteed student loans. More recently, Richardson and Bender (1987) found that the lack of financial assistance was especially problematic for minority students who transferred to urban universities, and that financial aid practices in several states discriminated against transfer students. These researchers found that midyear transfers often failed to receive the increase in state aid to which they were entitled when they transferred to a higher cost institution. According to the State of Illinois Board of Higher Education (1990b), minority students frequently used most of their financial aid eligibility prior to transfer because of changes in their education or career plans or needs for extensive remediation. When these students repeated a course in order to earn transferable credit, they often failed to receive aid.

Many of the barriers encountered by transfer students are under institutional or state control, reflecting administrative and political priorities rather than any real deficiencies on the part of these students (Richardson & Bender, 1987). A number of problems, such as the loss of transferable credit, stem from poor articulation between higher education institutions. Burt (1972) suggested that colleges and universities are inherently suspicious of the quality of

each other's course offerings and academic standards, and therefore fail to recognize that credits earned elsewhere are up to their standards. Community colleges, in particular, are often regarded as belonging at the "bottom of the barrel" in terms of their place in the hierarchy of higher education institutions and the quality of their faculty and student bodies (Green, 1988). Not surprisingly, transfers from community colleges often experience more problems than four-year college transfers in transferring credit, surmounting bureaucratic obstacles and affording additional costs at four-year institutions.

Interinstitutional Movements of Transfer Students

The number and origins of transfer students have been found to vary significantly depending upon the types of sending and receiving institutions and the pattern of transfer movement (e.g., two-year to four-year versus four-year to two-year institution). Researchers have found that transfer activity within the system of higher education is substantial. In her review of previous research, Knoell (1966) stated that half of new undergraduates attending large colleges and universities were transfers from other institutions. An identical percentage of transfers was found by Richardson and Bender (1987) to attend large, urban universities.

Spurred by the growth of community colleges and the

increasing mobility of the American population, transfer activity increased dramatically in the 1960s and 1970s. In their nationwide study, Willingham and Findyikan (1969) reported a 54% increase in transfers between 1961 and 1966, compared to a 25% increase in the number of new freshmen. Sandeen and Goodale (1972) discovered that half the number of students transferring nationally moved between four-year institutions. Peng's (1977) study, based on NLS of 1972 data, revealed that 21% of four-year college students and 40% of two-year college students transferred during the two years following initial matriculation. Knepper (1989), also using 1972 NLS data, found that 29% of students transferred at least once while working toward the B.A. degree. This number is similar to that reported by the U.S. Department of Education (1986), which found that only one-third of baccalaureate degree recipients graduated from the institution at which they originally matriculated.

There is evidence that institutions of higher education greatly underestimate the magnitude of student transfer from their campuses. An early study by Cope (1969) showed that 75% of University of Michigan "dropouts" had actually transferred to other institutions. Cope and Hannah (1975) interviewed a longitudinal, nationally representative sample of college students, and examined the students' college records. Although the records showed that 25% of the

students were leaving the university to transfer to another institution, 52% of these students reported that they were transferring to another college or university (p. 57).

Knoell and Medsker (1965) conducted the first nationwide, comprehensive study of the flow of transfers from two- to four-year institutions. Their research encompassed 7,243 two-year college students, 345 community colleges and 43 senior-level institutions. Students who transferred to four-year colleges in 1960 were surveyed over a two-year period along with a comparison group of native four-year students. In addition, college transcripts were collected for both groups of students. Knoell and Medsker discovered that students from private junior colleges tended to transfer to a number of different four-year institutions, while students from public community colleges transferred to a much smaller group of public four-year institutions. Overall, 91% of the transfers enrolled in public institutions. Of these, 43% transferred to a major state university; 30% to a multifunction state institution; 15% to a state teacher's college and 3% to a public technical institute. Only 9% of the students transferred to a private university.

Willingham and Findyikan (1969), noting the lack of national data on the movements of transfer students, conducted their study using a representative sample of 146 accredited colleges and universities. Administrators at these institutions responded to a questionnaire and supplied the

researchers with transcripts of a sample of transfer students to their campuses. Echoing the findings of Knoell and Medsker (1965), Willingham and Findyikan discovered that the great majority (78%) of transfers applied to and enrolled at large public universities. In addition, most transfers originated at public institutions within students' state of residence. Overall, 43% of the transfers moved between two-year colleges and 57% moved between four-year institutions.

Sandeen and Goodale (1972), in their study of the origins of transfers to 624 senior level institutions, found that 55% of transfers originated in the community/junior colleges; 27% in public four-year institutions and 18% in private colleges. Over 70% of these students transferred to public universities. In terms of the timing of the transfer decision, 16% of students transferred as freshmen; 35% as sophomores; 42% as juniors and 7% as seniors.

Van Alstyne, Henderson, Fletcher and Tsien (1973) used responses of entering freshmen to the 1967 CIRP survey and the 1971 followup survey in their study of transfer students. These researchers found that 25% of students in their sample transferred during the period 1967-1971. However, the transfer rate differed significantly depending upon the type and control of the institutions involved. The lowest transfer rate was from public four-year institutions

(17%); the highest from private two-year colleges (43%). The transfer rate of public and private universities was 19%; private four-year institutions 27%; and public two-year colleges 36%.

Holmstrom and Bisconti (1974) found that of first-time, full-time community/junior college entrants in 1968, slightly more than half transferred to a four-year college or university by 1972. The majority of these transfers (81%) moved to large, public four-year institutions, but this rate was found to vary depending upon the control of the sending institution. For example, students from private two-year colleges were more likely to transfer to a private university than those from public community colleges. Transfers from the community colleges were more likely to attend large, selective public institutions than those from private two-year colleges. Holmstrom and Bisconti theorized that this situation was due partly to the private colleges' greater willingness to accept transfers from private junior colleges than from public community colleges.

In addition to analyzing the backgrounds and decision-making processes of transfer students, Peng (1977) used data from the NLS of the high school class of 1972 to classify transfer rates according to institutional type. Peng looked at transfer behavior according to institutional control (e.g., public or private), length of the academic program in years (e.g., two-year or four-year), size and selectivity

level. Peng, like most of the researchers before him, concluded that the majority of transfers flowed to public institutions. Overall transfer rates were significantly higher for students transferring from private colleges in both the two-year and four-year sectors. In terms of program length, Peng found that during the two-year period studied 24% of students transferred from two-year to four-year institutions; 16% from four-year to four-year; 4% from two-year to two-year and 3% from four-year to two-year. The remainder either persisted at their original institution or dropped out of the system of higher education.

Peng discovered that transfer rates were not linearly related to institutional selectivity levels (e.g., transfer rates were not necessarily higher from more selective colleges than from less selective ones, as measured by Astin's (1971) selectivity index). Peng did find, however, that a much larger proportion of students transferred from high to lower selectivity institutions, and that student ability level, when matched with institutional selectivity, was related to the likelihood of transfer. These findings indicate that competitiveness plays a major role in the transfer process (p. 16).

Peng found that institutional size was related to transfer rates, in that fewer students transferred from larger four-year colleges than from smaller ones. He

theorized that larger institutions, due to their wider variety of academic and social programs, exert greater "holding power" over students (p. 17). However, this pattern did not appear to apply to transfers from four-year to two-year institutions, or to those who transferred from two-year to two-year colleges. Students from the largest institutions in these categories had the highest transfer rates. Among students who transferred from two- to four-year colleges, the largest and smallest institutions had higher vertical transfer rates than those of medium size.

Peng discovered that transfers, regardless of socioeconomic background, generally moved to lower cost, public institutions. He theorized that financial and/or academic pressures may be important factors in the transfer process since private institutions are more expensive and academically competitive than public colleges and universities (p. 15).

More recent research conducted by federal and state agencies lends support to the findings presented above. Knepper (1989) studied student progress in college, based on the NLS of 1972 and the related Postsecondary Education Transcript Study of 1984. Knepper found that 29% of the students in her national, longitudinal sample changed colleges at least once in the process of working toward the baccalaureate degree. Of these transfers, 9% made no level or control changes (e.g., transferred from a four-year

public institution to another four-year college; or moved within a system or consortium of related colleges). Of all transfers, 7% moved from a community college to a public four-year institution; 4% from any private institution to a public four-year; less than 1% from a private two-year to a private four-year; and 5% made some other change. While less than one-third of the B.A. recipients had transferred once or more during their collegiate career, their likelihood of degree completion actually increased from between 30% to over 70%, depending upon the type of transfer movement. However, the price to be paid for transferring appears to be an increase of 14 months or longer in the time required to complete the B.A. degree. Knepper discovered that students who transferred to a four-year institution instead of attending multiple colleges at the same level and control had the best chance of completing a degree.

According to the State of Illinois Board of Higher Education (1990b), Illinois' 12 public universities received over three times the number of community college transfer students than did the state's 11 private four-year institutions that admitted at least 100 transfers each in fall 1988. However, the proportion of Hispanic and black community college students who transferred to the state's private colleges was greater than to the public institutions. Similar findings published by the Illinois Community College

Board (1986) showed that 78% of transfers from Illinois community colleges moved to public universities and 22% to private four-year institutions in fall 1979, while 70% of private two-year college transfers moved to public universities, and 30% to privates. Overall, 36% of fall 1988 transfers in Illinois were from two-year to four-year institutions; 25% transferred within the same sector (e.g., two-year to two-year or four-year to four-year); 23% transferred to Illinois from out-of-state institutions and 16% reverse transferred from four-year to two-year institutions. The Illinois Community College Board noted that many of the community college students had earned credits at other institutions before enrolling at the community college from which they transferred, making them in effect multiple transfer students.

Two particular patterns of interinstitutional transfer appear consistently in the literature: upward and downward transfer. Upward transfer occurs when a student moves to a more selective institution; downward transfer when a student moves to a less selective institution (Janasiewicz, 1987; Kuznik, 1972; Tinto, 1987). Cope and Hannah (1975) found that students who received poor grades in four-year institutions tended to transfer downward to junior/community colleges. Similar findings were reported by Janasiewicz (1987). Campbell (1980) found that students who left the University of Wisconsin - Madison and who had low levels of

academic ability and achievement transferred to lower quality institutions. Tinto (1987) theorized that students transfer downward to a less selective college at the same or a lower level than their current institution when their goals are diminished by negative collegiate experiences.

On the other hand, Knoell (1966) found the most prevalent transfer pattern to be vertical transfer upward to a major state university by students whose previous college did not offer a particular academic program. In Wisner's (1984) survey of students who left the University of Michigan - Flint (UMF), transfers out of UMF cited the strong academic reputation of their new institution; specific academic programs; superior facilities; and opportunities for graduate school and career enhancement offered there. Janasiewicz (1987) found that the more academically gifted transfers in his study attended highly selective institutions, with stronger academic reputations and better or different academic programs. Tinto (1987) suggested that upward transfer to a more selective or higher level institution occurs when students enjoy positive experiences at a lower level institution, thus enhancing their collegiate goals.

Summary

This section has reviewed the literature concerning

transfer students in institutions of higher education. No studies describe the multiple transfer student or the movements of this population, although a few references have been made to the fact that many students transfer more than once during their collegiate careers (Holahan & Kelley, 1974; Kocher & Pascarella, 1990; Kuznik, 1972; Smart & Pascarella, 1987; Trent & Ruyle, 1965).

The literature concerning first-time transfer students falls into five categories: student background characteristics, academic performance, expectations, problems and interinstitutional movements. In terms of background characteristics, transfers from community colleges to four-year institutions tend to resemble traditional, four-year college natives far more than they do students who do not transfer or who drop out of the system of higher education (Holmstrom & Bisconti, 1974; Peng, 1977; Van Alstyne, 1974). Overall, transfers come from high socioeconomic status backgrounds and have well-educated parents. Transfers are usually high academic achievers in high school and college and hold lofty academic aspirations, although some studies have shown that transfers are not as successful academically as native students (Campbell, 1980; Cross, 1968). Despite this evidence that background characteristics are related to transfer, some researchers have found that these student attributes are less important in determining transfer behavior

than students' experiences at the institution from which they transfer (Holmstrom & Bisconti, 1974; Knepper, 1989; Volkwein et al., 1986).

Transfers appear to experience "transfer shock," a state in which their grades fall following transfer to a new institution (Alba & Lavin, 1981; Anderson, 1983, 1984; Hills, 1965; Peng, 1977). However, these students' grades have also been shown to recover consistently during the first year after transfer (Holahan et al., 1983; Nickens, 1972; Nolan & Hall, 1978; Peng, 1977). Transfer shock may be reflective of students' idealistic, unrealistic expectations of what the new institution will be like academically or socially. Researchers have referred to these inflated expectations as the "transfer myth" (Buckley, 1971; Zultowski & Catron, 1976). It has been theorized that misleading and inaccurate college publications may be partly responsible for inflating transfer students' expectations (Comm & Schmidt, 1986; Litten, 1981; Noel et al., 1987; Peng, 1977).

Transfer students, despite their numbers, must surmount a variety of bureaucratic, economic and academic barriers in moving among institutions. Some of the most common problems experienced by transfers include loss of credit, strict deadlines, poor orientation and advising and lack of financial aid (Knoell & Medsker, 1965; Richardson & Bender, 1987). A number of these problems are under institutional

and state control. Finally, although the numbers of transfer students in institutions of higher education are substantial (Knepper, 1989; Knoell, 1966; Richardson & Bender, 1987), institutions tend to grossly underestimate the magnitude of transfer from their campuses (Cope, 1969; Cope & Hannah, 1975). Overall, the dominant movement of transfers is to large, public institutions (Holmstrom & Bisconti, 1974; Knoell & Medsker, 1965; Peng, 1977; Sandeen & Goodale, 1972; State of Illinois Board of Higher Education, 1990b; Willingham & Findyikan, 1969). Transfer rates vary, however, according to program length, institutional size and selectivity level. Two dominant patterns of transfer behavior which have been identified by researchers are upward transfer to more selective institutions and downward transfer to less selective or lower level institutions (Janasiewicz, 1987; Peng, 1977; Tinto, 1987).

A major failing of the literature on transfer students is its emphasis on transfers from community colleges to four-year institutions, even though transfer among four-year colleges and universities has been found to constitute between 16% and 57% of enrollments nationally (Peng, 1977; Rose & Elton, 1970; Sandeen & Goodale, 1972; Willingham & Findyikan, 1969). Reverse transfer activity (transfer from four-year to two-year institutions) has also largely been ignored by researchers. In addition, most studies have

failed to differentiate among the various types of transfer movements, instead lumping two-year to four-year transfers, four-year to two-year transfers and four-year to four-year transfers into one category. Combining these transfer groups may mask differences among them in terms of background characteristics, academic performance and aspiration levels. Some of these differences have been highlighted by Peng's (1977, 1978) research.

Finally, the literature on students transferring from community colleges to four-year institutions generally fails to differentiate between transfers who have earned the associate's degree and those who transfer without having earned the degree (e.g., Hendel et al., 1984; Lee & Frank, 1990; Nolan & Hall, 1978; Velez & Javalgi, 1987; Volkwein et al., 1986; Willingham & Findyikan, 1969). Since community college transfers with associate's degrees stand the best chance of persisting to graduation from four-year institutions (Illinois Community College Board, 1986), this constitutes a methodological problem which should be examined in future research.

College Student Migration

The literature on student migration has primarily described the movements of first-time freshmen who leave their state of residence to attend college. In 1984,

approximately 14% of freshmen crossed state lines to enroll in college for the first time (Davis, 1986). As in the interinstitutional movements of transfer students, certain student migration patterns have been identified which are affected by institutional type and control, state, region, distance between institutions, tuition costs and college size (Davis, 1986; Fryman, 1988; Johns & Viehland, 1989). Identification of student migration patterns is vital to state interests, since some states are net importers of migrating students and others are net exporters. Illinois, along with several other states, consistently experiences a net loss of students, and in addition faces declines in overall enrollments. These migration patterns have implications for academic program development, estimated educational costs and future enrollment demands. Federal and state agencies use migration data to determine the impact of these trends on financial aid programs, policy development and college-going rates (Johns & Viehland, 1989).

There is a paucity of research analyzing the impact of transfer on student migration rates and patterns. However, existing data indicate that the numbers of migrant transfers are substantial. Willingham and Findyikan (1969) found that 34% of transfers were migrants; nearly twice the proportion of migrants that occurred among first-time freshmen. Johns and Viehland (1989) stated that transfers accounted for 19%

of interstate migration.

The literature on student migration is derived from sociological studies of the movements of populations within given regions and nations. Studies have repeatedly shown that younger and better educated individuals are most likely to migrate (Brennan, 1967; Shaw, 1975). In addition, individuals who have migrated once are more likely to migrate again than individuals who have not previously migrated (Lee, 1966, p.54). Migration tends to occur in well-defined streams which are highly specific in terms of their origins and destinations (Lee, 1966).

One of the first and most comprehensive reviews of interstate migration patterns was conducted by Gossman, Nobbe, Patricelli, Schmid and Stear (1968). Gossman et al. derived their data from a study conducted by the United States Office of Education. Their sample included 2,068 two- and four-year institutions. These researchers examined the flow of students by region and by state, and found that college student migration expanded threefold between 1938 and 1963. The general movement of migrating students during this period occurred in a westward direction from the Great Lakes and eastern regions. This movement is in keeping with the regional flow of transfer students to the west and southwest, as documented by Holmstrom and Bisconti (1974).

Gossman et al. found that the Great Lakes region as a whole, and the state of Illinois in particular, have

consistently experienced net losses of students to other regions and states. While some of the Great Lakes states have been able to offset losses of outmigrant students by attracting students from other states, Illinois has failed to make up its losses in either the public or private sector.

Gossman et al. discovered that undergraduates attending public institutions in their home state were the least migratory of any group, and speculated that this lack of movement from the public sector occurred because of lower resident tuition and admission requirements. In addition, public institutions are more equally distributed throughout the nation than private colleges, and are better tied into the flow of students who transfer from the public two-year college sector. In contrast with this low rate of outmigration from public universities, Gossman et al. found that the movement of students to attend private, out-of-state institutions comprised the "most substantial volume of college-student migration in the nation" (p.62). In 1963, 32% of students who attended private higher education institutions migrated out-of-state to do so. Not surprisingly, the primary migration streams of students attending private colleges flowed to the New England and Plains states from other areas.

In contrast to research showing the great majority of

transfer students moving to public institutions during the 1960s (Knoell & Medsker, 1965; Willingham & Findyikan, 1969), Gossman et al. found a growing propensity of students to migrate to private colleges. In addition, these researchers noted that the majority of student migrants moved over relatively short distances to attend college.

A study conducted by Davis (1986) for the U.S. Department of Education showed that approximately 14% of all first-time students migrated across state lines to attend college in fall 1984. The great majority of students who remained in their home states attended public institutions; while of those who migrated out-of-state, 53% enrolled in private and 47% in public colleges and universities. Of all the states, Illinois experienced the second largest net loss of students in fall 1984, with 12,243 students migrating into the state and 29,233 migrating out.

Using data collected by the National Center for Education Statistics from 1979 through 1986, the Carnegie Foundation for the Advancement of Teaching examined migration patterns of first-time freshmen in the United States. Continuing the trend identified by Gossman et al. (1968), migration of college freshmen increased by over 22% between 1979 and 1986. While migrants were still most likely to attend a private college or university in another state, the Carnegie Foundation identified a growing tendency for students to migrate to public institutions during the period

studied. This trend corresponds with findings that an increasing number of transfer students are attending public universities (Peng, 1977; Sandeen & Goodale, 1972; State of Illinois Board of Higher Education, 1990b). The state of Illinois, in particular, lost a high and increasing number of its resident students to out-of-state public universities from 1979 through 1986.

Fryman (1988) used National Center for Education Statistics data to study students who left the state of Iowa to attend public four-year colleges and universities in other states. He found that a significant number of these migrants chose institutions close to the Iowa state border. He determined that the factors which most affected the destinations of Iowa outmigrants were distance, differential tuition costs and the level of non-resident enrollment at the destination institutions. Fryman noted that by attending universities near Iowa's borders, students were able to take advantage of tuition rates just slightly higher than Iowa's in-state rates. Relatively low tuition and short distance attracted large numbers of Iowa migrants to certain out-of-state public universities, thus making these institutions attractive to other migrant students.

Johns and Viehland (1989) used Center for Education Statistics data collected in fall 1986 to study regional, state and interinstitutional migration patterns of

first-time college students. These researchers determined that of all freshmen who crossed state borders to attend college in fall 1986, 82% did so in order to attend a four-year institution. While 61% of all migrants were freshmen, undergraduate transfers accounted for 19% of migration activity. Johns and Viehland noted that migration patterns varied by sector of institutional control. Private four-year colleges and universities received 46% of student migrants in 1986; public institutions 38% and two-year colleges 16%.

Summary

Although the literature on college student migration focuses on first-time freshmen, many of the patterns involved in interstate and interregional migration parallel or complement those found in studies of transfer students. Research has shown that between 19% and 34% of transfer students are migrants who cross state lines to attend college (Johns & Viehland, 1989; Willingham & Findyikan, 1969). The fact that individuals who have migrated once are more likely to do so repeatedly (Lee, 1966) has implications for the behavior of multiple transfer students, who have already moved among at least two previous institutions. Like the transfer student population, the numbers of college migrants appear to be increasing dramatically (Carnegie Foundation, 1986; Gossman et al., 1968).

College migration trends are important to the states, in that some states are net importers while others are net exporters of migrant students. States like Illinois, which lose more students than they gain to migration and which at the same time face dwindling numbers of 18-22 year-olds, need to step up their retention efforts. Student migration also tends to flow to certain regions. The Great Lakes region experiences a net outflow of students, and there is a general flow of migration westward from the Great Lakes and eastern regions (Gossman et al., 1968). This movement corresponds with the flow of transfer students to the south and southwest (Holmstrom & Bisconti, 1974).

Student migration trends are influenced by the sector of institutional type and control. Not surprisingly, most migrants leave their state to attend four-year institutions (Johns & Viehland, 1989). While more migration still flows to private institutions, there is a growing movement in the direction of public universities (Davis, 1986; Carnegie Foundation, 1986). The migration streams of freshmen who leave their home state to attend private institutions tend to flow toward the New England and Plains regions (Gossman et al., 1968). Transfer students appear to move in the opposite direction, in that they are least likely to attend institutions in the northeast (Willingham & Findyikan, 1969).

Finally, college students are most likely to migrate when the distance to the destination institution is relatively short (Fryman, 1988; Gossman et al., 1968). Students tend to migrate to out-of-state, public universities when the tuition cost is comparable to tuition in their home state and when a number of migrants from their own state are already enrolled at the destination institution (Fryman, 1988).

The College Choice Process

Hossler et al. (1989) defined college choice as "a complex, multistage process during which an individual develops aspirations to continue formal education beyond high school, followed later by a decision to attend a specific college, university or institution of advanced vocational training" (p.234). Multiple transfer students, after reaching the decision to attend college, complete the choice process several times over the course of their collegiate careers.

Research on college choice has concentrated upon the decisions of high school students who choose to attend four-year colleges and universities, although three recent studies have focused on community college transfers (Becker, 1988; Moore & Hartsell, 1974; Smith, 1987). This research has shown that community college transfers and high school

seniors use similar information sources and find many of the same institutional attributes important during the choice process. No research, however, has been conducted on the college choices of students who transfer among four-year institutions, or on the selection process of students who transfer several times.

College choice is only one aspect of the global phenomenon of college attendance, which begins with the decision to pursue postsecondary education, continues with the choice of a specific institution, and culminates with graduation, dropout or transfer (Knoell, 1966). The steps in this cycle are highly interrelated. Therefore, inappropriate college choice often results in a poor "fit" between the student and institution, which in turn can lead to attrition or transfer.

In their extensive review of research on the causes of dropout, stopout and transfer behavior, Cope and Hannah (1975) estimated that poor college choice accounts for at least 20% of transferring among institutions. Peng (1977) and Tinto (1987) both found that the incongruency between student and institution which results from poor choice is a major determinant of transfer behavior. Bean (1982a) constructed a causal model of dropout, which he tested at a major midwestern university using multiple regression and path analysis. The findings revealed that the opportunity to transfer was negatively related to the certainty of

college choice.

The college choice process is a complex phenomenon, and as such is influenced by a great variety of student and institutional characteristics, as well as by the interaction of these characteristics with one another. The literature on college selection can be classified into three areas: models of the choice process, which include the influence of significant others and college communication strategies on choice; student background characteristics; and institutional attributes that impact choice.

Models of College Choice

In their review of the college choice literature, Hossler et al. (1989) described three types of models delineating the factors leading to college choice and the interrelationships among these factors. **Econometric models** emphasize the costs and benefits to an individual of 1) attending college versus pursuing a non-college alternative (e.g., the military or a job); and 2) choosing among various colleges and universities. **Sociological models** focus on an individual's aspirations for college attendance, and attempt to isolate the factors which influence these aspirations. Sociological models are derived from studies of status attainment, which examine how certain individuals and occupations acquire prestige and status. In contrast to the

econometric and sociological models, which regard college choice as a one-step decision, combined models focus on college selection as a multi-stage, longitudinal process (Stage & Hossler, 1988). Combined models typically separate the choice process into three or more sequential stages. These models attempt to delineate the ways in which student background characteristics, environmental variables and institutional attributes interact with one another to affect college choice. Combined models are more useful to public and institutional policy analysts than the econometric or sociological varieties, since these models utilize applied research and consequently foster institutional intervention in the choice process (Hossler et al., 1989).

Finding a great deal of overlap and consensus among the existing combined models (R. Chapman, 1986; Hanson & Litten, 1982; Hossler & Gallagher, 1987; Jackson, 1982; Litten, 1982), Hossler et al. integrated them into one. The resulting model contains the stages of predisposition, search and choice. The Hossler et al. (1989) model will be used here in order to integrate the theoretical and applied literature on college choice. A five-stage econometric model created by Kotler and Fox (1985) will then be described as it relates to student expectations and college communication strategies.

Predisposition

During the predisposition stage, the prospective student decides whether or not to attend college. It is during this phase that a number of student background characteristics come into play. The most important of these student attributes are **socioeconomic status** (D. Chapman, 1981; Hanson & Litten, 1982); **parental education levels** (Hossler & Stage, 1988; Manski & Wise, 1983; Stage & Hossler, 1988); **parental encouragement and support** (Hossler et al., 1989; Stage & Hossler, 1988; Williams & Stage, 1989); **student academic ability and achievement** (Manski & Wise, 1983) and **student goals and aspirations** (Dahl, 1982; Gilmour, Spiro & Dolich, 1978). Other factors such as gender, ethnicity, high school academic track, family residence, and encouragement of peers, high school counselors and teachers, are of lesser importance (Hossler et al., 1989). These background attributes will be presented in detail in the following section.

In addition to student background characteristics, the attitudes of parents and peers and the encouragement provided by these "significant others" impact the predisposition phase. Conklin and Dailey (1981) analyzed a sample of 2,700 high school students, using multiple regression analysis. They discovered a positive linear relationship between high school students' college plans and the amount of

parental encouragement they received. Conklin and Dailey also found that students with encouraging parents were more likely to attend selective, four-year institutions.

Murphy (1981) surveyed representative groups of seniors from six Milwaukee area high schools and interviewed parents of applicants to Marquette University. Murphy found 43% of the students and 50% of the parents in agreement that the parents had originated the idea of attending college. Students were found to have initiated attending college by 51% of students and 43% of parents, with friends and older siblings also considered influential. In their six market study of high-ability students in Carleton College's applicant pool, Litten et al. (1983) discovered that parents define the geographical, cost and academic quality boundaries of a student's college search during the senior year of high school.

By the end of the predisposition stage, students who decide to attend college have only vague ideas concerning the type of institution they would like to attend (Hossler et al., 1989; Hossler & Stage, 1988; Jackson, 1982). These ideas become more refined during the search stage of the choice process.

Search

This stage of the college selection process has received very little attention from researchers (Hossler et

al., 1989). During the search phase, prospective college students begin to interact with different institutions in order to form a "choice set," or group of colleges to apply to and seek more information about (Hossler & Gallagher, 1987). In a study of applicants to Pennsylvania State University, Gilmour et al. (1978) discovered that the search stage generally takes place during the junior and early senior years of high school. In his review of college choice studies, Litten (1982) found that students with college-educated parents begin the selection process earlier than others.

During the search stage, students begin to place boundaries on the types of institutions they will consider in their choice sets. According to Gilmour et al. (1978), geographical and cost limits are established first. After these boundaries have been drawn, students then determine which of the remaining institutions offer academic programs that interest them.

In their review of the literature on college choice, Hossler and Gallagher (1987) pointed out that "at the same time students are searching for institutions, institutions are searching for students" (p. 213). Hence, institutions employ a variety of communication strategies during both the search and choice stages. Promotional strategies, referred to as "fluid institutional characteristics" by Hossler

(1984), can be easily altered by institutions to appeal to specific student audiences. These communication strategies appear to be most effective during the search stage of the choice process (D. Chapman, 1981; Hossler & Gallagher, 1987). Once students enter the final choice stage of the process, they have generally eliminated most institutions from their choice set. Therefore, promotions received from institutions during the choice phase will have little impact on students' final decisions.

In their longitudinal study of college selection, Lewis and Morrison (1975) discovered that the search phase is an active process. Bi-weekly interviews with 144 high school seniors revealed that writing away for college information, visiting colleges, speaking with guidance counselors, and using college information available in the high schools were the most common search activities. In a survey of college-bound seniors from 24 high schools in Arizona, Cibik (1982) found that 51% of the students first learned about the college they decided to attend from friends, 13% from a campus visit and 12% from campus publications. According to Cibik, students most hoped that these sources would provide them with information concerning quality of academic programs, followed in rank order by career options in their major area; the cost of attending college; helpfulness and friendliness of instructors, and qualifications for financial aid and scholarships. Similar information needs

were found by Rowe (1980), who surveyed a representative sample of college-bound high school seniors in the state of Utah. Information on academic programs was ranked most important by these students, followed by costs, scholarships, location and admissions. However, students felt that they had not received adequate information concerning a number of these characteristics, especially scholarships; academic programs; requirements for the major; and costs.

In their survey of accepted applicants to Colgate University, Kealy and Rockel (1987) found that information from an institution's catalog, followed by campus visits, most influenced student perceptions of academic quality. These perceptions were found to be strongly reinforced by high school peers and students' parents, as well as by current Colgate students, faculty and alumni.

Student background characteristics appear to influence the manner in which students conduct their college searches. Litten (1982) discovered that black students and those from low-SES backgrounds conducted less efficient, longer searches than other students. Lewis and Morrison (1975) found, however, that blacks consulted a greater variety of information sources than whites. Litten et al. (1983), Ihlanfeldt (1980) and Zemsky and Oedel (1983) discovered that students with high academic ability levels conducted more sophisticated searches. Litten (1982) found that

students with highly educated parents utilized more complex sources, such as comparative college guidebooks, campus visits and interviews with admissions counselors, and that these students consulted with their parents more frequently during their searches. According to Litten and Brodigan (1982), who surveyed students in Carleton College's applicant pool, students with well-educated parents were less concerned with information on costs and more interested in information on academic standards and quality.

Unfortunately, it is during the search phase that students tend to eliminate institutions from their choice sets that may be quite compatible with their needs and aspirations (D. Chapman, 1981). Limits on cost are among the first to be drawn during this stage (Astin, 1980; Gilmour et al., 1978; Krukowski, 1985). Students, however, are generally not aware of the difference between an institution's list price and net price (tuition minus financial aid), so may eliminate institutions from their choice set that they erroneously believe are too expensive (Jackson, 1982). Jackson's research is supported by Boyer (1987), who surveyed high school seniors regarding what information they still needed in order to make their college choices. The vast majority (80%) of respondents felt they needed more information about college costs and financial aid.

Not only do institutions fail to supply prospective applicants with important information concerning programs

and costs, but much of the information that institutions do provide is either inaccurate or difficult to comprehend. The growing competition for a shrinking pool of applicants has resulted in an increase in aggressive promotional strategies, some of which are unethical, misleading and intrusive (Chapman & Stark, 1979; Litten, 1982; Noble, 1986). The impact of misleading and inaccurate college promotional materials on students is exacerbated by reading levels and vocabulary usage that are difficult for high school seniors to comprehend. Johnson and Chapman (1979) examined 42 catalogs from a random sample of colleges and universities, stratified by four different Carnegie classification levels. These researchers found that the catalogs were written at reading difficulty levels appropriate to advanced college students or college graduates, although reading difficulty varied according to institutional type. Research university catalogs were significantly more difficult to read than those of liberal arts colleges. Johnson and Chapman also found that high school students had a great deal of difficulty understanding the admissions, cost and academic terminology used throughout the catalogs. They theorized that these problems with reading level and vocabulary contributed to the inaccurate expectations commonly held by college applicants, particularly those planning to enter research universities. While other research has indicated that

students do not select a college based solely on reading its promotional materials, such information appears to exert at least a moderate effect on students' college choices (D. Chapman, 1981).

Promotional strategies that misrepresent an institution may attract students who later find they do not fit into the college's environment socially or academically. The results of this mismatch between expectation and reality are often dissatisfied students and high attrition rates (Chapman & Stark, 1979; Comm & Schmidt, 1986; Widdows & Hilton, 1990; Wisner, 1984). In his national, longitudinal study of transfer students, Peng (1977) found that expectation incongruency, particularly concerning social life and faculty quality, was a major predictor of transfer behavior. Even when accurate and easily understandable information is available to students, it appears that this information is often distorted by high school and transfer students' idealized expectations of what institutions should be like. These phenomena were presented earlier as the "freshman myth" and "transfer myth" (Buckley, 1971; D. Chapman, 1981; Chapman & Baranowski, 1977; Donato, 1973; Zultowski & Catron, 1976). It appears that the search phase, while perhaps the most crucial in the choice process, is often characterized by "incomplete information, ineffective actions and poor decision-making" which make it likely that students' already inflated expectations of college will be

inaccurate (Hossler, 1984, p. 11).

It has been conjectured that prospective freshmen and transfer students may engage in different decision-making processes during the search phase (Chapman & Stark, 1979). While first-time freshmen tend to begin their searches during the junior or senior years of high school (Gilmour et al., 1978), community college transfers often begin this stage while they are enrolled at the community college (Leister & Machlachlan, 1976). In a study of the information gathering activities of community college students during the search stage, Becker (1988) found that female community college transfers tended to make their decisions concerning four-year institutions earlier than male transfers. The women generally made this decision while in high school, but the men waited until they were enrolled at the community college. Becker also found that the primary information sources used by community college transfers were parents, friends and classmates. These sources, however, were considered only moderately influential by students. According to Becker, community college transfers found college catalogs, brochures and information on specific academic programs most helpful during the search process. These information needs are similar to those of first-time freshmen. Becker concluded that, like high school seniors, community college transfers do not make well-informed decisions

concerning four-year institutions.

Lenning and Cooper (1978) surveyed high school students, college sophomores, parents and high school staff, and reported that college sophomores had much different information priorities than the high school students. The sophomores' priorities were found to be 1) transferability of courses (out of their current college); 2) courses required for completion of the major; 3) the point at which a major had to be declared in order to graduate on time; and 4) the method by which classes were taught (e.g., lecture or seminar). In contrast to these practical, specific priorities, high school students were more interested in general items such as financial aid, social and recreational activities and how satisfied recent graduates were with their college experience. This study suggests that although they utilize many of the same information sources as high school students, transfers may be more focused and practical about their information needs. Transfers appear, however, to be as likely as first-time freshmen to have inaccurate, unrealistic expectations of college life which tend to influence their perception of these sources.

Choice

During this third and final stage of the college selection process, students evaluate and narrow their choice

sets, eventually reaching the decision of which institution to attend. The enrollment decision is a product of the interaction between student background characteristics and the institutional attributes of the colleges remaining in a student's choice set (Jackson, 1982). During this stage, students' communication with these institutions increases, as students request and receive more specific information concerning institutional quality, academic programs, cost and financial aid. These and other institutional attributes, as the student perceives them, have a crucial impact on the final enrollment decision. Institutions often employ "college courtship procedures" at this stage, consisting of increasingly sophisticated promotional materials and merit-based scholarship awards, in order to enhance their image in the student's eyes (Hossler & Gallagher, 1987).

A great deal of research has focused on the choice stage, although most of these studies are of single institutions and may not be generalizable (Hossler et al., 1989). In addition, little research has been done on how students form and evaluate their choice sets. Many of the same student background characteristics which tend to influence students' predisposition to attend college are also crucial determinants of choice. The most prominent background attributes at the choice stage are parental education levels (Hearn, 1984; Litten et al, 1983; Zemsky & Oedel, 1983); parental encouragement and support (Conklin & Dailey, 1981;

Hossler et al., 1989); **socioeconomic status** (D. Chapman, 1981; Davis & Van Dusen, 1975; Hanson & Litten, 1982; Hearn, 1984; Zemsky & Oedel, 1983); and **academic ability and achievement** (Hearn, 1984; Litten, 1982; Maguire & Lay, 1981; Zemsky & Oedel, 1983). Less important determinants of choice are ethnicity (Hearn, 1984) and location of family residence (D. Chapman, 1981; Litten et al., 1983; Maguire & Lay, 1981).

Although the institutions in a student's choice set have limited power to influence final choice through courtship procedures, institutional characteristics are crucial determinants of choice (Hossler et al., 1989). The most influential college attributes during the choice stage for both high school seniors and community college transfers are **perceived academic quality** (Krukowski, 1985; Leister & Machlachlan, 1976; Murphy, 1981); **cost** (Becker, 1988; Hearn, 1984; Lewis & Morrison, 1975; Murphy, 1981; Smith, 1987); **financial aid** (Chapman & Jackson, 1987; Maguire & Lay, 1981; Smith, 1987; Tierney, 1980; Welki & Navratil, 1987); **availability of specific academic programs** (Becker, 1988; D. Chapman, 1981; Hossler et al., 1989; Lewis & Morrison, 1975; Smith, 1987); and **location** (Ihlanfeldt, 1980; Lewis & Morrison, 1975; Murphy, 1981; Smith, 1987; Zemsky & Oedel, 1983).

Once a student enters the choice phase, the role of

parents and peers diminishes (Gilmour et al., 1978). In Murphy's (1981) study, Milwaukee area students and parents were in agreement that the final decision concerning which college to attend was made by the student. Cibik (1982) found similar results in her descriptive study of high school seniors, with 59% of students reporting that they had the greatest role in making the final decision. As pointed out by Hossler et al. (1989), parents appear to be most influential during the predisposition phase, when their attitudes affect student aspirations to attend college; and during the search stage, when their boundaries on cost and geographical location impact the composition of students' choice sets.

Litten et al. (1983) and Dahl (1982) have studied how institutional preferences change during the choice phase. The market study of Carleton College's applicant pool conducted by Litten et al. found that student preferences frequently changed from private to public institutions and from more selective to less selective colleges during the spring of senior year. In Dahl's longitudinal study of Kentucky high school seniors, 75% of students changed their preferences from one sector to another. Dahl found that the majority of students who shifted preferences stayed within their original type of institution (e.g., two-year or four-year); however, 66% of the students who shifted changed from private to public institutions, and 33% of students who

had planned to attend out-of-state colleges or universities decided to enroll in-state instead. Significantly, nearly 89% of students who had originally planned to enroll in a four-year public institution actually did so. This tendency for students to ultimately choose public institutions, even when their original choice is private, corresponds with the increasing movement of transfer students from private to public colleges and universities (Holmstrom & Bisconti, 1974; Knoell & Medsker, 1965; Peng, 1977; Sandeen & Goodale, 1972; State of Illinois Board of Higher Education, 1990b; Van Alstyne et al., 1973; Willingham & Findyikan, 1969).

Postdecision Assessment

Although most models of college choice conclude with the choice phase, Kotler and Fox (1985) created a more extensive model that adds one more step to the process. Kotler and Fox use an econometric college choice model emphasizing the consumer or marketing orientation of a student toward college selection. The stages of Kotler and Fox's model are 1) need arousal, in which the student's initial interest in attending college develops (congruent with the predisposition phase of the Hossler et al. model); 2) information gathering (similar to the search phase); 3) decision evaluation, or the narrowing of the student's choice set; 4) decision execution, in which the student

chooses which college to attend (stages 3 and 4 combine to form the choice phase); and 5) **postdecision assessment** , in which the student experiences satisfaction or dissatisfaction with her/his college choice.

It is the fifth stage of the Kotler and Fox model that sets it apart from others and makes it potentially applicable to the transfer student population. During this phase, the college must "deliver the quality and attributes that attracted students in the first place" (1985, p.211). According to Kotler and Fox, a satisfied student will re-enroll each semester; a dissatisfied student will probably drop out. The postdecision assessment stage underscores the importance of honest, realistic college promotional strategies which create accurate student expectations of an institution (Chapman & Stark, 1979; Comm & Schmidt, 1986; Hossler, 1984; Widdows & Hilton, 1990).

Student Background Characteristics

Student background variables are influential in determining a student's predisposition to attend a college or university, as opposed to the student's decision to pursue a non-academic alternative. They have also been found to have a significant impact on the choice stage of the college selection process (Conklin & Dailey, 1981; Davis & Van Dusen, 1975; Hanson & Litten, 1982; Hearn, 1984; Litten et

al., 1983; Zemsky & Oedel, 1983). Background characteristics which have exhibited a strong, positive association with participation in postsecondary education are **parental education** (Hearn, 1984; Hossler & Stage, 1988; Litten, 1982; Litten et al., 1983; Manski & Wise, 1983; Zemsky & Oedel, 1983); **parental encouragement** (Conklin & Dailey, 1981; Hossler et al., 1989; Williams & Stage, 1989); **socioeconomic status** (D. Chapman, 1981; Davis & Van Dusen, 1975; Hanson & Litten, 1982; Hearn, 1984); **academic ability and achievement** (Hossler et al., 1989; Hossler & Stage, 1988; Manski & Wise, 1983; Williams & Stage, 1989); and **student expectations of college** (D. Chapman, 1981; Hossler, 1984; Jackson, 1982; Litten et al., 1983).

Other background factors which have been found to have moderately strong relationships with college predisposition are **career plans and educational goals** (Hossler et al., 1989; Hossler & Stage, 1988); **ethnicity** (Hearn, 1984; Hossler et al., 1989); **high school academic track** (Hossler et al., 1989); and **gender** (Hearn, 1984; Stage & Hossler, 1988). Interestingly, the student characteristics which are most strongly linked to college attendance are also among the most important predictors of whether a student will transfer among colleges later in her/his academic career. Those background characteristics which correlate with both transfer behavior and college predisposition are **parental education levels** (Holmstrom & Bisconti, 1974; Metzner, 1984;

Nora & Rendon, 1988; Van Alstyne, 1974; Wisner, 1984); socioeconomic status (Carroll, 1989; Holmstrom & Bisconti, 1974; Lee & Frank, 1990; Peng, 1977; Velez & Javalgi, 1987); academic ability and achievement (Holmstrom & Bisconti, 1974; Lee & Frank, 1990; Peng, 1977; Velez & Javalgi, 1987); and student goals and aspirations (Holmstrom & Bisconti, 1974; Lee & Frank, 1990; Peng, 1977; Tinto, 1987; Velez & Javalgi, 1987; Wisner, 1984).

Parental Education Levels

A number of researchers have discovered that the level of parental education affects students' predisposition to attend college, as well as their choice of which specific institution to attend. Manski and Wise (1983), who analyzed NLS data from the high school class of 1972, found that at most income levels students with college-educated parents were more than twice as likely to attend college as those whose parents had less than a high school degree. Hossler and Stage (1988) and Stage and Hossler (1988) investigated the ways in which parental education affected the postsecondary aspirations of 1,421 ninth graders from the state of Indiana. The study by Hossler and Stage revealed that students' postsecondary plans were positively and directly affected by the combined level of their parents' education, and that parental education levels were the best predictors

of parents' educational expectations for their children. Stage and Hossler (1988) found that maternal education levels exerted a positive indirect effect, and paternal education levels positive direct and indirect effects, upon the ninth graders' college plans.

Zemsky and Oedel (1983) examined the college choices of over 500,000 high school seniors from New England, using College Board data. These researchers reported that in families where both parents had college degrees, over 70% of students made their college choices from among regional or national, rather than in-state or local, institutions (p.32). Zemsky and Oedel theorized that the children of college-educated parents had higher educational aspirations than others. Their findings are related to those of Hearn (1984). In surveying a large, nationally representative sample of college freshmen, Hearn discovered that students with highly educated parents were more likely to attend selective institutions. Litten et al. (1983), in their market research study of Carleton College's applicant pool, determined that students were more likely to select private colleges when their parents were highly educated. In addition, Litten (1982) reported that students whose parents had had college experience began the college selection process earlier than students whose parents were not college-educated. Finally, Lewis and Morrison (1975) and Gilmour et al. (1978) discovered that students with college-educated

parents applied to more institutions and applied earlier than others. According to Gilmour et al. (1978), these students also completed the choice stage earlier than others.

Parental Encouragement

Students who enjoy parental encouragement and support are more likely to attend college than other students (Hossler & Stage, 1988) and are also more likely to choose selective institutions. Williams and Stage (1989) used a sample population of 1,100 high school sophomores and seniors drawn from the nationally representative High School and Beyond data base. These researchers found that parental encouragement was a significant predictor of students' college attendance plans, as well as a major influence on their eventual persistence in college. In their study of the college plans of Indiana ninth graders, Stage and Hossler (1988) found that parental expectation was the strongest predictor of students' predisposition to attend college. Parental expectation levels, in turn, were reported by Stage and Hossler to be significantly and positively impacted by parental education and socioeconomic status (family income). Conklin and Dailey (1981) discovered that the high school students in their sample were increasingly likely to attend four-year (as opposed to two-year) colleges, and were more

likely to attend selective institutions, as the level of parental encouragement increased.

The findings reported above suggest that the level of parents' education, when coupled with parental encouragement and support, may be the strongest predictors of students' college aspirations and plans (Hossler et al., 1989).

Socioeconomic Status

Socioeconomic status (SES) has been shown to influence both the predisposition and choice stages of college selection, although researchers differ on whether the impact of SES is direct or indirect (Hossler et al., 1989). D. Chapman (1981), in his review of college choice studies, suggested that SES influences a number of student attitudes and actions that correspond with college choice, such as educational expectations and aspirations. SES is generally defined by researchers as parents' combined income, although some researchers combine parental income and parental education level in measuring SES (Williams & Stage, 1989).

Hanson and Litten (1982) reviewed previous research on college selection and identified SES as playing a vital role throughout the choice process, starting with the determination of college aspirations and attendance. According to D. Chapman (1981), SES not only influences students' rate of entry into higher education, but also determines the type of institutions students choose to attend. Hearn (1984) found

that students with higher SES backgrounds were most likely to attend selective, higher-cost, higher-resource institutions. Davis and Van Dusen's (1975) qualitative study revealed that private universities were preferred by high-SES students; public universities by medium-SES students and community or state colleges by low-SES students. Zemsky and Oedel (1983) reported that high-SES students in the New England states were more likely to apply to selective, out-of-state institutions.

While SES appears to affect the choice stage by determining the quality of higher education institutions chosen by students, the cost of attendance does not appear to be associated with SES level (Hossler et al., 1989; Tierney, 1980). A study of Boston College applicants conducted by Maguire and Lay (1981) indicated that low-SES students were as likely as high-SES students to attend private colleges.

Academic Ability and Achievement

Student ability and achievement, as demonstrated by high school grades, class rank, and scores on achievement tests such as the ACT or SAT, correlate with the predisposition and choice stages of the college selection process (Hossler et al., 1989; Hossler & Stage, 1988; Manski & Wise, 1983; Williams & Stage, 1989). Manski and Wise (1983) concluded that students' high school grade point averages

combined with their SAT scores were the most important predictors of college application. These measures, in fact, were found to be more predictive of predisposition to college attendance than SES. Manski and Wise observed that students' perception of their ability and achievement levels facilitated their self-selection into institutions where they felt they fit in academically. As pointed out by D. Chapman (1981), colleges and universities encourage this self-selection process through the publication of class ranks and achievement scores of entering classes.

Like SES, higher academic ability levels predispose students to choose more selective institutions (Hearn, 1984; Maguire & Lay, 1981; Zemsky & Oedel, 1983) and more out-of-state colleges and universities (Zemsky & Oedel, 1983). Students with higher grade point averages and achievement scores also tend to begin the college application process earlier, and to apply to more colleges, than lower ability students (Litten, 1982).

Student Expectations

Although both first-time freshmen and transfer students tend to harbor highly unrealistic expectations of the academic and social aspects of college life (Buckley, 1971; Chapman & Baranowski, 1977; Donato, 1973; Shaw, 1968; Stern, 1968), these expectations play an important role in the college selection process, particularly during the search

stage (Hossler, 1984). In their study of Carleton College's traditional-age applicant pool, Litten et al. (1983) reported that the college selection process tends to be irrational: "a young person graduating from high school frequently knows only vaguely what educational benefits he or she wants and only a little about what he or she needs" (p. 23). D. Chapman (1981) suggested that college information gleaned through students' high school experiences, college's communication efforts and the influence of significant others is filtered through students' idealized expectations. This filtering process causes even accurate, available information to become tainted or ignored by the student (p. 499). Jackson (1982) theorized that this inaccuracy on the part of college applicants frequently causes students to ignore information about institutions which should be considered in their choice sets.

Other Student Background Factors

A number of other student background variables appear in the college choice literature as predictive of college attendance. However, many of these are either highly inter-related with characteristics already described or appear to have weak or contradictory effects on the predisposition or choice stages. Student career plans and educational goals relate positively to college predisposition (Dahl, 1982;

Gilmour et al., 1978), but appear to be highly influenced by family SES, student ability level and parental expectations (Hossler et al., 1989; Hossler & Stage, 1988). Ethnicity is a second variable that influences predisposition through SES. Historically, blacks and other minorities have been less likely to attend college than whites (Hossler, 1984), and have been less likely to attend selective colleges and universities (Hearn, 1984). However, the impact of race on college predisposition tends to disappear when SES is controlled (Hossler et al., 1989). A third variable that appears to be interrelated with SES, as well as with student ability and parental encouragement in determining student predisposition is high school academic track (Hossler et al., 1989). Fourth, some research has shown that women are less likely to attend selective colleges (Hearn, 1984) and receive less family support than men (Stage & Hossler, 1988). However, Hossler et al. (1989) concluded that gender plays little, if any, role in the choice process.

A fifth variable, family residence, has weak effects on predisposition when students' academic ability and SES levels are controlled (Hossler et al., 1989). The impact of residence on the choice phase, however, appears slightly more pronounced. In their study of Boston College's applicant pool, Maguire and Lay (1981) found that students who chose to attend a college near their homes were more likely to follow through on their plans. However, Litten et al.

(1983) and Lewis and Morrison (1975) discovered that distance from home was negatively related to the likelihood that a student would apply to and enroll at a given institution.

Institutional Characteristics

While most research on student background characteristics has investigated how these variables affect an individual's predisposition to attend college, institutional characteristics do not come into play until the student has moved through the predisposition phase and entered the search and choice stages of the college selection process. In their review of college choice literature, Hossler et al. (1989) found that in most studies institutional quality and cost were consistently cited as the most influential factors in students' choice of a specific college to attend, although the weighting of these characteristics varied depending upon the type of institution and student population examined. The following institutional attributes will be described in this section: perceived academic quality; tuition cost; financial aid; specific academic programs; and location.

Perceived Academic Quality

Perceived academic quality has been found by a number

of researchers to be crucial in the choice stage of the college selection process, particularly for academically talented students (Chapman & Jackson, 1987; Litten et al., 1983). Quality has also been cited by community college and four-year college transfers as a major factor in their selection of a four-year institution (Kowalski, 1977; Leister & Maclachlan, 1976; Moore & Hartsell, 1974; Murphy, 1981; Smith, 1987; Wisner, 1984). With all the emphasis placed on academic quality and reputation by students in their choice of institutions, the question "How do students define quality?" arises.

Krukowski (1985) conducted a qualitative study in which she and her colleagues interviewed high school students, parents, teachers, and counselors concerning the college selection process. When asked to identify the most important criterion they used in deciding which college to attend, students overwhelmingly replied, "academic quality." Krukowski found that students who were high school seniors in 1985 defined quality differently than those interviewed eight years before. In the past, students had based their notion of quality on student body quality (as determined by the high school rank and SAT/ACT scores of the entering class) and faculty quality. Krukowski found that the 1985 students tended to "establish a hierarchy of institutions based on their sense of each college's relative "prestige,"

a quality that they believe translates most directly into the outcomes they want: success in the job market and professional school admission" (p. 23). Krukowski found that parents were willing to pay for perceived prestige, because like their children, they believed it paved the way to improved career opportunities.

In a related study, Litten and Hall (1989) interviewed a sample of high-ability students who had taken the Preliminary Scholastic Aptitude Test (PSAT) in 1983 and their parents. Each individual was asked to select characteristics from lists of student and institutional attributes that she/he felt represented institutional quality. Parents and students selected the same indicators of quality, with the top student-related attribute graduate and professional school admission rates, and the most important institutional qualities course variety, laboratory and library resources and the allocation of faculty effort to teaching.

Cost

A number of studies have shown that cost is very important to both high school and transfer students in the selection of a college (Becker, 1988; Hearn, 1984; Kowalski, 1977; Krukowski, 1985; Lewis & Morrison, 1975; Moore & Hartsell, 1974; Murphy, 1981; Peng, 1977; Richardson & Bender, 1987; Smith, 1987; Welki & Navratil, 1987). Krukowski's (1985) study revealed that parents tended to

"set up a financial screen" early in the selection process (p.25), frequently ruling out expensive private institutions before obtaining any concrete information on actual costs or availability of financial aid. According to Davis and Van Dusen (1975) and Litten et al. (1983), cost is a major reason that students do not attend their preferred institution. In their Carleton College market study, Litten et al. found that students tended to retreat from their first choice private college and to move to their second choice public institution when price was an important concern.

These studies are supported by research in the areas of student attrition and transfer. Mallette (1988) suggested that many high school seniors are unable to attend their first choice institution because of reductions in financial aid at the state and federal levels. Tinto (1987) theorized that students with financial concerns will be likely to enter a lower-cost, public institution initially rather than their first choice private college. Tinto suggested that the net effect of this altered choice may eventually be transfer to the original first-choice institution. Of course, the opposite scenario could also take place: that is, rather than drop out of higher education altogether, a student experiencing financial difficulties might transfer to a less expensive institution (Tinto, 1987, p. 82). Hearn (1984) discovered that students from lower-SES backgrounds

were particularly sensitive to price, and were less likely to attend higher-cost, higher-resource institutions.

Financial Aid

Colleges and universities are able to offset costs to some extent through the awarding of financial aid. Tierney (1980) examined a longitudinal, national sample of high school students using multiple regression analysis in order to ascertain the impact of financial aid on college choice. Tierney found that, except for high-SES, nonwhite students, increases in financial aid impacted choice more than lower tuition rates. Students were increasingly more likely to attend private institutions as the amount of aid offered by these colleges increased. As the tuition differences between private and public institutions increased, however, the chances of a student choosing to attend public institutions also increased.

Maguire and Lay (1981) found that financial aid was the most influential factor in discriminating between Boston College matriculants and those accepted students who chose to attend a different institution. In a similar study, Welki and Navratil (1987) surveyed admitted applicants to John Carroll University and found that financial aid grants increased the likelihood that students would choose to attend John Carroll over their alternative choice. Finally, Chapman and Jackson (1987) reported that undecided,

high-ability students could be swayed by \$1,000 more in financial aid. However, \$4,000 more in aid was required to lure a student from a first-choice to a second-choice institution, and \$6,000 more to attract a student to her/his third choice college. Hence, the effects of financial aid are relative and probably not as important in the choice process as students' perception of an institution's academic quality (Chapman & Jackson, 1987).

Academic Programs

In addition to general academic reputation and cost/financial aid, the availability of a specific academic program is considered an important attribute by students during the college choice process. Program availability is consistently ranked among the top two characteristics that community college and four-year college transfers look for in a four-year institution (Becker, 1988; Edward, 1979; Hendel et al., 1984; Kowalski, 1977; Leister & Machlachlan, 1976; Moore & Hartsell, 1974; Smith, 1987; Wisner, 1984). This characteristic is also ranked among the most important institutional attributes by high school seniors (D. Chapman, 1981; Hossler et al., 1989; Lewis & Morrison, 1975).

Location

Over 50% of new freshmen attend institutions located

within 50 miles of their home, and 92% attend colleges within 500 miles (Ihlanfeldt, 1980). Location has been ranked by first-time freshmen and transfer students as one of the top four institutional attributes in a number of college choice studies (Hossler et al., 1989; Kowalski, 1977; Lewis & Morrison, 1975; Moore & Hartsell, 1974; Murphy, 1981; Peng, 1977; Richardson & Bender, 1987; Smith, 1987). Location was ranked as the second most important institutional attribute by 1,000 community college transfer students surveyed by Moore and Hartsell (1974). College location was perceived as especially important by the married and female transfers in Moore and Hartsell's sample.

Students' college attendance patterns are also influenced by the availability of higher education institutions of various types in a given state or region. Zemsky and Oedel (1983) found that students residing in states with large numbers of diverse institutions were more likely to choose an in-state college or university, while students who resided in states with large private college sectors tended to choose private, in-state institutions. Finally, high ability, high SES students are more mobile than others; and are more likely to attend out-of-state, highly selective institutions (Hearn, 1984; Ihlanfeldt, 1980; Zemsky & Oedel, 1983).

Summary

Like the literature on transfer students and student migration, research in the area of college choice has concentrated upon a limited student population. Most studies have examined the choice behaviors of high school seniors. However, studies that have looked at the choice processes of transfer students have indicated that transfers use many of the same information sources, and find many of the same institutional attributes important, as high school seniors (Becker, 1988; Kowalski, 1977; Moore & Hartsell, 1974; Peng, 1977; Smith, 1987; Wisner, 1984). The information needs of transfer students may be more specific and related to the academic program than those of first-time freshmen (Lenning & Cooper, 1978). It is possible, then, that the theory-based models developed by Hossler et al. (1989) and Kotler and Fox (1985) are applicable to the multiple transfer student population.

College choice is a complex, multi-stage process during which a number of student and institutional characteristics interact with one another. Choice comprises only a portion of the global, interactive phenomenon of college attendance, which begins with the student's decision to attend college and ends with graduation or dropout from the system of higher education. Students who choose institutions that are socially and academically compatible with

their own background attributes tend to persist to graduation, while incompatibility leads to dropout or transfer (Noel et al., 1987; Peng, 1977; Tinto, 1987). Cope and Hannah (1975) estimated that at least 20% of transferring results from poor college choice. Unfortunately, choice is frequently influenced by inaccurate and misleading college promotional strategies which use vocabulary and terminology that are too difficult for high school seniors to comprehend (Chapman & Stark, 1979; Johnson & Chapman, 1979; Litten, 1982; Noble, 1986). When combined with the idealized expectations that new freshmen and transfer students hold of college life, these promotional strategies often contribute to a mismatch between student and institution.

The combined, three-stage model of college student choice developed by Hossler et al. (1989) was chosen to integrate the theoretical and applied literature on college choice. This model contains the stages of predisposition, search and choice. The Hossler et al. framework was supplemented by an econometric model of college selection created by Kotler and Fox (1985), which contains a similar, though expanded, sequence of stages.

During the predisposition stage, students decide whether or not to attend college. A number of student background characteristics, including SES; parental education levels; parental encouragement and support; academic ability

and achievement; goals and aspirations, greatly influence the predisposition to pursue postsecondary education. In addition, parents and significant others have an impact on the student's desire to attend college (Conklin & Dailey, 1981; Litten et al., 1983). The search phase of college choice entails the interaction of the student with a number of institutions and the subsequent formation of a choice set of preferred colleges (Hossler & Gallagher, 1987). The influence of parents and significant others is supplemented during this stage by a host of college communication strategies, including letters, catalogs, brochures, and invitations to visit various campuses. Unfortunately, students appear to construct their choice sets using incomplete, inaccurate information and haphazard decision-making (Becker, 1988; Hossler, 1984).

During the choice stage, students narrow their choice sets and reach a final decision concerning which college to attend. During this phase, institutional attributes such as perceived academic quality, cost, availability of financial aid, location and availability of specific academic programs are of great importance, and interact with student background characteristics. The role of parents and peers diminishes, and the final decision is made by the student alone (Cibik, 1982; Murphy, 1981). Students who choose to attend their second choice institution generally end up switching from private or more selective colleges to less

selective public institutions (Dahl, 1982; Litten, 1982).

Kotler and Fox's (1985) model of college choice contains an additional stage, entitled postdecision assessment. During this phase, the student either experiences satisfaction with her/his choice, resulting in continued enrollment; or dissatisfaction, resulting in dropout or transfer. This stage ties in with research on student/institution incongruency as a predictor of transfer behavior (Cope & Hannah, 1975; Peng, 1977; Tinto, 1987).

College Student Attrition

While the college choice literature has examined factors which operate to attract students to a college or university, the research on attrition has sought to identify variables involved in the student's decision to leave the institution. Thus, the transfer decision needs to be examined as an issue closely related to the withdrawal process. Although individual colleges and universities may view a transfer student's departure as attrition from their campuses, the transfer student is actually a persister within the system of higher education.

Substantial numbers of students who are thought to have withdrawn from college actually transfer to other institutions (Spady, 1970; Tinto, 1975, 1987). On many campuses, one-third to one-half of all entering students are

transfers who have been classified as dropouts by their previous institutions (Desler, 1985; Lea, Sedlacek & Stewart, 1979; Richardson & Bender, 1987). In a study by Brigman, Kuh and Stager (1982), 47% of voluntary withdrawers from a midwestern university immediately transferred to another institution. Cope (1969) reported that 75% of "dropouts" from the University of Michigan were attending other institutions, and concluded that these students had not been well matched with the social and academic atmosphere of the university. In Cope and Hannah's national, longitudinal study, twice as many "dropouts" stated that they were transferring than was indicated in colleges' institutional records. Not only do significant numbers of "dropouts" transfer, but many of these students enter their first institution with the intention of transferring (Cope & Hannah, 1975; Everett, 1979; Kowalski, 1977; Trent and Medsker, 1968). Nonetheless, transfers are lumped into a category entitled "dropouts" in the majority of attrition studies (e.g., Bean, 1980, 1982a). When transfers are included in institutional attrition statistics, the overall result is a gross nationwide overstatement of withdrawal rates (Gilbert & Gomme, 1986; Tinto, 1987).

Both student and institutional attributes appear to be highly influential in the attrition process, as is the degree of congruency or incongruency between the two. The

ways in which these variables interact have been delineated in a number of conceptual models of the dropout process. Drawing from the work of Spady (1970) and Rootman (1972), Tinto (1975, 1987) and Bean (1982b) have published models which can be used to study transfer student behavior. These models will be presented in this section, followed by a discussion of the student and institutional variables which have been shown to influence student attrition and transfer.

Student Attrition Models

Although college student attrition has been a major concern of researchers for the past four decades, longitudinal, conceptual models did not appear in the literature until the 1970s. Early investigations of attrition were often descriptive, and were conducted at single, residential institutions. These empirical studies sought to establish correlations between persistence or attrition and either student background characteristics or institutional attributes, using surveys or other post-hoc designs (Braxton, Brier & Hossler, 1988; Terenzini, 1982; Tinto, 1982a). While this atheoretical approach did determine individual correlates of student attrition, it failed to identify relationships between variables that interacted with one another, or to specify the reasons why these variables were related (Bean, 1982b). Moreover, the influence of confounding variables was rarely controlled (Lea et al., 1979).

Finally, descriptive research failed to differentiate between students who withdrew voluntarily, in good academic standing, and those who were dismissed for academic reasons (Tinto, 1982b).

Realizing that atheoretical research was not appropriate for the study of attrition, researchers began during the 1970s to conceptualize and model the attrition process. Their goal was to ascertain the reasons behind dropout behaviors, instead of merely identifying which students tended to leave (Bean, 1982b). Models which were developed viewed attrition as a multi-dimensional, longitudinal phenomenon which involved the student's interaction with the institution. Four models of college student attrition published by Spady (1970), Rootman (1972), Tinto (1975) and Bean (1982b) are presented in this section.

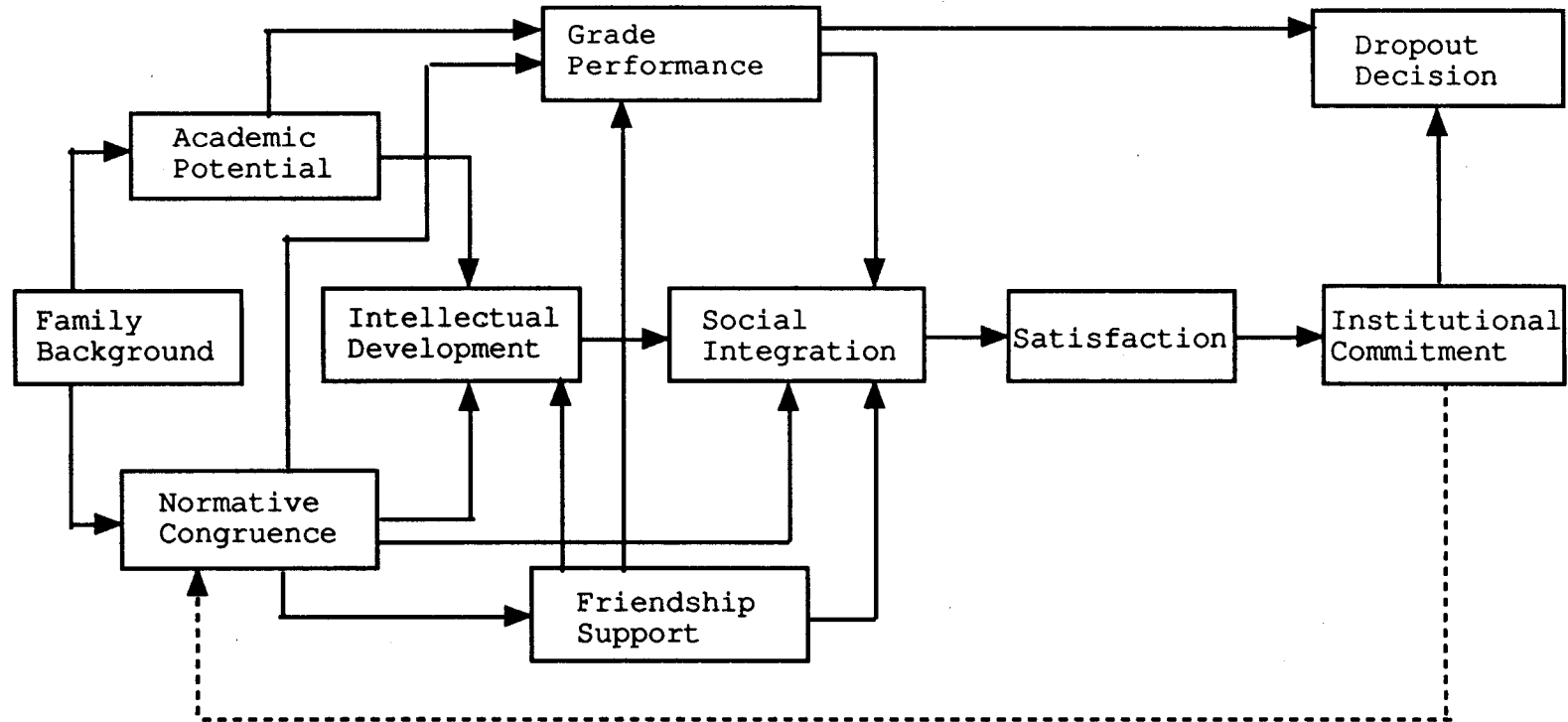
Spady's Model

Spady (1970) is credited with publishing the first comprehensive, theoretical model of student attrition. Spady's model had sociological roots, as it was derived from Durkheim's (1951) theory of suicide. This theory postulated that individual integration into a social system through interpersonal relationships and common values reduces suicide. Spady saw the college as a social system with both academic and social components, and contended that college

dropout resembled the act of suicide in the larger society. In Spady's model (see Figure 1), students enter college with important background traits, such as academic ability and achievement and family SES. To these attributes are added the variables of friendship support and normative congruence, defined as "having attitudes, interests, and personality dispositions that are basically compatible with the attributes and influences of the environment" (p.77). These characteristics together interact with the student's grade performance and intellectual development in college. Spady contended that all of these factors would combine to enhance the student's social integration into college life, which would in turn increase satisfaction with the institution. The degree of satisfaction would then influence the student's institutional commitment, or desire to graduate from that specific college. High levels of institutional commitment would cause persistence, and low levels attrition. Grade performance was also predicted to have a direct affect on attrition, as involuntary withdrawal could result from academic failure (Bean, 1982b).

Spady's model was tested on a sample of freshmen at the University of Chicago (Spady, 1971). The results supported the efficacy of the model in that student grade performance, intellectual development, friendship support, normative congruence and institutional commitment were found to be significantly related to persistence among the

Figure 1.--An Explanatory Sociological Model of the Dropout Process



Source: W. Spady, Dropouts from Higher Education: An Interdisciplinary Review and Synthesis. *Interchange*, 1, 1970.

students in the sample.

Rootman's Model

Rootman (1972) constructed a simple causal model of voluntary withdrawal derived from Biddle and Thomas' (1966) theory of person-role fit. Rootman's model focused on the relationship between student background characteristics and the demands of the student role at a specific institution (Bean, 1982b). Rootman posited that students who had high levels of person-role fit would also be well integrated into a college's academic and social environment, and would be less likely to withdraw. In studying the attrition of freshmen at the United States Coast Guard Academy, Rootman found that students who discussed leaving with others were more likely to withdraw, as were students with low levels of perceived interpersonal fit and person-role fit. These variables correspond with the friendship support and normative congruence variables in Spady's model (Bean, 1982b; Metzner, 1984). Rootman's findings were therefore compatible with the social integration theory put forth by Durkheim and Spady, as well as with Tinto's (1975) synthetic model.

Rootman's model is complemented by Cope and Hannah's (1975) and Williams' (1984, 1986) theories of student-institution fit, and by Peng's (1977) work on person-institution incongruency as a precursor to transfer behavior. Williams (1984) posited that "the physical, cognitive, and affective

interactions between students and their college or university constitute an important relationship that can lead to varying degrees of student satisfaction, academic achievement, and persistence in the institution" (p.70). This view of student-institution fit entails an examination of student characteristics and institutional attributes, as well as the ways in which student traits interact with those of the college environment (Williams, 1986, p. 144).

Cope and Hannah (1975) discovered that inadequate student-college fit accounted for most of the student transfer, stopout and dropout found in their research, and that this incongruency often resulted from poor college choice; institutional bureaucracy; and low teaching quality, among other factors. Cope and Hannah found that inappropriate college choice, or "poor assessment of the social and intellectual climate" of an institution (p. 33), accounted for at least 20% of transfer behavior. As discussed in the section on college choice literature, poor choice can also result from lack of information, or from misinformation on the part of the institution (Brigman et al., 1982; Comm & Schmidt, 1986; Cope & Hannah, 1975; Hossler, 1984; Peng, 1977; Tinto, 1987).

Peng's (1977) longitudinal study of transfer students supports Cope and Hannah's theory of incongruence as a precondition to transfer behavior. Peng found that students

who transferred often did so in order to find a better college fit. He identified two primary areas of incongruency which lead to transfer behavior: ability-challenge incongruency and expectation incongruency. Using Astin's (1971) college selectivity index to compute the level of academic challenge at various institutions, Peng found that high-ability students tended to transfer from low to high selectivity colleges, whereas less-able students moved from high to low selectivity colleges. These results support Tinto's (1987) theory of upward and downward transfer, which posited that students who enjoy positive academic experiences at their initial institutions develop enhanced educational goals, and often transfer to more selective or higher-level institutions. Students whose goals are diminished by negative educational experiences, however, often transfer downward to lower-level, lower quality colleges or universities.

Findings from Janasiewicz' (1987) study of students who left Florida State University lend credence to Tinto's and Peng's theories of ability-challenge congruency. The highest ability leavers in Janasiewicz' sample transferred, most frequently to institutions which were more prestigious and selective than Florida State. Similarly, Wisner (1984) found that students who enrolled in less challenging academic programs at the University of Michigan - Flint were more likely to transfer, while those enrolled in stronger programs persisted. As Cope and Hannah (1975), Bean (1982b)

and Tinto (1987) have pointed out, a mismatch is created when highly competent and confident students choose institutions that fail to provide a sufficient level of academic challenge. These students are prime candidates for transfer to more competitive, selective institutions.

Reasoning that "expectation incongruency may be reflected in the student's measured satisfaction with various aspects of college education, such as the quality of faculty members and the intellectual and social life on campus," Peng (1977) postulated that satisfied students would be less likely to transfer than dissatisfied ones, when academic ability and performance were controlled (p. 44). He found that transfers among four-year institutions tended to be dissatisfied with faculty quality and social life, and that reverse (four-year to two-year) transfers were dissatisfied with faculty quality. These results partially support Peng's expectation incongruency hypothesis. Peng suggested that, whether or not these incongruencies were due to institutional factors or to transfers' unrealistic, idealistic expectations of the college environment, colleges could reduce this problem by providing more comprehensive information to prospective students (p. 50).

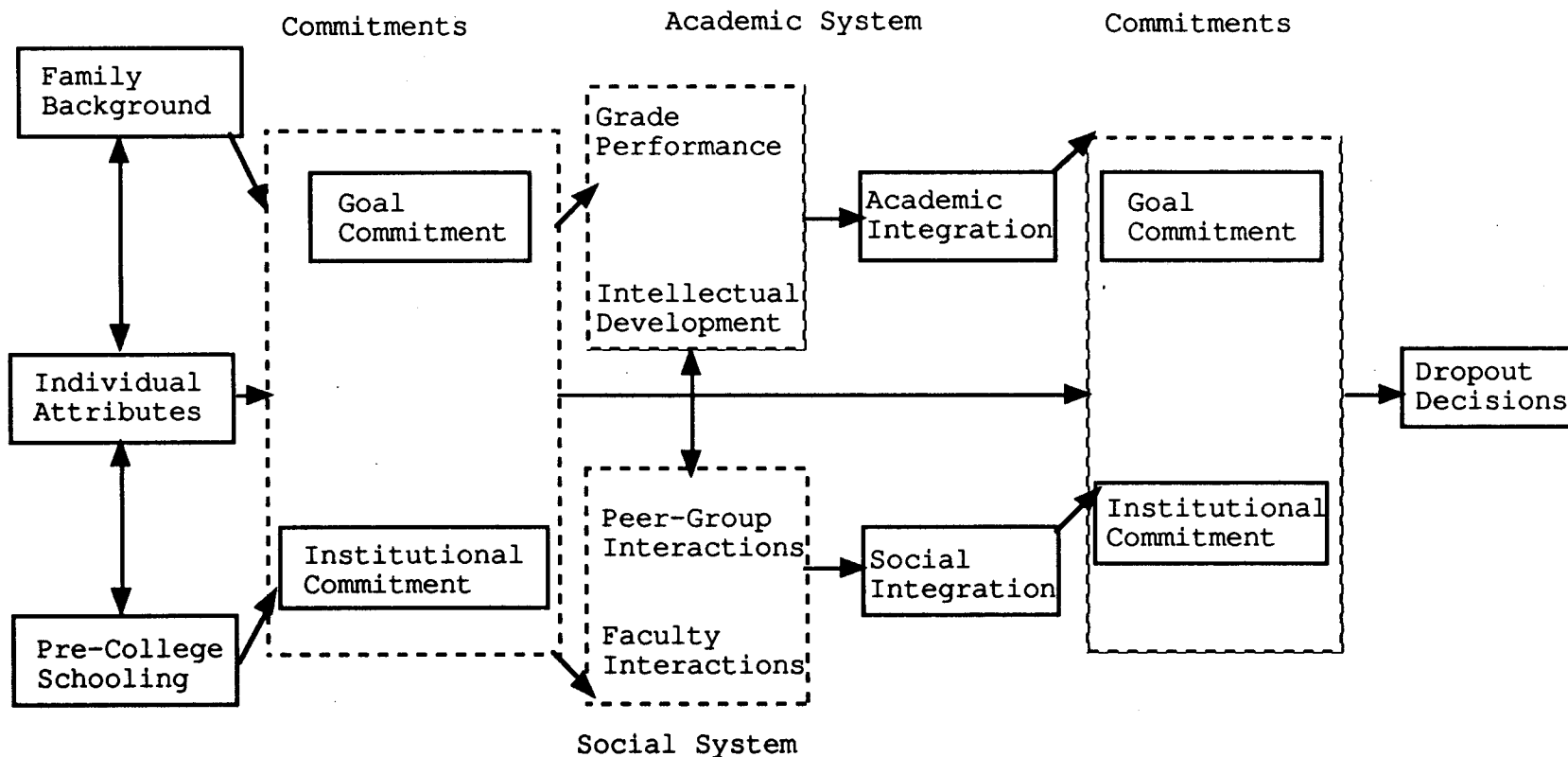
Tinto's Synthetic Model

Tinto's longitudinal, synthetic model (1975), derived

from the work of Durkheim (1951) and Spady (1970) and combined with findings from other persistence research, has been the most widely tested conceptual model of attrition. Like Spady, Tinto theorized that since each college is a social system, dropout from college is analogous to committing suicide in the larger society (p. 91). As colleges are made up of both academic and social systems, Tinto reasoned that a student who was not integrated into either sphere of college life would have a low level of commitment and would be likely to withdraw. The likelihood of attrition, then, would depend upon the background characteristics, motivations and expectations of the individual student and the degree of congruence between these background attributes and the academic and social subsystems of a particular institution. Tinto's theory of student-institution fit was adapted from Rootman's model of person-role fit.

Tinto's model (see Figure 2) posited that students enter college with a variety of background attributes, including SES; community of residence; high school experiences; academic ability; gender; and ethnicity. These background variables interact with one another to influence a student's goal commitment (motivation to graduate from college) and institutional commitment (motivation to attend a particular institution). Tinto viewed both goal and institutional commitment as stemming from the student's educational expectations. Thus, students with an expectation of

Figure 2.--A Conceptual Schema for Dropout from College



Source: V. Tinto, *Dropout from Higher Education: A Theoretical Synthesis of Recent Research*. Review of Educational Research, 45, 1975, p. 95 (fig. 1).

completing a master's degree or a Ph.D. were expected to have a higher goal commitment than those desiring to earn a bachelor's degree. Similarly, the strength of a student's educational expectations in attending a particular institution (e.g., attending a college to pursue a specific program of study) would cause higher institutional commitment. As goal and institutional commitment increased, the likelihood of attrition was expected to decrease.

Upon enrollment, the student's background characteristics and commitments begin to interact with the academic and social systems of the institution. In the academic sphere, high goal commitment enhances the student's intellectual development and grade performance, which leads to academic integration. In the social realm, institutional commitment helps the student to develop relationships with peers and faculty members, resulting in social integration. The extent of a student's academic and social integration then determine the depth of goal and institutional commitment.

While either low goal commitment or low institutional commitment could lead to dropout, Tinto theorized that a high level of goal commitment could compensate for a low level of institutional commitment, and vice versa. However, while low commitment to the goal of college completion might cause an individual to drop out completely from the system of higher education, low level of commitment to a particular institution would be more likely to result in transfer to

another institution.

Tinto surmised that different patterns of transfer behavior among colleges could be explained by examining the interrelationships between goal and institutional commitment and institutional characteristics, such as quality, size and level (e.g., two-year or four-year). He predicted that students with low to moderate levels of institutional commitment, but high goal commitment, would be likely to transfer when their initial educational expectations were altered by their academic experiences at an institution. Such students, Tinto suggested, would be likely to seek institutions perceived to offer a social or academic environment better suited to their needs. Downward transfer to a less selective college at the same level or to a lower level institution (e.g., four-year to two-year college) would result from students' diminished expectations, whereas upward transfer to a more selective same-level or higher-level institution would result from enhanced expectations (p.97). Similarly, transfers dismissed for academic reasons would be likely to transfer downward; but voluntary transfers looking for a better student-institution fit would transfer in either horizontal or upward directions. These concepts are related to Peng's (1977) findings that the degree of linkage between student ability and institutional selectivity partially explains the transfer process.

Since previous research on both freshmen and transfer students shows that they enter college with unrealistic, idealistic expectations of the institutional environment (Buckley, 1971; Chapman & Baranowski, 1977; Zultowski & Catron, 1976), it could be speculated that upward and downward transfer are fairly common occurrences, especially among multiple transfer students.

Tinto (1982b) stressed that there are two different types of dropout behavior: academic dismissal and voluntary withdrawal. He, like most other researchers, has focused only on the voluntary variety of dropout, wishing to study only those students who make a "conscious, self-motivated decision to leave the institution" (Janasiewicz, 1987, p. 24). Voluntary departures constitute by far the most common variety of dropout, accounting for approximately 85% of student attrition (Noel et al., 1987). Tinto (1975) found that academic dismissals (involuntary withdrawals) have low college grades, whereas students who withdraw voluntarily "generally show both higher grade performance and higher levels of intellectual development than average persisters" (p. 117). Since transfer students are generally classified as voluntary leavers, they could be expected to exhibit the latter characteristics.

Tinto pointed out the importance of defining the term "voluntary dropout" according to the goals and intentions of individual students upon their enrollment in college. Some

students, for example, have no intention of earning a degree, but only desire to take a course or two for personal development or for career enhancement. Many other students enter one institution with the intention of transferring to another college (1982b, p.4). To label these heterogenous groups of students "dropouts" is, according to Tinto, both inaccurate and misleading.

Studies conducted by Hackman and Dysinger (1970), Shirley (1986) and Getzlaf, Sedlacek and Kearney (1984) have tested Tinto's model. Results from these studies support Tinto's emphasis on goal and institutional commitment. Hackman and Dysinger surveyed 1,407 students enrolled in three liberal arts colleges in the midwest and their parents, dividing students in the sample into three categories: persisters, transfers, voluntary withdrawals and academic dismissals. Students in all four categories and their parents were asked a number of questions designed to measure the students' goal and institutional commitment. Measures of academic performance were also used. The results indicated that persistence or withdrawal might be determined by the interaction of commitments and academic ability. Next to students in the persister category, transfers were rated highest in academic competence; however, transfers tended to have moderate to low levels of institutional commitment. Relating these outcomes to the research on student/

institution fit, Hackman and Dysinger suggested that in circumstances where the institution is a poor fit for the student, a high level of commitment becomes important for the student's continued persistence at that institution. Transfers, with their moderate to low levels of institutional commitment, may be more sensitive than native students to incongruencies in their fit with the institution.

Shirley (1986) employed a design similar to Hackman and Dysinger's in their study of 888 students from nonselective, public residential institutions. Using Tinto's model, Shirley classified students as either persisters, transfers or withdrawals after eight semesters at the institutions. He found that transfers could be distinguished from dropouts by their lower levels of social integration.

In a study that compared undergraduate dropouts from Washington State University with persisters, Getzlaf et al. (1984) used Tinto's model to discriminate between students who voluntarily withdrew and transferred and those who dropped out voluntarily from the system of higher education. These researchers found that academic ability and performance contributed significantly to the discrimination between total dropouts and transfers. Dropouts had lower levels of academic ability, weaker academic performance, and were less academically and socially integrated into college life than the transfers. In addition, total dropouts had lower goal commitments (defined by Getzlaf et al. as the

highest level of education sought), but higher institutional commitment than transfers. As expected, the transfers exhibited lower levels of institutional commitment than did students who persisted at Washington State.

A number of other empirical studies have been conducted to determine the validity and reliability of Tinto's model. Two researchers in particular, Ernest Pascarella and Patrick Terenzini, have examined the model's efficacy in a series of studies (Pascarella & Terenzini, 1980, 1983; Stoeker, Pascarella & Wolfe, 1988; Terenzini, Lorang & Pascarella, 1981; Terenzini & Pascarella, 1977). The results of these studies confirmed that academic and social integration are positively and significantly related to persistence, although these variables explained more of the variance in dropout at residential (as opposed to commuter) institutions (Pascarella, Duby & Iverson, 1983). The studies also uniformly confirmed the power of institutional and goal commitment in predicting persistence. Student background variables, however, were not found to be significant predictors of dropout, leading Pascarella and Terenzini (1983) to theorize that the quality of students' experiences once they arrive on campus is a more important predictor of persistence than the characteristics and attitudes they bring with them to college. This has also been shown to be true of transfer students (Holmstrom & Bisconti, 1974;

Knepper, 1989; Volkwein et al., 1986). One on-campus experience that has been found to be significantly related to persistence is informal faculty-student contact, which contributes to students' academic and social integration (Kowalski, 1977; Terenzini & Pascarella, 1977).

Except for the work of Getzlaf et al. (1984), Shirley (1986) and Hackman and Dysinger (1970), the only studies found that examined transfer student populations within the context of Tinto's model were conducted by Desler (1985) and Nora and Rendon (1988). Desler examined the persistence/withdrawal behaviors of 623 first-time transfers to the University of Illinois at Chicago by surveying the transfers and analyzing the data using multiple regression and path analysis. The findings indicated that Tinto's model, and particularly its emphasis on academic and social integration, was applicable to transfer student populations in urban university settings. Desler discovered that academic integration was a much more important determinant of transfer student persistence than social integration, findings highly similar to those of Shirley (1986). The influence of most student background characteristics on transfer persistence was found by Desler to be indirect; however, male transfers were more likely to persist than females.

Nora and Rendon (1988) used the Tinto model to test their hypothesis that "high levels of congruency between students and their environments lead to high levels of

student predisposition to transfer" (p. 8). These researchers surveyed a stratified random sample of community college students, and found that the following factors had a significant impact on students' predisposition to transfer to a four-year institution: initial goal and institutional commitment; academic and social integration; and high level of parental educational attainment.

While Tinto's model has proven useful for the study of attrition from single institutions, several criticisms have been levelled at it. Bean (1982b) found the model to be conceptually flawed in that goal and institutional commitments appear twice, so that it is unclear how these two sets of variables interact with one another and with other variables in determining the dropout decision. The Tinto model also failed to consider the impact of external, environmental factors on attrition, other than indirectly through their impact on a student's goal commitments. The most significant criticisms of the Tinto model have come from Tinto himself. These include the model's insufficient attention to the role of finances in dropout decisions; an insensitivity to forms of dropout that occur in the two-year sector; and a failure to distinguish between group-specific differences in rates of dropout by ethnicity, gender and SES background. Most significantly, since the model focuses on attrition from single institutions, it "does not adequately

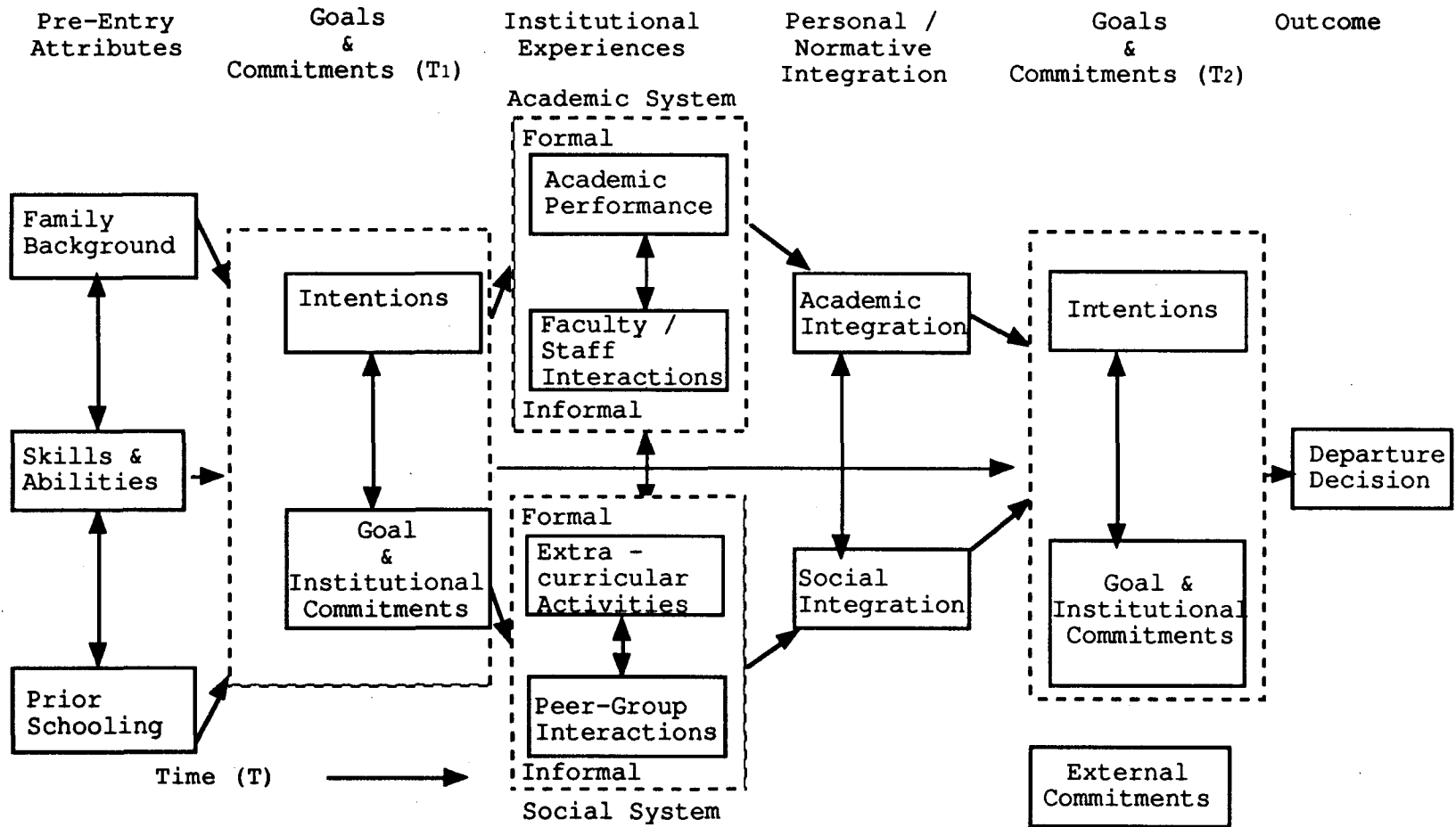
distinguish between those behaviors that lead to institutional transfer and those that result in permanent withdrawal from higher education (1982a, p. 689). Tinto suggested that the inclusion of a financial variable indicating the relative costs of different institutions would help in differentiating transfers from permanent dropouts.

In 1987, Tinto published a slightly revised version of his model of institutional departure (see Figure 3). Perhaps influenced by Bean's (1982b) model, which includes an intent to leave variable, Tinto's 1987 model added the variable of student intentions, as distinguished from commitments. Tinto stated:

Intentions or goals specify both the level and type of education and occupation desired by the individual. Commitments indicate the degree to which individuals are committed both to the attainment of those goals (goal commitment) and to the institution into which they gain entry (institutional commitment) (1987, p.115).

Tinto also added an external commitments variable to the new model, which interacts with student intentions and commitments and immediately precedes departure from the institution. This addition may have been influenced by Bean's inclusion of environmental variables in his 1982b model. Finally, in the 1987 version Tinto divided students' experiences in the social and academic systems of college into formal and informal categories.

Figure 3.--A Model of Institutional Departure



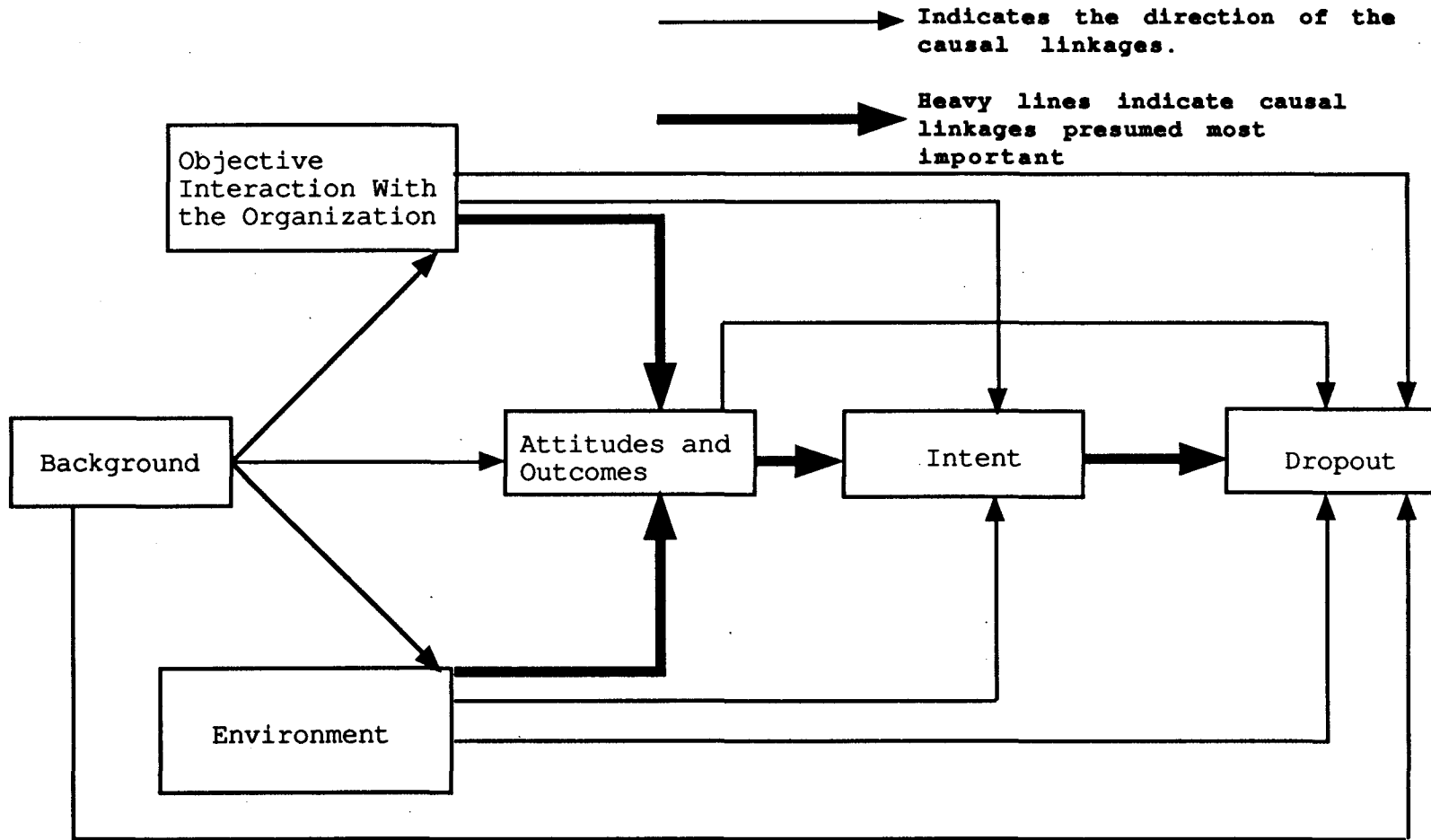
Source: V. Tinto, Leaving College: Rethinking the Causes and Cures of Student Attrition. Chicago: The University of Chicago Press, 1987, p. 114 (fig. 4.1).

Bean's Synthetic Model

Noting that previous models had failed to include the potential influence of external factors on attrition, Bean (1982b) created a model that incorporated a number of environmental variables, including the opportunity to transfer. Bean called this a "synthetic model," since it consisted of a synthesis of previous research in the fields of education, sociology and psychology. The purposes of this model were to determine the probability that a student would drop out; to identify some of the reasons for dropout; and to show how these variables were related in a causal sequence. The synthetic model contains four categories of variables: student background variables; organizational (institutional) variables; environmental variables; and attitudinal (outcome) variables (see Figure 4). Bean theorized that each of these variables would directly or indirectly affect a student's intent to leave an institution, which he had previously found to be significantly and directly related to dropout (Bean, 1980, 1981). The importance of intentions in determining behavior had been established by Fishbein and Ajzen (1975).

Bean's model was intended to provide a simple, workable framework for designing attrition studies at individual institutions. Moreover, Bean (1982b) stated that the model could be easily adapted to a particular institution's needs

Figure 4.--A Synthetic Causal Model of Student Attrition



Source: J. P. Bean, Conceptual models of Student Attrition: How Theory Can Help the Institutional Researcher. In E. T. Pascarella (Ed.), Studying Student Attrition (San Francisco: Jossey - Bass, Inc. Publishers, 1982), p. 26 (Fig. 3).

by adding or deleting variables. He hypothesized that the relationship between categories of variables, rather than between specific variables, would determine attrition or persistence (Metzner, 1984).

In the synthetic model, background variables are those that students bring with them to college (see Table 1). While these attributes have not been found to directly influence dropout behavior (Bean, 1980, 1981; Pascarella & Terenzini, 1983), Bean included them in his model to clarify the effects of the organizational and environmental variables. He also included specific background attributes, such as sex, age, ethnicity, and transfer/nontransfer as control variables (Bean, 1982b). Many of the background variables used in the model were derived from studies of status attainment (e.g., Sewell & Hauser, 1975), which indicated that certain individual attributes affect postsecondary educational attainment.

Bean (1982b) defined organizational variables as "indicators of the student's interaction with the organization" (p. 26). These attributes are particularly important from the standpoint of individual institutions, in that many of them are "fluid characteristics" (Hossler, 1984) which can be altered. In defining these variables, Bean drew from the work of Durkheim (1951), Rootman (1972), Spady (1970) and Tinto (1975) regarding students' social and academic integration into college life. Bean included such integration

**Table 1. --Variables Classified for Use in the Synthetic Model
of Student Attrition**

Background Variables

*Mother's Education
 *Father's Education
 *High School Grades
 *Achievement Test Scores
 High School Size
 Hometown Size
 College Preparatory Curriculum
 Distance Home
 State Resident
 Head of Household's Occupation
 Parents' Income
 Religion

Environmental Variables

*Opportunity (transfer)
 Opportunity (job)
 *Family Approval (institution)
 Family Approval (major)
 Family Responsibilities
 *Likelihood of Marrying
 Difficulty of Financing School
 Military Draft
 Economic Indicators (CPI Index,
 Employment Rate)
 Social Fads

Attitude and Outcome Variables

*Practical Value
 Institutional Quality
 Self-Development
 Satisfaction
 *Boredom
 *Confidence
 Adjustment
 *Certainty of Choice
 Fairness of Treatment
 Competitiveness of Academic
 Program
 *Loyalty
 *Major Certainty
 Occupational Certainty
 *Educational Goals
 *Absenteeism

Variables for Statistical Control

Age
 Ethnicity
 Year in School
 Full-time/Part-time Status
 Transfer/Non-transfer
 U.S. Citizenship
 Sex

Organizational Variables

Regulation of Life at School
 Repetitiveness of School
 Communication of Policies
 *Close Friends
 Helpfulness of Advisor
 *Informal Contact with Faculty
 *Grades
 Participation in Decision Making
 *Memberships in Campus
 Organizations
 *Curriculum (availability of
 preferred courses)
 Housing
 Job
 University Services Used
 Peer Culture
 Leisure Activities
 Financial Aid
 *Discussed Leaving with Outsiders
 *Discussed Leaving with Insiders

Intentions

*Intent to Leave

*Presumed to have a greater influence on dropout than other variables
 in the category.

Source: J. P. Bean, *Conceptual Models of Student Attrition: How Theory
 Can Help the Institutional Researcher*. In E. T. Pascarella (Ed.),
Studying Student Attrition (San Francisco: Jossey-Bass Inc. Publishers,
 1982), P. 27 (Table 1).

variables as informal contact with faculty; memberships in campus organizations; availability of preferred courses; and relationships with close friends. In addition, research done by Price (1977) on employee turnover in work organizations was incorporated into this category as the variables grades (a surrogate measure for pay in work settings); participation in decision making; communication; and repetitiveness. Spady's (1970) findings regarding the importance of discussing dropping out with others were also incorporated into the model as organizational variables.

As mentioned earlier, the environmental variables in particular set Bean's model apart from the others which have been presented. Environmental variables cannot be controlled by the institution, and for that reason had not been previously studied (Bean, 1978, 1980, 1981). As Bean (1982b) stated, "Whereas most research is concentrated on what could push a student out of an institution, these variables indicate ways in which a student might be pulled from the institution" (p. 28). The most important of these variables to the present study is opportunity to transfer.

Bean assumed that there would be no reciprocal relationship between organizational and environmental variables in the model, and that these sets of variables would operate independently of one another throughout the student's enrollment in college. However, both sets of variables are assumed to influence the category of attitudinal/outcome

variables (Metzner, 1984).

The fourth category is comprised of attitudinal/outcome variables, which represent the student's practical and emotional evaluation of the educational experience in terms of quality; level of satisfaction; certainty of choice in attending the institution; loyalty (similar to institutional commitment as defined by Tinto); educational goals; and the practical value of the education received. In Bean's model, a direct path is drawn from student background attributes to outcomes/attitudes, indicating the impact of an individual's past experiences on her/his present attitudes. The final variable category, labeled "intent to leave" and derived from the work of Fishbein and Ajzen (1975) was hypothesized by Bean (1982b) to be the most powerful predictor of dropout.

Bean viewed attrition as a sequential, cumulative process, and each class of variables in his model was posited to have a progressively greater impact on intent to leave, which directly affects the dropout decision (Metzner, 1984). Thus, background variables were expected to have little direct impact on intent to leave, while organizational and environmental factors were predicted to have a moderate impact. However, a few organizational and environmental variables, such as grades and opportunity to transfer, were predicted to directly affect intent to leave. The

attitudinal/outcome variables were hypothesized to absorb the effects of the organizational and environmental categories and to be the best predictors of intent to leave the institution, which in turn would directly impact dropout.

Bean tested different versions of his synthetic model at residential institutions and with traditional age student populations (Bean, 1980, 1982a, 1983). The findings generally support the efficacy of the model and suggest that it is a useful framework for examining student attrition. In a 1980 study of freshmen at a major midwestern university, Bean found that institutional commitment (an outcome/attitudinal variable) was the most powerful predictor of attrition for male and female students. Students' opportunity to transfer (an environmental variable) exerted a significant effect on institutional commitment for both sexes. In 1982(a), Bean studied a similar student population, eliminating students from the sample who had transferred from other institutions and dividing the sample into groups of high and low confidence men and women. Multiple regression and path analysis were used to analyze the data. Results confirmed Bean's hypothesis that intent to leave was the best predictor of dropout, with grades ranking second and opportunity to transfer ranking third in total causal effects. Although extremely important in predicting dropout for both sexes, transfer opportunities were more important for women than men. In addition to predicting dropout, opportunity to

transfer exhibited consistent effects on the attitudinal variables as well as on intent to leave. Finally, opportunity to transfer was negatively related to certainty of students' college choice for both groups, and had a consistent negative relationship with institutional loyalty for three of the four groups.

The external variable opportunity to transfer also figured prominently in research conducted on nontraditional student populations that Bean conducted with Barbara Metzner (1985, 1987). These researchers defined the term "nontraditional student" as part-time, older than 24, and commuter (nonresidential). Bean and Metzner (1985) proposed a conceptual model of attrition which emphasized the prominent effects of the external environment on nontraditional students, while it minimized the importance of social integration variables. These researchers speculated that "measures frequently correlated with persistence as reported in the literature about traditional students may be correlated with attrition in the case of dropouts who transfer, thus producing a transfer effect, defined as a reversal of the expected relationship between a variable and attrition due to students dropping out to transfer to another institution" (p. 507). They surmised that this transfer effect might produce surprising results in studies of institutions with high transfer rates. A type of transfer effect was evident in

Tinto's (1975) findings that students' academic aptitude negatively impacted persistence. Tinto suggested that this effect was either due to horizontal transfer or to upward transfer to a more selective institution. The transfer effect can also be seen in Pascarella et al.'s (1983) study, which indicated that commuter students with high social integration were likely to transfer to an institution with greater social opportunities.

Metzner and Bean (1987) tested their model of nontraditional student attrition on a population of 624 part-time, commuter freshmen at a midwestern urban university, using multiple regression analysis. Results validated the model and indicated that opportunity to transfer was positively associated with nontraditional students' intent to leave the university, as were level of academic performance, level of institutional commitment, utility of the practical outcome of education and satisfaction. As expected, social integration variables played an unimportant role in attrition for these students.

Bean's synthetic model was tested on a random sample of community college transfer students to a large, urban university by Johnson (1980). Johnson surveyed these students using questions derived from several valid, reliable attitude scales, and analyzed the data using LISREL VI (Joreskog & Sorbom, 1984). Johnson's findings fully supported Bean's emphasis on the intent to leave variable as a

major predictor of attrition from the university for community college transfers. Academic performance (students' grade point averages) also had a positive effect on the transfers' persistence at the university. In addition, Johnson found that transfers' assessment of the practical value of their education and academic satisfaction with the university were positively associated with their intent to persist, while high levels of family, job and financial pressure were negatively associated with intent to persist. Practical value was related to academic satisfaction, and academic integration was associated with academic performance, leading Johnson to conclude that the academic system of a four-year institution is much more important to transfer student persistence than the social system. Desler (1985), who tested Tinto's model on students who transferred to the University of Illinois at Chicago, also found the academic system to be most influential in the persistence behaviors of transfer students.

Bean's model and its derivatives are important in that they include variables that have largely been overlooked in other studies of attrition. Bean drew from a wide variety of disciplines in constructing his model, thus avoiding the heavy influence of social integration theory that permeates the models of Tinto and Spady (Metzner, 1984). The most applicable of Bean's variables to the examination of

transfer student behavior are the environmental variables, including the opportunity to transfer; and Bean's identification of the intent to leave variable as the direct precursor to attrition. While the ordering of the variables which precede attrition is unclear in the Tinto and Spady models, Bean clearly specified a one-way, causal sequencing of the variables in his model (Bean, 1983).

One problem with Bean's model is that the intent to leave variable, while a powerful statistical predictor of attrition, is not very useful in explaining the phenomenon of dropout (Bean, 1982a). In addition, like the Spady and Tinto models, Bean's looks only at attrition in single institutions, not as an interinstitutional or systemwide phenomenon. While his inclusion of the opportunity to transfer variable at least recognizes the difference between transfer and total dropout behaviors, this institutional bias causes Bean's model to fail, as the others have, to differentiate transfer from systemwide attrition.

The following sections will examine more thoroughly the student background characteristics and institutional attributes that are included in the models just presented. All of these characteristics have been presented in previous sections as related to the transfer and college choice processes.

Student Background Characteristics

Although student attributes account for only a small portion of the variance in most tests of the attrition models (Bean, 1980, 1982a; Gilbert & Gomme, 1986; Pascarella & Terenzini, 1983), these variables have been shown to affect persistence indirectly, through students' levels of satisfaction; social and academic integration; and educational commitment (Munro, 1981; Pascarella & Terenzini, 1983; Tinto, 1982b, 1987; Williams & Stage, 1989). Recent research has identified a number of significant differences in the frequency and variety of withdrawal behaviors according to student characteristics and institutional type (Tinto, 1987). Moreover, many of these attributes correspond with those found important in studies of college choice and transfer behavior.

The most influential student background traits which are related to persistence are **high parental education level** (Astin, 1975; Fetters, 1977; Hossler, 1984; Manski & Wise, 1983; Nora & Rendon, 1988); **parental encouragement** (Hossler, 1984; Lenning, 1982; Tinto, 1975; Williams & Stage, 1989); **high socioeconomic status** (Fetters, 1977; Lenning, 1982; Manski & Wise, 1983; Porter, 1989; Tinto, 1975, 1987; Velez, 1985); **high levels of academic ability and achievement**, as measured by high school grades; rank in high school graduating class; and admissions test scores (Astin, 1975; Beal &

Noel, 1980; Hossler, 1984; Lenning, 1982; Manski & Wise, 1983; Porter, 1989); **quality of high school and high school academic track** (Beal & Noel, 1980; Lenning, 1982).

As Astin (1975) pointed out, the relationship between family socioeconomic status and attrition may be mediated by parental education level, student academic ability and financial concerns. In effect, the greater likelihood that a low-SES student has of dropping out can be attributed to lower levels of ability, motivation and parental education, and greater concern about finances (p. 35).

Students' age and gender are generally used as statistical control variables in studies of student attrition, as these traits have generally been shown to be unrelated to persistence when academic ability, SES, and motivation are controlled (Bean, 1982b; Hossler, 1984; Lenning, 1982). Students' ethnicity, while also frequently used as a control variable (Bean, 1982b; Pascarella & Terenzini, 1979), has been found to be related to persistence in that minority students are more likely to drop out than whites (Astin, 1975; Hossler, 1984). The higher departure rates of blacks and American Indians tend to disappear when SES, ability and motivation are controlled. However, irregardless of controls used, Hispanics tend to drop out more frequently, and Jews and Asians less frequently, than other students (Lenning, 1982; Lenning et al., 1980; Tinto, 1987).

Several personality and attitudinal characteristics

have been attributed to voluntary dropouts, including high creativity, commitment, ability, and SES levels (Lenning, 1982; Tinto, 1982a, 1987). These attributes have also been linked to students' likelihood of transferring (Tinto, 1982a; Wisner, 1984). Voluntary withdrawals, like transfer students, tend to resemble persisters on most measures of personality (Desler, 1985; Tinto, 1975, 1987). Other attributes of students who withdraw from college voluntarily are nonconformity; individuality; resentment of institutional regulations; and lack of goal direction (Cope & Hannah, 1975; Hossler, 1984; Zaccaria & Creaser, 1971). It should be noted, however, that personality and value variables have complex relationships with attrition and with other variables, resulting in inconsistent research findings (Lenning, 1982).

Student Aspirations, Intentions and Motivations

Tinto (1975) posited that "once an individual's ability is taken into account, it is his (sic) commitment to the goal of college completion that is most influential in determining college persistence" (p. 102). Tinto maintained that the level of commitment (which Bean included in his model as loyalty) could be measured by a student's educational plans, career expectations and educational expectations. The direct relationship between commitment, or

loyalty, and persistence is demonstrated in both Bean's and Tinto's models, and has been corroborated through the research of Beal and Noel (1980) and Lenning et al. (1980). Lenning et al. stressed that commitment becomes especially crucial to persistence when student-institutional fit is poor (p. 17). Transfer students, as previously discussed, tend to demonstrate high levels of goal commitment (motivation to earn a college degree), but low amounts of institutional commitment (desire to attend a specific institution) (Getzlaf et al., 1984; Hackman & Dysinger, 1970; Tinto, 1987).

Persistence is linked to the level of educational aspirations and goals. Students who plan to earn a doctorate or professional degree are most likely to persist as undergraduates, while those aspiring to a bachelor's degree are more likely to drop out (Astin, 1975; Beal & Noel, 1980; Bean, 1982b; Lenning, 1982). Student expectations of completing a degree at a specific institution are powerful predictors of persistence (Astin, 1975; Lenning, 1982), while intent to withdraw or transfer, particularly at the time of initial enrollment, is positively related to attrition (Bean, 1982b; Lenning et al., 1980; Metzner & Bean, 1987; Tinto, 1987).

Institutional Characteristics

A number of institutional attributes are related to

student persistence, and many of these same characteristics are also important in the college choice process. These include institutional quality or selectivity; type; control; size; cost; and financial aid.

Institutional Quality

Just as students look for perceived academic quality, prestige and selectivity in choosing an institution, so is persistence higher at colleges and universities possessing these traits (Astin, 1975; Beal & Noel, 1980; Feters, 1977; Kamens, 1971; Lenning, 1982). Institutional selectivity generally refers to the quality of a college's student body, as measured by standardized tests such as the ACT or SAT (Astin, 1975; Tinto, 1987). Astin pointed out that selectivity is "regarded by many not only as an index of academic quality, but also as an indicator of prestige or position in the institutional hierarchy" (1975, p. 120). Astin's research was based on a nationally representative sample of 243,156 students who participated in the Cooperative Institute Research Program (CIRP) as freshmen and who were surveyed again four years later. Astin found that the percentages of dropouts in his study closely paralleled institutional selectivity levels. However, when two-year colleges were removed from the sample, the correlation between selectivity and persistence was lowered. Astin suggested that

this was due to the fact that almost all two-year colleges are in the low selectivity category, and also tend to have much higher dropout rates than four-year institutions.

Kamens (1971) surveyed 2,405 freshmen from a nationally representative sample of 99 higher education institutions and collected data on dropout rates and student ability from these institutions. He found that students at higher quality colleges and universities were more likely to persist and graduate, regardless of their ability, achievement and aspiration levels. Lenning et al. (1980) posited that the higher retention rates of more selective colleges result from students' perception that the dissatisfactions experienced at these institutions are outweighed by the benefits of receiving a prestigious degree (and, by implication, greater career benefits).

Institutional Type and Control

A number of studies have found that attrition rates are dramatically higher at two-year institutions than they are at four-year colleges and universities (Astin, 1975; Eagle & Schmidt, 1990; Fetters, 1977; Lenning, 1982; Tinto, 1987). As Tinto (1987) suggested, however, not only do students enter two-year colleges with lower academic ability, goal and commitment levels than students entering four-year institutions, but many of these students consider the community college as a "stepping stone" on the way to a

four-year institution.

Institutional control is related to persistence in that, in the aggregate, private colleges and universities have lower rates of departure than public institutions (Beal & Noel, 1980; Cope & Hannah, 1975; Fetters, 1977; Lenning, 1982; Porter, 1989; Tinto, 1987; Velez, 1985). In his analysis of High School and Beyond data, derived from a national survey of 28,000 high school seniors by the U.S. Department of Education, Porter (1989) found that students enrolled in private institutions had higher persistence rates and graduated in less time than those enrolled in the public sector. In addition, completion rates for all ethnic groups were better in the independent sector. Sedlacek and Webster (1978) found that private institutions retained minority students in greater numbers than public institutions over an eight-year period studied.

In a recent U.S. Department of Education study, Knepper (1989) used NLS data from the high school class of 1972 and its related Postsecondary Transcript Study of 1984. Knepper reported that 62% of students enrolled in private colleges, as compared to 58% in public institutions, were successful in completing the baccalaureate degree.

Astin (1975), Tinto (1987) and Manski and Wise (1983) theorized that some of these differences in completion rates between public and private institutions are due to the

greater self-selection process and recruitment of more academically talented, higher SES students into the private sector.

Finally, a positive relationship has been discovered between the religious affiliation of a college and persistence (Astin, 1975; Beal & Noel, 1980; Lenning, 1982). More specifically, Catholic colleges and universities appear to have higher retention rates than Protestant institutions (Astin, 1975; Lenning, 1982). In addition, single-sex, as opposed to coeducational, institutions appear to have higher persistence rates (Astin, 1975).

Institutional Size

Institutional size is related to attrition and selectivity. In the private sector, the more selective colleges and universities tend to be small, while in the public sector they are generally large (Tinto, 1987). Among private institutions, therefore, small size is positively related to persistence, while in the public sector the reverse tends to be true (Tinto, 1987). Rates of departure overall are higher in the smallest institutions, or those with enrollments of 500 or less (Astin, 1975; Tinto, 1987). Kamens (1971), using nationally representative data and controlling for student characteristics, found that larger institutions had lower dropout rates. He attributed this to the greater control large universities have over students'

commitments due to these institutions' greater status-allocating capabilities. Kamens' findings are related to those of Peng (1977), who posited that larger institutions exert greater "holding power" over transfer students due to the fact that they offer a wider variety of social and academic opportunities than small colleges.

Other institutional attributes that appear to be positively related to persistence are having a residential campus (Astin, 1975; Beal & Noel, 1980; Lenning, 1982) and the availability and quality of student services such as academic advising, counseling and orientation (Beal & Noel, 1980; Lenning, 1982).

Cost and Financial Aid

While some studies have found that higher cost institutions have higher attrition rates than others (Beal & Noel, 1980; Lenning et al., 1980), Astin (1975) discovered that this relationship disappeared when other institutional attributes such as selectivity and size were controlled. An article recently published by Cabrera, Stampen and Hansen (1990), however, suggests that students' ability to pay for their college education directly affects the decision to persist, and influences student goal and institutional commitments. According to Cabrera et al., students who are dissatisfied with the cost of attending an institution will

be less committed to graduating from that institution, and are likely to withdraw or transfer. These findings complement those of Tinto (1987), who theorized that financial considerations could induce students initially to enter their second or third-choice institution (often a low-cost community college) instead of a preferred private or more expensive college or university. The net effect of this decision, Tinto reasoned, would be withdrawal or transfer to the originally preferred institution (p. 81). Tinto also hypothesized that students with high goal commitment to earn a college degree would be likely to transfer to a less expensive public institution when cost became an issue rather than drop out of higher education altogether. Finally, while students who are overly concerned about college cost appear more likely to withdraw than others (Beal & Noel, 1980), this finding may be mitigated by the fact that financial pressures are considered a socially acceptable reason for withdrawal (Cope & Hannah, 1975; Lenning, 1982).

As they are with cost, findings regarding the impact of financial aid on attrition are mixed. The form of aid a student receives does appear to influence persistence, however. Receipt of aid in the form of scholarships or grants, as opposed to loans, appears to have a small relationship with persistence (Astin, 1975; Beal & Noel, 1980; Jensen, 1981; Porter, 1989). Astin (1975) found that college work/study had the most positive, consistent impact on

persistence; that grants had a moderate effect and loans a negative effect. He also determined that spousal and/or parental financial support generally enhanced persistence. Iwai and Churchill (1982) found that persisters tended to rely on more sources of financial support than students who withdrew. This finding supports research by Cope and Hannah (1975) and Noel et al. (1987) which suggested that financial need is linked to college access and choice to a greater extent than it is to persistence. Noel et al. theorized that if other factors are positive, students will find ways to finance their college educations (p. 9).

Interaction and Attitudinal Variables

As seen in the models of Spady, Bean and Tinto, some student background traits interact with institutional attributes to influence attrition. One of the most significant of these is the extent to which student expectations are met by institutional realities (Lenning, 1982). Student expectation plays a major role in the transfer and college choice processes, in addition to being a significant influence on persistence. As transfer students are likely to enter college with exaggerated, unrealistic expectations (Buckley, 1971; Zultowski & Catron, 1976), it is not surprising that when these expectations are not met they withdraw and move to another institution.

A number of interaction variables have been shown to enhance students' social integration, thus impacting persistence. These variables are informal contact with peers; involvement in extracurricular activities; and membership in campus organizations (Bean, 1982b; Lenning, 1982; Spady, 1970; Tinto, 1975, 1987). In his longitudinal, multi-institutional study, Astin (1975) discovered that students who attended institutions in which many other students of similar social backgrounds were enrolled (e.g., students of similar religion, ethnicity, and home town size) were more likely to persist.

Interaction variables that influence persistence through the academic system of the institution include availability of preferred courses in the curriculum (Beal & Noel, 1980; Bean, 1982b); involvement in academic programs (e.g., honors programs, tutoring and peer counseling) (Astin, 1975; Lenning, 1982); informal contact with faculty and staff (Bean, 1982b; Lenning, 1982; Pascarella & Terenzini, 1983; Spady, 1970; Tinto, 1987); attending college full-time as opposed to part-time (Fetters, 1977); and grade performance (Bean, 1982b; Tinto, 1975). It is not surprising that a student's college grade point average, particularly for the first semester of enrollment, is a powerful predictor of persistence (Beal & Noel, 1980; Lenning, 1982). Zaccaria and Creaser (1971), in their study of factors related to persistence at the University of

Illinois at Chicago, found that those students who withdrew in good academic standing often transferred to other institutions.

In studies of transfer students, it has been found that the academic system of the institution has a much more significant influence on persistence than the social system (Desler, 1985; Johnson, 1987). In her study of community college transfer students, Johnson found that the transfers' perception of their education as high quality and useful in self-development and future employment, combined with their first semester grade point average, heavily influenced their persistence.

It is clear that student involvement with the institution, whether in the academic or social realm, is crucial to persistence. If a student has at least one relationship with a "significant other" on campus in either the social or academic system, she/he will become more integrated into the campus environment and will be more likely to persist (Astin, 1975; Bean, 1983; Husband, 1976; Lenning, 1982; Tinto, 1975, 1987).

External/Environmental Factors

Environmental variables are those over which institutions can exert little or no control. These factors are featured in Bean's model as impacting student outcomes and

attitudes; intent to leave the institution; and, finally, dropout. External variables include the opportunity to transfer or get a job; approval and support of family or spouse; likelihood of marriage; and family responsibilities (Bean, 1982b). Although he didn't include them in his model, Tinto viewed external events as important in that they compete for the student's attention with college attendance, particularly when the student is living and working off campus, attending urban institutions or enrolled on a part-time basis (Tinto, 1987). Tinto posited that the student's evaluation of the relative costs and benefits of attending a particular institution can change when the rewards of social and/or academic integration are lacking. This situation can cause the student to transfer to an institution that she/he perceives has more to offer academically or socially.

Whereas working off-campus on a part-time basis has been found to enhance persistence, full-time employment, especially when it is off-campus, tends to increase attrition (Astin, 1975; Beal & Noel, 1980; Fetters, 1977; Lenning et al., 1980). However, Desler (1985) found in her study of transfer commuter students to the University of Illinois at Chicago that the more hours a student worked per week, the greater the likelihood that the student would persist one year later. Clearly, the impact of external factors on persistence is complex.

Students' Self-Reported Reasons for Withdrawing and Transferring

Student self-reports, generally obtained through survey responses or personal interviews, have been found to be moderately reflective of reality (Astin, 1975). Peng (1977) and Fetters (1977) warned that the validity of post hoc explanations provided by students for transferring or withdrawing might be questionable due to students' tendency to rationalize their behavior, as well as to the complex nature of the attrition process. According to Spady (1970), students tend to give socially acceptable reasons for leaving, downplaying academic difficulties, motivational problems and indecision and focusing instead on financial matters. However, student self-reports are still considered useful in that they suggest some of the factors that may influence transfer and attrition behaviors. Moreover, the reasons provided by students for withdrawing from college tend to mirror the institutional, interaction and environmental variables presented earlier.

In general, self-reports of students who withdraw from the system of higher education differ from those of students who transfer. Transfers appear to focus more on institutional characteristics, particularly concerning the academic system of the college, while total withdrawals tend to cite motivational, attitudinal or environmental problems.

In Fetters' (1977) study, based on the NLS of the Class of 1972, voluntary (nonacademic) withdrawals reported that they left college because of good job offers; a desire to get practical experience; marriage; or financial difficulties. A large number of these withdrawals also indicated that they were uncertain of their goals. Unclear educational and career goals were also reported by students who withdrew voluntarily in Higginson's (1985) study of attrition at Southern Illinois University - Carbondale. Similarly, indecision concerning career choice; the opportunity for full-time employment; dissatisfaction with personal achievement and lack of interest in their program of study were the reasons most frequently cited by students leaving a large public university (Brigman et al., 1982). Kowalski (1977) compared random samples of persisting and nonpersisting students at a major midwestern university, and reported that students who withdrew expressed a general dissatisfaction with the college atmosphere, were experiencing conflicts in balancing their work and studies, and had financial problems.

In contrast with students who withdraw, students who transfer report more practical, institution-specific reasons for leaving, often focusing on the academic system of a college or university. In Kowalski's (1977) study, transfers reported a desire to attend a smaller institution, one

with a better academic program or one that offered a specific program that was unavailable at their current institution. Richardson and Bender (1987) found that community college transfers to urban universities desired better academic programs and higher quality institutions; closer proximity to home, lower tuition and a greater relationship between their studies and career objectives. Wisner (1984) discovered that transfers from the University of Michigan-Flint had preferences identical to those found by Richardson and Bender. In addition, these transfers expressed a desire to attend an institution that would better enhance their opportunities to get into graduate or professional programs.

In the Brigman et al. (1982) study, transfers decided to leave a large, public university to pursue a course of study not offered there, and also expressed dissatisfaction with the adequacy of academic advising and teaching; grading practices; and class size. Astin, Korn and Green (1987) used CIRP data from college freshmen along with two- and four-year followup surveys to gain a longitudinal perspective on attrition. These researchers found that students transferred from private colleges to attend institutions with better academic reputations; a wider variety of course offerings; and a better social life.

In his longitudinal study of transfer behavior, based on NLS data from the class of 1972, Peng (1977) classified transfers as horizontal (two-year to two-year or four-year

to four-year institution); vertical (two-year to four-year) or reverse (four-year to two-year). He discovered that students' self-reported reasons for transferring differed among these groups. For vertical transfers, the major reasons for transferring were to gain better career opportunities and to maximize intellectual and personal development. Other reasons were to pursue a program of study not offered at the current institution; to attend a larger institution; and to have more social activities available. In the reverse transfer category, students reported transferring to attend an institution that was less expensive, closer to home, or "where I felt more like I belonged" (p. 39). Reasons for transferring were very similar for both groups of horizontal transfers. These students sought to maximize their career opportunities along with their academic and personal development. In addition, large numbers of horizontal transfers reported that they had become interested in an academic program not available at their current institution; that they wanted to attend college closer to home; and that they had chosen to enroll at a college or university where they felt they fit in better. According to Peng, the wide variety of reasons given by transfers, and particularly horizontal transfers, for leaving their present institution suggests that these students were not well suited to their original college choices.

In his study of freshmen and sophomores who voluntarily withdrew from Florida State University, Janasiewicz (1987) found that the majority of students left Florida State to enroll at another institution. Students who were doing poorly in their academic work tended to transfer to two-year colleges, as did many of the students who left for financial reasons (and who also tended to have low grade point averages). On the other hand, students who were doing well academically tended to transfer out of Florida State for specific academic or career reasons, most frequently moving to highly selective institutions or to those offering academic programs not available at Florida State.

Transfer as a Correlate of Attrition

As discussed earlier, transfer behavior is attrition from a particular institution, not from the system of higher education. Many studies have examined the persistence and graduation rates of students who transfer, frequently comparing these rates with those of native students. Findings have differed dramatically, with many researchers concluding that graduation rates for transfers are much lower, and attrition much higher, than for native students (Anderson, 1983, 1984; Astin, 1975; Desler, 1985; Johnson, 1987; Lindsay, Marks & Hamel, 1966; Newlon & Gaither, 1980), and others finding the opposite result (Alba & Lavin, 1981;

Carroll, 1989; Holahan et al., 1983; Holmstrom & Bisconti, 1974; Knepper, 1989). Astin (1975) estimated that for students who initially enrolled in four-year institutions, transferring increased the likelihood of attrition by 10% to 15%. He found that this negative outcome was most pronounced among students who had transferred out of private, four-year institutions; and among students who transferred from public colleges and universities in the northeast and midwest, regions which he found were "unreceptive or otherwise ill-equipped to accomodate transfers" (p. 120). In a study of the freshman class at the University of Wisconsin-Madison, Campbell (1980) found that students who transferred out of that institution reduced their chances of graduation by 25% for men and 15% for women. He surmised that this was partly due to students' credit loss upon transferring.

Three studies conducted at the University of Illinois at Chicago (UIC) have reached particularly disturbing conclusions concerning transfer student persistence. Desler (1985) found that although transfers had comprised at least 40% of enrollments at UIC since 1979, only 38% of community college transfers and 39% of four-year college transfers were retained two years after transfer, compared to 76% for native freshmen. Anderson conducted two identical studies comparing native sophomores and juniors with transfers to the University of Illinois at Chicago in 1983 and 1984, and reached conclusions similar to Desler's. For the fall 1984

group, 43% of community college and four-year college transfers graduated or maintained continuous enrollment at the institution, compared to 80% for native sophomores and juniors. Six percent of the community college transfers and 10% of four-year college transfers graduated within two years following transfer, compared to 38% of the native students. Moreover, by the end of the second year after transfer, 29% of community college transfers and 22% of four-year college transfers had been dropped for academic reasons or had left while on academic probation. The results of Anderson's 1983 study are very similar.

According to Anderson, transfers were placed at a disadvantage in these studies, since many of them had entered the institution with substantially fewer credits than had been accumulated by native sophomores and juniors. Anderson noted that the four-year transfers achieved better grade point averages than the natives, but that they did not persist and graduate at a comparable rate. Moreover, the retention and graduation rates of the transfers were found to closely parallel those of native freshmen at the institution, leading Anderson to conclude that "achievement and retention may be affected more by variables other than whether one is a transfer or native student at the time of first entry" (p. 9).

While the findings of these studies were fairly

negative concerning persistence and graduation of transfer students, it must be stressed that they were single institution studies and are not necessarily generalizable. Research conducted on national or state-wide levels has generally reached different, and more positive, conclusions. Carroll (1989), using national, longitudinal High School and Beyond data for 1980 high school graduates, found that transferring was actually beneficial for these students. For those transfers who went directly from high school to college and transferred without stopping out, Carroll found that the likelihood of degree attainment was increased. Knepper (1989) had similar findings using NLS of 1972 data, along with the related Educational Transcript Study of 1984. Knepper found that while transferring among colleges caused students to take longer to complete their degrees (59 months on average, compared to 51 months for nontransfers), this effect did not inhibit degree completion. Over 60% of students transferring among four-year colleges received a B.A. within the 12-year time span covered by the study, closely paralleling the number of students who persisted at their original institution. In addition, students who transferred among four-year institutions had a 30% to 70% greater likelihood of graduation, depending upon the type of transfer. Students who transferred from two-year colleges, however, had a 15% lower likelihood of receiving the B.A. degree.

In another national, longitudinal study, Holmstrom and Bisconti (1974) used American Council on Education data to study transfers from two-year to four-year institutions. They found that four years after entering the two-year college, two-fifths of the transfers had received B.A. degrees; and three-fifths were still enrolled. Transfers to private four-year colleges made the best progress toward their degrees; large institutional size (enrollments over 5,000) and high selectivity negatively impacted transfer degree attainment. Using multiple regression analysis, Holmstrom and Bisconti found the strongest predictor of transfer student degree completion to be overall college grade point average. Like Knepper, they determined that transferring does delay degree completion: two of five transfers, compared to three of five natives, received the baccalaureate within four years of initial college entry.

Finally, in a five-year study of transfers from Illinois two-year to Illinois four-year institutions, the Illinois Community College Board (1986) found that transfers from private two-year to private four-year colleges had the highest graduation rates, followed by community college to public four-year transfers. In addition, students who had earned their associate's degrees prior to transfer had the highest persistence and graduation rates, as well as the best senior year cumulative grade point averages.

Summary

College student attrition is a complex phenomenon that involves an elaborate interplay between student and institutional characteristics. Attrition becomes even more complicated in the case of transfer students, who are classified as withdrawals from an institutional standpoint but who actually persist within the system of higher education.

While none of the existing theoretical models of student departure adequately explains the withdrawal behaviors of transfer students, the models published by Rootman (1972), Spady (1970), Tinto (1975, 1987) and Bean (1982b) include variables which have been shown to impact transferring.

Although student background attributes appear to influence dropout only indirectly, these characteristics do affect the type and frequency of withdrawal and transfer behaviors (Tinto, 1987). On the other hand, students' aspirations; expectations; intentions and motivations are direct predictors of attrition (Bean, 1982b; Lenning et al., 1980; Tinto, 1975). Institutional attributes that have been linked to persistence are selectivity; type; control; size; cost and financial aid. Finally, variables which result from the student's interactions with the institution influence attrition; as do external, environmental factors such as work; family responsibilities; and the opportunity to

transfer.

Transfer students' self-reported reasons for leaving a college or university tend to focus on institutional characteristics, and particularly on the college's academic system; while dropouts from higher education often cite attitudinal, environmental or motivational problems (Brigman et al., 1982; Fetters, 1977; Peng, 1977; Richardson & Bender, 1987; Wisner, 1984).

Theories of student-institution fit developed by Cope and Hannah (1975), Peng (1977) and Williams (1984) were influenced by Rootman's (1972) model of person-role incongruity. Poor student-institution fit has been shown to account for a significant amount of transfer behavior; as has a lack of congruency between a student's academic ability and the level of intellectual challenge at a given institution (Cope & Hannah, 1975; Janasiewicz, 1987; Peng, 1977; Tinto, 1987). Students who need more academic challenge are likely to transfer to higher level, more selective institutions or to those that offer higher quality programs in specific fields. On the other hand, students who find the intellectual demands of an institution too rigorous often move to lower level or less prestigious colleges or universities (Janasiewicz, 1987; Peng, 1977; Tinto, 1987; Wisner, 1984). Both student - institution and ability - challenge incongruencies may stem from inaccurate student expectations of a college's social or academic atmosphere (Cope & Hannah,

1975; Peng, 1977; Tinto, 1987).

Tests of Tinto's (1975) model of student departure have shown that transfer students generally exhibit low levels of institutional commitment, but high goal commitment to finish the B.A. degree (Getzlaf et al., 1984; Hackman & Dysinger, 1970). Other tests of the model have revealed that academic integration is a more important determinant of transfer student persistence than social integration (Desler, 1985; Shirley, 1986).

Bean's (1982b) model was the first to delineate the relationship between external variables and attrition. One particularly important environmental variable in Bean's model is the opportunity to transfer, which directly influences students' intent to leave an institution (Bean, 1982b; Johnson, 1980; Metzner & Bean, 1987). Bean (1980) also found that the opportunity to transfer variable exerts a significant effect on students' institutional commitment. This discovery is consistent with findings by Getzlaf et al. (1984) and Hackman and Dysinger (1970) that transfers exhibit low levels of institutional commitment.

All of the attrition models presented in this section share the assumption that dropout is a sequential process during which the student interacts with the institution. As Metzner (1984) summarized, "a student enters college with individual background characteristics, interacts with the

college environment, assesses the value of this experience on the basis of outcomes and subjective norms, and decides whether to continue enrollment in the institution" (1984, p.39). The Bean model and revised (1987) Tinto model extend this description one step further to include the influence of external, environmental variables on dropout.

The Tinto and Spady models differ from those of Rootman and Bean in that they are cyclical, with student - institution interaction and the student's evaluation of this interaction hypothesized to continue until the student either drops out, transfers, or graduates (Metzner, 1984). Bean's model, by contrast, views dropout as a one-way, causal sequence (Bean, 1982b).

The greatest shortcoming of the attrition models is the tendency to focus on dropout from individual institutions and to ignore transfer behavior within the system of higher education. As Tinto stated,

While we can conceivably modify our institutional models to distinguish between those forces that lead persons to leave one institution for another from those that result in permanent withdrawal, we have yet to develop system-wide models that would permit us to examine the variety of interinstitutional transfers that occur in higher education. What are needed are models of student interinstitutional movement that would permit the assessment of the comparative interactive effects of differing institutional and system attributes upon the decisions of individuals to persist at a given institution, to transfer within state to other institutions of varying kinds, to transfer out-of-state, or to leave higher education altogether (1982a, p. 690).

This failure to differentiate permanent dropout from

transfer behaviors has led to a massive overexaggeration of dropout rates (Gilbert & Gomme, 1986; Tinto, 1975, 1987).

Although a number of single institution studies have concluded that persistence and graduation rates are lower for transfers than for native students, research on the national and state levels has generally shown that these two populations are equally successful at earning the baccalaureate degree. Transfers generally take longer to complete their degrees, but appear to be more likely to eventually earn the B.A. than native students (Carroll, 1989; Knepper, 1989).

Chapter Summary

This chapter has reviewed research in five areas which impact the college attendance patterns of multiple transfer students: the multiple transfer student; the transfer process; student migration; the college choice process; and college student attrition.

The phenomenon of college attendance begins with a student's decision to attend college, and is followed by the choice of a specific institution in which to enroll; and the student's subsequent re-enrollment, stopout or transfer to another institution. The process ends with graduation or dropout from the system of higher education (Knoell, 1966).

College selection, transfer and attrition are interrelated in that they result from the complex interaction of student background attributes and institutional characteristics with environmental variables. Many of the same variables have been shown to influence college choice, transfer and attrition (see Appendices 1, 2 and 3). Nora and Rendon's (1988) study of community college transfer students revealed that academic achievement, retention and transfer are interdependent; and Tinto (1982b) found that many of the same factors that are involved in the transfer decision also play an influential role in the withdrawal process.

Several studies have shown that inconsistencies between students' expectations of college and the realities of the institutional environment increase the likelihood of attrition and transfer behavior (Cope & Hannah, 1975; Peng, 1977; Shaw, 1968; Tinto, 1987; Wisner, 1984). Incongruencies between students' expectations and institutional reality often result from poor college choice (Hossler, 1984; Peng, 1977; Wisner, 1984). A number of scholars have theorized that more realistic, honest admissions information would result in improved student-college fit, which would in turn reduce transfer and attrition rates (Brigman et al., 1982; Chapman & Stark, 1979; Comm & Schmidt, 1986; Peng, 1977; Widdows & Hilton, 1990; Wisner, 1984). Thus, college attendance is a cyclical phenomenon in which the processes of choice, transfer and attrition impact one another through

shared, interrelated variables. This recursive pattern will be particularly evident in the examination of multiple transfer students, who repeat the choice - transfer/attrition process several times over the course of their collegiate careers.

This review and synthesis of the literature has provided a theoretical framework which will be used to analyze and interpret the data collected for this study. The research design of the study will be presented in Chapter III, which includes a discussion of the population and criteria used in selecting the sample; materials and instrumentation; procedures followed in collecting the data; the study design and analysis of the data.

CHAPTER III

METHOD

Introduction

The purpose of Chapter III is to describe the research design used in this study and to provide information regarding the population and sample selection, materials and instrumentation, data gathering procedures, and data analyses. Since the multiple transfer student has not previously been studied, the primary foci of this research are to provide descriptive data on the population; to determine individual and institutional reasons why multiple transfer behavior occurs; and to identify transfer patterns in terms of institutional types. Specific research questions are listed in the section entitled Materials and Instrumentation.

Population and Selection of Sample

The population for the study is the group of undergraduate students who transferred to the University of Illinois at Chicago (UIC) in fall 1989 and who had attended two or more postsecondary institutions prior to enrolling at UIC. In the fall of 1989, 4,679 new undergraduates entered

UIC. Of these, 2070 (44%) were transfer students. Of the transfer population, 1,170 (56%) students had attended one prior institution; 602 (29%) two prior institutions; 203 (10%) three prior institutions; 62 (3%) four prior institutions; and 39 (2%) more than four prior institutions. Thus, 906 students, or 44% of the total transfer student population in fall 1989 consisted of multiple transfer students.

Approximately 50% of all transfers to UIC in fall 1989 had most recently attended an Illinois two-year college; 17% an Illinois public four-year college or university; 11% an Illinois four-year private college or university; 18% an out-of-state institution; and 4% an unknown type of institution (State of Illinois Board of Higher Education, 1989).

The sample for the study was randomly selected from a computerized listing of the population of 906 multiple transfer students who entered UIC in fall 1989. This procedure was accomplished with the assistance of the Office of Planning and Resource Management at UIC. Through random sampling (without replacement), 453 multiple transfer students were selected for inclusion in the research sample.

The University of Illinois at Chicago is an urban, public research university with a total enrollment of 24,195 in the fall of 1989. Several studies have been conducted of first-time transfer students at UIC. Desler (1985) examined the persistence/withdrawal behaviors of first-time transfer students to UIC within the context of Tinto's (1975)

theoretical model of student persistence. Anderson (1983, 1984) compared the persistence behaviors and academic performance of first-time transfers to UIC with those of native students. In addition, UIC's Offices of School and College Relations and Planning and Resource Management publish annual reports concerning the characteristics of new freshmen and transfer students. These research findings provided valuable background information for the study.

Materials and Instrumentation

In gathering data for the study, the researcher sought to answer the following research questions:

1) Is there an identifiable pattern of the following demographic and academic background variables present in the fall 1989 entering multiple transfer student population at the subject institution: age, sex, ethnicity, religious preference, marital status, academic achievement (high school grade point average, program of study and class rank; and cumulative UIC grade point average), and socioeconomic status (parental education levels and student's or parents' income level)? How do these variables compare with those of first-time freshmen and transfers at UIC?

2) Which of these background variables are related to the most common interinstitutional enrollment/transfer patterns

of this population?

3) Which of the interinstitutional enrollment/transfer patterns are related to students' self-reported reasons for choosing (transferring to) and leaving (transferring from) their previous institutions?

4) Are there identifiable interinstitutional enrollment/transfer patterns of multiple transfer students in this population, in terms of the following institutional classifications: type (two-year or four-year), size, control (public, private or proprietary), tuition level, selectivity level (defined according to average ACT scores of the entering student body), Carnegie classification and state/region?

5) From what sources do multiple transfer students' expectations of their institutions arise (e.g., college counselors, college guidebooks, institutional promotional materials or campus visits)?

Data for the study were collected as part of a two-stage process, and included both primary and secondary information. Secondary data were obtained from UIC's official records, which yielded both demographic and institutional information. Demographic data included age, sex, ethnicity and residence (whether the student was a United States citizen, immigrant / permanent resident, or foreign).

Institutional data included the names of all previous colleges or universities attended, as well as dates of attendance, total credit hours earned and transfer credit hours earned at each institution. UIC information included the name of the college in which each student was enrolled (e.g., College of Business Administration, College of Liberal Arts and Sciences); the number of credit hours for which each student was enrolled in fall 1989; the class each student was in upon matriculation (e.g., freshman, sophomore, junior or senior); the cumulative grade point average earned for the fall 1989, winter 1990, and spring 1990 academic quarters; and whether or not the student was enrolled at UIC for each of those quarters.

Institutional data were received from UIC on computer disk and were restructured so as to eliminate certain variables, including students' names and social security numbers (survey codes were used instead for identification purposes); addresses and telephone numbers; transcript numbers; federal identification codes for colleges and universities; and transfer points attained by students at each institution attended. In addition, other variables were reformatted so they would conform to the coding procedures. Student dates of birth were transformed into simple age figures; the number of quarter hours for which each student was registered in fall 1989 was translated into a numerical code

which designated full-time or part-time status; and the specific curriculum in which each student was enrolled was shortened to include only the appropriate college name (e.g., the College of Business Administration).

For each student in the sample, the researcher numbered all colleges in the order in which they were attended according to dates listed in UIC's records (e.g., College 1 represented the most recent institution attended; College 2 the second most recent, etc.) Respondents to the survey indicated the name and location of each college and the order in which all institutions were attended. This information served as a confirmation of the data listed in the records. In the vast majority of cases, the information provided by survey respondents was identical to that listed in UIC's records. When a discrepancy occurred, the institutional records (which indicated specific dates of attendance at each college) were given preference over student responses.

Each student in the sample was assigned a code that described the overall pattern of their multiple transfer movement. Transfers were divided into two general categories: "conventional transfers," who attended each college separately and sequentially; and "sandwich transfers," who attended two or more colleges simultaneously or who matriculated at one institution, transferred elsewhere and then returned to the original college at some point. Further

differentiations were made on the basis of whether the student was enrolled at a given institution for only one semester or quarter, or only for the summer.

Once all institutions attended by students were identified, the researcher listed the colleges and universities alphabetically, assigning each one a code number. Students in the sample attended a total of 302 different higher education institutions, which are listed in Appendix 9. Using the Carnegie Foundation's A Classification of Institutions of Higher Education (1987), The College Board's The College Handbook 1989-90, and U.S. News and World Report's America's Best Colleges (1990), the researcher identified institutional type; control; Carnegie classification; location by state; average tuition/fee and enrollment levels; and average ACT scores of the entering student body (used as a selectivity measure) for each institution attended by students in the sample. For those colleges that published only average SAT scores, these scores were transformed into average ACT scores using conversion tables developed by Astin (1971).

It is important to note that although information such as students' reasons for transferring to and from various institutions must be inferred from their answers to questions given on the survey, institutional data were provided for all students included in the sample. Thus, transfer

patterns by institutional type, grade point average at each institution attended and a limited number of demographic characteristics were included in the study for all 424 students in the sample, and not only for the survey respondents.

Primary data were obtained through a researcher-designed questionnaire. Survey questions were designed to elicit respondents' reasons for transferring to and from their previous colleges or universities, using a Likert or summated rating scale format. Each respondent was assigned an identification number so that data from the institutional records could easily be paired with information obtained through the survey. Variables previously found to be related to college choice, student persistence, and transfer behavior were used to elicit information on student background characteristics, institutional attributes and attitudinal, environmental and interaction characteristics (see Appendices 1, 2 and 3 for a listing of variables featured prominently in the literature). Student background variables included 1) marital status; 2) parental education levels; 3) previous degree(s) earned; 4) high school program; 5) high school grade point average; 6) high school class rank; 7) length of commute to UIC; 8) religious preference; 9) student/parental income level; 10) employment situation; and 11) number of hours worked per week.

Institutional variables included 1) academic quality;

2) variety of courses and programs offered; 3) class size; 4) faculty teaching ability; 5) faculty availability outside the classroom; 6) availability of financial aid and scholarships; 7) affordability of tuition and fees; 8) convenience of campus location; 9) attractiveness of campus facilities and grounds; 10) social atmosphere; 11) availability of student support services (e.g., advising, counseling and career planning); and 12) fairness of campus rules and regulations.

Attitudinal, environmental and interaction characteristics included: 1) educational goal commitment ("What is the highest degree you expect to earn in your lifetime?"); 2) institutional commitment ("What is your main goal in transferring to UIC?" and "How important is it to you to achieve this goal?"); 3) choice ranking given to each institution (e.g., first, second, third or fourth); 4) degree of support received from members of the faculty or staff at each institution; 5) level of student satisfaction with the overall experience at each institution; and 6) entering student expectations of the subject university.

The questions concerning educational goal commitment and institutional commitment were drawn from the attrition literature, which emphasizes the importance of these commitment levels to persistence and indicates that transfer students exhibit high goal commitment, but low institutional

commitment (Bean, 1982a; Getzlaf et al., 1984; Hackman & Dysinger, 1970; Tinto, 1975, 1987). The question measuring respondents' choice ranking is important in that students are more likely to transfer when they have initially enrolled at a lower-choice institution (Tinto, 1987). The degree of support received from faculty or staff members has been shown to be significantly related to persistence in studies by Husband (1976), Lenning (1982), Terenzini and Pascarella (1980), and Tinto (1975, 1987). Finally, a student's overall experience at an institution has been found to be more important than her/his background characteristics in determining transfer behavior (Holmstrom & Bisconti, 1974; Volkwein et al., 1986).

An additional survey item asked whether the decision to transfer out of each institution was the respondent's alone, the decision of the respondent's parents, the college's decision, for academic or other reasons, or other. This question was included so that students dismissed by an institution could be analyzed separately from the rest of the sample. While academic or disciplinary dismissal is not equivalent to voluntary transfer behavior (Janasiewicz, 1987; Tinto, 1982b), the multiple transfer student's choice of attending and/or leaving subsequent institutions, when voluntary, was of interest to the researcher.

The first section of the survey focused on factors which influenced respondents' choice of attending UIC.

Students were asked to indicate the relative influence of several information sources on their selection of UIC, including high school counselors and teachers; faculty or counselors at their previous college; friends attending UIC; family members; UIC alumni; mass media (e.g., radio, television or newspapers); promotional materials sent from UIC; college guidebooks; or a campus visit to UIC. These information sources have been identified in the college choice literature as being influential in the selection process. In addition, respondents were asked to indicate whether they had decided on a college major; and if so, how important the availability of this course of study had been in their selection of UIC. These questions were included as unavailability of a specific academic program is a major reason given by students for transferring from one institution to another (Brigman et al., 1982; Kowalski, 1977; Peng, 1977).

Respondents were asked to indicate which, if any, of several problems they had experienced upon transferring to UIC: transfer of credit; fitting in as a student at UIC; finding their way around campus; registering for classes; overcoming bureaucratic "red tape"; or other problems. These factors were taken from the literature on roadblocks encountered by students during the transfer process. The final question in this section dealt with respondents' perception of how difficult it would be to transfer to another

college from UIC. This variable has been shown to be highly predictive of transfer behavior in that the more difficult a student perceives transferring to be, the less likely she/he will be to transfer (Metzner, 1984).

An initial draft of the survey instrument was reviewed and evaluated for content validity by the researcher's dissertation committee members and by two outside faculty members with national reputations in the areas of college choice and persistence. It was also reviewed by a marketing professor with expertise in survey research techniques. The revised questionnaire was pilot-tested on a representative sample of ten multiple transfer students who entered UIC in fall 1988. These students were asked to read the cover letter and fill out the questionnaire, and were then interviewed by the researcher to assess their overall reaction to the survey. Respondents were asked whether they felt the questions were clearly written and appropriate, and were encouraged to suggest other items which they felt should have been included. The interviews and pilot-tests enabled the researcher to ascertain the face validity of the survey items.

According to the experts' review and the pilot-testing procedure, the content or face validity of the items used in the study was high. Once this was determined, the survey instrument was revised for the final time and plans were made for data collection.

Procedures

The design, printing and mailing of the survey instruments were accomplished using Dillman's Total Design Method for mail surveys (1978). A first-class mailing, including a cover letter, questionnaire and a postage-paid, return envelope, was sent to the 424 multiple transfer students in the sample on October 24, 1989 (the sixth week of UIC's fall quarter). One week later, a postcard reminder was sent to the entire sample. Finally, a second cover letter (slightly shorter and more urgent in tone than the first) was sent to nonrespondents on November 15, 1989, along with a replacement questionnaire and a postage-paid return envelope. The cover letter was printed on UIC stationery, and the UIC logo appeared on the cover of the questionnaire. In addition, the signature of the Vice Chancellor for Student Affairs appeared at the bottom of each letter, along with that of the researcher. These techniques were employed in order to emphasize the University's sponsorship of the survey so that response rates would be enhanced. In the cover letter, students were assured that their responses would be kept completely confidential, and that the code number which appeared on the cover page of the survey would be used only for mailing purposes and to match selected data from the student record with survey responses. Respondents were

given the opportunity to request a copy of the survey results by writing "copy of the results requested" on the back of the return envelope. Copies of the cover letter, followup letter, postcard and questionnaire are included as Appendices 4, 5, 6, and 7.

Design and Data Analyses

Two types of descriptive data were collected for the study: objective data, such as the various types of institutions attended by each student, the student's age and field of study; and subjective, self-reported data, such as the student's expectations of selected institutional characteristics and reasons for choosing and leaving each institution attended. The study assumes that students would have no reason for giving biased responses. Any biases that did occur, moreover, should be skewed in a positive normative direction (Bean, 1980). There is a tendency for respondents to answer survey questions in what they perceive to be socially desirable ways. Transfer behavior might be inferred by some students as failure and thus rationalized or underestimated; whereas grades, which are considered positive sanctions, might be overestimated (Peng, 1977).

In responding to items on the survey, students consistently answered even the most personal questions, such as those concerning family income. The assurance of

confidentiality provided in the cover letter, and the thorough pilot-testing of these items, apparently were effective strategies for eliciting data of a personal nature.

Processing of the data gathered for the study was accomplished using The SPSSx Information Analysis System (SPSSx Inc., 1986). The primary statistical procedures used to analyze the results of the study are frequency analysis and chi-square analysis. Frequency distributions are used to categorize and graphically depict demographic and academic background data gathered concerning multiple transfer students and their interinstitutional enrollment/transfer patterns. Distributions are also used to describe students' self-reported reasons for transferring to and from various institutions. Chi-square analysis is used to identify relationships among the student, institutional and interaction variables listed previously. This technique is used to ascertain whether relationships expected to exist among these variables are present at conventional significance levels.

Chapter Summary

This chapter has described the methods used in selection of the sample population, instrumentation, data gathering procedures and design for the study.

Of the 2,070 undergraduate transfer students who

entered UIC in fall 1989, 44% were multiple transfers. Using random sampling (without replacement), 453 of these multiple transfers were selected for inclusion in the research sample. The sample was eventually adjusted to include 424 multiple transfer students.

Both primary and secondary data were collected for the study. Secondary data were drawn from UIC's institutional records, and primary data were obtained through a questionnaire based on research in the areas of student attrition, college choice and transfer behavior. The primary foci of the data collection were to obtain descriptive, demographic data concerning the sample population; to determine reasons for transferring to and from each institution attended; and to identify transfer patterns in terms of institutional characteristics.

The survey instrument was analyzed for content validity by experts in the field, and was pilot-tested on ten multiple transfers who entered UIC in fall 1988. The results of the pilot-tests and interviews with the respondents indicated that the questionnaire had high face validity.

Dillman's Total Design Method for mail surveys (1978) was used to guide the design, printing and mailing of the questionnaires. The initial mailing was followed by a reminder postcard and a repeat mailing to nonrespondents.

As the primary focus of the study is the analysis of

descriptive data, percentages and crosstabulations are the primary methods used. Frequency analysis and chi-square analysis are also used for more detailed analyses of the data.

LOYOLA UNIVERSITY OF CHICAGO

THE MULTIPLE TRANSFER STUDENT IN HIGHER EDUCATION:
BACKGROUND CHARACTERISTICS AND INTERINSTITUTIONAL MOVEMENTS
OF A SAMPLE POPULATION

VOLUME II

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

BY

GRETCHEN WARNER KEARNEY

CHICAGO, ILLINOIS

JANUARY, 1992

CHAPTER IV

RESULTS

This chapter will describe the data analyses and results of the study. Findings will be presented as they relate to the four objectives delineated in Chapter I and the five research questions listed in Chapter III. Results will be interpreted as they reflect the previously published literature discussed in Chapter II.

Data Analyses

The original research sample for this study consisted of 453 multiple transfer students who entered the University of Illinois at Chicago (UIC) in fall 1989. Of this sample, four students were excluded because of incorrect or missing mailing addresses; 13 were eliminated because of an institutional record-keeping error which listed them as multiple transfers even though the record indicated that they had attended only one other institution prior to enrolling at UIC; and 12 were removed from the sample when they failed to matriculate at UIC in fall 1989. Thus, the adjusted sample was composed of 424 multiple transfer students.

As described in Chapter III, surveys were mailed to

all students in the adjusted sample (see Appendix 7). Ultimately, 275 surveys were returned for a response rate of 65%. All of the returned questionnaires yielded useable data. Demographic and academic comparisons as computed using the SAS program indicated nonsignificant differences between the sample and the population of 906 multiple transfer students who entered UIC in fall 1989. This implied that the sample was representative of the population.

Student background data received from UIC enabled the researcher to ascertain the possible degree of response bias by comparing characteristics of survey respondents ($n=275$) with those of nonrespondents ($n=149$). Chi-square analysis indicated nonsignificant differences on all variables except those of ethnicity; cumulative grade point average earned at UIC in the spring quarter of 1990; and persistence at UIC through the spring quarter of 1990 (see Table 2). These minimal differences implied a low response bias.

A significantly lower percentage of blacks than whites responded to the survey (see Table 2). Although 15% of the sample consisted of black students, only 8% of respondents were black, as were 25% of nonrespondents. Although white students comprised 66% of the multiple transfer sample, 72% of respondents were white as compared with 55% of nonrespondents. In addition, a significantly greater percentage of survey respondents (32%) had earned UIC cumulative grade point averages in the A and B range by spring quarter 1990

Table 2. --Student Background Characteristics of Respondents and Nonrespondents

	Respondents (N = 275)		Nonrespondents (N = 149)	
	%	N	%	N
Curriculum				
Liberal Arts	61	168	70	104
Business	16	45	15	22
Engineering	13	36	9	13
Art/Architecture	4	12	5	7
Physical Education	3	8	2	3
Social Work	2	6	-	-
TOTAL N		275		149
Class				
Freshman	9	24	6	9
Sophomore	35	97	35	52
Junior	40	111	40	59
Senior	16	43	19	29
TOTAL N		275		149
Sex				
Male	49	136	59	88
Female	51	139	41	61
TOTAL N		275		149
Ethnicity***				
2				
(X ² (4) = 22.828, p < .0001)				
American Indian	1	2	1	1
Black	9	23	26	37
Asian	13	34	14	21
Hispanic	6	15	4	6
White	72	191	55	80
TOTAL N		265		145

Table 2. --Continued

	Respondents		Nonrespondents	
	(N = 275)		(N = 149)	
	%	N	%	N
Age				
18-22	58	157	56	83
23-28	29	78	30	44
29-33	8	21	11	16
34-38	3	8	1	2
38 and over	3	7	3	4
		-----		-----
TOTAL N		271		149
Hours Enrolled				
Full-time	77	210	79	117
Part-time	23	64	21	32
		-----		-----
TOTAL N		274		149
Total Colleges Attended				
Two	72	199	71	106
Three	20	55	22	33
Four	7	18	3	5
Five	-	1	1	2
Six	-	1	1	1
Seven	-	1	1	2
		-----		-----
TOTAL N		275		149

Table 2. --Continued

	Respondents (N = 275)		Nonrespondents (N = 149)	
	%	N	%	N
Cumulative UIC				
GPA***				
	² (X (4) = 24.549, p < .0000)			
0-1.9	1	2	1	1
2-2.9	2	6	11	17
3-3.9	66	181	72	107
4-4.9	29	81	15	23
5.0 and above	2	5	1	1
		275		149
TOTAL N		275		149

Persistence at UIC				
through				
Spring, 1990**				
	² (X (1) = 7.129, p < .0075)			
Still Enrolled	81	222	70	104
Not Enrolled	19	53	30	45
		275		149
TOTAL N		275		149

Note: Percentages are rounded to the nearest full percent.

*** P < .001, two-tailed. Pearson chi-square.

** P < .01, two-tailed. Pearson chi-square.

* P < .05, two-tailed. Pearson chi-square.

than had nonrespondents (16%).

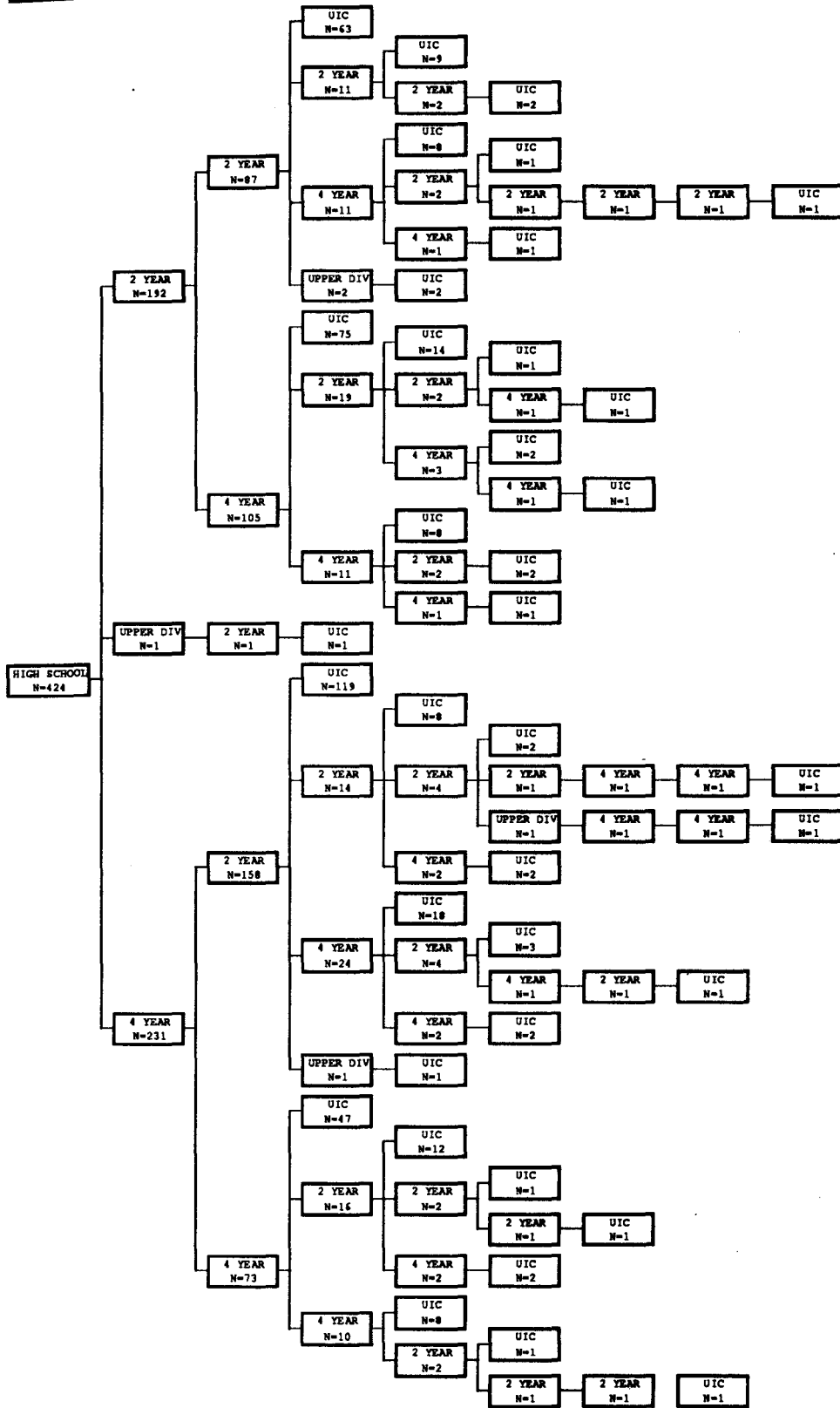
As shown in Table 2, a significantly greater percentage of respondents were still enrolled at UIC in the spring quarter of 1990 than were nonrespondents (81% and 69%, respectively). It is reasonable to expect that a student who is considering withdrawing or transferring would fail to respond to a survey concerning the institution.

Findings Related to Study Objectives and Research Questions

Objective 1 To identify the most common interinstitutional enrollment/transfer patterns, in terms of institutional types, of multiple transfer students who enrolled at the subject institution in fall 1989, and to infer from the data patterns which could be used to predict interinstitutional movement of these student populations.

Identification of the paths most frequently followed by multiple transfer students was vital to the interpretation of the remaining objectives and research questions. In order to determine the most common multiple transfer paths, crosstabulations were employed to establish the sequence of colleges and universities attended in terms of institutional type (two-year, four-year or upper division) for all students in the multiple transfer sample ($n = 424$). Four primary paths were discovered which accounted for 76% of the transfer movements of students in the sample (see Figure 5). While the vast majority of students in the sample (72%) had attended two colleges or universities prior to enrolling at

Figure 5. --Multiple Transfer Paths of the Sample Population



UIC, 21% had attended three institutions and 7% four to seven institutions.

The most common transfer path, taken by 119 students or 28% of the sample, was that of initially attending a four-year college or university; transferring to a two-year institution; and then transferring to UIC. This pattern will be referred to as the $4 > 2 > 4$ path. The second largest group of students began at community colleges, transferred to four-year institutions and then enrolled at UIC. Entitled the $2 > 4 > 4$ path, this group comprised 75 students, or 18% of the sample population.

The third multiple transfer path, followed by 63 students, consisted of initial enrollment at a community college, followed by transfer to another two-year institution, and then a third transfer to UIC. This pattern of movement will be referred to as the $2 > 2 > 4$ path. In the data analysis, this group was augmented by nine students who attended three community colleges and two who attended four community colleges, prior to enrollment at UIC. Thus, the total $2 > 2 > 4$ group included 74 students, or 17% of the sample population.

The fourth multiple transfer path was followed by 47 students who attended two four-year colleges or universities prior to enrolling at UIC. This group was supplemented by eight students who transferred to a third four-year institution before moving to UIC. Once these students were

included, the 4 > 4 > 4 path contained 55 students, or 13% of the sample population.

The remaining 101 students (24% of the sample) were categorized as "other," as there were too few subjects in any given cell for meaningful analyses to be performed. Appendix 8 illustrates the transfer paths followed by these students. The largest such group was comprised of 18 students who followed the 4 > 2 > 4 > 4 path, accounting for only 4% of the sample population.

An alternate series of transfer paths was discovered when institutions to which students transferred only during the summer were excluded from the analysis. The resulting, smaller sample and transfer paths (see Figure 6 and Table 3) did not differ significantly from those in which summer transfer was included. The only path which experienced a slight increase in size with summer transfers excluded was the 4 > 4 > 4 group. This small degree of growth indicates that students in this group frequently attended community colleges to earn summer school credit.

No significant differences were found when the samples and paths with summer transfers included and excluded were compared. Therefore, the data were collapsed over the original sample of 424 multiple transfers and its four derivative transfer paths. Of the two groups, the original sample best fulfilled the definition of multiple transfer student

Table 3. --Multiple Transfer Paths

	<u>Including Summer</u>	<u>Excluding Summer</u>
4>2>4 Path	119	111
2>4>4 Path	75	62
2>2>4 Path	74	69
4>4>4 Path	55	56
"Other" Path	101	67
Sample Population	424	365

Note:4>2>4 refers to students who initially enrolled at a four-year institution, subsequently transferred to a community college and then transferred to a second four-year institution.

set forth in Chapter I as "a student who attended and received transfer credit from two or more colleges or universities prior to attending the subject institution."

It is interesting to note that the multiple transfer paths identified above are extensions of the four basic transfer groups delineated by Peng (1977) in his national, longitudinal study of first-time transfer students. These basic groups were $2 > 2$, $2 > 4$, $4 > 2$ and $4 > 4$. Peng found that, within two years after initial matriculation, 24% of the national transfer population had moved from two-year to four-year institutions; 16% from four-year to four-year; 4% from two-year to two-year and 3% from four-year to two-year. Peng's findings on the percentage of students in each transfer group differ substantially from those of this study, which indicate that over an extended period of time 18% of multiple transfers to UIC followed the $2 > 4$ path, 13% the $4 > 4$ path, 17% the $2 > 2$ path and 28% the $4 > 2$ path.

Objective 2 To identify background variables (demographic and academic) of multiple transfer students who enrolled at the subject institution in fall 1989, and to infer from the data background variables which could be used to predict the likelihood of multiple transfer behavior.

Research Question 1 How do these variables compare with those of first-time freshmen and transfers at UIC?

Research Question 2 Which of these background variables are related to the most common interinstitutional enrollment/transfer patterns of this population?

In order to explore fully Objective 2 and its related research questions, the background characteristics and educational goals and aspirations of multiple transfer students in the sample were examined from the following perspectives:

1) in comparison with first-time freshmen, the undergraduate population, and the entering transfer population at UIC in fall 1989;

2) according to the number of colleges attended prior to enrolling at UIC;

3) depending upon whether the student's first college attended was two-year or four-year;

4) depending upon whether the student's most recent college attended prior to enrolling at UIC was two-year or four-year; and

5) according to the four major multiple transfer paths (4 > 2 > 4, 2 > 4 > 4, 2 > 2 > 4, and 4 > 4 > 4).

Chi-square analysis was used to ascertain whether background differences expected to exist among the groups were present at conventional significance levels.

Analysis of the Sample Population

As seen in Tables 4 and 5, the majority of students in the multiple transfer sample can be described by the following background composite: white, 18-22 years of age, Catholic, and single; with college-educated parents

Table 4. --Background Characteristics of Students Enrolled at
UIC in Fall, 1989

	Multiple Transfer Sample (N = 424) (%)	Under- graduate Population (N = 15,945) (%)	Freshman Population (N = 2,609) (%)	Transfer Population (N = 2,070) (%)
Curriculum				
Liberal Arts	64	58	67	64
Business	16	18	11	17
Engineering	12	14	13	10
Art/Architecture	5	8	7	7
Physical Education	3	2	2	2
Social Work	2	-	-	1
Class				
Freshman	8	28	100	17
Sophomore	35	20	-	37
Junior	40	22	-	35
Senior	17	30	-	11
Sex				
Male	53	51	52	54
Female	47	59	48	46
Ethnicity				
American Indian	1	-	-	1
Black	15	10	10	12
Asian	13	16	20	10
Hispanic	5	11	14	7
White	66	58	52	63
		(unknown-5%)	(unknown-4%)	(unknown-7%)
Residence				
U.S. Citizen	91	98	99	96
Foreign	9	2	1	4

Table 4. --Continued

	Multiple Transfer Sample (N = 424) (%)	Under- graduate Population (N = 15,945) (%)	Freshman Population (N = 2,609) (%)	Transfer Population (N = 2,070) (%)
Age				
18-22	57	40	95	32
23-28	29	45	4	49
29-33	9	9	1	11
34-38	2	4	-	4
39 and over	3	3	-	5
Hours Enrolled				
Full-time	78	82	90	78
Part-time	22	18	10	22
Employment				
Employed	65	-	63	78
Not Employed	35	-	37	22
Income- Dependent				
Below \$10,000	10	-	7	4
\$10,000-\$19,999	6	-	11	18
\$20,000-\$29,999	14	-	24	18
\$30,000-\$39,999	9	-	26	16
\$40,000-\$49,999	17	-	16	14
\$50,000 and Above	43	-	17	31
Income- Independent				
Below \$10,000	48	-	83	48
\$10,000-\$19,999	27	-	8	18
\$20,000-\$29,999	11	-	-	15
\$30,000-\$39,999	9	-	8	6
\$40,000-\$49,999	2	-	-	4
\$50,000 and Above	3	-	-	9

Table 4. --Continued

	Multiple Transfer Sample (N = 424) (%)	Under- graduate Population (N = 15,945) (%)	Freshman Population (N = 2,609) (%)	Transfer Population (N = 2,070) (%)
Mother's Education				
No College	45	-	53	51
Some College	24	-	23	22
College Degree	30	-	24	27
Father's Education				
No College	37	-	41	43
Some College	18	-	26	19
College Degree	46	-	32	38
Goal in Attending UIC				
Bachelor's Degree	92	-	87	92
Transfer	5	-	10	6
Take Job-related Courses	1	-	1	1
Self-improvement	1	-	-	1
Other	1	-	2	-
Rank Choice UIC				
First Choice	60	-	46	75
Second Choice	31	-	39	21
Third Choice	6	-	15	4
Fourth or Lower Choice	3	-	-	-

Note: Percentages are rounded to the nearest full percent.

especially fathers); high family incomes (above \$40,000) if dependent, but low incomes (below \$10,000) if independent; high educational aspirations (interest in earning an advanced degree); earned a high school grade point average in the B- to A range, ranked in the top or second quarter of the high school class, and attended a college preparatory high school; had previously attended two other colleges, but had not earned a degree prior to enrolling at UIC; enrolled full-time (more than 12 hours) as a sophomore or junior in the College of Liberal Arts and Sciences at UIC, employed off-campus on a part-time basis while attending UIC, and had earned a cumulative UIC grade point average in the 3.0 to 3.9 range (on a 5.0 scale).

These findings reflect previous research which describes first-time transfers as white (Peng, 1977; Van Alstyne, 1974); traditional age (Holmstrom & Bisconti, 1974; Preston, 1976; Wisner, 1984); of high socioeconomic status (Carroll, 1989; Holmstrom & Bisconti, 1974; Lee & Frank, 1990; Peng, 1977; Velez & Javalgi, 1987); with highly educated parents (Holmstrom & Bisconti, 1974; Metzner, 1984; Nora & Rendon, 1988; Wisner, 1984) and high high school and college grade point averages (Peng, 1977; Velez & Javalgi, 1987). One variable of particular interest was the extremely wide range of income levels present in the multiple transfer sample. Of survey respondents, 50% classified themselves as dependent and 50% as independent. The family

incomes of dependent multiple transfers were high, with the largest concentration in the \$70,000 and over category. Independent respondents had substantially lower incomes than their dependent counterparts, with 48% earning below \$10,000 and 27% between \$10,000 and \$19,999.

When their success in achieving degree aspirations at previous institutions was examined, it was evident that the goals of students in the sample had shifted a number of times prior to their enrollment at UIC. Of students whose initial institution was a four-year college or university, 77% planned to earn a bachelor's degree and 8% to transfer, while 26% of students initially entering a community college aspired to earn an associate's degree and 60% to transfer. While 62% of respondents whose goal was to earn an associate's degree from their initial institution actually received one, 17% of students who intended to transfer and 22% who planned to earn a bachelor's degree also obtained an associate's degree.

In contrast to their degree goals at their initial institution, 64% of students intended to earn a bachelor's degree at their most recent four-year college or university prior to enrolling at UIC, and 23% planned to transfer; while 29% of those entering community colleges aspired to earn an associate's degree and 61% to transfer. Of respondents who planned to graduate from their most recent

institution, 84% who aspired toward the associate's degree earned one, as did 22% of those who intended to transfer. Only 19% of respondents had the same goal when enrolling at their initial college as they did at their most recent institution, and 55% of these same-goal students stated that they intended to earn transfer credit at both institutions.

The educational goals of students in the sample regarding their first institution attended were related to their high school ranks such that 59% of students who were ranked in the top quarter of their high school class aspired to earn the bachelor's degree at their first institution, while 24% planned to transfer. Of those students in the second quarter of their high school class, 46% hoped to earn the bachelor's degree and 33% to transfer, while in the third quarter 27% planned to graduate with a B.A./B.S. and 29% expected to transfer.

Multiple transfers in the sample population were found to have high levels of institutional commitment to UIC as well as lofty long-term educational aspirations. Of students in the sample, 92% stated that their goal in transferring to UIC was to earn a bachelor's degree, and 99% felt that achieving this goal was extremely or very important. In terms of future aspirations, 16% of the multiple transfers aspired toward a bachelor's degree; 53% a master's degree and 31% a doctorate or professional degree. Finally, reflecting the findings of Johnson (1980) in her study of

community college transfers to a large, urban university, the cumulative grade point averages of multiple transfers in the sample were found to be significantly related to their persistence at UIC through the spring quarter of 1990 ($\chi^2(4) = 22.211, p < .0000$). In general, the higher the cumulative grade point averages of these students, the more likely they were to persist at UIC.

Comparison of the Sample to Other UIC Populations

Table 4 lists a number of background variables characteristic of students enrolled at UIC in fall 1989. Data describing the undergraduate population, entering freshmen and transfers were derived from the Student Data Book 1985-1989, and from survey results published by the Office of Planning and Resource Management at UIC. Data were not available for all groups across all variables; however, it is possible to compare at least some of the groups in all cases.

When compared to the population of 2,609 undergraduate freshmen entering UIC in fall 1989, the multiple transfer sample contained more white and black students and fewer Hispanics and Asians than the freshmen. The freshmen were younger than the multiple transfers, were more likely to be U.S. citizens and were more inclined to enroll in classes on a full-time basis than the multiple transfers. The multiple

transfers, however, had better-educated parents than the freshmen, were less likely to be employed while attending college and were from higher income families, whether they were financially dependent or independent. The multiple transfers were more likely to aspire to earn a bachelor's degree from UIC, and were less likely to plan to transfer than the freshmen. In addition, a higher percentage of students in the multiple transfer sample considered UIC their first choice institution than did the freshmen.

When compared to the total population of 2,070 transfers to UIC in fall 1989, a much higher percentage of students in the multiple transfer sample were in the 18-22 age range. Students in the sample were more likely to have high income families (if dependent) and to have college-educated parents, but were less likely to be employed while attending UIC than the transfer population. In addition, a higher percentage of transfers were classified as freshmen and sophomores at UIC, and a lower percentage as juniors and seniors than students in the multiple transfer sample. This finding was not surprising, given that the multiple transfers had attended more institutions prior to enrolling at UIC than the transfer population as a whole. Members of the multiple transfer sample were also much less likely than students in the transfer population to state that UIC was their first choice institution.

A comparison of the multiple transfer sample with the entire population of 15,945 undergraduates at UIC in fall 1989 indicates that the undergraduate population included a greater percentage of Hispanics and Asians, but fewer blacks and whites than the multiple transfer sample. A higher percentage of multiple transfers were in the 18-22 age range than the undergraduates. Finally, the undergraduate population contained a higher percentage of freshmen and seniors, but fewer sophomores and juniors, than the multiple transfer sample.

In summary, comparisons of the multiple transfers with other student populations at UIC in fall 1989 reflected the prominent background characteristics of the sample delineated earlier in this chapter. The multiple transfers were younger, and were more likely to be white; to have better-educated parents; and to have higher family income levels - and thus higher socioeconomic statuses - than the other groups.

Total Number of Colleges Attended

A third perspective on background characteristics of multiple transfer students was gained by examining differences between students who had attended two, three and four to seven institutions prior to enrolling at UIC (see Table 5). While the numbers in the first two categories were large ($n=306$ for two previous colleges and $n=87$ for

Table 5. --Student Background Characteristics by Total Number of Colleges Attended

	Two Colleges (N = 306)		Three Colleges (N = 87)		Four to Seven Colleges (N = 31)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N
Curriculum								
Liberal Arts	63	193	70	61	52	17	64	271
Business	14	44	16	14	26	8	16	66
Engineering	13	40	9	8	3	1	12	49
Art/Architecture	5	14	2	2	10	3	5	19
Physical Education	4	11	1	1	-	-	3	12
Social Work	1	4	1	1	7	2	2	7
Total N		306		87		31		424
Class								
Freshman	9	27	6	5	7	2	8	34
Sophomore	38	115	26	23	36	11	35	148
Junior	41	126	39	34	29	9	40	170
Senior	12	38	29	25	29	9	17	72
Total N		306		87		31		424
Sex								
Male	53	162	57	50	32	10	53	223
Female	47	144	43	37	68	21	47	201
Total N		306		87		31		424

Table 5. --Continued

	Two Colleges (N = 306)		Three Colleges (N = 87)		Four to Seven Colleges (N = 31)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N
Ethnicity								
American Indian	1	2	1	1	-	-	1	3
Black	13	39	16	13	26	8	15	60
Asian	14	42	12	10	7	3	13	55
Hispanic	5	16	5	4	3	1	5	21
White	67	197	66	55	59	19	66	271
Total N	296		83		31		410	
Age***								
	χ^2 $(X^2 (20) = 75.083, p < .0000)$							
18-22	63	193	49	43	16	5	57	240
23-28	27	81	32	28	45	14	29	123
29-33	7	21	13	11	19	6	9	38
34-38	2	6	1	1	10	3	2	10
39 and over	1	4	5	4	10	3	3	11
Total N	305		87		31		422	
Hours Enrolled								
Full-time	79	242	74	64	70	21	77	327
Part-time	21	63	26	23	30	9	23	95
Total N	305		87		30		422	

Table 5. --Continued

	Two Colleges (N = 306)		Three Colleges (N = 87)		Four to Seven Colleges (N = 31)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N
Religion								
Catholic	52	100	46	24	29	6	49	130
Jewish	4	7	8	4	-	-	4	11
Protestant	14	27	23	12	10	2	15	41
Other	13	25	15	8	33	7	15	40
No Religion	18	34	8	4	29	6	17	44
Total N		193		52		21		266
High School GPA								
A- to A	17	33	7	4	24	5	16	42
B to A-	26	51	28	15	19	4	26	70
B- to B	23	45	35	19	38	8	27	72
C to B-	22	43	20	11	14	3	21	57
C- to C	9	17	7	4	5	1	8	22
D to C-	2	4	-	-	-	-	1	4
Below D	1	1	2	1	-	-	1	2
Total N		194		54		21		269
High School Rank								
Top 1/4	39	73	33	17	53	10	39	100
Second 1/4	31	59	37	19	26	5	32	83
Third 1/4	25	47	22	11	16	3	24	61
Bottom 1/4	4	8	8	4	5	1	5	13
Total N		187		51		19		257

Table 5. --Continued

	Two Colleges (N = 306)		Three Colleges (N = 87)		Four to Seven Colleges (N = 31)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N
High School Program								
College Preparatory	82	157	76	41	86	18	81	216
Vocational/ Occupational	7	13	7	4	-	-	6	17
Business/ Commercial	4	8	6	3	5	1	5	12
Other	7	14	11	6	9	2	8	22
	-----		-----		-----		-----	
Total N	192		54		21		267	
Mother's Education								
No College	47	90	42	22	38	8	45	120
Some College	25	49	21	11	24	5	24	65
College Degree	28	54	37	19	38	8	30	81
	-----		-----		-----		-----	
Total N	193		52		21		266	
Father's Education								
No College	39	75	31	16	29	6	37	97
Some College	19	37	11	6	19	4	18	47
College Degree	42	81	58	30	52	11	46	122
	-----		-----		-----		-----	
Total N	193		52		21		266	

Table 5. --Continued

	Two Colleges (N = 306)		Three Colleges (N = 87)		Four to Seven Colleges (N = 31)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N
Marital Status***								
	² (X (10) = 61.124, p < .0000)							
Single	89	175	79	42	48	10	84	227
Married	9	17	19	10	43	9	13	36
Divorced	2	5	2	1	9	2	3	8
		-----		-----		-----		-----
Total N		197		53		21		271
Employment								
Off-Campus	59	113	71	37	60	12	61	162
On-Campus	3	6	6	3	10	2	4	11
No Employment	38	74	23	12	30	6	35	92
		-----		-----		-----		-----
Total N		193		52		20		265
Hours Worked								
0-10	43	83	29	15	29	4	41	108
11-20	21	41	33	17	21	3	23	61
21-30	19	36	14	7	7	1	17	44
31-40	14	26	14	7	29	4	14	37
41 and over	3	6	10	5	14	2	5	13
		-----		-----		-----		-----
Total N		192		51		14		263

Table 5. --Continued

	Two Colleges (N = 306)		Three Colleges (N = 87)		Four to Seven Colleges (N = 31)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N
Income- Dependent								
Below \$10,000	11	11	10	2	-	-	10	13
\$10,000-\$19,999	6	6	5	1	69	11	6	8
\$20,000-\$29,999	15	16	10	2	-	-	14	18
\$30,000-\$39,999	10	10	5	1	13	2	9	12
\$40,000-\$49,999	15	16	30	6	-	-	17	22
\$50,000-\$59,999	14	14	5	1	-	-	12	15
\$60,000-\$69,999	8	8	5	1	6	1	8	10
\$70,000 and above	22	22	30	6	13	2	23	30
		-----		-----		-----		-----
Total N		103		20		16		128

**Income-
Independent*****

2

(X (28) = 60.890, p < .0003)

Below \$10,000	49	41	56	18	23	3	48	62
\$10,000-\$19,999	29	24	22	7	31	4	27	35
\$20,000-\$29,999	12	10	9	3	15	2	11	15
\$30,000-\$39,999	6	5	6	2	31	4	9	11
\$40,000-\$49,999	2	2	3	1	-	-	2	3
\$50,000-\$59,999	1	1	3	1	-	-	2	2
\$60,000-\$69,999	1	1	-	-	-	-	1	1
\$70,000 and above	-	-	-	-	-	-	-	-
		-----		-----		-----		-----
Total N		84		32		13		129

Table 5. --Continued

	Two Colleges (N = 306)		Three Colleges (N = 87)		Four to Seven Colleges (N = 31)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N
Previous Degree								
Associate's	26	52	34	19	37	7	28	78
Bachelor's	1	2	2	1	5	1	1	4
Vocational/ Technical	2	4	11	6	11	2	4	12
No Degree	71	142	54	30	47	9	66	183
Total N		200		56		19		277
Degree Aspirations								
Bachelor's	19	38	9	5	5	1	16	44
Master's	50	98	59	31	66	14	53	143
Doctorate or Professional	31	60	32	17	28	6	31	83
No Degree	-	1	-	-	-	-	-	1
Total N		197		53		21		271
Difficulty in Transferring from UIC								
Extremely Difficult	7	14	13	7	5	1	8	22
Very Difficult	9	18	8	4	10	2	9	24
Somewhat Difficult	48	94	43	23	40	8	47	125
Not Difficult	36	70	36	19	45	9	36	98
Total N		196		53		20		269

Table 5. --Continued

	Two Colleges (N = 306)		Three Colleges (N = 87)		Four to Seven Colleges (N = 31)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N
Cumulative UIC GPA								
0-1.9	1	2	-	-	3	1	1	3
2-2.9	5	17	7	6	-	-	5	23
3-3.9	67	204	75	65	61	19	68	288
4-4.9	26	79	17	15	32	10	25	104
5.0 and over	1	4	1	1	3	1	1	6
		-----		-----		-----		-----
Total N		306		87		31		424

UIC Persistence (Spring 1990)								
Enrolled	78	240	77	67	61	19	77	326
Not Enrolled	22	66	23	20	38	12	23	98
		-----		-----		-----		-----
Total N		306		87		31		424

Note: Percentages are rounded to the nearest full percent.

*** P < .001, two-tailed. Pearson chi-square.

** P < .01, two-tailed. Pearson chi-square.

* P < .05, two-tailed. Pearson chi-square.

three previous colleges), it was necessary to combine students who had transferred among four or more institutions to obtain an n of 31, large enough so that statistical inferences could be made on nonresponse items.

Students who had transferred among three or more colleges before enrolling at UIC were significantly more likely to be older, married and to have earned a previous post-secondary degree than those who had attended only two previous institutions (see Table 5). Students who had transferred most frequently were more likely to have attained senior status at UIC, but not junior or sophomore status, than those who had moved among fewer institutions. It would be expected that students who had attended a greater number of institutions would have accumulated more credits and achieved higher class standings by the time they enrolled at UIC. That this was not the case could be the result of students moving from one institution to another for short periods of time and earning very few credits at these institutions.

Ethnicity was found to be related to the number of total colleges attended in that blacks were more likely to transfer among several institutions, while the percentage of Asians, Hispanics and whites decreased with the number of colleges attended. In addition, students who had transferred more frequently were likelier to have college-educated parents and to come from higher income families, if they

were dependent. These students were also more likely to aspire to earn a master's degree. Students who had transferred frequently were less likely, however, to still be enrolled at UIC in spring 1990 than were transfers among fewer colleges. This finding corresponded with answers given by survey respondents to the question, "How difficult would it be for you to transfer to another college?" Of the respondents, 36% of students who had attended two or three colleges prior to UIC, and 45% who had attended four or more colleges answered that it would be "not at all difficult" to transfer from UIC. This finding lends credence to the theory that the more times a student transfers, the less concern she/he will have about making a subsequent transfer.

Students' Initial Institutional Type

A fourth examination of multiple transfers' background characteristics was conducted according to the institutional type of each student's initial college or university. Of the students in the sample ($n=424$), 192 began their college careers at two-year institutions, while 231 initially entered four-year colleges or universities (see Figure 5 and Table 6).

Students in the sample whose first college was a two-year institution were significantly older and significantly more likely to be male and married or divorced than students

Table 6. --Student Background Characteristics According to First and Most Recent Colleges Attended

	First College Two-Year (N = 192)		First College Four-Year (N = 231)		Most Recent College Two-Year (N = 243)		Most Recent College Four-Year (N = 178)	
	%	N	%	N	%	N	%	N
Curriculum								
Liberal Arts	61	116	67	152	59	143	70	125
Business	15	29	15	33	18	44	12	22
Engineering	14	26	10	23	13	32	10	17
Art/ Architecture	4	8	4	10	4	10	5	9
Physical Education	3	5	3	7	3	8	2	4
Social Work	3	5	-	1	3	6	1	1
		-----		-----		-----		-----
Total N		189		226		243		178
Class								
Freshman	7	13	9	21	8	20	8	14
Sophomore	32	61	37	84	38	92	31	55
Junior	43	82	37	85	41	100	39	69
Senior	18	33	16	36	13	31	23	40
		-----		-----		-----		-----
Total N		189		226		243		178
Sex *								
	² (X (2) = 6.120, p < .0468)							
Male	57 *	109	50 *	112	54	132	51	91
Female	43	80	50	114	46	111	49	87
		-----		-----		-----		-----
Total N		189		226		243		178

Table 6. --Continued

	First College Two-Year (N = 192)		First College Four-Year (N = 231)		Most Recent College Two-Year (N = 243)		Most Recent College Four-Year (N = 178)	
	%	N	%	N	%	N	%	N
Ethnicity								
American Indian	1	2	-	1	-	1	1	2
Black	14	25	14	31	15	35	15	25
Asian	16	29	12	25	14	32	13	23
Hispanic	7	12	4	9	7	16	3	5
White	63	115	70	152	64	152	68	117
Total N	183		218		236		172	
Age ***								
2								
(X (8) = 36.850, p < .0000)								
18-22	50 ***	95	64 ***	143	55	134	59	104
23-28	34	64	25	57	30	73	28	49
29-33	7	20	7	15	9	21	10	17
34-38	3	6	1	2	3	7	2	3
39 and over	2	2	4	9	3	7	2	4
Total N	187		226		242		177	
Religion								
Catholic	53	64	46	65	52	80	44	49
Jewish	1	1	7	10	4	6	5	5
Protestant	11	13	20	28	16	24	15	17
Other	20	24	11	15	12	19	19	21
No Religion	16	19	17	24	16	24	18	20
Total N	121		142		153		112	

Table 6. --Continued

	First College Two-Year (N = 192)		First College Four-Year (N = 231)		Most Recent College Two-Year (N = 243)		Most Recent College Four-Year (N = 178)	
	%	N	%	N	%	N	%	N
High School GPA								
A- to A	7	8	23	33	15	23	17	19
B to A-	28	34	25	36	26	40	26	30
B- to B	25	31	27	39	24	37	30	35
C to B-	26	31	17	26	23	36	17	20
C- to C	11	13	6	9	8	13	8	9
D to C-	2	2	1	2	1	2	2	2
Below D	2	2	-	-	1	2	-	-
	-----		-----		-----		-----	
Total N	121		145		153		115	
High School Rank								
Top 1/4	32	36	44	62	37	55	41	45
Second 1/4	33	38	31	44	33	48	32	35
Third 1/4	31	35	18	26	24	35	24	26
Bottom 1/4	4	4	6	9	5	8	4	4
	-----		-----		-----		-----	
Total N	113		141		146		110	

Table 6. --Continued

	First College Two-Year (N = 192)		First College Four- Year (N = 231)		Most Recent College Two-Year (N = 243)		Most Recent College Four-Year (N = 178)	
	%	N	%	N	%	N	%	N
High School Program *								
2								
(X (6) = 13.419, p < .0368)								
College								
Preparatory	72 *	88	88 *	125	79	121	83	94
Vocational/ Occupational	7	9	6	8	8	12	4	5
Business/ Commercial	7	9	2	3	5	7	4	5
Other	13	16	4	6	9	13	8	9
		122		142		153		113
Total N								
Mother's Education								
No College	48	58	42	60	45	69	45	51
Some College	25	30	24	35	28	42	19	22
College Degree	27	32	34	48	26	40	36	41
		120		143		151		114
Total N								
Father's Education								
No College	43	51	31	44	38	57	35	40
Some College	20	24	16	23	18	27	17	19
College Degree	38	45	53	76	44	67	48	55
		120		143		151		114
Total N								

Table 6. --Continued

	First College Two-Year (N = 192)		First College Four-Year (N = 231)		Most Recent College Two-Year (N = 243)		Most Recent College Four-Year (N = 178)	
	%	N	%	N	%	N	%	N
Marital Status **								
	$\chi^2 (4) = 14.326, p < .0063$							
Single	81 **	99	88	127	83	129	84	97
Married	15	19	11	16	14	21	13	15
Divorced	4	5	1	2	3	5	3	3
	-----		-----		-----		-----	
Total N		123		145		155		115
Employment								
Off-Campus	58	69	64	90	57	85	67	76
On-Campus	4	5	4	6	4	7	4	4
No Employment	38	46	32	46	39	58	30	34
	-----		-----		-----		-----	
Total N		120		142		150		114
Income-Dependent								
Below \$10,000	11	6	10	7	12	8	8	5
\$10,000-\$19,999	7	4	5	4	6	4	7	4
\$20,000-\$29,999	18	10	11	8	13	9	15	9
\$30,000-\$39,999	7	4	11	8	10	7	8	5
\$40,000-\$49,999	23	13	12	9	16	11	18	11
\$50,000-\$59,999	13	7	11	8	10	7	13	8
\$60,000-\$69,999	5	3	10	7	10	7	5	3
\$70,000 and up	16	8	30	22	22	15	25	15
	-----		-----		-----		-----	
Total N		55		73		68		60

Table 6. --Continued

	First College Two-Year (N = 192)		First College Four-Year (N = 231)		Most Recent College Two-Year (N = 243)		Most Recent College Four-Year (N = 178)	
	%	N	%	N	%	N	%	N
Income-								
Independent ***								
2								
(X (14) = 51.964, p < .0000)								
Below \$10,000	51 ***	33	47 ***	29	47	36	51	26
\$10,000-\$19,999	29	19	26	16	26	20	28	14
\$20,000-\$29,999	14	9	10	6	13	10	10	5
\$30,000-\$39,999	3	2	11	7	8	6	10	5
\$40,000-\$49,999	2	1	3	2	4	3	-	-
\$50,000-\$59,999	2	1	2	1	1	1	2	1
\$60,000-\$69,999	-	-	1	1	1	1	-	-
\$70,000 and up	-	-	-	-	-	-	-	-
		-----		-----		-----		-----
Total N		65		62		77		51
Goal in Attending UIC								
Bachelor's Degree	93	116	91	133	96	150	87	101
Transfer	4	5	6	8	1	2	10	11
Take Job-Related Courses	1	1	1	2	1	2	1	1
Self-Improvement	1	1	1	1	-	-	2	2
No Goal	1	1	1	2	1	2	1	1
		-----		-----		-----		-----
Total N		124		146		156		116

Table 6. --Continued

	First College Two-Year (N = 192)		First College Four- Year (N = 231)		Most Recent College Two-Year (N = 243)		Most Recent College Four-Year (N = 178)	
	%	N	%	N	%	N	%	N
Importance of Transfer Goal								
Extremely Important	86	106	83	120	87	135	81	93
Very Important	12	15	16	23	12	19	17	19
Somewhat Important	2	2	1	2	-	1	3	3
Not at All Important	-	-	-	-	-	-	-	-
	-----		-----		-----		-----	
Total N	123		145		155		115	
Previous Degree***								
2								
(X (2) = 17.254, p < .0001)								
Associate's	35	43	23	33	40 *	62	13 *	15
Bachelor's	-	-	3	4	-	-	3	4
Vocational/ Technical	2	3	6	9	5	8	3	4
No Degree	65	80	70	102	58	90	80	93
	-----		-----		-----		-----	
Total N	126		148		160		116	

Table 6. --Continued

	First College Two-Year (N = 192)		First College Four- Year (N = 231)		Most Recent College Two-Year (N = 243)		Most Recent College Four-Year (N = 178)	
	%	N	%	N	%	N	%	N
Degree Aspirations								
Bachelor's	18	22	15	22	16	24	17	20
Master's	53	64	53	77	54	84	50	58
Doctorate or Professional	29	35	32	47	30	47	31	36
No Degree	1	1	-	-	-	-	1	1
Total N	122		146		155		115	
Rank Choice UIC								
First Choice	58	72	60	87	64	100	53	61
Second Choice	34	42	29	42	27	42	37	42
Third Choice	6	7	7	10	6	10	6	7
Fourth or Lower Choice	2	3	4	6	3	4	4	5
Total N	124		145		156		115	
Cumulative UIC GPA								
0-1.9	1	2	-	1	1	2	1	1
2-2.9	6	11	5	12	7	18	3	5
3-3.9	63	119	72	162	65	157	73	129
4-4.9	30	56	20	46	27	65	21	38
5.0 and over	-	1	2	5	-	1	3	5
Total N	189		226		243		178	

Table 6. --Continued

	First College Two-Year (N = 192)		First College Four- Year (N = 231)		Most Recent College Two-Year (N = 243)		Most Recent College Four-Year (N = 178)	
	%	N	%	N	%	N	%	N
UIC Persistence (Spring 1990) *								
	2							
	$(X^2 (2) = 8.641, p < .0132)$							
Enrolled	74 *	139	81 *	183	80	195	72	128
Not Enrolled	27	50	19	43	20	48	28	50
		189		226		243		178
Total N		189		226		243		178

Note: Percentages are rounded to the nearest full percent.

*** P < .001, two-tailed. Pearson chi-square.

** P < .01, two-tailed. Pearson chi-square.

* P < .05, two-tailed. Pearson chi-square.

who began at four-year colleges or universities (see Table 6). They were also less likely to be white than initial four-year college entrants. In addition, significantly fewer students who first entered community colleges had attended college preparatory high schools. Students who began at two-year institutions had earned significantly lower high school grade point averages and had lower class ranks than the four-year group, were significantly less likely to have college-educated fathers and, particularly if they were independent, earned significantly lower incomes than their four-year college counterparts. These findings reflect previous research conducted by Peng and Bailey (1977). Not surprisingly, students who began at community colleges were more likely to have earned associate's degrees than those who initially enrolled at four-year institutions. Finally, multiple transfers whose first college was two-year were significantly less likely than the four-year group to still be enrolled at UIC in spring 1990.

Students' Most Recent Institutional Type

When examined from the perspective of students' most recent institution attended prior to enrolling at UIC, differences between the groups were not as dramatic as those found between students initially entering two-year, as opposed to four-year, institutions (see Table 6). While the percentages of freshmen transferring to UIC from two-year

and four-year institutions were identical, students coming from two-year colleges were more likely to be sophomores or juniors while four-year college transfers were more likely to be seniors. Multiple transfers moving to UIC from two-year institutions were more likely to be Hispanic, Catholic, and to have earned slightly lower high school grade point averages and class ranks than four-year college transfers. In addition, multiple transfers from community colleges came from lower-income families (if they were dependent) and were less likely to have college-educated parents than transfers from four-year institutions.

Transfers from community colleges were significantly more likely to have an associate's degree upon matriculation at UIC, and were enrolled in professional programs (e.g., business and engineering) to a greater extent than those from four-year institutions (see Table 6). In addition, a greater percentage of community college transfers aspired to earn the B.A. degree at UIC and felt that this goal was "extremely important" than the four-year college transfers. Respondents transferring to UIC from community colleges were also more likely to state that UIC was their first choice institution. Of respondents who transferred to UIC from four-year institutions, 10% stated that their main goal in coming to UIC was to earn credits for transfer to another college. It is not surprising, then, that multiple

transfers to UIC from two-year institutions had a significantly higher persistence rate in spring 1990 than those transferring from four-year colleges and universities.

A final examination of multiple transfers' background characteristics was made according to the interinstitutional transfer paths delineated in the last section (see Table 7). Attributes of the sample population were included in this table for comparison purposes.

4 > 2 > 4 Path

Reverse transfers, or those who begin their collegiate careers at four-year institutions and then transfer to community colleges, were found by Peng (1977) and Janasiewicz (1987) to be poor academic performers with low college grade point averages. Kuznik, Maxey and Anderson (1974) theorized that transfers frequently enroll at community colleges in order to improve their low grades, and then intend to return to the four-year sector. Although students' previous college grades were not analyzed for this study, 11% of 4 > 2 > 4 respondents indicated that they had left their original four-year institution as a result of "the college's decision, for academic or other reasons."

While the literature has suggested otherwise, an analysis of the background characteristics of 4 > 2 > 4 transfers indicated that these students performed very well academically. 4 > 2 > 4 transfers had the second highest high

Table 7. --Background Characteristics According to Multiple Transfer Path

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Curriculum										
Liberal Arts	65	77	69	52	49	36	71	39	64	271
Business	17	20	13	10	17	13	5	3	16	66
Engineering	9	11	12	9	22	16	14	8	12	49
Art/ Architecture	4	5	3	2	4	3	5	3	5	19
Physical Education	4	5	3	2	4	3	4	2	3	12
Social Work	1	1	-	-	4	3	-	-	2	7
Total N		119		75		74		55		424
Class										
Freshman	10	12	5	4	8	6	11	6	8	34
Sophomore	45	54	33	25	30	22	29	16	35	148
Junior	37	44	44	33	51	38	40	22	40	170
Senior	8	9	17	13	11	8	20	11	17	72
Total N		119		75		74		55		424
Sex										
Male	50	60	51	38	67	49	49	27	53	223
Female	50	59	49	37	33	24	51	28	47	201
Total N		119		75		73		55		424

Table 7. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Ethnicity										
American Indian	-	-	-	-	1	1	2	1	1	3
Black	12	14	11	8	15	11	17	9	15	60
Asian	10	11	17	12	20	14	17	9	13	55
Hispanic	5	6	6	4	10	7	-	-	5	21
White	73	84	67	48	53	38	64	34	66	271
Total N	115		72		71		53		410	
Residence										
U.S. Citizen	95	113	91	68	81	58	87	48	91	384
Foreign	5	6	9	7	19	14	13	7	9	40
Total N	119		75		72		55		424	
Age***										
² (X (12) = 38.940, p < .0001)										
18-22	74	88	68	51	35	24	58	32	57	240
23-28	20	24	24	18	40	29	26	14	29	123
29-33	3	4	7	5	17	12	9	5	9	38
34-38	1	1	1	1	6	4	2	1	2	10
over 38	2	2	-	-	3	2	5	3	3	11
Total N	119		75		71		55		422	

Table 7. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Hours Enrolled										
Full-time	84	100	76	57	80	59	69	38	77	327
Part-time	16	19	24	18	20	45	31	17	23	95
Total N	119		75		74		55		422	

Religion*

$$\chi^2 (12) = 25.608, p < .0121$$

Catholic	48	37	58	29	64	27	35	11	49	130
Jewish	8	6	-	-	-	-	3	1	4	11
Protestant	18	14	6	3	10	4	26	8	15	41
Other	10	8	22	11	12	5	7	2	15	40
No Religion	16	12	14	7	14	6	29	9	17	44
Total N	77		50		42		31		266	

High School

GPA*

$$\chi^2 (21) = 32.827, p < .0481$$

A- to A	20	16	8	4	5	2	33	11	16	42
B to A-	26	20	28	14	31	13	24	8	26	70
B- to B	23	18	31	16	12	5	24	8	27	72
C to B-	20	16	22	11	33	14	12	4	21	57
C- to C	9	7	10	5	10	4	3	1	8	22
D to C-	1	1	2	1	2	1	3	1	1	4
Below D	-	-	-	-	5	2	-	-	1	2
Total N	78		51		41		33		269	

Table 7. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
High School Rank										
Top 1/4	40	31	39	19	24	9	52	17	39	100
Second 1/4	35	27	29	14	34	13	27	9	32	83
Third 1/4	18	14	31	15	37	14	15	5	24	61
Bottom 1/4	7	5	2	1	3	1	6	2	5	13
	-----		-----		-----		-----		-----	
Total N	77		49		37		33		257	
High School Program**										
χ^2 $(X^2 (9) = 24.570, p < .0034)$										
College										
Preparatory	91	70	82	42	57	24	84	26	81	216
Vocational/ Occupational	4	3	6	3	14	6	6	2	6	17
Business/ Commercial	3	2	6	3	7	3	-	-	5	12
Other	3	2	6	3	21	9	10	3	8	22
	-----		-----		-----		-----		-----	
Total N	77		51		42		31		267	
Mother's Education										
No College	40	31	48	24	56	23	45	15	45	120
Some College	27	22	20	10	29	12	21	7	24	65
College Degree	30	23	32	16	15	6	33	11	30	81
	-----		-----		-----		-----		-----	
Total N	76		50		41		33		266	

Table 7. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Father's Education										
No College	30	23	38	19	56	23	39	13	37	97
Some College	16	12	24	12	22	9	15	5	18	47
College Degree	54	41	38	19	22	9	45	15	46	122
Total N	76		50		41		33		266	
Marital Status***										
2										
(X (3) = 25.984, p < .0000)										
Single	92	72	90	46	73	32	85	28	84	227
Married	6	5	6	3	20	9	15	5	13	36
Divorced	1	1	4	2	7	3	-	-	3	81
Total N	78		51		44		33		271	
Employment										
Off-Campus	60	46	60	30	54	22	64	21	61	162
On-Campus	3	2	2	1	-	-	6	2	4	11
Not Employed	38	29	38	19	46	19	30	10	35	92
Total N	77		50		41		33		265	

Table 7. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Hours Worked										
0-10	41	31	40	20	49	21	44	14	41	108
11-20	24	18	26	13	12	5	22	7	23	61
21-30	21	16	14	7	16	7	19	6	17	44
31-40	13	10	14	7	19	8	6	2	14	37
41 and over	1	1	6	3	5	2	9	3	5	13
Total N	76		50		43		32		263	
Income- Dependent**										
χ^2 $(X^2 (24) = 46.208, p < .0041)$										
Below \$10,000	9	4	7	2	25	3	14	3	10	13
\$10,000-\$19,999	4	2	10	3	-	-	5	1	6	8
\$20,000-\$29,999	14	6	21	6	25	3	5	1	14	18
\$30,000-\$39,999	11	5	7	2	-	-	14	3	9	12
\$40,000-\$49,999	11	5	24	7	25	3	5	1	17	22
\$50,000-\$59,999	16	7	21	6	-	-	5	1	12	15
\$60,000-\$69,999	14	6	3	1	-	-	5	1	8	10
\$70,000 and up	20	9	7	2	25	3	47	10	23	30
Total N	44		29		12		21		128	

Table 7. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Income- Independent										
Below \$10,000	48	14	48	10	50	15	50	5	48	62
\$10,000-\$19,999	21	6	28	6	30	9	40	4	27	35
\$20,000-\$29,999	14	4	14	3	17	5	-	-	11	15
\$30,000-\$39,999	7	2	10	2	-	-	10	1	9	11
\$40,000-\$49,999	3	1	-	-	3	1	-	-	2	3
\$50,000-\$59,999	3	1	-	-	-	-	-	-	2	2
\$60,000-\$69,999	3	1	-	-	-	-	-	-	1	1
\$70,000 and up	-	-	-	-	-	-	-	-	-	-
Total N		29		21		30		10		129
Goal in Attending UIC										
Bachelor's Degree	95	75	90	47	100	43	82	27	92	252
Transfer	3	2	8	4	-	-	12	4	5	13
Take Job-Related Courses	1	1	-	-	-	-	3	1	1	3
Self-Improvement	-	-	2	1	-	-	3	1	1	2
No Goal	1	1	-	-	-	-	-	-	1	3
Total N		79		52		43		33		273

Table 7. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Importance of Transfer Goal										
Extremely Important	87	68	83	43	86	37	79	26	85	229
Very Important	13	10	13	7	14	6	18	6	14	38
Somewhat Important	-	-	4	2	-	-	3	1	1	4
Not at all Important	-	-	-	-	-	-	-	-	-	-
Total N		78		52		43		33		271
Previous Degree***										
χ^2 $(X^2 (3) = 25.984, p < .0000)$										
Associate's	27	21	14	7	56	25	6	2	28	78
Bachelor's	-	-	-	-	-	-	9	3	1	4
Vocational/ Technical	1	1	-	-	7	3	6	2	4	12
No Degree	72	57	86	45	38	17	79	26	66	183
Total N		79		52		45		33		277
Degree Aspirations										
Bachelor's	18	14	22	11	17	7	21	7	16	44
Master's	51	40	45	23	59	25	42	14	53	143
Doctorate or Professional	31	25	31	16	24	10	36	12	31	83
No Degree	-	-	2	1	-	-	-	-	-	1
Total N		79		51		42		33		271

Table 7. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Difficulty in Transferring from UIC										
Extremely Difficult	8	6	8	4	7	3	3	1	8	22
Very Difficult	14	11	4	2	7	3	6	2	9	24
Somewhat Difficult	44	34	50	26	53	23	49	16	47	125
Not at all Difficult	34	26	38	20	33	14	42	14	36	98
		-----		-----		-----		-----		-----
Total N		77		52		43		33		269
Cumulative UIC GPA										
0-1.9	1	1	-	-	1	1	-	-	1	3
2-2.9	7	8	1	1	10	7	4	2	5	23
3-3.9	66	79	71	53	59	44	76	42	68	288
4-4.9	25	30	27	20	30	22	15	8	25	104
5.0 and over	1	1	1	1	-	-	5	3	1	6
		-----		-----		-----		-----		-----
Total N		119		75		74		55		424
UIC Persistence (Spring 1990)*										
2										
(X (3) = 8.873, p < .0310)										
Enrolled	87	103	69	52	76	56	74	41	77	326
Not Enrolled	13	16	31	23	24	18	26	14	23	98
		-----		-----		-----		-----		-----
Total N		119		75		74		55		424

Table 7. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Goal in Attending First College *** $\chi^2 (15) = 126.173, p < .0000$										
Associate's	4	3	26	10	32	11	4	1	13	31
Bachelor's	80	61	3	1	-	-	67	18	42	98
Transfer	5	4	62	24	50	17	11	3	33	76
Take Job-Related Courses	4	3	-	-	9	4	-	-	3	7
Self-Improvement	-	-	5	2	6	3	11	3	4	8
No Goal	7	5	5	2	3	1	7	2	5	11
Total N	76		39		34		27		231	
Goal in Attending Second College *** $\chi^2 (15) = 122.251, p < .0000$										
Associate's	23	16	2	1	42	17	7	2	18	45
Bachelor's	-	-	69	36	-	-	48	15	29	72
Transfer	64	44	23	12	54	22	26	8	44	111
Take Job-Related Courses	-	-	-	-	-	-	3	1	1	2
Self-Improvement	12	8	2	1	2	1	16	5	6	16
No Goal	1	1	4	2	2	1	-	-	2	6
Total N	69		52		41		31		252	

Note: Percentages are rounded to the nearest full percent.

*** P < .001, two-tailed. Pearson chi-square.

** P < .01, two-tailed. Pearson chi-square.

* P < .05, two-tailed. Pearson chi-square.

school grade point averages and class ranks of the four groups (4 > 4 > 4 transfers had the highest); were significantly more likely to have attended college preparatory high school programs; and were more likely to be Jewish and to have college-educated parents than the other groups (see Table 7). Multiple transfers in the 4 > 2 > 4 group also came from high-income families (if they were dependent) and were significantly more likely than the other three transfer groups to still be enrolled at UIC in spring 1990. Moreover, the cumulative UIC grade point averages of 4 > 2 > 4 transfers were comparable to those of students in the other groups, and were higher than those of the 4 > 4 > 4 transfers.

The 4 > 2 > 4 transfer path contained the highest percentage of white, single, traditional-age, full-time students of any group studied. Students in this group were significantly younger than those taking the other three paths, and all of these transfers had attended two other institutions prior to enrolling at UIC. Of the 4 > 2 > 4 respondents, 95% stated that their main goal in attending UIC was to earn a bachelor's degree. This goal was felt to be "extremely important" by 87% of respondents and "very important" by the remaining 13%, making this group one of the two highest in terms of institutional and goal commitment. The long-term degree aspirations of 4 > 2 > 4 respondents were also high, with 18% aspiring toward the B.A.,

51% the M.A. and 31% the doctorate or a professional degree.

Educational goals of 4 > 2 > 4 transfers were examined in terms of the types of institutions they had previously attended. The majority of respondents reported that they had enrolled at their first college (a four-year institution) with the goal of earning a B.A. and their second college (a two-year institution) with the goal of transferring. These responses were supported by UIC data indicating that 26% of the students taking this transfer path earned 11 credit hours or less at the two-year college, while only 3% earned 11 credit hours or less at the four-year institution (see Table 8).

2 ≥ 4 ≥ 4 Path

The process of transferring from a community college to a four-year institution has long been considered "normal" transfer behavior. This type of transfer movement is often referred to in the literature as "vertical" (Peng, 1977; Peng & Bailey, 1977). All of the 2 > 4 > 4 transfers in this study had attended two other institutions prior to their enrollment at UIC.

Many of the background characteristics of 2 > 4 > 4 transfers differed from those of the other groups. Students taking this path were among the youngest in the sample, and most were single; Catholic; and had lower family income

Table 8. --Credit Hours Earned at First and Second Colleges

	4>2>4		2>4>4		2>2>4		4>4>4	
	Group		Group		Group		Group	
	(N = 119)		(N = 75)		(N = 74)		(N = 55)	
	%	N	%	N	%	N	%	N
First College ***								
	² (X (10) = 67.667, p < .0000)							
0-11	3	3	36	25	23	16	14	7
12-30	27	29	23	16	31	22	28	14
31-60	41	44	15	10	20	14	22	11
61-90	22	24	15	10	13	9	16	8
91-120	4	4	12	8	11	8	16	8
121 and over	3	3	-	-	1	1	4	2
TOTAL N	107		69		73		50	
Second College								
0-11	26	30	4	3	8	6	14	7
12-30	20	23	21	15	24	17	35	17
31-60	21	24	31	22	28	20	27	13
61-90	19	22	28	20	24	17	18	9
91-120	12	14	10	7	11	8	2	1
121 and over	1	1	7	5	6	4	4	2
TOTAL N	119		75		72		49	

Note: Percentages are rounded to the nearest full percent.

*** P < .001, two-tailed. Pearson chi-square.

** P < .01, two-tailed. Pearson chi-square.

* P < .05, two-tailed. Pearson chi-square.

levels than all of the other groups except the 2 > 2 > 4 transfers. These data lend credence to the theory that students who begin their collegiate careers in the two-year sector often do so because of financial concerns (Tinto, 1987). Although students taking this path earned the second highest cumulative grade point averages at UIC of the transfer groups, they were significantly less likely to still be enrolled at UIC in spring 1990 than the other groups. They were also significantly less likely than the other groups to have earned a degree prior to enrolling at UIC (see Table 7).

Most 2 > 4 > 4 transfers entered their first community college with the intention of transferring, and then aspired to earn the B.A. once they transferred to the four-year college or university. This behavior was reflected in the fact that 36% of these transfers earned 11 or fewer credits at the community college, while only 4% earned 11 or less at the four-year institution.

These findings are in agreement with previous research showing that vertical, or 2 > 4 transfers are relatively young, have high academic aspirations, good high school and college grade point averages, and well-educated parents (Holmstrom & Bisconti, 1974; Peng, 1977; Velez & Javalgi, 1987).

2 > 2 > 4 Path

Transfers who attended two community colleges consecutively prior to enrolling at UIC differed most substantially from the other groups and from the sample population in terms of their background characteristics and educational goals and aspirations. While the percentage of males and females in the other transfer paths was approximately equal, 67% of the 2 > 2 > 4 transfers were male and 33% female. There were more Asians and Hispanics in this group than in any of the others, and fewer white students. There were also more foreign students among the 2 > 2 > 4 transfers.

Students in this group were significantly older than those taking the other transfer paths, and were significantly more likely to be married or divorced (see Table 7). There were also more Catholics in this group than in any of the others. These background characteristics could be related to the fact that the 2 > 2 > 4 transfers were the least geographically mobile of the groups, with 81% of these students attending two or more Chicago area community colleges and then staying in the area to attend UIC. When compared to the other groups, the fathers of these students were less likely to have had college educations, and their family incomes were substantially lower. Even though 2 > 2 > 4 transfers were older and had lower incomes (whether they were dependent or independent), they were less likely than

the other groups to be employed and more likely to attend UIC on a full-time basis. They were, however, significantly less likely than the other groups to be enrolled in the College of Liberal Arts and Sciences at UIC. Instead, many of these transfers were enrolled in the Colleges of Business and Engineering, programs with a more professional emphasis.

The majority of respondents taking the 2 > 2 > 4 transfer path enrolled at both of their two-year institutions with the intention of transferring, although 32% aspired to earn the A.A. at their first college and 42% at their second. In line with these goals, transfers in this group spent more time at their second than at their first community college. Only 8% of 2 > 2 > 4 transfers earned 11 credits or less at their second institution, while 23% earned 11 or fewer credits at their first. Of respondents in this group, 58% had earned an associate's degree, and 7% a vocational or occupational certificate prior to enrolling at UIC; a significantly higher percentage than the other groups. Of the 2 > 2 > 4 transfers, 88% had attended two community colleges and 12% three community colleges prior to enrolling at UIC.

Transfers on the 2 > 2 > 4 path were the most likely of the four groups to aspire to earn the B.A. from UIC. It is surprising that students taking this path earned the highest cumulative UIC grade point averages of the transfer groups, since they had the lowest socioeconomic statuses,

were significantly less likely to have attended college preparatory high schools and earned significantly lower high school grades. Although grade point averages from these students' previous two-year colleges were not available for comparison purposes, these findings would seem to partially refute the theory that transfers from community colleges experience "transfer shock" and consequently earn lower grades at four-year institutions than transfers from the four-year sector.

4 > 4 > 4 Path

Multiple transfer students following this path were in many respects the reverse image of the 2 > 2 > 4 group. These transfers were primarily traditional age; white; single; and were significantly less likely to be Catholic and significantly more likely to be Protestant, or to have no religious preference, than the other groups (see Table 7). 4 > 4 > 4 transfers had significantly higher family income levels than the other groups (47% of dependent students in this group had parents earning \$70,000 and above); were likely to have college-educated parents; had significantly higher high school grades; and achieved better high school class ranks, but lower UIC grade point averages, than the other groups. These findings are similar to those of Peng (1977), who discovered that the 4 > 4 transfers in his

study had high socioeconomic status and academic aspiration levels, were academic achievers and had attended high school preparatory programs. However, the lackluster academic performance at UIC of 4 > 4 > 4 transfers was surprising in light of these students' high socioeconomic statuses and superior academic backgrounds.

In terms of their goals and aspirations, 67% of respondents in the 4 > 4 > 4 group enrolled at their first institution with the stated goal of earning a B.A. However, only 48% had this intention when they transferred to their second four-year institution, while 26% expected to transfer again and 16% were taking courses for self-improvement. These transfers' lower expectation of obtaining a B.A. at their second four-year institution could be related to the fact (discussed further in the following two sections) that they tended to move from higher-choice, more selective colleges to lower-choice, less prestigious ones. Of 4 > 4 > 4 transfers, 85% had attended two institutions, and 15% three institutions, prior to enrolling at UIC.

Multiple transfers on the 4 > 4 > 4 path were significantly less likely than the other groups to have earned a previous postsecondary degree before enrolling at UIC, and were significantly more likely to be enrolled in the College of Liberal Arts and Sciences at UIC. Only 82% of 4 > 4 > 4 respondents entered UIC with the goal of earning a

bachelor's degree, while 12% stated that they intended to transfer to another institution. Not surprisingly, 4 > 4 > 4 transfers were most likely of all the groups to feel that transferring out of UIC would be "not at all difficult" to do, and only 74% of the students in this group were still enrolled at UIC in spring 1990. In the multiple transfer sample, a significant relationship was found to exist between full-time enrollment at UIC and persistence through the spring 1990 quarter ($\chi^2 (1) = 34.370, p < .0000$). It is therefore not surprising that 4 > 4 > 4 transfers, who were least likely of the transfer groups to be enrolled full-time at UIC, persisted at a comparatively lower rate than students in the other groups.

Summary of Background Characteristics by Transfer Path

There were a number of significant differences among the four multiple transfer groups with regard to student background characteristics (see Table 7). While the majority of students in the sample population were traditional age, 4 > 2 > 4 transfers were significantly younger, and 2 > 2 > 4 transfers significantly older, than the other two transfer groups and the sample population. Related to these differences is the fact that significantly more 4 > 2 > 4 transfers were single, and a significantly greater percentage of 2 > 2 > 4 transfers married or divorced, than the

other groups.

In terms of socioeconomic status, financially dependent 4 > 4 > 4 transfers had significantly higher incomes than the other groups, while 4 > 2 > 4 transfers were more likely to have college-educated fathers. A significantly higher percentage of 2 > 2 > 4 transfers, on the other hand, had fathers with no college education. 2 > 2 > 4 transfers also had significantly lower family incomes than the other groups, if they were dependent.

Religious differences were surprisingly substantial among the multiple transfer groups, with Catholicism significantly more prevalent among 2 > 2 > 4 transfers and least likely among students taking the 4 > 4 > 4 path. While 4 > 4 > 4 transfers were primarily Protestants or had no religious affiliation, 2 > 4 > 4 transfers were significantly less likely than the other groups to be Protestant, but were more likely to claim "other" as their religious affiliation.

Although the vast majority of students in the sample had attended college preparatory high school programs and 39% were in the top quarter of their high school class, educational backgrounds of students in the four transfer groups differed dramatically. Students in the 4 > 4 > 4 group had earned significantly better high school grades, and 2 > 2 > 4 transfers significantly lower, than the other groups. Additionally, 2 > 2 > 4 transfers were significantly less likely to have attended college preparatory high

school programs than the other groups, having instead enrolled in vocational/occupational or other types of high schools. This finding may be related to the fact that significantly fewer 2 > 2 > 4 transfers, and significantly more 4 > 4 > 4 transfers, were enrolled in the College of Liberal Arts and Sciences at UIC in fall 1989. 2 > 2 > 4 students instead entered the business and engineering programs in greater numbers than the other groups. Given their comparatively lower socioeconomic statuses and less impressive high school performances, the fact that the 2 > 2 > 4 transfers outperformed the other three groups by receiving higher cumulative grade point averages at UIC was a remarkable and unexpected finding.

Overall, students taking the four multiple transfer paths had very high educational goals and aspirations, with the vast majority of transfers in all groups aspiring toward master's degrees, doctorates or professional degrees. In addition, 100% of 2 > 2 > 4 transfers, 95% of 4 > 2 > 4 transfers, 90% of 2 > 4 > 4 transfers and 82% of 4 > 4 > 4 transfers planned to earn a B.A. at UIC. This low degree of institutional commitment, but high goal commitment, on the part of 4 > 4 > 4 transfers may be related to the lower UIC persistence rates for this group and the fact that 4 > 4 > 4 transfers were less likely than the other groups to attend UIC on a full-time basis, a variable found to have a

significant positive relationship with persistence. The two groups with the strongest intentions to earn bachelor's degrees at UIC (4 > 2 > 4 and 2 > 2 > 4 transfers) also had the highest persistence rates at UIC, with retention of 4 > 2 > 4 transfers significantly greater than the other groups and the sample as a whole.

Objectives 3 and 4 To delineate the multiple transfer students' self-reported reasons for choosing (transferring to) and leaving (transferring from) previous institutions attended.

Research Question 3 Which of the interinstitutional enrollment/transfer patterns are related to students' self-reported reasons for choosing (transferring to) and leaving (transferring from) their previous institutions?

The 424 students in the multiple transfer sample moved among a total of 302 different higher education institutions in the United States and abroad (see Appendix 9 for a listing of these institutions). These 302 colleges and universities represented a total of 1,013 student transfer decisions and 1,437 enrollment decisions (including the decision to enroll at UIC).

The college choice and attrition literature describes a number of student and institutional characteristics that are influential in the transfer decision. In terms of choosing a college or university, perceived academic quality; cost; financial aid; academic program availability and location appear to be the most important institutional

characteristics (Becker, 1988; Chapman & Jackson, 1987; Hossler et al., 1989; Litten et al., 1983; Tinto, 1987). Institutional attributes are also highly influential in the transfer decision, according to students' self-reports. Some of the attributes shown to influence the transfer decision are academic quality and program availability; location; cost; institutional size; teaching quality; faculty availability outside the classroom; class size and social atmosphere (Brigman et al., 1982; Kowalski, 1977; Peng, 1977; Richardson & Bender, 1987; Wisner, 1984).

In order to determine the factors which most influenced the choice and transfer decisions of multiple transfers in the sample population, survey respondents were asked to answer the following questions for each college attended: "Which of the characteristics below were most important in your decision to enroll at this college? Please circle the numbers of the THREE MOST IMPORTANT characteristics." Then, respondents were asked to indicate "Which of the characteristics listed above, if viewed negatively, were most important in your decision to LEAVE (transfer out of) this college? Please return to the list for Question 5, and place an "X" in front of the three characteristics which most influenced your decision to leave."

When the answers to these questions were analyzed by multiple transfer path several interesting patterns emerged. Responses to a number of other survey items lent support to

these findings. For each institution attended, respondents were asked whether this college was their first, second, third or fourth choice. Respondents were also asked about the quality of their overall experience at the college; whether they could name an individual on the faculty or staff who had shown a personal interest in them or helped them with a school-related problem; and whether the decision to transfer out of that college was the student's alone; the student's parents'; the college's, for academic or other reasons; or other. Results will be presented in the context of the interinstitutional transfer paths described earlier in this chapter, and are illustrated in Table 9.

4 ≥ 2 ≥ 4 Path

Multiple transfers taking this path overwhelmingly enrolled at their initial (four-year) college or university because of the perceived quality of its academic programs. The ranking of other institutional attributes, however, depended upon sector of control. For students enrolling at public institutions ($n=44$), variety of courses and programs was considered the second most important characteristic, with affordability of tuition and fees third and convenience of location/attractiveness of campus facilities and grounds fourth. For students enrolling at private institutions ($n=28$), academic quality was followed by faculty teaching

**Table 9. --Factors Influencing College Choice and Persistence
by Multiple Transfer Path**

	4>2>4 Group		2>4>4 Group		2>2>4 Group		4>4>4 Group		Multiple Transfer Sample	
	(N = 119)		(N = 75)		(N = 74)		(N = 55)		(N = 424)	
	%	N	%	N	%	N	%	N	%	N
Rank Choice										
First College										
First Choice	77	58	66	25	73	24	63	17	72	165
Second Choice	16	12	18	7	21	7	19	5	16	36
Third Choice	5	4	5	2	6	2	7	2	6	14
Fourth or Lower Choice	1	1	11	4	-	-	11	3	6	13
	-----		-----		-----		-----		-----	
Total N	75		38		33		27		228	
Rank Choice										
Second College										
First Choice	51	35	75	39	56	23	58	18	64	160
Second Choice	19	13	14	7	37	15	19	6	19	48
Third Choice	12	8	8	4	5	2	7	2	7	18
Fourth or Lower Choice	18	12	4	2	2	1	16	5	10	24
	-----		-----		-----		-----		-----	
Total N	68		52		41		31		250	

Table 9. --Continued

	4>2>4 Group		2>4>4 Group		2>2>4 Group		4>4>4 Group		Multiple Transfer Sample	
	(N = 119)		(N = 75)		(N = 74)		(N = 55)		(N = 424)	
	%	N	%	N	%	N	%	N	%	N
Overall Experience First College *										
χ^2 (12) = 23.206, p < .0126										
Extremely Positive	17	13	21	8	15	5	27	7	18	41
Positive	22	17	46	18	42	14	35	9	34	78
Average	30	23	31	12	36	12	27	7	30	70
Negative	27	21	3	1	6	2	12	3	15	35
Extremely Negative	4	3	-	-	-	-	-	-	3	6
Total N	77		39		33		26		230	

Overall Experience Second College***										
χ^2 (12) = 34.256, p < .0006										
Extremely Positive	25	17	8	4	24	10	32	10	24	61
Positive	44	30	44	23	59	24	42	13	45	113
Average	30	21	25	13	17	7	16	5	23	58
Negative	-	-	19	10	-	-	7	2	6	14
Extremely Negative	1	1	4	2	-	-	3	1	2	6
Total N	69		52		41		31		252	

Table 9. --Continued

	4>2>4 Group		2>4>4 Group		2>2>4 Group		4>4>4 Group		Multiple Transfer Sample		
	(N = 119)		(N = 75)		(N = 74)		(N = 55)		(N = 424)		
	%	N	%	N	%	N	%	N	%	N	
Faculty/Staff Relationship First College											
Yes	47	36	49	19	44	15	63	17	48	111	
No	53	41	51	20	56	19	37	10	52	121	
Total N	77		39		34		27		232		
Faculty/Staff Relationship Second College											
Yes	64	44	54	28	56	23	53	16	60	151	
No	36	25	46	24	44	18	47	14	40	100	
Total N	69		52		41		30		251		
Decision to Transfer First College **											
χ^2 $(X^2 (9) = 22.927, p < .0063)$											
Own Decision	79	60	90	34	74	25	77	20	80	182	
Parents' Decision	8	6	-	-	3	1	4	1	4	8	
College's Decision	11	8	-	-	-	-	4	1	6	14	
Graduated	3	2	10	4	24	8	15	4	11	25	
Total N	76		38		34		26		229		

Table 9. --Continued

	4>2>4 Group		2>4>4 Group		2>2>4 Group		4>4>4 Group		Multiple Transfer Sample	
	(N = 119)		(N = 75)		(N = 74)		(N = 55)		(N = 424)	
	%	N	%	N	%	N	%	N	%	N
Decision to Transfer Second College *** χ^2 $(X^2 (9) = 46.522, p < .0000)$										
Own Decision	71	49	92	47	56	23	97	30	77	193
Parents' Decision	-	-	4	2	-	-	-	-	2	4
College's Decision	-	-	4	2	-	-	3	1	2	5
Graduated	29	20	-	-	44	18	-	-	20	49
	-----		-----		-----		-----		-----	
Total N	69		51		41		31		251	
Rank Choice UIC										
First Choice	63	50	50	26	73	32	62	20	60	162
Second Choice	27	21	40	21	20	9	31	10	31	84
Third Choice	6	5	8	4	7	3	3	1	6	17
Fourth or Lower Choice	4	3	2	1	-	-	3	1	3	9
	-----		-----		-----		-----		-----	
Total N	79		52		44		32		272	

Note: Percentages are rounded to the nearest full percent.

*** $p < .001$, two-tailed. Pearson chi-square.

** $p < .01$, two-tailed. Pearson chi-square.

* $p < .05$, two-tailed. Pearson chi-square.

ability, convenience of campus location and availability of financial aid. Of all 4 > 2 > 4 respondents, 77% indicated that their initial college or university was their first choice, and 16% that it was their second choice institution. However, 81% of students in this group who enrolled at private colleges ranked these institutions as their first choice as opposed to only 73% who chose to attend public colleges or universities.

Students in the 4 > 2 > 4 group most frequently decided to transfer out of public four-year institutions for personal reasons, followed by affordability of tuition and fees, convenience of campus location and social atmosphere. On the other hand, those transferring from private colleges or universities ranked affordability of tuition as their most important reason for leaving, followed by personal/family considerations. These findings are similar to those of Peng (1977), who reported that reverse transfers in his study left their four-year institutions to attend less expensive colleges that were closer to home and that provided a better fit for them personally.

The large majority (79%) of 4 > 2 > 4 respondents from both public and private four-year colleges transferred from their first institution of their own volition. However, other variables affecting the transfer decision differed by sector of control. Of 4 > 2 > 4 transfers, 14% left private colleges due to their parents' decision, 4% the college's

decision and 4% as a result of graduating with an associate's degree or certificate. It could be hypothesized that the parental decision to transfer out of private institutions resulted from higher tuitions in the private sector. On the other hand, only 5% of transfers from public four-year institutions left as a result of their parents' decision, while 16% were dismissed for academic or other reasons. The size of this last group indicates that some 4 > 2 > 4 transfers left their initial four-year institutions (particularly when they were public) because of poor academic performance. It has been postulated that these students transfer downward to community colleges to improve their grades so that they can later re-enter the four-year sector (Kuznik et al., 1974).

It follows that 4 > 2 > 4 transfers chose their community colleges primarily for convenience of location and affordable tuition. Perhaps because of the practical implications of attending a community college, only 51% of respondents stated that this institution was their first choice. While respondents also cited quality and variety of academic programs as important in their choice of the community college, these were also among the top three reasons students transferred out, along with "graduated," "personal/family concerns" and "social atmosphere."

Students on the 4 > 2 > 4 path chose to attend UIC

because of the perceived quality and variety of its academic programs, affordability of its tuition and convenience of its campus location. The interest expressed by 4 > 2 > 4 respondents in UIC's academic programs was reflected in their answers to two questions concerning their major area of study. When asked whether their major was offered at the college they had most recently attended (the community college), 42% of respondents answered that their major was not available, and 75% stated that its availability at UIC was "extremely important" or "very important" in their decision to transfer to UIC. Of 4 > 2 > 4 transfers, 63% indicated that UIC was their first choice institution, and 27% their second choice.

A number of researchers have found that students' experiences at an institution are the most crucial determinants of transfer behavior (Holmstrom & Bisconti, 1974; Volkwein et al., 1986). When asked to rank their overall experience at each college attended, 60% of 4 > 2 > 4 transfers indicated that they had had less positive experiences at their first, four-year institution than at the community college. This was the case for public, as well as private, four-year institutions, although students reported substantially more positive overall experiences at private than public colleges and universities. Of students transferring from private four-year institutions, 50% reported positive or extremely positive experiences, as opposed to 29% from

public colleges or universities. While only 45% of 4 > 2 > 4 respondents indicated that a staff or faculty member at the four-year institution had shown a personal interest in them (45% at public and 46% at private colleges), 64% reported having had such a relationship at the community college. Having significant relationships with faculty or staff members on campus has been shown to influence persistence positively (Astin, 1975; Bean, 1983; Husband, 1976; Lenning, 1982; Pascarella, 1980; Tinto, 1985, 1987).

2 > 4 > 4 Path

Students in this multiple transfer group selected their first (two-year) institution primarily because of its convenient location and low tuition, with variety of academic programs running a distant third. The community college was the first-choice institution of 66% of 2 > 4 > 4 respondents, but a telling 11% indicated that it was their fourth or lower choice.

Of the respondents in this group, 90% indicated that transferring out of the community college was their own decision, while 10% left because they had earned an associate's degree. Reasons given for transferring focused on the quality and variety of the community college's academic programs, with social atmosphere, change of residence, graduation and personal/family considerations playing smaller

roles.

The academic program qualities that 2 > 4 > 4 transfers found lacking in the community college were, not surprisingly, the same ones that most influenced these students' subsequent choice of a four-year institution. Quality and variety of academic programs, location, social atmosphere and faculty teaching ability all factored into 2 > 4 > 4 respondents' decision to transfer to the four-year college or university. However, the emphasis placed on these variables differed depending upon the control of the institution. While respondents entering both private and public colleges most frequently cited overall academic quality as the predominant choice factor, tuition, financial aid and social atmosphere were ranked second most important by students entering public institutions. Students choosing private colleges or universities, on the other hand, focused on variety of academic programs, campus location and faculty teaching ability. While 75% of all 2 > 4 > 4 respondents indicated that the four-year institution was their first choice, this ranking differed considerably depending upon sector of control. For students entering private colleges, 94% identified this institution as their first choice, as opposed to only 65% of students who chose public colleges or universities.

When asked about the characteristics that most influenced their decision to transfer out of the four-year

institution, academic factors again played an important role for respondents. Once again, however, students' reasons for leaving depended heavily upon institutional control. For respondents leaving private, four-year colleges or universities, the single most important factor was affordability of tuition. Transfers from public four-year institutions, on the other hand, cited personal and family reasons, followed by social atmosphere and convenience of campus location. Of all respondents, 92% stated that transferring out of the four-year institution was their own decision, 4% their parents' decision and 4% the college's decision.

When asked about the quality of their overall experience at the institutions they attended, 2 > 4 > 4 transfers rated the community college highest, with 67% of respondents ranking their experiences at this institution positive or extremely positive. Of students transferring to public four-year colleges or universities, 56% gave these institutions positive or extremely positive ratings, as compared to only 44% of transfers to private four-year colleges. Students were, however, more likely to have enjoyed a supportive relationship with a member of the faculty or staff at four-year institutions than at community colleges, with a higher percentage having had such a relationship at public four-year colleges or universities than at private ones. It is interesting to contrast these findings with those of the

4 > 2 > 4 group, in which the majority of students replied that they received more support from faculty or staff members at the community college than at the four-year institution.

Upon transferring out of the four-year institution, 2 > 4 > 4 respondents from both private and public sectors chose UIC for the high quality and variety of its academic programs. However, transfers from private four-year colleges ranked UIC's tuition as the most important choice factor, followed by variety of program offerings and academic quality. On the other hand, students who had most recently attended public four-year institutions gave quality the highest ranking, followed by program variety, faculty teaching ability, and campus location. Although 71% of respondents stated that their major was offered at the previous four-year institution, 79% believed that the availability of this major was "extremely or very important" in their decision to transfer to UIC. Of 2 > 4 > 4 respondents, only 50% indicated that UIC was their first choice institution, a substantially lower percentage than in any of the other groups. Students taking the 2 > 4 > 4 path were slightly more likely to rank UIC as their first choice if they transferred from a private than from a public four-year institution.

2 > 2 > 4 Path

Since this group of multiple transfers contained significantly more older, minority, and low-socioeconomic status students than the other transfer paths, it should not be surprising that 2 > 2 > 4 respondents' reasons for selecting and transferring from the community colleges they attended focused primarily on practical attributes such as institutional location and tuition costs. In choosing both community colleges, respondents in this group rated these two factors substantially higher than any of the others. Quality of the colleges' academic programs was ranked a distant third in reasons for the selection of students' first and second institutions. Students in this group ranked their first community college substantially higher in terms of choice preference than their second, with 73% indicating that their initial institution was their first choice but only 56% giving their second institution this ranking.

When asked about characteristics that influenced the decision to transfer out of the community colleges, 2 > 2 > 4 respondents ranked variety of academic programs and graduating with an associate's degree as influential for both institutions. Change of residence was also an important reason given by students in this group for transferring out of the first community college. These rationales for

transferring were supported by respondents' statements that they left both colleges as a result of their own decision or because they had graduated. A significantly higher percentage of respondents indicated that they had graduated from their most recent community college than from their first (44% for the most recent, as opposed to 24% for the first); not a surprising finding since credits earned at the first institution would increase the likelihood of graduation from the second.

Multiple transfers in the 2 > 2 > 4 group ranked their overall experience at the most recent community college higher than their experience at the first, even though a much higher percentage of respondents indicated that their initial community college was their first choice institution. Of the respondents, 83% rated their most recent community college "extremely positive" or "positive" in terms of overall experience, while only 57% gave this ranking to their first institution. Additionally, a greater percentage of respondents stated that they had enjoyed a supportive relationship with a member of the faculty or staff at the most recent community college.

Transfers taking the 2 > 2 > 4 path were the most likely of all four groups to state that their academic major was not offered at the institution from which they transferred to UIC. Additionally, 79% of 2 > 2 > 4 respondents felt that the availability of this major at UIC had an extremely

or very important influence on their decision to transfer. When asked about factors which influenced their selection of UIC, respondents' highest rankings were in the academic areas - quality and variety of programs and faculty teaching ability. Not surprisingly, affordability of tuition and convenience of campus location were also influential choice factors. Of 2 > 2 > 4 transfers, 73% indicated that UIC was their first choice institution, a substantially higher percentage than the other three groups.

4 > 4 > 4 Path

Unlike multiple transfers taking the 2 > 2 > 4 path, 4 > 4 > 4 transfers were very concerned with academic quality when they chose their first and second four-year institutions. However, the importance placed on this attribute was found to vary according to sector of control. While quality was considered the single most influential choice factor by 4 > 4 > 4 transfers who enrolled at private colleges and universities, it was ranked less important than affordability of tuition and convenience of campus location by those choosing public institutions. Of 4 > 4 > 4 respondents, only 63% initially attended their first choice institution - the lowest percentage of any of the groups - and 11% enrolled at their fourth or lower choice college. Choice rankings of students in this group differed from the others

in that 4 > 4 > 4 transfers rated public colleges and universities higher than private institutions. Of students in this group who initially enrolled at public institutions, 69% ranked them as their first choice, while only 60% of students entering private colleges did so. It is possible that students in this group were more concerned about prestige when enrolling at private colleges or universities.

In their decision to transfer out of the first four-year institution, 4 > 4 > 4 students leaving private colleges considered affordability of tuition the overriding factor, followed by personal/family issues. By contrast, personal and family considerations were the primary rationales given by students who transferred out of public institutions. These reasons differ from those found by Peng (1977), who stated that the 4 > 4 transfers in his national, longitudinal study were dissatisfied with faculty quality and social life at their original institutions. Of 4 > 4 > 4 respondents, 77% stated that transferring was their own decision; 4% their parents' decision; and 4% the college's decision. An additional 14% of the students in this group transferred because they had graduated with an associate's degree or certificate.

In choosing their most recent four-year institution, respondents selecting both private and public colleges again focused on academic program quality. However, students who chose private colleges also cited teaching quality, while

affordability of tuition and convenience of campus location were the major selection factors used by those who enrolled at public institutions. Only 58% of 4 > 4 > 4 respondents attended their first choice institution this time around, and 16% ended up at their fourth or lower choice college (as compared to 63% and 11%, respectively, for the initial four-year college). This tendency of 4 > 4 > 4 students to transfer from higher-choice to lower-choice institutions could reflect the financial and geographical limitations that caused these students to transfer out of their initial college. Once again, a higher percentage of respondents ranked public institutions as their first choice (63%) than did students selecting private colleges (57%).

Reasons for transferring out of the second four-year college were more disparate for 4 > 4 > 4 transfers than for the other groups, and varied according to the sector of control of the institution. Students leaving private four-year colleges ranked variety of courses and programs most important in their decision to leave, followed by affordability of tuition and fees; while their counterparts transferring out of public institutions cited personal and family concerns, variety of programs and change of residence as their primary considerations. Of all the respondents, 97% stated that the decision to transfer a second time was their own; the other 3% were dismissed by the college for academic

or other reasons.

4 > 4 > 4 respondents, like those in the 2 > 2 > 4 and 4 > 2 > 4 groups, indicated that their overall experience at the first institution was not as good as their experience at the most recent college. For both their initial and second transfer movements, however, 4 > 4 > 4 respondents rated their experiences at public institutions higher than they did at private ones. On the other hand, students in this group were substantially more likely to have had a supportive relationship with a faculty or staff member at the first institution if it was private.

Even though 75% of 4 > 4 > 4 transfers stated that their academic major was offered at the most recent four-year institution, 72% felt the availability of this major at UIC was an extremely or very important reason to transfer there. Like the other multiple transfer groups, 4 > 4 > 4 students reported that academic factors (e.g., quality, program variety and faculty teaching ability) were most influential in their decision to transfer to UIC, with the practical aspects of tuition and location also playing an important role for transfers from both private and public sectors. Of 4 > 4 > 4 respondents, 62% ranked UIC as their first choice, and 31% their second choice institution. Students were slightly more likely to rank UIC as their first choice if they had most recently attended private colleges.

Summary of Multiple Transfer Students' Reasons for Choosing and Leaving Previous Institutions

Findings of this study indicate that multiple transfer students look for many of the same institutional attributes when choosing four-year colleges as first-time transfers and freshmen. Perceived academic quality was cited as the most influential factor in the selection of four-year institutions by the multiple transfer groups, with variety of courses and programs running a close second in most cases. Additionally, all four groups felt that academic attributes such as quality and program variety were highly influential in their choice of UIC. Not only did respondents consider academic characteristics the most important criteria in their choice of four-year institutions, but these attributes figured prominently in the decision to transfer out of community colleges.

An entirely different set of characteristics was considered important by multiple transfers in their choice of community colleges than in the selection of four-year institutions. Convenience of campus location and affordability of tuition and fees were the attributes most frequently cited by respondents who chose to attend community colleges. As might be expected, community colleges were generally ranked as first choice institutions by a smaller percentage of respondents than were four-year colleges or universities. However, in the groups in which students attended both

two-year and four-year institutions (the 2 > 4 > 4 and 4 > 2 > 4 paths), respondents rated their overall experiences higher at the community colleges than at the four-year institutions. In addition, 4 > 2 > 4 respondents indicated that they had enjoyed more supportive relationships with faculty or staff members at the community colleges than at the four-year institutions.

Students in all groups except the 2 > 4 > 4 path reported having had significantly better overall experiences at their second than at their first institution, whether it was two- or four-year. With the exception of students taking the 4 > 4 > 4 path, respondents also reported more supportive relationships with faculty or staff members at the most recent institution they attended. However, in all groups except the 2 > 4 > 4 path, respondents indicated that the first college they attended (whether it was two- or four-year) was a higher choice institution than the second. Contrary to previous findings reported in the literature, financial aid was not considered particularly important in the choice of community colleges or four-year institutions by any of the multiple transfer groups.

Multiple transfer students' reasons for moving among institutions reflect previous research which shows that students transfer for practical, institution-specific reasons that frequently focus on the academic system. The

multiple transfer groups reported that they left community colleges because of perceived low academic program quality and limited course and program availability. Graduating with an associate's degree and changing residence were also cited frequently by two-year college transfers in all groups. It is important to note that graduating from the community college is considered a natural transfer point by both students and postsecondary institutions. A change of residence would place community college students in a different district, thus forcing the student to either transfer or pay higher, out-of-district tuition rates.

When contrasted with students transferring from community colleges, transfers from four-year institutions gave a much wider variety of reasons for leaving. While academic attributes were considered important, affordability of tuition, personal/family considerations, change of residence and social atmosphere were also mentioned frequently as reasons for transferring from four-year institutions.

Sector of institutional control exerted a major influence on multiple transfer students' reasons for choosing four-year colleges and universities. For the sample population, enrollment at students' most recent four-year institution was based on perceived academic quality regardless of control. However, for public institutions affordability of tuition was considered second most important, with convenience of campus location ranked third and social

atmosphere/attractiveness of campus facilities and grounds fourth. Affordability of tuition did not factor into students' choice of private institutions: after academic quality, location was ranked second, variety of programs third and faculty teaching ability fourth. In the 4 > 2 > 4 and 2 > 4 > 4 transfer groups, larger percentages of respondents ranked private four-year institutions as their first choice college, while in the 4 > 4 > 4 group public colleges and universities were ranked slightly higher than private ones for students' first and second transfer movements.

Respondents in the 4 > 4 > 4 and 2 > 4 > 4 groups reported having had more positive overall experiences at public than at private four-year institutions, while students taking the 4 > 2 > 4 path indicated that they had better overall experiences at private four-year colleges. Findings were mixed regarding the existence of supportive relationships between students and faculty or staff, with 4 > 4 > 4 transfers reporting more such relationships at private four-year colleges; 2 > 4 > 4 transfers at public four-year institutions; and 4 > 2 > 4 transfers ranking public and private four-year institutions equally in this regard.

When leaving four-year institutions, affordability of tuition was the primary rationale given by students in the sample who transferred from private colleges, with variety

of programs second, social atmosphere third and academic quality fourth. Transfers from four-year public institutions, by contrast, stated that they chose to leave primarily for personal/family reasons, due to a change of residence (which would affect in-state tuition rates, as well as the ability to commute to an institution); and because of quality and variety of academic programs.

In choosing to attend UIC, transfers from four-year private institutions ranked affordability of tuition as the most prominent influence, followed by academic quality and variety, location and faculty teaching ability. Students coming to UIC from public institutions, on the other hand, ranked academic quality as most important, followed by variety of programs, campus location and, finally, affordability of tuition.

In all the multiple transfer groups, but especially the 4 > 2 > 4 and 2 > 4 > 4 groups, close relationships existed between why students transferred from their first institution and why they enrolled at their second. In the 4 > 2 > 4 group, students transferred out of their initial four-year college because of tuition and location (among other factors), and then considered those same variables important in their selection of a community college. In the 2 > 4 > 4 group, students left their community colleges because of academic quality, program variety and social atmosphere, and then ranked these same characteristics

highly in their selection of four-year institutions. Convenience of campus location was considered an important reason that 2 > 2 > 4 transfers left their first community college, along with variety and quality of academic programs. These attributes were then ranked highly in students' choice of a second community college. In the 4 > 4 > 4 group, tuition was cited as a major reason for leaving the first four-year institution and for enrolling at the second. For all multiple transfer groups, quality and variety of academic programs were cited as major reasons for leaving the institution attended prior to UIC (whether it was two-year or four-year). These same attributes were then given as those which most influenced respondents' enrollment at UIC.

Research Question 4 Are there identifiable interinstitutional enrollment/transfer patterns of multiple transfer students in this population, in terms of the following institutional classifications: type (two-year or four-year), size, control (public, private or proprietary), tuition level, selectivity level (defined according to average ACT scores of the entering student body), Carnegie classification and state/region?

In this section, the multiple transfer sample and the four transfer paths will be used to examine interinstitutional movements as they relate to the college attributes listed above. Crosstabulations were run by transfer path to determine the ways in which institutional characteristics

interfaced with transfer movements, and the chi-square test was used to determine significance. Institutional data were obtained from UIC's records for all students in the multiple transfer sample ($n=424$).

General Institutional Profile

A general profile can be constructed of the institutions most recently attended by multiple transfer students in the sample prior to transferring to UIC. Of the sample, 58% of multiple transfers had most recently attended community colleges, and 42% four-year institutions. Of these four-year colleges and universities, 63% were public, 36% private and 1% proprietary. When the Carnegie classifications of these institutions were examined, 26% were research universities; 19% doctorate-granting colleges and universities; 40% comprehensive colleges and universities; 11% liberal arts colleges and 3% specialized institutions.

Not surprisingly, the Carnegie classification of an institution was found to have a highly significant relationship with its sector of control ($\chi^2 (10) = 327.908, p < .0000$). Due to this relationship, students' patterns of transfer were found to vary significantly according to their multiple transfer path. Of institutions most recently attended by multiple transfers in the sample, 99% of two-year colleges were public, as were 93% of research universities; 65% of doctorate-granting colleges and universities and 66%

of comprehensive colleges and universities. Private institutions comprised 7% of research universities; 35% of doctorate-granting colleges and universities; 34% of comprehensive colleges and universities; 100% of liberal arts colleges; 1% of two-year colleges and 67% of specialized institutions.

When institutions were categorized by selectivity level, or average ACT scores of the entering student body at each institution, it was found that there were 268 nonselective colleges attended by students in the multiple transfer sample just prior to enrolling at UIC. Of these nonselective institutions, 90% were community colleges; 9% four-year colleges or universities; and 1% public, upper-division institutions. All of the other 152 institutions attended by students in the sample were four-year colleges or universities. Of these, 16% were low selectivity; 59% moderate selectivity; 24% high selectivity and 1% extremely high selectivity.

Of the students in the sample, 83% had attended relatively inexpensive institutions in the \$0 to \$3,000 tuition range just prior to transferring to UIC. All of these institutions were in the public sector. The vast majority (71%) of the multiple transfers had most recently attended institutions that were large (average enrollments of 8,600 to 15,000) or very large (over 15,000). Finally, 81% of

the multiple transfers had attended colleges or universities in the state of Illinois prior to transferring to UIC; and 7% had most recently attended institutions elsewhere in the Midwest.

Institutional Type

Of the multiple transfers in the sample, 192 (45%) began their collegiate careers at a community college. Of these students, 105 (55%) subsequently transferred to a four-year institution; and 87 (45%) moved horizontally to another community college. A second group of 231 students (54% of the sample) originally attended a four-year college or university. Of these students, 158 (68%) subsequently moved to a community college, and 73 (32%) transferred horizontally to another four-year institution (see Figure 5). Thus, a larger number of students in the sample transferred from the four-year sector than from the two-year sector. This was true even when institutions to which students transferred only during the summer were excluded from the analysis (see Figure 6). By the time students in the sample transferred to UIC, 243 (58%) had most recently attended community colleges, and 178 (42%) four-year institutions.

These findings differ from those of Peng, who conducted a national, longitudinal study of transfer behavior in

1977, using NLS of 1972 data. Peng reported that 67% of transfers in his research sample began their collegiate careers at four-year institutions, and 33% at community colleges. Peng's findings that the transfer rate was much greater from the two-year than from the four-year sector differ radically from those of this study. The substantially heavier community college attendance rate of students in the multiple transfer sample may be reflective of these students' concerns regarding college costs in the four-year, and particularly the private four-year, sector. Since the time of Peng's study tuition costs have risen steadily, and the number of community colleges has increased dramatically. It is therefore not surprising that the multiple transfers in this study attended community colleges at a far greater rate than that found by Peng in 1977.

Institutional Size

Average student enrollments were used in this study to measure institutional size. Average enrollments were categorized into six groups: very small (enrollments of 1 - 1,000); small (1,100 - 3,000); moderate (3,100 - 5,000); moderately large (5,100 - 8,500); large (8,600 - 15,000) and very large (15,100 and up). UIC's enrollment of 24,195 placed it in the very large category. Chi-square analysis revealed a significant relationship between average

enrollment and college type ($\chi^2 (10) = 96.325, p < .0000$) in that the vast majority of students in the sample were enrolled at two-year and four-year institutions in the moderately large to very large categories prior to transferring to UIC. In addition, average enrollments were found to be significantly related to sector of institutional control ($\chi^2 (10) = 226.950, p < .0000$) in that of public colleges most recently attended by students in the sample 80% were in the large and very large enrollment categories. Private institutions were much more disparate in terms of size, with only 27% in the largest two enrollment categories; 18% moderately large; 13% moderate; 28% small and 13% very small.

The largest subgroup of the sample population, containing 43% of the multiple transfers, moved from smaller colleges to much larger institutions; and in transferring to UIC moved to an even larger university. A second subgroup, comprising 30% of the sample, moved from larger colleges or universities to smaller institutions. The majority of these students moved from very large institutions with enrollments of over 15,000 to large colleges or universities enrolling between 8,600 and 15,000 students. In transferring to UIC, the students in this group returned to a very large university. A third subgroup containing 109 of the multiple transfers, or 27% of the sample, initially moved among institutions with very similar average enrollments. The vast majority (82%) of these transfers attended two large

institutions with enrollments in the 8,600 to 15,000 range. In moving to UIC, these students moved up one category to attend a very large institution.

When analyzed by multiple transfer path, transfer rates followed patterns similar to those of the sample population in that students taking all four paths were significantly more likely to attend large and very large institutions than small or moderately-sized ones ($\chi^2 (24) = 97.706, p < .0000$ for the first institution attended; $\chi^2 (24) = 75.839, p < .0000$ for the second institution attended). Movements of students in the sample population and its derivative paths reflect the trend of transferring from smaller to larger institutions which has been shown to occur in national studies (Holmstrom & Bisconti, 1974; Peng, 1977). These movements support Peng's (1977) theory that larger colleges and universities exert greater "holding power" over transfer students than smaller ones.

4 > 2 > 4 Path

In this group, 43% of the multiple transfers moved from large four-year institutions to even larger community colleges, and then to UIC. These students tended to move among larger institutions with enrollments in the 8,600 to over 15,000 ranges. The second subgroup, containing 32% of 4 > 2 > 4 transfers, moved from larger four-year

institutions to smaller community colleges, and then back to a very large university (UIC). The vast majority (83%) of students in this subgroup transferred from very large four-year institutions with enrollments of over 15,000 to community colleges with enrollments of between 5,100 and 15,000. A third subgroup comprised of 25% of 4 > 2 > 4 transfers moved from larger institutions to institutions of similar size. Of these transfers, 43% attended two very large colleges with average enrollments in the 15,000 and over range. This trend of moving among very large institutions continued with students' third transfer to UIC.

Findings regarding the 4 > 2 > 4 group differ from those of Peng (1977), who reported that the largest reverse transfer rates in his study were from institutions with the highest enrollments. The institutional size patterns evident in the 4 > 2 > 4 group and in the following two groups (2 > 4 > 4 and 2 > 2 > 4) may be indicative of the relatively large size of Chicago-area community colleges. The multiple transfers in all three of these groups had relatively low geographical mobility, tending to remain in the Chicago vicinity for all of their transfer movements.

2 > 4 > 4 Path

Multiple transfers in this group followed patterns similar to those of the sample and the 4 > 2 > 4 group. Of

these transfers, 45% began at community colleges with moderately large to large enrollments and moved to larger four-year institutions before transferring to UIC. About 47% of these transfers moved from community colleges with enrollments of between 8,600 and 15,000 to larger four-year institutions of over 15,000 students, and then to another very large university (UIC). Another 33% of 2 > 4 > 4 transfers moved from larger community colleges to smaller four-year institutions before transferring to UIC. A third subgroup containing 21% of 2 > 4 > 4 transfers moved from larger community colleges to four-year institutions of similar size. For 69% of these students, the transfer to UIC entailed moving to an even larger third institution.

2 > 2 > 4 Path

Patterns evident in the multiple transfer sample and the first two transfer paths were not as apparent in the 2 > 2 > 4 group. The largest percentage of students in this group (40%) transferred from their first community college to another of the same size before moving to UIC. The vast majority (79%) of these institutions had average enrollments in the 8,600 to 15,000 range. A second subgroup comprising 37% of 2 > 2 > 4 transfers moved from smaller community colleges to larger ones in the 8,600 to over 15,000 range before moving to UIC. A third subgroup contained only 23% of 2 > 2 > 4 transfers who moved from larger community

colleges to smaller ones, and then to UIC. These findings indicate that 2 > 2 > 4 transfers enrolled at large community colleges initially and then moved among larger institutions throughout their collegiate careers. Peng's (1977) study, on the other hand, showed that transfer rates for students moving between two-year colleges were higher from the largest institutions.

4 > 4 > 4 Path

Movements of transfers taking this path differed from those of the other groups and were much more disparate. Of 4 > 4 > 4 transfers, 42% began their collegiate careers at larger institutions, moved to smaller ones and then transferred to substantially larger UIC. A second subgroup containing 40% of 4 > 4 > 4 transfers moved from smaller to larger colleges, and then transferred to UIC. Only 19% of 4 > 4 > 4 transfers moved from their first four-year institution to another of similar size, and 55% of these students moved among institutions with enrollments of over 15,000.

Institutional Control

Of the multiple transfer sample, 76% of students began their collegiate careers in the public sector and 24% in the private sector. Of those who started in public institutions, 61% of the students initially attended community

colleges and 39% public four-year colleges or universities. Of those who began in the private sector, only 4% of students initially enrolled at two-year colleges and 96% at four-year institutions. These percentages are similar to those found by Sandeen and Goodale (1972) in their nationwide study of first-time transfers. These researchers reported that 55% of transfers originated in public community colleges, 27% in public four-year institutions and 18% in private four-year colleges. Sandeen and Goodale discovered that over 70% of these transfers moved to public institutions.

When the transfer behavior of students in the sample was examined, it was determined that 69% of these students remained within the same sector of control when moving from their first to their second institution. Of these same-sector transfers, 93% moved between two public colleges or universities. For this group, the transfer to UIC completed the pattern of remaining solely within the public sector for all three transfer movements. While 19% of the sample initially attended private colleges or universities and then moved to public institutions, only 11% transferred from public to private institutions. This higher degree of movement from the private sector by multiple transfer students agrees with studies by Peng (1977), Sandeen and Goodale (1972) and Van Alstyne et al. (1973).

Because of the preponderance of community colleges and four-year public institutions attended by multiple transfers in the sample, institutional type was found to be significantly related to sector of control ($\chi^2 (4) = 97.991, p < .0000$). Of the students whose most recent college prior to enrolling at UIC was a two-year institution, 99% attended public community colleges. Of those who most recently enrolled at four-year institutions, 63% had attended public colleges or universities, 36% private institutions and 1% proprietary institutions.

4 > 2 > 4 Path

Of the multiple transfers in this group, 63% moved from public four-year institutions to public community colleges, and then remained within the public sector when they transferred a third time to UIC. Another 34% of 4 > 2 > 4 transfers began at private four-year institutions but moved to public community colleges. A third subgroup containing 3% of 4 > 2 > 4 transfers began at four-year proprietary institutions and then moved to community colleges. Only one individual in this group transferred from a public four-year college or university to a private two-year college.

2 > 4 > 4 Path

All but one of the 2 > 4 > 4 transfers began their collegiate careers at public community colleges. The vast

majority (67%) of students taking this path remained completely within the public sector for all three transfer movements, as they moved from community colleges to two different, public four-year institutions (including UIC). A smaller subgroup containing 32% of 2 > 4 > 4 transfers moved to private four-year institutions before transferring to UIC.

2 > 2 > 4 Path

Students taking this path moved from one community college to another and then transferred to UIC. Of the 2 > 2 > 4 transfers, 94% followed this pattern. Only 4% of the students initially enrolled in private two-year colleges, and all of these transferred to public community colleges before enrolling at UIC. Only one individual moved from a public community college to a private two-year institution.

4 > 4 > 4 Path

The multiple transfer students in this group exhibited much more diverse transfer patterns than those taking the other three paths. Of this transfer group, 54% of students initially enrolled in public, and 46% in private four-year colleges or universities. Of the 4 > 4 > 4 transfers, 25% moved from one public institution to another; 21% from a

public to a private; 27% from a private to another private and 25% from a private to a public. Only one student transferred from a public to a proprietary four-year institution.

Findings from the four multiple transfer groups are generally in agreement with those of national studies of first-time transfers, which indicate that the vast majority of transfers move among public institutions (Holmstrom & Bisconti, 1974; Knoell & Medsker, 1965; Peng, 1977; Willingham & Findyikan, 1969).

Institutional Selectivity

Average ACT scores of the entering student body at each college or university were used as a measure of institutional selectivity. For colleges that only publish SAT scores, these scores were changed into average ACT scores using conversion tables developed by Astin (1971). Once average ACT scores were determined, they were grouped into five categories: nonselective (0 - 15); low selectivity (16 - 19); moderate selectivity (20 - 23); high selectivity (24 - 27); and extremely high selectivity (28 and above). UIC, with an average ACT of 20 in 1990, was classified as moderately selective.

In the sample population, a highly significant relationship existed between selectivity level and institutional type ($\chi^2 (8) = 322.826, p < .0000$), in that all of the

community colleges attended by students in the sample were nonselective institutions. Therefore, trends appearing in the multiple transfer sample were biased toward community colleges. This bias was mitigated to some extent when the four multiple transfer paths were examined separately.

The first and largest subgroup of the sample population, containing 40% of the multiple transfers, moved from higher selectivity to lower selectivity, lower prestige institutions. Of these students, 89% transferred to nonselective institutions from more selective ones, once again reflecting the pervasive influence of community colleges on the nonselective category. A second subgroup containing 32% of multiple transfers moved from their first institution to a second at the same selectivity level. Of these students, 85% transferred from one nonselective institution to another. A third subgroup comprising 28% of the sample transferred from lower to higher selectivity institutions. Of these transfers, 51% moved from institutions in the nonselective category to institutions in the moderately selective range. In transferring a third time to UIC, these transfers attended another moderately selective institution. Another 24% of the transfers in this subgroup moved from institutions in the nonselective category to colleges or universities in the highly selective range.

4 > 2 > 4 Path

The multiple transfers in this group all moved from higher selectivity colleges and universities to nonselective community colleges. Half (50%) of these students transferred from moderately selective four-year institutions to community colleges. In transferring to UIC, these students then moved upward to another moderately selective institution. A second subgroup containing 25% of 4 > 2 > 4 transfers began at high selectivity colleges or universities, transferred downward to nonselective community colleges and then moved to moderately selective UIC. A third subgroup, including 16% of 4 > 2 > 4 transfers, started out at low selectivity institutions, transferred to nonselective community colleges and then moved to UIC.

2 > 4 > 4 Path

These multiple transfers all began their collegiate careers at community colleges, but then moved to a wide variety of four-year institutions before transferring to UIC. Of the 2 > 4 > 4 transfer group, 53% moved from their initial community college to moderately selective institutions and then to UIC, a second moderately selective institution. Another 23% of 2 > 4 > 4 transfers moved from community colleges to highly selective colleges and universities, and then transferred downward to moderately

selective UIC. The third subgroup, comprising 13% of 2 > 4 > 4 transfers, moved between two nonselective institutions, and then transferred upward to UIC.

2 > 2 > 4 Path

All of the multiple transfers following this path moved between two nonselective community colleges before transferring to UIC, classified as a moderately selective university.

4 > 4 > 4 Path

The students in this group exhibited the greatest diversity in their transfer behaviors. The largest subgroup, containing 44% of 4 > 4 > 4 transfers, moved from higher to lower selectivity institutions before transferring to UIC. Most of these transfers moved from colleges or universities of moderate and high selectivity to low and moderate selectivity institutions. Although this downward movement in selectivity or institutional prestige reflected the behavior of the sample population, this was an unexpected finding. Since 4 > 4 > 4 transfers had the most promising high school grade point averages and class ranks of the four groups, it had been expected that these students would be the most likely to move from lower to higher prestige institutions.

A second subgroup containing 31% of 4 > 4 > 4 transfers moved between two institutions at the same selectivity level. The bulk of these (67%) transferred between two or more moderately selective colleges or universities, and with their transfer to UIC extended this pattern. The remaining subgroup, containing 25% of 4 > 4 > 4 transfers, moved from lower to higher selectivity institutions, although no particular pattern could be discerned.

The trends which occurred in the multiple transfer sample and in the transfer paths reflect previous findings by Peng (1977) showing that a much larger percentage of students transfer from high to low selectivity institutions. As previously theorized by Peng (1977) and Tinto (1975), it was confirmed that of the multiple transfers in the sample dismissed for academic reasons, the vast majority transferred downward to less selective institutions. Of respondents to the survey, only 8% reported having been dismissed by previous colleges. Of these, 81% moved from higher to lower selectivity institutions; 14% moved between institutions at the same selectivity level and 5% moved upward to higher selectivity institutions. Of the 81% who transferred downward following their dismissal, 48% moved from moderately selective public four-year institutions to nonselective community colleges, and another 41% transferred from the highly selective Illinois public flagship university to

lower selectivity, in-state institutions.

Institutional selectivity was found to be related to the educational goals and aspirations of students in the multiple transfer sample. When asked about their main goal in attending their first college or university, 82% of survey respondents who aspired toward the associate's degree were enrolled in nonselective institutions. Of respondents intending to earn the bachelor's degree from their initial college or university, 48% were enrolled in moderately selective, 26% in highly selective and 5% in extremely selective institutions. Finally, 84% of respondents intending to transfer from their initial institution were enrolled in nonselective colleges, and 11% were attending moderately selective colleges or universities.

A highly significant relationship was found to exist between institutional selectivity and sector of control ($\chi^2(8) = 83.924, p < .0000$), with private colleges more selective than their public counterparts. Of nonselective colleges and universities most recently attended by multiple transfers in the sample population, 94% were public; 5% private and 1% proprietary. Institutions of low selectivity were 84% public and 6% private; moderate selectivity 57% public and 43% private; high selectivity 75% public and 25% private and extremely high selectivity 100% private.

Carnegie Classification

In order to create manageable categories based on Carnegie classification, Research Universities I and II were combined into one group, entitled Research Universities; as were Doctorate-Granting Colleges and Universities I and II; Comprehensive Colleges and Universities I and II and Liberal Arts Colleges I and II. The remaining Carnegie categories were left unchanged as Two-Year Community, Junior and Technical Colleges and Specialized Institutions (including religion and theology, health professions, business and management, art, music and design, corporate colleges and teachers colleges). UIC is classified as a research university.

In the multiple transfer sample, 38% of students moved to a two-year college from an institution with a different Carnegie classification. A second subgroup containing 26% of the multiple transfers moved from a two-year college to institutions with a wide variety of Carnegie classifications. Finally, 24% of students in the sample moved between institutions with the same Carnegie classification for their first two transfers, and 86% of these individuals moved from one two-year college to another before enrolling at UIC. Of course, all students in the multiple transfer sample ended up at UIC, classified as a research university.

4 > 2 > 4 Path

Of the students taking this transfer path, 32% moved from research universities to two-year colleges, and then back to a research university (UIC). The second subgroup, containing 29% of 4 > 2 > 4 transfers, moved from comprehensive colleges and universities to two-year colleges, transferring a third time to the research university. Another 23% of 4 > 2 > 4 transfers began at doctorate-granting colleges and universities; transferred to two-year colleges and then moved to UIC. Only 12% of transfers in this group initially enrolled at liberal arts colleges, and an even smaller group (4%) started at specialized institutions.

2 > 4 > 4 Path

These transfers moved from two-year colleges to a wide range of Carnegie classification institutions. The largest subgroup, comprising 41% of 2 > 4 > 4 transfers, moved from two-year colleges to comprehensive colleges and universities and then to the research university (UIC). Another 25% of the students in this group transferred from two-year colleges to doctorate-granting institutions before enrolling at UIC. Finally, 23% of 2 > 4 > 4 transfers began at two-year colleges, transferred to research universities and then transferred again to a second research university

(UIC). Only 9% of 2 > 4 > 4 transfers attended liberal arts colleges as their second institution.

2 > 2 > 4 Path

All of the students in this category moved from one two-year college to another and then transferred to UIC, a research university.

4 > 4 > 4 Path

As with institutional selectivity level, the group of 4 > 4 > 4 transfers displayed the most widely divergent patterns in moving among institutions of different Carnegie classifications. While 40% of the institutions that 4 > 4 > 4 transfers moved among before transferring to UIC were comprehensive colleges and universities, no specific transfer patterns were evident. Another 21% of 4 > 4 > 4 transfers attended research universities; 19% liberal arts colleges; 13% doctorate-granting institutions; and 6% specialized institutions.

The Carnegie classification of multiple transfers' initial college was found to be closely related to their degree goals from that institution. Of students originally attending research universities, 83% enrolled with the intention of earning a bachelor's degree, and 10% planned to transfer. At doctorate-granting colleges and universities,

89% of students anticipated earning the B.A. and 4% transferring; at comprehensive colleges and universities 70% expected to earn a B.A. and 3% to transfer; at liberal arts colleges 71% planned to earn a B.A. and 18% to transfer; and at two-year colleges 26% intended to receive an associate's degree and 58% to transfer.

The Carnegie classification of multiple transfers' first and second institutions was found to be significantly related to their persistence at UIC, as measured by whether or not they were still enrolled at UIC in spring 1990 (χ^2 (5) = 11.291, $p < .0458$ for the first college; χ^2 (5) = 12.760, $p < .0257$ for the second college). Of students in the sample who attended research universities just prior to enrolling at UIC, 63% were still enrolled in spring 1990, as were 79% of students who began at doctorate-granting colleges and universities; 81% who began at comprehensive institutions; 60% who started at liberal arts colleges; and 80% who began at two-year colleges. Of those students whose second most recent institution prior to UIC was a research university, 88% were still enrolled in spring 1990, as opposed to 87% from doctorate-granting colleges and universities; 70% from comprehensive institutions; 79% from liberal arts colleges and 72% from two-year colleges.

Finally, the Carnegie classification of multiple transfers' first and second colleges was found to be

significantly related to institutional selectivity level (χ^2 (20) = 532.977, $p < .0000$ for the first college; χ^2 (20) = 518.913, $p < .0000$ for the second college). While two-year colleges were all classified as nonselective, so were a few comprehensive colleges and universities and liberal arts colleges. Comprehensive colleges and universities made up the bulk of low selectivity institutions, while institutions of moderate selectivity were primarily research universities, doctorate-granting colleges and universities and comprehensive colleges and universities. Research universities comprised the vast majority of high and extremely high selectivity institutions.

Tuition and Fees

Institutional costs were based on annual tuition and fee levels (not including room and board, books and supplies and other expenses). For public institutions, in-state tuition and fees were used. Cost levels were grouped into five categories for analysis: extremely low (\$0 - \$1,000); low (\$1,100 - \$3,000); moderate (\$3,100 - \$6,000); high (\$6,100 - \$10,000); and extremely high (above \$10,100). UIC was classified in the low-cost category, as its in-state tuition and fees were \$2,730 for the 1989-1990 academic year.

The first and largest subgroup, including 41% of the

sample population, moved from institutions with higher tuition rates to those with lower rates before transferring to UIC. Nearly 51% of these students moved from institutions in the low cost range to colleges or universities in the extremely low category. Another 34% of students in this subgroup moved from institutions with high or extremely high tuition rates to institutions at the lowest two levels. These students' third transfer to UIC completed a pattern of originally attending high-cost colleges or universities and then transferring to much lower-cost institutions.

A second group containing 32% of multiple transfers moved between first and second institutions at the same tuition level. Of these students, 53% attended two institutions in the extremely low tuition category before moving to UIC, also a low-cost institution. Another 39% of students in this subgroup moved among three institutions (including UIC) in the low tuition category.

A third subgroup comprised of 28% of the students in the sample moved from lower-cost institutions to more expensive ones. Of these students, 52% moved from extremely low to low-cost institutions, and the transfer to UIC continued this pattern to yet another low-cost university. Another 37% transferred from institutions in the lowest two tuition categories to substantially more expensive ones charging \$6,100 and up. However, in moving to UIC these students all descended the cost ladder once again to attend a relatively

inexpensive university.

4 > 2 > 4 Path

All of the transfers in this group moved from four-year colleges or universities to inexpensive community colleges. The majority (62%) of these students initially attended four-year institutions in the low-cost (\$1,100 to \$3,000) category. Another 10% of 4 > 2 > 4 transfers began at colleges or universities with moderate tuitions, and 20% at four-year institutions in the high tuition range. Only 6% of students in this group initially attended colleges or universities in the extremely expensive (over \$10,100) category.

It is not surprising to note that affordability of tuition and fees was a major reason given by 4 > 2 > 4 transfers for leaving their four-year institutions. Of students who gave this reason for transferring, 44% were attending low tuition colleges, while the other 55% were attending institutions in the highest two tuition categories. It could be speculated that many of these students used the affordability rationale in order to provide an "acceptable" reason for transferring. Affordability of tuition and fees was, of course, also a major criterion for choosing the community college to which these students transferred. In transferring a third time to UIC, 64% of

4 > 2 > 4 transfers continued to follow the established pattern of attending progressively less expensive institutions.

2 > 4 > 4 Path

In this group, students transferred from community colleges in the lowest tuition categories to a wide variety of four-year colleges and universities. The vast majority (64%) of these students, however, moved to four-year institutions in the low (\$1,100 - \$3,000) tuition range. In continuing on to UIC, these transfers perpetuated the trend of enrolling at lower-cost colleges. Affordability of tuition was the primary reason given for enrolling at UIC by 50% of 2 > 4 > 4 transfers who previously attended moderate and low-priced four-year colleges, and by 50% who attended expensive and extremely expensive colleges. Although affordability of tuition was one of the major reasons that 2 > 4 > 4 transfers moved to UIC from their previous four-year institution, 52% of respondents giving this reason transferred to UIC from colleges in the same tuition range as UIC.

2 > 2 > 4 Path

These students' first two institutions were both inexpensive community colleges, and 76% moved between institutions at the extremely low tuition level.

4 > 4 > 4 Path

Once again, the 55 multiple transfers taking this path moved among a much wider range of institutions than the other groups. Of the 4 > 4 > 4 transfers, 42% moved from their first four-year institution to another at the same tuition level. Of these students, 65% moved among colleges or universities (including UIC) in the low-cost (\$1,100 - \$3,000) category. A second subgroup containing 31% of 4 > 4 > 4 transfers moved from more expensive to less expensive institutions. Of these transfers, 47% moved from a college or university at the expensive level to one in the low tuition category. In transferring a third time to UIC, these students moved to yet another low-cost institution. A third subgroup including 27% of 4 > 4 > 4 transfers moved from less expensive to more expensive institutions. Of these transfers, 77% moved from low-cost colleges or universities to institutions in the expensive category.

While affordability of tuition was an important reason claimed by 4 > 4 > 4 transfers for leaving their first institution at all tuition levels, it was not cited as frequently for the second transfer movement, and only for colleges in the moderate and expensive tuition categories. Affordability of tuition was a major reason that students in this group transferred to UIC no matter what tuition category their most recent institution belonged to. Across all

of the transfer groups, affordability was a common rationale for enrolling at institutions with inexpensive tuitions, while it was given as a reason for leaving colleges with tuitions at all levels.

Tuition was another category of characteristics found to be significantly related to institutional type ($\chi^2 (8) = 289.615, p < .0000$) and sector of control ($\chi^2 (4) = 406.537, p < .0000$) in that community colleges have extremely low tuition rates while four-year public colleges and universities are clustered in the low tuition category. Four-year private and proprietary institutions, on the other hand, have substantially higher tuition rates than their public counterparts. All of the private four-year colleges most recently attended by students in the multiple transfer sample were in the moderate to extremely high tuition categories. Of students in the sample, 83% had attended a public institution in the lowest two tuition categories just prior to transferring to UIC. On the other hand, of the 16% of students who had most recently attended private institutions, 18% had been enrolled at colleges or universities in the moderate (\$3,100 - \$6,000) tuition range; 68% the high-cost range and 13% the extremely high-cost range.

When examined in light of the income levels of survey respondents who were dependent upon their families for financial support, it is apparent that multiple transfers from all income levels enrolled at low-cost, public institutions.

In the highest income range (families earning \$70,000 and above annually), 68% of respondents began their collegiate careers at institutions in the extremely inexpensive and inexpensive tuition categories. It could be surmised that these students chose to attend low-cost institutions for reasons that were not financial in nature. In addition, 84% of the transfers at all income levels had attended public institutions just prior to enrolling at UIC. Of students in the sample who were dependent and had most recently attended community colleges prior to enrolling at UIC, 22% were from families earning \$70,000 or more annually, as were 28% of those most recently attending four-year public institutions.

In addition to being related to institutional control, college tuition and fee levels were found to be significantly related to Carnegie classification ($\chi^2 (20) = 368.724, p < .0000$), in that of the two-year colleges attended by multiple transfers just prior to enrolling at UIC 98% were in the extremely low or low tuition categories. Of research universities most recently attended by students in the sample, 91% were in the low-cost tuition category, as were 62% of comprehensive colleges and universities and 65% of doctorate-granting colleges and universities. Of liberal arts colleges, 90% were clustered in the moderate and high tuition ranges, as were 34% of comprehensive colleges and universities and 21% of doctoral-granting institutions. In

the extremely high (\$10,100 and over) tuition category were 4% of research universities, 15% of doctorate-granting colleges and universities and 10% of liberal arts colleges. Of these extremely expensive institutions, 100% were private colleges and universities.

Institutional tuition and fee level was found to be related to multiple transfer students' rank choice of colleges in that the more expensive the college, the higher the percentage of students who ranked it as their first choice. For their initial institution, 70% of respondents ranked extremely inexpensive and inexpensive colleges as their first choice, while 73% gave this ranking to moderately expensive institutions; 78% to expensive institutions and 85% to extremely expensive institutions. For their most recent college, only 57% ranked extremely inexpensive institutions as their first choice, as opposed to 100% for extremely expensive institutions.

Finally, tuition and fee level was found to be related to students' educational goals and aspirations. When asked about their main goal in enrolling at their most recent institution prior to UIC, 60% of students attending very inexpensive colleges stated that they planned to transfer and 28% that they intended to earn an associate's degree. At the inexpensive tuition level, 34% of the students expected to transfer, 8% to earn an associate's degree and 52% to earn a B.A. At the expensive level, 20% planned to

transfer, 12% to earn an A.A. and 56% to receive a B.A.; and at the extremely expensive level 100% of respondents intended to earn a bachelor's degree.

State and Region

Institutions attended by multiple transfers in the sample were placed into the following six categories by state or region: **Illinois**; **Midwest** (Indiana, Iowa, Kansas, Kentucky, Nebraska, Ohio, Oklahoma, Michigan, Minnesota, Wisconsin); **West** (Alaska, Arizona, Arkansas, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming); **East** (Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont); **South** (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Missouri, North Carolina, South Carolina, Tennessee, Texas, Virginia, West Virginia); and **Other**, which included foreign four-year institutions.

Appendix 9 lists all of the institutions attended by multiple transfer students in the sample according to the state in which they are located.

In the sample population, 67% of all students ($n=285$) remained within the same state during their first two transfer movements. Of these students, 87% stayed in Illinois, continuing to remain in-state when they transferred a third

time to UIC. A second subgroup, containing 19% of the sample population, transferred from an out-of-state institution to a second institution in Illinois. Of these students, 38% transferred to Illinois from institutions in the Midwest; 23% from the East; 18% from the West; 14% from the South and 8% from other states or foreign countries. A third subgroup comprised of 7% of the students in the sample began their collegiate careers at institutions in Illinois, transferred to out-of-state colleges and then moved back to Illinois where they enrolled at UIC.

The basic patterns observed within the sample population held true for the four multiple transfer groups. The 2 > 2 > 4 group, as would be expected, was the group most heavily concentrated in the state of Illinois, with 81% of these transfers remaining in-state to attend all of their institutions (including UIC). In the 2 > 4 > 4 group, 77% of transfers remained completely in-state, while 11% began at Illinois community colleges, transferred to four-year institutions in the Midwest and then returned to Illinois to attend UIC. Of students in the 4 > 2 > 4 group, only 59% remained in Illinois for both transfer movements, while 14% began their collegiate careers at four-year institutions elsewhere in the Midwest; 7% in the East; 7% in the South; 4% in the West and the remainder in other states or foreign countries before transferring to community colleges in Illinois. Only 5% of 4 > 2 > 4 transfers attended community

colleges located outside of Illinois.

The 4 > 4 > 4 group was the most geographically mobile, exhibiting diverse transfer patterns by state and region. Although 54% of these students remained within the same state for their first two transfer movements, only 38% moved between two institutions in Illinois, while another 24% moved among institutions in other Midwestern states. A second subgroup, containing 28% of 4 > 4 > 4 transfers, initially attended out-of-state institutions, transferred to Illinois and then remained in Illinois when they enrolled at UIC. These results reflect findings by Ihlanfeldt (1980) that students with high ability and socioeconomic status levels are more mobile than others.

Overall Multiple Transfer Pattern

The overall pattern of multiple transfer movement was analyzed for the sample and the four transfer paths. Students whose movement from one institution to another was sequential and distinct were classified as "conventional multiple transfers." "Sandwich multiple transfers," on the other hand, either attended two institutions simultaneously or matriculated at one institution, transferred elsewhere and then returned to the original college at some point during their collegiate careers. These two basic multiple transfer categories were broken down further into

conventional and sandwich summer transfers, who attended one or more of their colleges only during the summer term; and conventional and summer one-semester transfers, who attended one or more colleges for only one semester or quarter.

When the behavior of the entire sample was examined (see Table 10), the most typical pattern was that of conventional transferring, with 33% of students moving sequentially from one institution to the next. The second most frequent pattern, followed by 27% of the students in the sample, was conventional summer transferring. Finally, 13% of the sample consisted of sandwich transfers.

When the paths were analyzed for overall multiple transfer patterns, some differences among the groups were detected. For all the transfer paths, conventional transferring was the most typical pattern. The $2 > 2 > 4$ and $2 > 4 > 4$ groups were more likely than the others to engage in sandwich transfer behavior, while the $2 > 4 > 4$ and $4 > 4 > 4$ groups were more likely to transfer conventionally, but to spend only one semester at one or more institutions.

Summary of Institutional Characteristics

Findings based on the behavior of the multiple transfer sample support Peng's study (1977), which documented that transfers, regardless of their socioeconomic backgrounds, generally move to larger, lower-cost, less

Table 10. --Overall Multiple Transfer Pattern

	4>2>4 Group (N = 119)	2>4>4 Group (N = 75)	2>2>4 Group (N = 74)	4>4>4 Group (N = 55)	Multiple Transfer Sample (N = 424)
	%	%	%	%	%
Conventional Transfer	40	35	44	35	33
Conventional Summer	16	8	6	11	13
Conventional One-Semester	18	23	15	27	20
Sandwich Transfer	16	16	17	13	14
Sandwich Summer	3	15	8	9	12
Sandwich One-Semester	8	4	11	6	8

Note: Percentages are rounded to the nearest full percent.

selective public institutions. The greater numbers of multiple transfers moving from the four-year sector, however, differ from Peng's findings that community colleges have much higher transfer rates than four-year institutions. Of students in the multiple transfer sample, the vast majority began their collegiate careers in the state of Illinois and remained within its boundaries for all of their transfer movements.

When the characteristics of institutions attended by multiple transfer students were examined, several interrelationships were discovered. Institutional type was found to have a highly significant relationship with college size, control, Carnegie classification, selectivity level and tuition and fee level. Sector of institutional control was significantly related to college size, Carnegie classification, tuition and fee and selectivity levels. Carnegie classification was found to be closely related to multiple transfer students' degree goals, as well as to the persistence of these students once they enrolled at UIC. Institutional tuition and fee levels were related to multiple transfers' rank choice of the colleges they attended. Finally, both selectivity and tuition and fee levels were related to multiple transfer students' educational goals and aspirations.

When analyzed by multiple transfer path, the complex interrelationships among institutional attributes became

even more obvious. Significant differences were found to exist among the groups according to sector of control, selectivity level, tuition and fee level, Carnegie classification and institutional size. While the transfer behavior of students taking the four paths generally reflected that of the multiple transfer sample, the 4 > 4 > 4 group consistently differed from the others. This difference was not surprising, given that the 4 > 4 > 4 group was the only one in which students had attended four-year colleges and universities exclusively. The characteristics of four-year institutions differ markedly from those of their two-year counterparts in terms of cost, selectivity, control, and Carnegie classification, among other factors.

Research Question 5 From what sources do multiple transfer students' expectations arise (e.g., college counselors, college guidebooks, institutional promotional materials or campus visits)?

In order to determine which information sources most influenced students in the multiple transfer sample to attend UIC, respondents to the survey were asked to rank the importance of ten variables on a five point scale (with one being "not at all important" and five being "extremely important"). The ten variables investigated have been shown to be influential in the college choice process for both college freshmen and community college transfer students (see Chapter II). The variables are as follows: high school

teachers or counselors; teachers at students' previous college; counselors at students' previous college; friends attending UIC; family member(s); UIC alumni; radio, TV or newspapers; college guidebooks; campus visit; and materials sent from UIC. Percentage rankings of the information sources by the sample population and the four multiple transfer paths can be seen in Table 11.

According to respondents' rankings, there was no one overriding factor which influenced their choice of UIC. Materials sent from UIC received the highest overall rankings, with 35% of respondents indicating that these materials had an important or extremely important effect on their decision to transfer to UIC. This is in line with Becker's (1988) finding that community college transfers from higher income families found college catalogs and information concerning academic programs most helpful during the college choice process.

The second most influential factor on the choice decision was family members, although only 28% of respondents indicated that this influence was extremely or very important. The remaining choice factors, in descending order of their degree of influence on respondents' transfer decision, were friends attending UIC; campus visit; college guidebook; teachers at students' previous college; counselors at students' previous college; UIC alumni; radio, TV or

Table 11. --Factors Influencing Choice and Expectations of UIC by Multiple Transfer Path

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Family Support to Attend UIC										
Extremely Supportive	38	30	27	14	34	15	33	11	34	93
Very Supportive	29	23	35	18	30	13	18	6	30	81
Somewhat Supportive	15	12	19	10	16	7	33	11	16	44
Indifferent	13	10	17	9	21	9	12	4	17	46
Not At All Supportive	5	4	2	1	-	-	3	1	3	8
Total N		79		52		44		33		272
Information Sources Influencing Choice of UIC										
Teachers at Previous College										
Not At All Important	67	53	65	34	47	20	66	21	63	168
Unimportant	13	10	8	4	7	3	3	1	10	26
Neutral	14	11	12	6	28	12	13	4	15	40
Important	3	2	10	5	12	5	6	2	8	21
Extremely Important	4	3	6	3	7	3	13	4	5	14
Total N		79		52		43		32		269

Table 11. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Counselors at Previous College										
Not At All										
Important	73	57	64	33	47	20	76	25	67	179
Unimportant	8	6	8	4	9	4	3	1	9	24
Neutral	14	11	14	7	26	11	6	2	14	37
Important	4	3	10	5	16	7	6	2	7	20
Extremely Important	1	1	6	3	2	1	9	3	3	9
		-----		-----		-----		-----		-----
Total N		78		52		43		33		269
Friends Attending UIC										
Not At All										
Important	45	35	48	25	44	19	61	20	51	138
Unimportant	10	8	8	4	12	5	3	1	8	22
Neutral	19	15	25	13	16	7	21	7	20	53
Important	14	11	8	4	16	7	12	4	12	31
Extremely Important	12	9	12	6	12	5	3	1	10	26
		-----		-----		-----		-----		-----
Total N		78		52		43		33		270

Table 11. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Family Member(s)										
Not At All										
Important	29	23	39	20	35	15	49	16	39	105
Unimportant	15	12	8	4	9	4	12	4	12	33
Neutral	23	18	29	15	26	11	18	6	21	56
Important	14	11	21	11	21	9	12	4	17	47
Extremely Important	19	15	4	2	9	4	9	3	11	29
		-----		-----		-----		-----		-----
Total N		79		52		43		33		270
UIC Alumni										
Not At All										
Important	71	55	75	39	61	26	55	18	69	185
Unimportant	12	9	8	4	5	2	24	8	10	27
Neutral	8	6	12	6	19	8	18	6	12	31
Important	6	5	2	1	12	5	3	1	7	19
Extremely Important	4	3	4	2	5	2	-	-	3	8
		-----		-----		-----		-----		-----
Total N		78		52		43		33		270
Radio, TV, Newspapers										
Not At All										
Important	74	56	77	39	67	28	67	22	73	194
Unimportant	18	14	8	4	14	6	18	6	14	37
Neutral	4	3	12	6	17	7	12	4	9	25
Important	4	3	2	1	2	1	3	1	3	8
Extremely Important	-	-	2	1	-	-	-	-	-	1
		-----		-----		-----		-----		-----
Total N		76		51		42		33		265

Table 11. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
UIC Materials										
Not At All										
Important	30	23	46	24	26	11	36	12	33	88
Unimportant	8	6	17	9	12	5	15	5	11	30
Neutral	24	19	14	7	26	11	18	6	22	59
Important	27	21	12	6	21	9	18	6	20	53
Extremely Important	12	9	12	6	16	7	12	4	15	39
		-----		-----		-----		-----		-----
Total N		78		52		43		33		269
College Guide										
Not At All										
Important	58	45	65	34	35	15	52	17	53	142
Unimportant	8	6	10	5	12	5	18	6	12	33
Neutral	13	10	17	9	26	11	21	7	18	47
Important	15	12	4	2	16	7	6	2	11	30
Extremely Important	6	5	4	2	12	5	3	1	6	16
		-----		-----		-----		-----		-----
Total N		78		52		43		33		268
Campus Visit *										
2										
$(X^2(12) = 22.135, p < .0360)$										
Not At All										
Important	39	31	60	31	41	17	53	17	47	126
Unimportant	13	10	15	8	10	4	9	3	12	33
Neutral	24	19	17	9	36	15	9	3	21	57
Important	10	8	4	2	10	4	22	7	12	31
Extremely Important	14	11	4	2	5	2	6	2	8	22
		-----		-----		-----		-----		-----
Total N		79		52		42		32		269

Table 11. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
High School Teachers/ Counselors										
Not At All										
Important	80	62	79	41	71	30	88	29	81	216
Unimportant	5	4	8	4	12	5	-	-	7	19
Neutral	8	6	10	5	12	5	9	3	8	21
Important	6	5	4	2	2	1	-	-	3	9
Extremely Important	1	1	-	-	2	1	3	1	1	3
		-----		-----		-----		-----		-----
Total N		78		52		42		33		268
Availability of Major at Previous College ***										
2 ($\chi^2(6) = 24.872, p < .0003$)										
Yes	45	35	71	37	32	14	75	24	55	149
No	42	32	21	11	59	26	22	7	37	100
Does Not Apply	13	10	8	4	9	4	3	1	8	21
		-----		-----		-----		-----		-----
Total N		77		52		44		32		270

Table 11. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Importance of Major Availability at UIC										
Does Not Apply	13	10	8	4	9	4	-	-	7	19
Extremely Important	50	39	58	30	48	21	50	16	53	144
Very Important	19	15	21	11	30	13	22	7	23	61
Somewhat Important	13	10	10	5	11	5	13	4	12	33
Not At All Important	5	4	4	2	2	1	16	5	5	14
Total N		78		52		44		32		271

**Degree of
Expectations
of UIC**

**Academic
Program
Quality***

²
(X (12) = 21.588, p < .0423)

Extremely Low	-	-	2	1	2	1	-	-	1	2
Low	1	1	-	-	-	-	3	1	1	3
Neutral	14	11	25	13	7	3	24	8	17	47
High	43	34	50	26	36	16	52	17	44	120
Extremely High	42	33	23	12	54	24	21	7	37	101
Total N		79		52		44		33		273

Table 11. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Variety of Courses and Programs										
Extremely Low	-	-	-	-	2	1	-	-	-	1
Low	1	1	-	-	-	-	3	1	2	5
Neutral	17	13	17	9	9	4	15	5	15	42
High	44	35	48	25	49	21	61	20	47	127
Extremely High	38	30	35	18	40	17	21	7	36	98
Total N		79		52		43		33		273
Faculty Teaching Ability										
Extremely Low	1	1	-	-	2	1	3	1	1	3
Low	5	4	4	2	-	-	3	1	3	8
Neutral	10	8	23	12	19	8	12	4	15	42
High	46	36	37	19	33	14	52	17	42	115
Extremely High	38	30	37	19	47	20	30	10	39	105
Total N		79		52		43		33		273
Faculty Availability Outside Class										
Extremely Low	10	8	4	2	5	2	9	3	6	17
Low	9	7	12	6	21	9	19	6	12	33
Neutral	30	24	40	21	26	11	31	10	34	93
High	30	24	37	19	28	12	19	6	30	81
Extremely High	20	16	8	4	21	9	22	7	18	48
Total N		79		52		43		32		272

Table 11. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Reasonable Class Size										
Extremely Low	13	10	6	3	7	3	6	2	8	21
Low	13	10	15	8	14	6	30	10	15	41
Neutral	41	32	44	23	26	11	21	7	38	103
High	17	13	23	12	35	15	30	10	24	65
Extremely High	17	13	12	6	19	8	12	4	15	42
Total N		78		52		43		33		272
Availability of Financial Aid*										
2 (X ² (12) = 25.074, p < .0144)										
Extremely Low	22	17	27	14	16	7	16	5	22	58
Low	21	16	14	7	5	2	13	4	14	37
Neutral	28	22	29	15	35	15	9	3	26	71
High	9	7	17	9	12	5	31	10	16	44
Extremely High	20	16	14	7	33	14	31	10	22	59
Total N		78		52		43		32		269
Affordability of Tuition										
Extremely Low	3	2	10	5	5	2	12	4	6	15
Low	8	6	6	3	14	6	3	1	9	23
Neutral	28	22	31	16	30	12	24	8	27	72
High	35	28	27	14	14	6	24	8	29	78
Extremely High	27	21	27	14	40	17	36	12	31	84
Total N		79		52		43		33		272

Table 11. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Convenience of Location										
Extremely Low	6	5	8	4	2	1	6	2	5	13
Low	18	14	19	10	9	4	9	3	14	38
Neutral	30	24	19	10	23	10	18	6	25	68
High	32	25	29	15	23	10	21	7	29	79
Extremely High	14	11	25	13	42	18	46	15	27	73
	-----		-----		-----		-----		-----	
Total N	79		52		43		33		271	
Attractiveness of Facilities and Grounds										
Extremely Low	18	14	25	13	23	10	15	5	20	55
Low	24	19	19	10	7	3	27	9	19	53
Neutral	33	26	33	17	33	14	33	11	33	90
High	19	15	21	11	28	12	15	5	22	59
Extremely High	6	5	2	1	9	4	9	3	6	16
	-----		-----		-----		-----		-----	
Total N	79		52		43		33		273	
Social Atmosphere										
Extremely Low	23	18	29	15	19	8	21	7	23	62
Low	17	13	19	10	7	3	21	7	19	51
Neutral	24	19	27	14	47	20	39	13	32	86
High	25	20	21	11	23	10	9	3	20	54
Extremely High	11	9	4	2	5	2	9	3	7	19
	-----		-----		-----		-----		-----	
Total N	79		52		43		33		272	

Table 11. --Continued

	4>2>4 Group (N = 119)		2>4>4 Group (N = 75)		2>2>4 Group (N = 74)		4>4>4 Group (N = 55)		Multiple Transfer Sample (N = 424)	
	%	N	%	N	%	N	%	N	%	N
Availability of Student Support Services										
Extremely Low	6	5	10	5	2	1	6	2	6	17
Low	14	11	17	9	16	7	12	4	16	44
Neutral	24	19	38	20	28	12	55	18	33	89
High	32	25	25	13	33	14	15	5	28	75
Extremely High	23	18	10	5	21	9	12	4	17	47
	-----		-----		-----		-----		-----	
Total N	78		52		43		33		272	
Fairness of Rules and Regulations										
Extremely Low	6	5	6	3	2	1	3	1	4	10
Low	13	10	15	8	-	-	15	5	10	27
Neutral	38	30	40	21	37	16	49	16	41	113
High	24	19	29	15	37	16	18	6	28	75
Extremely High	19	15	10	5	23	10	15	5	18	48
	-----		-----		-----		-----		-----	
Total N	79		52		43		33		273	

Table 11. --Continued

	4>2>4		2>4>4		2>2>4		4>4>4		Multiple Transfer Sample	
	Group		Group		Group		Group		Group	
	(N = 119)		(N = 75)		(N = 74)		(N = 55)		(N = 424)	
	%	N	%	N	%	N	%	N	%	N
Most Difficult Aspects of Transferring to UIC										
Transferring Credits	37	29	38	20	39	17	30	10	39	107
Fitting In	15	12	11	6	16	7	12	4	14	39
Finding Way										
Around Campus	20	16	21	11	36	16	12	4	20	55
Red Tape	44	35	40	21	27	12	51	17	42	114
Registering	43	34	42	22	39	17	30	10	41	111
No Problems	8	6	10	5	12	5	1	4	9	25
Total N		132		85		74		49		451

(due to multiple responses, percentages add up to more than 100%)

Note: Percentages are rounded to the nearest full percent.

*** P < .001, two-tailed. Pearson chi-square.

** P < .01, two-tailed. Pearson chi-square.

* P < .05, two-tailed. Pearson chi-square.

newspapers; and high school teachers or counselors (see Table 11).

When information sources influencing the choices of students in the four multiple transfer groups were examined, they varied slightly from the responses of the sample population. While the 4 > 2 > 4, 2 > 2 > 4 and 4 > 4 > 4 groups all ranked materials received from UIC as the most influential information source, respondents in the 2 > 4 > 4 group rated family members as most important. Family members were ranked second most influential by 4 > 2 > 4 and 2 > 2 > 4 respondents, while 2 > 4 > 4 respondents ranked UIC materials second and students in the 4 > 4 > 4 group ranked campus visit second. The third most influential sources were friends and campus visit for 4 > 2 > 4 transfers; college guidebooks for 2 > 2 > 4 transfers; friends for 2 > 4 > 4 transfers and family members for 4 > 4 > 4 transfers.

There was a significant difference among the groups on the ranking of campus visit (see Table 11), with 4 > 4 > 4 respondents finding this information source substantially more important to their choice decision than the other multiple transfer groups. 4 > 4 > 4 transfers tended to rely upon more sophisticated information sources, combining materials obtained from UIC with a campus visit, and relied less upon friends and family members than the other groups. Perhaps this relative sophistication was due to the

4 > 4 > 4 transfers' more extensive experience in selecting four-year institutions, or their greater geographical mobility. These transfers' significantly higher ranking of the importance of campus visits corresponds with findings of Litten (1982) that students with highly educated parents tend to utilize more complex information sources than other students. Interestingly, 4 > 2 > 4 and 2 > 4 > 4 transfers, the other two groups with highly educated parents, did not utilize these sources to the extent that students in the 4 > 4 > 4 group did.

While family members were considered the third most influential choice factor for 4 > 4 > 4 transfers, only 21% of respondents ranked this source as very or extremely important. This relatively low ranking may be related to the low degree of support these students reportedly received from their families in the decision to transfer to UIC. Only 51% of 4 > 4 > 4 respondents indicated that their family had been supportive of this decision - a much lower percentage than the other groups.

2 > 2 > 4 respondents appeared to use most of the information sources listed to a much smaller extent than did students in the other three transfer groups. This was particularly evident in the comparatively low ratings that 2 > 2 > 4 transfers gave to teachers and counselors at their previous college, UIC materials, college guidebooks, campus

visits, and high school teachers/counselors. The only information sources that 2 > 2 > 4 transfers appeared to use to any extent were family members (30%); UIC materials (37%); college guidebooks (28%) and friends attending UIC (28%).

In addition to differing by multiple transfer path, the ranking of information sources was found to depend to some extent upon the number of total colleges attended prior to students' enrollment at UIC. The number of previous colleges attended was found to be significantly related to the importance of family members as an information source ($\chi^2 (20) = 30.751, p < .05856$), in that the more institutions a student had transferred among, the less important a resource her/his family became during the college choice process.

In summary, the information sources most valued by multiple transfer students were institutional promotional materials, which are also considered important by freshmen and community college transfers. It is important to point out, however, that none of the information sources used by students in the multiple transfer sample or the four transfer groups was ranked highly important by more than 39% of respondents. This leads to the conclusion that multiple transfers are not single-source reliant in their selection of colleges and universities.

Availability of Major

When asked whether their college major was available at the institution from which they transferred to UIC, 55% of students in the multiple transfer sample replied that this major was available, and 37% that it was not. The availability of students' majors at their previous colleges differed significantly depending upon which transfer path they took, however. Students taking the 4 > 2 > 4 and 2 > 2 > 4 paths, who had attended community colleges immediately prior to enrolling at UIC, were significantly less likely to state that their major had been offered by their previous institution than 4 > 4 > 4 and 2 > 4 > 4 transfers (see Table 11). When asked how important the availability of this major was in their decision to transfer to UIC, 76% of respondents in the sample population replied that it had been very important or extremely important. Answers of respondents taking the four transfer paths did not differ significantly from each other or the sample on this question. Not surprisingly, the availability of a specific academic program was found to be much more important to transfers majoring in the professional fields - social work, architecture, engineering and business - than to those majoring in the liberal arts.

It is clear, then, that the availability of multiple transfers' major at UIC was extremely important to these

students' choice decision. This finding is in keeping with previous research indicating the importance of academic program offerings to students' transfer decisions (Desler, 1985; Johnson, 1987; Richardson & Bender, 1987; Wisner, 1984).

Expectations of UIC

Findings reported in the literature have emphasized the highly unrealistic expectations of colleges' academic and social programs held by first-time freshmen and transfer students, as well as the extremely important, if erroneous, role that these exaggerated expectations play during the college choice process (Buckley, 1971; Chapman & Baranowski, 1977; Donato, 1973; Hossler, 1984; Shaw, 1968; Stern, 1968).

Survey respondents were asked to indicate on a five point scale (one being extremely low and five being extremely high) the extent of their expectations of UIC in terms of 12 institutional variables. As these attributes are potentially influential in the college choice process, respondents were also asked to indicate which ones had been most important in their decision to attend UIC. Students in the sample population, as well as in the four multiple transfer groups, had their highest expectations regarding the quality of UIC's academic programs, the variety of these programs and the teaching ability of the faculty. Student

expectations were moderately high regarding the affordability of tuition and fees at UIC and the convenience of its campus location; and expectations were lowest in terms of the attractiveness of campus facilities and grounds and social atmosphere.

Several differences were found to exist among the four multiple transfer groups in terms of student expectations (see Table 11). The groups' expectations of academic program quality differed significantly from one another; an important finding since this variable was the most influential on students' choice of UIC. The 4 > 2 > 4 and 2 > 2 > 4 groups, in which students had attended community colleges just prior to enrolling at UIC, held significantly higher expectations of academic program quality than the 2 > 4 > 4 and 4 > 4 > 4 groups. This could be due to these students' expectation of attending a more prestigious institution. Respondents in the groups most recently attending community colleges also had higher expectations of faculty availability outside the classroom, UIC's social atmosphere and availability of student support services on campus than students taking the 2 > 4 > 4 and 4 > 4 > 4 paths. Finally, significant differences existed among the four groups regarding their expectations of financial aid availability at UIC, with 4 > 4 > 4 transfers expressing high expectations, 2 > 2 > 4 transfers moderately high expectations and the

other two groups relatively low expectations regarding this variable.

Overall, the findings of this study with regard to multiple transfer students' expectations are not consistent with previous research indicating that first-time freshmen and transfers have unrealistically high expectations of institutional characteristics (e.g., Buckley, 1971; Chapman & Baranowski, 1977; Donato, 1973; Hossler, 1984). While the four multiple transfer groups differed according to the degree of their expectations of several attributes, the variables for which all of the groups had high expectations - quality and variety of academic programs and faculty teaching ability - were in the academic realm, shown by previous research to be of particular importance to transfer students (Becker, 1988; Hendel et al., 1984; Smith, 1987; Wisner, 1984). UIC, as a moderately selective research university, could reasonably be expected to offer a wide variety of high quality academic programs. Multiple transfers' low level of expectations regarding certain empirical UIC attributes, such as the attractiveness of its campus facilities and grounds, social atmosphere, financial aid availability and class size, indicates that these students assessed the institution realistically.

Institutional Roadblocks

Although survey respondents were not asked whether

any impediments to transfer had existed at previous institutions, they were asked whether they experienced any problems in transferring to UIC. In fact, multiple transfers in the sample did appear to encounter a variety of institutional "roadblocks" that impeded their smooth transition to the new campus environment at UIC. Encountering bureaucratic "red tape;" registering for classes; transferring credit to UIC and finding their way around campus were, in descending order, the most difficult aspects of transferring to UIC reported by respondents in the sample (see Table 11). Written comments described staff working in UIC's administrative offices as inattentive, impolite and incompetent, and characterized the campus environment as hostile and uncaring.

Differences existed among students taking the four multiple transfer paths concerning the relative difficulty of the various factors. Transfers in the 4 > 4 > 4 group found red tape the most vexing problem they encountered, as did 4 > 2 > 4 transfers. On the other hand, 2 > 4 > 4 transfers reported that registering for classes was the most difficult aspect of transferring to UIC. A much higher percentage of 2 > 2 > 4 transfers found that finding their way around campus was problematic than did respondents in the other three groups. In addition, students taking the 2 > 2 > 4 path reported more difficulty in transferring

credit to UIC and fitting in as students at UIC than did students in the other groups; while 4 > 4 > 4 transfers found these factors much less troublesome. Perhaps the fact that 2 > 2 > 4 transfers had previously attended only community colleges prior to enrolling at UIC, whereas 4 > 4 > 4 transfers were the most familiar of all the groups with four-year college campuses, accounted for this difference.

Chapter Summary

This chapter has presented the study findings as they relate to previously published literature and to the objectives and research questions delineated in Chapters I and III. Chapter V will summarize the data analyses and results; set forth conclusions; and present practical recommendations as well as suggestions for future research.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this chapter is to summarize the study, present conclusions, and make recommendations for the development of institutional policies and future research on the multiple transfer student population.

Summary of the Study

The primary purpose of this study was to examine individual and institutional factors influencing past choice and withdrawal behaviors of undergraduate multiple transfer students who enrolled at a large, urban, public university in fall 1989. A multiple transfer student was defined as an individual who attended and received transfer credit from two or more colleges or universities prior to enrolling at the subject institution. This was a descriptive, exploratory study which had the following objectives: 1) to identify demographic and academic background variables, goals and aspirations of these students; 2) to discover the most common interinstitutional enrollment/transfer patterns of this population in terms of institutional type, control,

Carnegie classification, tuition level, selectivity level, size and state or region; 3) to delineate these students' self-reported reasons for leaving (transferring from) and choosing (transferring to) previous institutions attended; and 4) to examine the information sources which influenced these students' decision to attend the subject university, along with their expectations of its academic and social programs.

As no single body of literature describes the multiple transfer student, several streams of research were brought together to provide a theoretical framework for this study. The literature on student persistence, college choice and transfer behavior contains a number of overlapping variables concerning student and institutional characteristics (see Appendices 1 through 3). The researcher employed these variables in the design of a survey instrument, which was administered to a sample of 424 multiple transfer students. This sample was randomly selected from the population of 906 multiple transfers who matriculated at the University of Illinois at Chicago (UIC) in fall 1989. For that academic quarter, multiple transfer students constituted 44% of the university's incoming transfer population and 19% of its entering undergraduates.

Of the 424 students in the sample, 275 returned completed, useable surveys for a response rate of 65%. Chi-square analysis detected only minimal differences between

survey respondents and nonrespondents, implying a low response bias. By combining primary data obtained through the questionnaires with secondary data on student demographic and academic backgrounds provided by UIC, the researcher was able to address successfully the study objectives and their related research questions. The following section summarizes the major findings of the study.

Characteristics of the Multiple Transfer Sample

Analyses of the sample revealed that the majority of multiple transfer students were white, traditional age (18 to 22), single and Catholic; that they had attended college preparatory high schools, attained high school grade point averages in the B- to A range and ranked in the top or second quarter of their high school class; that they had college-educated parents (especially fathers) with high family incomes; that they had high educational aspirations (plans to earn an advanced degree); and that they were enrolled full-time as sophomores or juniors and worked part-time while enrolled at UIC. Students in the multiple transfer sample had an extremely wide range of family incomes, with the highest concentration of dependent survey respondents in the \$70,000 and over category.

When the educational goals and aspirations of multiple transfers in the sample were examined, it was apparent that

the goals of these students had changed a number of times over the course of their collegiate careers. Only 19% of respondents professed the same degree goal when they enrolled at their initial institution as they did at their second college, and 55% of these same-goal students planned to earn transfer credit at both institutions. Not surprisingly, students who had attended community colleges were more likely to express an intention to transfer than were students who had enrolled at four-year institutions.

Although the multiple transfers exhibited varying degrees of commitment (i.e., intention to earn the B.A. degree) to their previous institutions - generally expressing the lowest level of commitment to the second college they attended - respondents in the sample exhibited high institutional commitment upon matriculating at UIC. Students in the multiple transfer sample were more likely than freshmen entering UIC to state that UIC was their first-choice institution. In addition, the multiple transfers persisted for one year (fall quarter, 1989 through spring quarter, 1990) at a higher rate than did freshmen at UIC and at comparable institutions nationally. While 77% of students in the multiple transfer sample were still enrolled at UIC in spring 1990, only 72.6% of the freshman cohort which entered in fall 1983 persisted for one year (Zusman, 1989). The persistence rate of the multiple transfers was also

better than that of freshmen nationally who enrolled at public, medium selectivity, doctoral-granting universities in 1989 (ACT, 1989). However, students who had moved among three or more colleges were less likely to persist at UIC through spring 1990 than those who had transferred only twice.

Students in the sample were found to possess high levels of goal commitment, or aspiration to earn an advanced degree. Of survey respondents, 53% aspired to earn master's degrees and 31% doctoral degrees. The multiple transfers' high goal commitment, but low institutional commitment to colleges attended prior to UIC, is consistent with earlier research on first-time transfer students (Getzlaf et al., 1984; Hackman & Dysinger, 1970).

Their high socioeconomic status backgrounds, in particular, distinguished students in the multiple transfer sample from other populations at UIC. The multiple transfers had higher family income levels and were more likely to have college-educated parents (especially fathers) than the freshmen or transfers who matriculated at UIC in fall 1989, and were not as likely to be employed while attending UIC.

When the total number of colleges attended by students in the sample was examined, it was found that students who had transferred among three or more colleges prior to enrolling at UIC were significantly more likely to be older, married, and to have earned a previous postsecondary degree

than those who had attended only two previous institutions (see Table 5). Students who had transferred more frequently were also more likely to be black, of senior status, and to have better-educated parents than the other students.

The Four Major Multiple Transfer Paths

A series of crosstabulations revealed four primary paths which accounted for 76% of the transfer movements of students in the sample. While the vast majority (72%) of the students had attended two colleges or universities prior to enrolling at UIC, 21% had attended three institutions and 7% four to seven institutions.

The 4 > 2 > 4 Path

This was the most common multiple transfer path, and was followed by 28% of the students in the sample. 4 > 2 > 4 transfers initially attended a four-year institution; transferred to a community college; and then transferred to UIC. Students taking the 4 > 2 > 4 path were significantly younger than students in the other groups, and were more likely to be single; to have attended college preparatory high school programs; to have college-educated fathers; and to persist at UIC through spring 1990 (see Table 7). In addition, a higher percentage of 4 > 2 > 4 transfers were white; U.S. citizens; and enrolled full-time at UIC than the

other groups.

The 2 > 4 > 4 Path

The second most common path was taken by 18% of the students in the multiple transfer sample. These students originally enrolled at a community college; transferred to a four-year institution; and then moved to UIC. Transfers taking the 2 > 4 > 4 path were significantly less likely than students in the other groups to have earned a post-secondary degree prior to enrolling at UIC (see Table 7). Although these transfers earned relatively high cumulative grade point averages at UIC, they were significantly less likely to persist at UIC through spring 1990 than the other groups.

The 2 > 2 > 4 Path

The third major path was that of attending two or more community colleges consecutively prior to enrolling at UIC: this path was followed by 17% of students in the multiple transfer sample. 2 > 2 > 4 transfers were found to differ most substantially from students in the other three groups and from the sample population in terms of their background characteristics and educational goals. Students in this group had earned significantly lower high school grades; were significantly less likely to have attended college preparatory high schools; and were significantly older, less likely to be single, more likely to have earned a previous

degree and less likely to be enrolled in UIC's College of Liberal Arts and Sciences than the other three groups (see Table 7). In addition, the 2 > 2 > 4 group contained a higher percentage of males, Asians, Hispanics, foreign students and Catholics than the other transfer paths. These students came from significantly lower socioeconomic status families than the other groups, and were the least geographically mobile in their transfer patterns. Despite these disadvantages, 2 > 2 > 4 transfers earned the highest grade point averages at UIC and had the highest institutional commitment (desire to earn a B.A. from UIC) of the four groups.

The 4 > 4 > 4 Path

The fourth multiple transfer path, taken by 13% of students in the sample, was that of enrolling at three or more four-year colleges or universities consecutively, including UIC. Transfers following the 4 > 4 > 4 path came from families with significantly higher income levels and had achieved significantly better high school grades and higher class ranks than students in the other three groups (see Table 7). 4 > 4 > 4 transfers were the most geographically mobile of the four groups; tended to prefer public and private colleges equally prior to enrolling at UIC; and moved most frequently among comprehensive colleges and

universities.

Students following the 4 > 4 > 4 path were primarily traditional age; white; single and significantly less likely to be Catholic than students taking the other transfer paths. Once at UIC, 4 > 4 > 4 transfers were more likely to enroll in the College of Liberal Arts and Sciences, but earned comparatively lower cumulative grade point averages, than the other groups. These students were the most likely to state that they intended to transfer from UIC.

4 > 4 > 4 transfers, who were least likely of the four groups to be enrolled full-time at UIC and who earned lower grade point averages, also had comparatively lower persistence rates. This was not a surprising finding, as positive significant relationships were found to exist between multiple transfer students' cumulative UIC grade point averages and persistence at UIC, as well as between full-time enrollment and persistence.

Interinstitutional Movements of Students in the Multiple Transfer Sample

In the sample and its four derivative paths, the number of students transferring from the four-year, private sector was substantially higher than from community colleges and public four-year institutions. In addition, the multiple transfers exhibited a definite pattern of moving from smaller, more expensive, more selective institutions to

larger, less expensive, less selective colleges and universities. This finding is similar to that of Peng (1977) in his national, longitudinal study of first-time transfer students. Of students in the sample, the vast majority began their collegiate careers in the state of Illinois and remained within its boundaries for all of their transfer movements.

A much more complex pattern was found to occur when colleges' Carnegie classifications were examined, as this variable was significantly related to institutional type, selectivity and control, as well as to students' educational goals and to their persistence at UIC. Due to these interrelationships, students' patterns of transfer among Carnegie types were found to vary significantly according to their multiple transfer path. Significant differences also existed among the groups according to sector of control, selectivity and tuition levels, and institutional size.

Several institutional attributes were found to be interrelated for students in the multiple transfer sample. Institutional type was significantly related to college size, control, Carnegie classification, selectivity and tuition level. Sector of control was significantly related to college size, Carnegie classification, tuition and selectivity level. Tuition level was related to multiple transfers' rank choice of colleges; and Carnegie classification, tuition level and selectivity corresponded with students'

educational goals and aspirations.

The most prominent pattern of multiple transfer movement in the sample and the four major paths was found to be conventional transfer, or sequential movement from one institution to another for more than one semester at a time. The second most frequent pattern was conventional summer transfer, in which students attended one or more institutions only during the summer; and the third was sandwich transfer, in which students either attended two institutions simultaneously or enrolled at one college on two or more separate occasions.

Multiple Transfers' Reasons for Choosing and Leaving Previous Institutions

The 424 multiple transfers in the sample collectively made 1,013 decisions to transfer and 1,437 decisions to enroll at various institutions by the time they matriculated at UIC. The rationales provided by multiple transfers in the sample for moving among colleges were found to confirm previous research showing that students transfer for practical, specific reasons that focus on the academic system of the institution (Astin et al., 1987; Brigman et al., 1982; Janasiewicz, 1987; Kowalski, 1977; Richardson & Bender, 1987). Respondents' criteria for choosing and transferring out of specific colleges were determined primarily by

institutional type (two-year or four-year) and control (public or private). In the selection of four-year colleges or universities (including UIC), perceived academic quality was considered the most important criterion by students in all of the multiple transfer groups, with variety of courses and programs ranked second. Not surprisingly, perceived low quality of these academic attributes was cited as an important reason for transferring out of community colleges. By contrast, in selecting community colleges multiple transfers considered affordability of tuition and convenience of campus location to be the primary institutional attributes.

Respondents gave a much wider range of reasons for choosing and for transferring out of four-year institutions than they did for community colleges, and these reasons were highly determined by sector of institutional control. Academic quality was considered the primary rationale for selecting four-year institutions by students in the multiple transfer sample. However, affordability of tuition was rated second most important and convenience of location third in the choice of four-year public colleges and universities; while for private institutions location, variety of programs and faculty teaching ability were ranked (in descending order) after academic quality. Respondents' reasons for choosing UIC were related to the control of the institution from which they transferred. Those transferring from public colleges cited academic quality first, followed

by program variety and location; while those transferring from private colleges cited affordability of tuition first, academic quality second, location third and faculty teaching ability fourth.

Affordability of tuition was given most frequently as the primary reason for transferring out of four-year private colleges, followed by program variety, social atmosphere and academic quality. The decision to leave four-year public institutions, by contrast, was made for personal/family reasons, followed by change of residence, academic quality and program variety.

Community colleges were ranked as lower choice institutions by multiple transfers than were four-year colleges and universities. All respondents except those in the 2 > 4 > 4 group ranked the college they first attended as a higher choice institution than the second. In the 4 > 2 > 4 and 2 > 4 > 4 groups larger percentages of respondents ranked private four-year colleges as their first choice, while in the 4 > 4 > 4 group public institutions were ranked slightly higher than privates. Students in both the 4 > 2 > 4 and 2 > 4 > 4 groups reported having had better overall experiences at the community colleges than at the four-year institutions they attended. All groups except the 2 > 4 > 4 transfers had more positive overall experiences at their second than at their first institution, whether it was

two-year or four-year. Finally, respondents in the 2 > 4 > 4 and 4 > 4 > 4 groups reported having had better experiences at public than at private four-year institutions. Just as a higher percentage of multiple transfer respondents indicated that they had their most positive overall experience at the most recent institution they attended prior to transferring to UIC, so did more respondents report having had a significant relationship with a faculty or staff member at their most recent institution prior to UIC.

The Role of Information Sources in Multiple Transfer Students' Choice of UIC

Multiple transfers in the sample and in three of the four major paths ranked promotional materials sent from UIC as most influential in their choice decision, followed by family members, friends at UIC, a campus visit, and college guidebooks. Transfers taking the 2 > 4 > 4 path, however, ranked family members as their most important source. Respondents in the 4 > 4 > 4 group ranked campus visits second to UIC materials in influencing their choice decision, showing a sophistication in the use of information sources that was significantly different from the other three groups. It is important to note that none of the information sources used by multiple transfers in any of the groups was considered highly influential by more than 39% of respondents, indicating that the multiple transfers were not single

source reliant in their selection of colleges and universities.

A factor which appeared to be extremely important in multiple transfers' choice of UIC was the availability of academic programs in students' major field of study, regardless of whether this major was offered by their previous institution. This factor was considered particularly important by transfers majoring in professional fields such as business and engineering.

Respondents in the sample and the four major multiple transfer paths had their highest expectations of UIC in the academic realm, and their lowest expectations in the areas of social atmosphere, attractiveness of facilities and grounds, financial aid and class size. Students taking the 4 > 2 > 4 and 2 > 2 > 4 paths held significantly higher expectations of academic quality, social atmosphere and student support services than students in the other two groups, who had most recently attended four-year institutions.

Conclusions

Although this study examined only the behaviors of multiple transfer students who eventually enrolled at the same institution, the findings suggest that the numbers of these students may be substantial in American colleges and

universities, and particularly in large, urban, public institutions. Multiple transfers matriculating at UIC in fall 1989 comprised 19% of entering undergraduates and 44% of new transfer students - a significant portion of institutional enrollments. Implications of the multiple transfer phenomenon for individual students, institutions, the states and the system of higher education are therefore much greater than previously expected. This section will address the implications of multiple transfer behavior for each of these constituencies and will present conclusions based upon the results of the study.

Implications Regarding the Individual Student

Although the literature presents both positive and negative aspects of transfer student characteristics and behavior, results of this study suggest that multiple transfers possess - to a high degree - the demographic, academic and motivational attributes that characterize college persisters. These attributes include high levels of parental education, family income, academic ability and achievement, educational aspirations, and family support to attend college (Astin, 1975; Beal & Noel, 1980; Hossler, 1984; Lenning, 1982; Manski & Wise, 1983; Pascarella & Terenzini, 1980, 1983; Porter, 1989; Tinto, 1975, 1987; Velez, 1985). In addition to possessing some of these attributes to a

greater degree than first-time freshmen and transfers at UIC, it is possible that multiple transfers in the sample also have higher levels of goal commitment than these other student populations, and thus an increased potential for attaining the baccalaureate degree. Indeed, multiple transfers may be considered the ultimate persisters, in that they make the decision to remain within the system of higher education several times over the course of their collegiate careers.

In moving among many different institutions, multiple transfer students - like first-time transfers - may extend the time period required to earn a baccalaureate degree. This may have the effect of increasing the cost of these students' college education and delaying their early occupational attainment. Students who remain at one institution for the duration of their undergraduate careers undoubtedly receive a number of benefits, including faster degree completion, in-depth exposure to one curriculum, and the opportunity to develop long-term relationships with other students, faculty and staff. On the other hand, students who transfer experience a variety of different institutional settings and curricula. Transferring may actually lower the overall cost of a college education for the majority of multiple transfer students, who attend community colleges and/or public four-year institutions for substantial periods of time.

Perhaps most important of all, transferring offers the potential for improving student-institution fit, thus enhancing persistence within the system of higher education (Cope & Hannah, 1975; Noel et al., 1987; Tinto, 1987) and increasing the likelihood of degree attainment (Carroll, 1989; Knepper, 1989). As the vast majority of students in the multiple transfer sample reported that they chose - and also left - four-year colleges and universities because of the quality and/or variety of their academic programs, it is speculated that many of these students transferred to obtain a better academic fit. It is possible that multiple transfers, who tend to enter colleges and universities with low levels of institutional commitment, are also more sensitive than other students to any incongruencies they experience in their fit with the institution. As a result, multiple transfers may be more prone to transfer when their expectations of an institution are not met.

Transfer students have previously been accused of making ill-informed college choices which frequently result from their exaggerated, inaccurate expectations of an institution (Hossler, 1984; Noel et al., 1987; Peng, 1977). In turn, poor college choice is said to be partly responsible for any incongruencies which later arise between the student and institution (Tinto, 1987). Students in the multiple transfer sample did not appear to make "poor" college

choices, nor did they seem ill-informed about the institutions they attended. Rather, these students selected institutions based on practical, specific attributes - location and cost for community colleges and perceived academic quality for four-year institutions.

Rather than resulting from poor choice, the behavior of students in the multiple transfer sample appears to be due at least in part to the students' conscious selection of lower-choice institutions. This was found to be the case whether the colleges were two-year or four-year, public or private. Tinto (1987) theorized that attending lower-choice colleges would contribute to transfer behavior, a theory that the findings of this study seem to bear out. Whether this pattern was due to students' rejection by their first-choice institution, or to financial or geographical limitations was not established by this study. However, it is speculated that the multiple transfers' tendency to transfer downward to less prestigious, lower-choice institutions occurred more frequently for the latter reasons. This theory is borne out by the fact that many respondents in all four major groups stated that they intended to transfer from their previous institutions at the time of their initial enrollment (see Table 7), an intention shown to be a strong predictor of transfer behavior (Bean, 1982b; Lenning et al., 1980; Metzner & Bean, 1987).

Although multiple transfers in the sample had

excellent high school records which would have gained them admission to most four-year institutions, substantial numbers of these students chose to attend community colleges and less selective four-year institutions. This pattern occurred despite the findings of previous research that high socioeconomic status, high ability students prefer selective, private institutions (Davis & Van Dusen, 1975; Hearn, 1984; Zemsky & Oedel, 1983). The large numbers of multiple transfers who were attracted to community colleges and public four-year institutions because of their low tuitions and convenient campus locations suggests that these students' choices were limited by geographical and/or financial constraints rather than by academic ability. Cost, in particular, has been identified as a major reason that students do not attend their preferred institution (Davis & Van Dusen, 1975; Litten et al., 1983). As institutional tuition and fee levels were found to be positively related to respondents' rank choice of colleges, it is not surprising that multiple transfer students who felt constrained to attend low-cost colleges also tended to rank these institutions as their second, third or even fourth choices.

Respondents in the multiple transfer sample were not asked to describe their expectations of previous institutions they attended, to provide the source of these expectations, or to determine whether the colleges satisfied these

expectations. Therefore, it is unclear whether respondents' perceptions of institutional attributes were in fact realistic, and whether they were derived from institutional or other sources. When asked their expectations of various UIC characteristics, however, the multiple transfers gave rankings that appeared realistic given the empirical strengths and weaknesses of the institution. It is probable, then, that respondents were realistic concerning their expectations of previous institutions. It is also possible that the "transfer myth," or exaggerated expectations of first-time transfer students (Buckley, 1971) may subside with experience in transferring among four-year institutions, making multiple transfers more realistic with each institution they attend. This theory is borne out by the fact that, along with students in the 4 > 2 > 4 group, 2 > 2 > 4 transfers' expectations regarding academic quality, faculty availability, social atmosphere and student support services at UIC were higher than those of the other two groups (whose members had most recently attended four-year institutions).

Students in the multiple transfer sample were bright, highly motivated individuals who did not hesitate to leave an institution when the costs of remaining were judged to outweigh the perceived benefits of transferring elsewhere. For most of these students, transferring was a positive experience in that it meant moving to an institution that was a better fit academically, socially, financially or

geographically - thus enhancing their persistence within the system of higher education.

Implications for Institutions

Although this study examined only the behaviors of multiple transfers who eventually enrolled at UIC, the findings suggest that a substantial number of multiple transfer students move among American colleges and universities, and that a surprisingly large percentage of these students enter four-year institutions with the intention of transferring. Moreover, many of the demographic, academic and motivational attributes possessed by multiple transfers in the sample are perceived as highly desirable by colleges and universities. Their high socioeconomic statuses, excellent high school records and high academic aspirations, in particular, should make multiple transfers a sought-after target population by enrollment managers at all types of institutions.

Like first-time freshmen with similar background characteristics, the multiple transfers (and especially those taking the 4 > 4 > 4 path) conducted complex, sophisticated college searches and used a variety of information sources. During the choice stage of the college choice process, the multiple transfers, like the freshmen and first-time transfer students, appeared to focus on specific institutional attributes such as academic quality, program availability,

cost and location. Upon their enrollment, however, the multiple transfers seemed to be particularly sensitive to incongruencies which existed between themselves and the institution, and as sophisticated consumers did not hesitate to leave when the costs of remaining were judged to outweigh the perceived benefits of transferring elsewhere.

Kotler and Fox's (1985) postdecision assessment phase of the college choice process appears to be particularly applicable to multiple transfers. During this phase, the student either experiences satisfaction with her/his choice, resulting in continued enrollment; or dissatisfaction, resulting in dropout or transfer to another institution. Students in the multiple transfer sample who had transferred most frequently appeared to experience less hesitation about transferring again than those who had moved among fewer colleges.

Because of their proclivity for transferring, recruitment of multiple transfer students may seem to be a mixed blessing for colleges and universities. In addition to their sheer numbers and promising background attributes, however, multiple transfers appear to persist successfully when they enroll at an institution that is a good fit for them, especially in the academic realm. Therefore, colleges and universities that attempt to learn more about multiple transfers' needs and expectations will likely attract

students who perform well academically and persist to graduation.

Private Colleges and Universities

The fact that multiple transfers in the sample tended to transfer from private to public institutions is obviously disheartening news for the private sector of higher education. Private institutions are generally smaller, more academically competitive, offer a more limited selection of academic programs and charge higher tuition rates than their public counterparts. In the multiple transfer groups in which students attended at least one four-year institution prior to enrolling at UIC (4 > 4 > 4, 2 > 4 > 4, and 4 > 2 > 4), substantial percentages of transfers attended private colleges at some point during their collegiate careers. However, all of these students ended up at UIC, a large, urban, moderately selective public university. It is possible that, due to the limited nature of this study, a negative selection bias may have distorted the low enrollment of students in the sample at private colleges. For example, multiple transfers with a propensity to enroll only at small, private institutions affiliated with the Baptist church would not have eventually transferred to UIC and therefore would not have been included in the sample. However, the fact that transfers tend to move from private to public institutions has been documented in numerous research

studies (Carnegie Foundation for the Advancement of Teaching, 1986; Holmstrom & Bisconti, 1974; Knoell & Medsker, 1965; Peng, 1977; State of Illinois Board of Higher Education, 1990b; Willingham & Findyikan, 1969), which mitigates negative selection biases to some extent.

The tendency of financially dependent multiple transfers at all income levels to enroll at low-cost, public institutions presents a particularly problematic situation for private colleges. In order to attract and retain these students, private colleges will have to find ways to downplay or mitigate the tuition differential between themselves and public institutions and accentuate attributes such as academic quality, program variety, faculty teaching ability and campus location.

Multiple transfer respondents' answers to survey questions concerning the quality of their overall experience and the existence of supportive relationships with faculty and staff at each institution attended indicate that private colleges have some work to do in these areas, as well. Of the respondents, students in the 4 > 4 > 4 and 2 > 4 > 4 groups reported having had more positive overall experiences at public than at private four-year institutions. In addition, multiple transfer students in the 4 > 4 > 4 group gave higher choice rankings to public than to private colleges and universities. Finally, 2 > 4 > 4 respondents indicated

that they had enjoyed more supportive relationships with faculty or staff members at four-year public institutions than at private colleges or universities.

Community Colleges

A particularly surprising finding of the study was the extent to which multiple transfer students in the sample moved among community colleges - both prior to and following their enrollment at four-year institutions. Students taking three of the four major paths transferred to or from a community college at some point during their collegiate careers, thus establishing community college attendance as typical of multiple transfer behavior. Another discovery of interest was the fact that, in the multiple transfer groups in which students attended both two-year and four-year institutions (the 2 > 4 > 4 and 4 > 2 > 4 paths), survey respondents reported having had better overall experiences at the community colleges. In addition, 4 > 2 > 4 transfers indicated that they had enjoyed more supportive relationships with members of the faculty or staff at the community colleges than at four-year institutions. Since students' overall experiences at an institution have been shown to be more important than their background characteristics in determining transfer behavior (Holmstrom & Bisconti, 1974; Volkwein et al., 1986), the fact that community colleges received consistently higher ratings in this area bodes

poorly for four-year institutions (and particularly for private colleges, which have established reputations for enhancing students' on-campus experiences).

Multiple transfers in the sample who attended community colleges appeared to experience far less student-institution incongruency than those who enrolled at four-year institutions. These students entered community colleges because they considered them to be inexpensive and convenient, with the expectation of eventually transferring to a four-year institution. By virtue of community colleges' dual mission to serve the community and to serve as waystations for students desiring to transfer, these institutions strive to offer a solid academic product at an extremely low price. Community colleges have never tried to acquire reputations for offering highly prestigious academic programs. It is therefore theorized that community colleges are able to be more realistic and straightforward in their promotional activities, and that students' expectations tend to be less exaggerated than they are of four-year institutions.

It is of interest that the enrollments of suburban, Chicago-area community colleges are skyrocketing while those of several four-year institutions in the region are declining. Some private colleges have even had to merge with other institutions or face closing their doors. As the low tuition cost, convenient class schedules and central

locations of community colleges make them more acceptable alternatives to four-year institutions, it is predicted that students will transfer back and forth between the two- and four-year sectors with increasing frequency in the years ahead. As competition between these sectors increases, community colleges will pose an increasingly formidable challenge to four-year colleges and universities for the first two years of a student's undergraduate education.

Four-year institutions could potentially improve the experiences, and thus the retention rates, of multiple transfers if they reduced the numerous bureaucratic roadblocks that complicate the transfer process. Even though the pool of traditional-age college students is shrinking, higher education institutions appear to treat transfer students as "second class citizens," much as they have in decades past (Anderson, 1970; Burt, 1972; Dearing, 1975; Knoell & Medsker, 1965; Hendel et al., 1984; Richardson & Bender, 1987; Wechsler, 1989; Willingham & Findyikan, 1969). Community college transfers, in particular, are apparently still regarded as second-rate candidates for admission by four-year institutions (Green, 1988). In the multiple transfer sample, students in the 2 > 2 > 4 group reported encountering more difficulties in transferring credit to UIC, finding their way around campus, and fitting in as students than did any of the other groups, even though these students exhibited greater institutional commitment to UIC

and earned higher cumulative grade point averages than others.

Of the four major multiple transfer groups, students taking the 4 > 4 > 4 path would probably be considered the most desirable candidates for admission from the standpoint of the more selective four-year colleges and universities. These students entered UIC with the most academically and socioeconomically promising backgrounds of the four groups. In addition, 4 > 4 > 4 transfers moved among private, selective and out-of-state institutions to a much greater extent than students in the other three groups. However, the 4 > 4 > 4 transfers exhibited comparatively low levels of institutional commitment to all of the colleges they attended (including UIC), along with lackluster persistence rates and academic performance at UIC. For institutions concerned with retention rates, students belonging to the 4 > 4 > 4 group may be less desirable candidates for admission than those in the other three groups. In particular, the 2 > 2 > 4 transfers, whose backgrounds may seem unimpressive to many colleges and universities, may be "dark horse candidates" for admission. Transfers in this group possessed the background characteristics which typically predict persistence and academic success in college to a lower degree than the other three groups - and to a much lower degree than the 4 > 4 > 4 transfers. However, students taking the 2 > 2 > 4

path earned better UIC grade point averages and exhibited higher institutional commitment than those in the other three groups, and had high persistence rates at UIC.

The multiple transfer phenomenon may cause institutions to reexamine existing models of student persistence and to question how the perception of academic quality or prestige influences transfer behavior. Individual colleges and universities have traditionally failed to distinguish between attrition and transfer, regarding both behaviors as highly undesirable in that they result in increased costs and decreased tuition revenues. However, findings from this study indicate that institutions should separate transfers from dropouts instead of lumping them together into aggregate data. Results of this study and others show that transfers have a great deal more in common with persisters than they do with dropouts (Carroll, 1989; Holmstrom & Bisconti, 1974; Lee & Frank, 1990; Velez & Javalgi, 1987; Wisner, 1984).

By analyzing the characteristics, needs and expectations of students who transfer to and from their campuses, institutions will likely increase their ability to recruit and retain them. However, despite their best efforts to meet the needs of multiple transfers and to promote their programs accurately and honestly, institutions will lose some of these students in transfer to other colleges and universities. In this regard, it is important for

institutions to understand that what is beneficial for them (e.g., retaining a student to graduation) may not ultimately be beneficial for the student, and that transferring to improve student-institution fit can increase the likelihood that an individual will attain a college degree. Although multiple transfers may leave an institution in search of a better fit, other multiple transfers will likely enroll at that same institution to take their place.

Since many multiple transfers in the sample reported that they moved among institutions because of perceived academic quality or prestige, colleges and universities should examine how these students define "academic quality," and from what information sources they derive their perceptions of quality. While a student who transfers because of lack of program variety is likely to do so because of a change in her/his major, the motivations of a student who is disappointed with an institution's academic quality are more difficult to analyze. As discussed in Chapter II, there has been a shift in meaning of the term "academic quality" from measured student body and faculty attributes to a vague, hierarchically-based "prestige" factor (Krukowski, 1985). Previous research has indicated that students' perceptions of academic quality are influenced most strongly by information from the institution's catalog (Kealy & Rockel, 1987), and concern has been expressed by many researchers that

institutional publications are frequently misleading and inaccurate (Chapman & Stark, 1979; Litten, 1982; Noble, 1986). In today's environment of declining enrollments and fierce interinstitutional competition, it is speculated that the academic attributes of colleges and universities may be exaggerated and/or misrepresented in many institutions' promotional materials. This is an area which should be further explored in future research.

Implications for the States

The tendency of most students in the sample to remain in-state and to move primarily among institutions in the public sector suggests that multiple transfer behavior is beneficial to individual states in that it boosts state economies, utilizes tax proceeds efficiently, increases state enrollment figures and decreases attrition figures. Multiple transfer enrollments may be particularly helpful to states such as Illinois, which is experiencing higher education enrollment declines and which exports more college students than it imports (Carnegie Foundation for the Advancement of Teaching, 1986; Davis, 1986; Gossman et al., 1968).

Students following the 2 > 2 > 4 and 2 > 4 > 4 paths were most likely to remain within the state of Illinois for all of their transfer movements, and would therefore be most

desirable from that state's point of view. 4 > 4 > 4 transfers, on the other hand, were most likely to attend colleges and universities outside Illinois' borders, and were particularly inclined to attend private out-of-state institutions. These trends correspond with previous research indicating that students who reside in states with a wide variety of higher education institutions, such as Illinois, tend to remain in-state (Zemsky & Oedel, 1983); and that students with higher levels of academic ability and socioeconomic status (e.g., 4 > 4 > 4 transfers) are more mobile and more likely to attend selective, out-of-state, private institutions (Gossman et al., 1968; Hearn, 1984; Ihlanfeldt, 1980; Zemsky & Oedel, 1983).

System-Wide Implications

Findings of this study verify Tinto's (1982) theory that transfer students, even though they move among colleges and universities with great frequency, are ultimately persisters within the system of higher education. In fact, as stated earlier, multiple transfers may be classified as the ultimate persisters, in that they make the decision to persist a number of times during their collegiate careers. After exhibiting relatively low commitment toward their initial institutions, students in the multiple transfer sample displayed high institutional commitment, achieved

well academically and persisted at rates higher than those of freshmen at UIC and nationally. These results support Tinto's (1975) theory that high commitment to the goal of achieving a college degree can compensate for low institutional commitment, leading to transfer but eventually to persistence - an outcome that is obviously in the national interest.

Findings of this study also support the argument that allowing students to transfer to institutions that better meet their needs academically, financially, socially or otherwise improves their chances to persist to graduation (Carroll, 1989; Knepper, 1989; Tinto, 1987). The prevalence of downward transfer activity among students in the multiple transfer sample - and especially among those in the 4 > 2 > 4 group - indicates that these students benefitted from the opportunity to recoup academically and/or financially at a community college before moving upward to a four-year university. The 4 > 4 > 4 transfers, who were more academically gifted and socioeconomically advantaged, appeared to benefit from upward transfer to more selective institutions, as shown in studies of first-time transfers by Janasiewicz (1987) and Wisner (1984).

The fact that multiple transfer students move among so many institutions over the course of their collegiate careers leads to a concern for curricular accountability. While multiple transfers undoubtedly accumulate the credit

hours and earn the academic credentials necessary to receive a college degree, the possibility that they will have a coherent and unified educational experience is small. Multiple transfers' frequent movements from college to college preclude the chance that any one institution's curriculum will have a significant impact. The multiple transfer phenomenon may therefore be an impetus to the development of course-by-course general education curricula which are largely distributive in nature, as opposed to those which currently emphasize a cohesive, four-year sequence. Such curricula would also be beneficial for students who "stop out" (leave an institution for a period of time and then return) and for students who change their academic field of concentration. Even though these students attend only one college, they tend to receive disjointed educational experiences which resemble those of multiple transfers.

The institutions that multiple transfers tend to move among - nonselective community colleges and low and moderately selective four-year colleges and universities - offer fairly standard academic programs. Improved articulation among these and other higher education institutions, as described in detail in the practical recommendations section which follows, would assist in unifying the educational experience of multiple transfer students.

Recommendations for Colleges and Universities

A number of practical recommendations for higher education institutions can be derived from the results of this study. The goal of these recommendations is to enhance the ability of colleges and universities to recruit and retain multiple transfer students.

1) In an era of declining freshman enrollments, colleges and universities would be wise to focus some of their recruiting and retention efforts on the multiple transfer student population. Students in the multiple transfer sample had excellent qualifications for college admission and possessed the high levels of educational goal commitment necessary for persistence. A first step in this direction would be for institutions to assess accurately the numbers of multiple transfer students that enroll at, and transfer from, their campuses. In the calculation of aggregate institutional attrition figures, it is imperative that transfer students be separated from those who drop out of the system of higher education. This will provide a realistic and comprehensive picture of the overall extent of transfer movement.

2) Since multiple transfer students in the sample tended to move back and forth between the two-year and four-year sectors, it is highly recommended that these sectors work

together to strengthen existing articulation agreements and to create such agreements where none exist. It is important that these plans outline specific degree programs that can be completed through consecutive or sequential enrollment at a group of affiliated institutions. Private colleges should attempt to establish such programs with community colleges and with other four-year institutions, both private and public. As the multiple transfers appeared to be financially and/or geographically constrained in their college choices, priority should be given to developing articulation agreements - possibly including consortial tuition and financial aid plans - with neighboring colleges and universities.

The types of programs outlined above should ease some of the problems experienced by students who attempt to transfer credit from one institution to another, and should decrease the additional time required for transfer students to earn undergraduate degrees. It is anticipated that as multiple transfer behavior becomes more commonplace, students will look for institutions that have developed these agreements, and will compare the benefits of various articulation plans before making their enrollment decisions.

Higher education institutions may be able to work with regional and state agencies in establishing articulation plans. A model program may be one currently under development which includes DePaul University, Barat College (both

private four-year institutions), Northeastern Illinois University (a public university) and three Chicago suburban community colleges. The consortial program will be funded under the Illinois Board of Higher Education's Higher Education Cooperation Act (HECA). The three four-year institutions will offer a joint bachelor's degree in Social Science, with general education courses and most of the courses required for the major taught at the community colleges. Students will select one of the four-year institutions from which to receive the bachelor's degree, but will be able to transfer credits among Barat, DePaul and Northeastern. The program includes a tuition differential component, through which a scholarship fund will pay the difference between the lowest tuition of the four-year institutions and the tuition rate of the institution in which the student is enrolled. The joint degree program is aimed at students who are constrained financially or geographically, or who do not have the time to commute long distances to attend college because of work or family obligations.

3) Private colleges, in particular, must attempt to offset students' concerns about the higher tuitions in the private sector by promoting and providing high quality academic programs and classroom teaching. Results of this study support previous findings indicating that the academic system of an institution is of more importance to transfer

students than the social system (Desler, 1985; Johnson, 1980). Private colleges, and especially those with small enrollments, are in a unique position to provide a wide variety of support services and to deliver the high quality collegiate experiences that are vital to transfer student persistence. Private institutions may have to try even harder than their public counterparts to provide these experiences, as reputations for academic prestige and quality in the private sector may in and of themselves heighten student expectations.

4) All higher education institutions, but especially four-year colleges and universities, must carefully examine the accuracy of the image that they present to prospective transfer students, as well as the channels through which this image is conveyed. Multiple transfers in the sample were found to use a number of different information sources during the college choice process, and their perceptions of academic quality appeared to be influenced by colleges' promotional materials and by campus visits, among other factors. It is therefore important that institutions ensure the accuracy of these information sources in order to keep student expectations to a reasonable level.

5) In order to retain multiple transfers, colleges and universities should attempt to increase these students' low level of institutional commitment. Student development professionals could enhance this effort by creating special

transfer orientation programs which include tours of the campus and workshops on adjusting to a new college environment. Orientation programs for transfers are particularly recommended for urban, commuter institutions which lack the social focus of residential life. In addition, staff in all administrative offices should be alerted to the types of bureaucratic roadblocks (for example, transfer of credit) that plague transfer students, and should be trained to handle these situations professionally and politely.

Multiple transfers in the 2 > 2 > 4 group, in particular, were found to be older, married, and less prepared academically for attendance at a four-year institution. Flexible course scheduling, availability of day care and academic support services would be beneficial in heightening these students' institutional commitment, and hence their persistence. As the majority of multiple transfers in all four major groups were employed off-campus while enrolled at UIC, provision of evening student services and course offerings would be highly recommended. As competition among colleges and universities increases, those institutions that enthusiastically promote these services will benefit from improved retention of multiple transfer students.

6) Multiple transfers exhibit a propensity to "vote with their feet" and leave an institution when they are dissatisfied, particularly with the quality and variety of its

academic programs. Colleges and universities should attempt to meet the needs of these students when designing new programs, and should investigate ways in which existing programs can be better matched to their interests. Academic advising systems that focus on transfer curricula can assist in accomplishing these objectives. Most importantly, perhaps, institutions need to describe academic programs of interest to transfer students accurately and in detail - and then need to deliver the programs as promised.

Recommendations for Future Research

A number of hypotheses, theories and issues which need further investigation are derived from this study, and are as follows:

- 1) As this study was conducted at a single institution, its generalizability is limited. The researcher intends to replicate the study at other four-year institutions, both public and private, and at the community college level. In addition, the multiple transfer phenomenon should be examined from the national perspective using data from such sources as the National Longitudinal Study of the High School Class of 1972 and the High School and Beyond Study (1980). Use of these sources would assist the researcher in determining whether the multiple transfer phenomenon has increased over time; and in ascertaining the relationship of

multiple transfer behavior to national, political and social developments in this country.

2) The researcher is currently following students in the multiple transfer sample and recording their attendance patterns, academic performance (based upon cumulative grade point averages earned each quarter) and persistence within the system of higher education. Followup interviews of these students will be conducted, and the differences between graduates, dropouts and transfers ascertained.

3) Some aspects of the college choice process appear to be similar for first-time freshmen, transfers and multiple transfer students. However, more research needs to be done on how college choice, and the role of information sources in the choice process, differs among these groups. It is hypothesized that the choice process of multiple transfers is more sophisticated than that of other students, and that multiple transfers include fewer institutions in their choice sets due to geographical and/or financial constraints. It is further theorized that the choice process evolves with each multiple transfer movement as students develop a "learning curve" regarding the selection of various types of institutions.

Just as the use of information sources was found to differ according to the multiple transfer path taken by students in the sample, it is hypothesized that the college choice process will vary among the four major transfer

groups. In examining this possibility, the tendency of multiple transfers to attend lower-choice institutions should be investigated further. Students could be asked to indicate the names of their first and second (and, if appropriate, third and fourth) choice institutions for each transfer movement. Students' reasons for not attending the higher choice institution(s) could also be elicited. It would be of interest to note whether students eventually enroll at any of their higher-choice institutions, and for what reasons. Responses to these questions would help determine whether multiple transfers routinely switch from first-choice private colleges to lower-choice public institutions during the search phase, as has been shown to occur in the first-time freshman population (Dahl, 1982; Litten et al., 1983).

4) Although several differences were found to exist between students in the multiple transfer sample and other student populations at UIC, more research is needed in order to determine whether these findings are generalizable to other college settings. Of particular interest is the extent to which multiple transfer students differ from first-time freshmen and transfers in background characteristics, academic performance, educational aspirations, institutional commitment and persistence within the system of higher education.

5) Findings of this study indicated several significant demographic, academic and motivational differences among students taking the four major multiple transfer paths. The 2 > 2 > 4 and 4 > 4 > 4 groups, in particular, differed from one another and from the other two groups. These differences should be re-examined using multivariate statistics. A predictive model could be built containing five or six variables for each of the four major paths, and the effectiveness of the model determined using discriminant analysis. In addition, differences among the multiple transfer groups should be examined using the cultural construct of "localism/cosmopolitanism," which has been successfully applied to the college choice process (Wiese & Townsend, 1991).

6) The concept of perceived academic quality should be further explored in terms of its interrelationships with multiple transfers' expectations, college choices, and persistence. How do multiple transfers define academic quality? How do institutions' promotional materials affect students' perceptions of quality? Are students' expectations of academic quality higher at private than at public institutions? If so, why is this the case? How do these expectations affect students' satisfaction with the overall collegiate experience? Does a reputation for academic quality lead students to develop exaggerated expectations regarding other areas of an institution as well (e.g., social

atmosphere)? Are students who attend nonselective colleges and universities likely to have lower expectations of academic quality than those who enroll at more selective institutions, and do these students therefore tend to be more satisfied with their overall collegiate experience? Do multiple transfers develop more realistic expectations with each transfer movement, or does this only occur when students move among four-year institutions?

In an attempt to answer some of these research questions, followup interviews will be conducted with students in the multiple transfer sample who responded to the original survey. Gap analysis will be performed in order to determine whether these students' expectations of UIC, as stated on the original survey, were met and whether the reasons given by students who left UIC prior to graduation were related to their initial expectations.

7) A study should be done of the promotional materials of a variety of two-year and four-year institutions. The researcher could examine the empirical accuracy of these materials and could then conduct interviews with students to determine how the materials influence respondents' expectations of academic quality and other factors.

8) Interviews with respondents to the original survey will be designed to obtain more information on multiple transfers' tendency to move from private to public institutions.

The role that higher private college tuitions play in determining transfer to the public sector will be examined using respondents of various income levels.

9) Future research on multiple transfer students should differentiate between residential and commuter students, as students living on campus have been shown to persist at higher rates than those who commute (Astin, 1975; Beal & Noel, 1980; Lenning, 1982). Future research should also examine the factors involved in horizontal, upward and downward transfer behavior among students in this population, differentiating between students who transfer for a semester or more and those who transfer only for the summer term. In addition, a thorough examination should be conducted of how these various types of transfer movements interact with in-state enrollment and out-of-state migration patterns.

10) Research should be done on the factors that students consider in judging the quality of their overall collegiate experiences, focusing on how these factors differ among community colleges, four-year public and four-year private institutions.

This study examined a sample of students from a population that has not been subject to previous research - the multiple transfer population. Several significant findings emerged from the data analyses, suggesting that the background characteristics, educational aspirations and

interinstitutional movements of multiple transfer students are areas worthy of further research.

	Transfer Literature	Choice Literature	Attrition Literature
Academic and Occupational Aspirations	<p>Getzlaf et al. (1984) Holmstrom & Bisconti (1974) Lee & Frank (1990) Nora & Rendon (1988) Peng (1977) Tinto (1987) Velez & Javalgi (1987) Wisner (1984)</p>	<p>D. Chapman (1981) Dahl (1982) Gilmour et al. (1978) Hanson & Litten (1982) Hossler et al. (1989) Hossler & Stage (1988)</p>	<p>Astin (1975) Beal & Noel (1980) Bean (1982) Fetters (1977) Getzlaf et al. (1984) Lenning (1982) Nora & Rendon (1988) Tinto (1987)</p>
Academic Achievement and Ability	<p>Campbell (1980) Cross (1968) Getzlaf et al. (1984) Holahan et al. (1983) Holmstrom & Bisconti (1974) Janasiewicz (1987) Lee & Frank (1987) Nolan & Hall (1978) Peng (1977) Richardson & Douchette (1982) Van Alstyne (1974) Velez & Javalgi (1987)</p>	<p>Hearn (1984) Hossler et al. (1989) Hossler & Stage (1988) Ihlanfeldt (1980) Litten (1982) Maguire & Lay (1981) Manski & Wise (1983) Williams & Stage (1989) Zemsky & Oedel (1983)</p>	<p>Astin (1975) Beal & Noel (1980) Getzlaf et al. (1984) Hossler (1984) Janasiewicz (1987) Johnson (1980) Lenning (1982) Manski & Wise (1983) Porter (1989) Spady (1970)</p>

	Transfer Literature	Choice Literature	Attrition Literature
Socio-economic Status (SES)	Carroll (1989) Cross (1968) Holmstrom & Bisconti (1974) Lee & Frank (1990) Peng (1977) Velez & Javalgi (1987)	D. Chapman (1981) Davis & Van Dusen (1975) Hanson & Litten (1982) Hearn (1984) Litten (1982) Stage & Hossler (1988) Zemsky & Oedel (1983)	Fetters (1977) Lenning (1982) Manski & Wise (1983) Porter (1989) Tinto (1975, 1987) Velez (1985)
Parental Education Level	Holmstrom & Bisconti (1974) Metzner (1984) Nora & Rendon (1988) Van Alstyne (1974) Wisner (1984)	Gilmour et al. (1978) Hearn (1984) Hossler & Stage (1988) Lewis & Morrison (1975) Litten et al. (1983) Litten & Brodigan (1982) Manski & Wise (1983) Stage & Hossler (1988) Zemsky & Oedel (1983)	Astin (1975) Fetters (1977) Hossler (1984) Manski & Wise (1983) Nora & Rendon (1988)
Parental Encouragement and Support	Velez & Javalgi (1987)	Conklin & Dailey (1981) Hossler & Stage (1988) Hossler et al. (1989) Stage & Hossler (1988) Williams & Stage (1989)	Hossler (1984) Lenning (1982) Tinto (1975, 1987) Williams & Stage (1989)

	Transfer Literature	Choice Literature	Attrition Literature
Gender	Desler (1985) Holmstrom & Bisconti (1974) Knepper (1989) Lee & Frank (1990) Peng (1977) Van Alstyne (1974) Velez & Javalgi (1987)	Becker (1988) Hearn (1984) Stage & Hossler (1988)	Dealer (1985)
Ethnicity	Peng (1977) Van Alstyne (1974) Velez & Javalgi (1987)	Hearn (1984) Hossler (1984) Hossler et al. (1989) Lewis & Morrison (1975) Litten (1982)	Astin (1975) Hossler (1984) Lennig et al. (1980) Pascarella et al. (1981) Tinto (1975, 1987)
High School Academic Track and Quality	X	Hossler et al. (1989)	Beal & Noel (1980) Lenning (1982)
Home of Residence	Holmstrom & Bisconti (1974)	D. Chapman (1981) Litten et al. (1983) Maguire & Lay (1981)	X

Appendix 1. --Continued

	Transfer Literature	Choice Literature	Attrition Literature
Religion	Velez & Javalgi (1987)	X	Lenning (1982) Tinto (1987)
Age	Holstrom & Bisconti (1974) Preston (1976) Wisner (1984)	X	X

Appendix 2. --Institutional Characteristics

	Transfer Literature	Choice Literature	Attrition Literature
Type	<p>Holmstrom & Biscounti (1974) Illinois Community College Board (1986) Knepper (1989) Peng (1977) Sandeen & Goodale (1972) Van Alstyne et al. (1973) Willingham & Findyikan (1969)</p>	<p>D. Chapman (1981) Conklin & Dailey (1981) Dahl (1982)</p>	<p>Astin (1975) Eagle & Schmidt (1980) Feters (1977) Lenning (1982) Tinto (1975, 1987)</p>
Control	<p>Holmstrom & Bisconti (1974) Illinois Community College Board (1986) Knepper (1989) Knoell & Medsker (1965) Peng (1977) Sandeen & Goodale (1972) State of Illinois Board of Higher Education (1990) Van Alstyne (1973) Willingham & Findyikan (1969)</p>	<p>Dahl (1982) Davis & Van Dussen (1975) Litten et al. (1983) Maguire & Lay (1981)</p>	<p>Beal & Noel (1980) Cope & Hannah (1975) Feters (1977) Knepper (1989) Lenning (1982) Porter (1989) Sedlacek & Webster (1978) Tinto (1987) Velez (1985)</p>

	Transfer Literature	Choice Literature	Attrition Literature
Selectivity Level (Perceived Quality)	Astin et al. (1987) Campbell (1980) Cope & Hannah (1975) Janasiewicz (1987) Kowalski (1977) Kuznik (1973) Leister & Machlachlan (1976) Moore & Hartsell (1974) Murphy (1981) Peng (1977) Smith (1987) Tinto (1987) Wisner (1984)	Chapman & Jackson (1987) Conklin & Dailey (1981) Hearn (1984) Hossler et al. (1989) Krukowski (1985) Leister & Machlachlan (1976) Litten et al. (1983) Maguire & Lay (1981) Moore & Hartsell (1974) Murphy (1981) Zemsky & Oedel (1983)	Astin (1975) Beal & Noel (1980) Fetters (1977) Janasiewicz (1987) Kamens (1971) Kowalski (1977) Lenning (1982) Tinto (1975, 1987) Wisner. (1984)
Academic Program Variety and Availability	Astin et al. (1987) Becker (1988) Brigman et al. (1982) Edward (1979) Hendel et al. (1984) Knoell (1966) Kowalski (1977) Leister & Machlachlan (1979) Peng (1977) Richardson & Bender (1987) Smith (1987) Wisner (1984)	Becker (1988) D. Chapman (1981) Edward (1979) Hossler et al. (1989) Kowalski (1977) Leister & Machlachlan (1979) Lewis & Morrison (1975) Moore & Hartsell (1974) Smith (1987)	Beal & Noel (1980) Bean (1982) Kowalski (1977) Wisner (1984)

	Transfer Literature	Choice Literature	Attrition Literature
Student Services (Advising, etc.)	Brigman et al. (1982) Kintzer (1973) Knoell & Medsker (1965) Wechsler (1989) Williams (1973)	X	Beal & Noel (1980) Lenning (1980) Tinto (1987)
Bureaucracy	Burt (1972) Cope & Hannah (1975) Richardson & Bender (1987) Wechsler (1989) Willingham (1972) Willingham & Findyikan (1969)	X	Cope & Hannah (1975)
Recruitment and Promotional Strategies	X	Becker (1988) Boyer (1987) D. Chapman (1981) Cibik (1982) Hossler & Gallagher (1987) Johnson & Chapman (1979) Kealy & Rockel (1987) Lenning & Cooper (1978) Lewis & Morrison (1975) Rowe (1980)	X

Appendix 3. --Attitudinal, Environmental and Interaction Characteristics

	Transfer Literature	Choice Literature	Attrition Literature
Work	Desler (1985) Velez & Javagli (1987)	X	Astin (1975) Beal & Noel (1980) Desler (1985) Fetters (1977) Johnson (1987) Lenning et al. (1980)
Student Expectations of the College Environment	Anstett (1973) Buckley (1971) Donato (1973) Peng (1977) Shaw (1968) Zultowski & Catron (1976)	D. Chapman (1981) Chapman (1982) Hossler (1984) Jackson (1982) Litten et al. (1983)	Lenning (1982) Tinto (1987)
Institutional Commitment	Bean (1982) Getzlaf et al. (1984) Hackman & Dysinger (1970) Nora & Rendon (1988) Tinto (1987)	X	Beal & Noel (1980) Bean (1982) Lenning et al. (1980) Metzner & Bean (1984) Nora & Rendon (1988) Spady (1970) Tinto (1975, 1987)
Student Satisfaction	Brigman et al. (1982) Peng (1977)	Kotler & Fox (1985)	Bean (1982) Johnson (1987) Metzner (1984)

Appendix 4. --Survey Cover Letter

UIC

The University of Illinois at Chicago

Office of the Vice Chancellor for Student Affairs (M/C 600)
2705 University Hall
Box 4348, Chicago, Illinois 60680
(312) 996-7854

October 24, 1989

Ms. Leigh A. Sweeney
743 Suffolk Dr.
Janesville, WI 53545

Dear Ms. Sweeney,

Transferring from one college or university to another is a common experience for many students today. However, very little is known about why students leave one school and enroll in another. Gaining a better understanding of this process is important so that colleges can better serve the needs of the growing numbers of transfer students on their campuses.

You have been chosen to participate in this study because you recently transferred to the University of Illinois at Chicago (UIC). As part of a small sample of UIC transfer students who will receive this questionnaire, your participation is crucial to the success of the study. Your participation will involve completing and returning the enclosed Survey of Transfer Students. We ask that you respond to each question completely and honestly, and that you return the survey by November 7, 1989 in the enclosed, postage-paid envelope.

Your completed survey will be treated with the utmost confidentiality. The questionnaire has been assigned an identification number for mailing purposes, so that we may check your name off our mailing list when your survey is returned. In addition, the identification number will enable us to match selected data from your record with your survey responses. Your name will never be placed on the questionnaire itself.

The results of this study will be used by the University of Illinois at Chicago to improve its services for transfer students and will also be made available to other colleges and universities. If you would like to receive a copy of the results, please write "copy of the results requested" on the back of the return envelope and print your name and address below it. Please do not write this information on the questionnaire itself.

We would be pleased to answer any questions you might have while you are completing the survey. Please feel free to write or call Gretchen Warner Kearney at the address and phone number on this stationery. Thank you for your assistance!

Sincerely,

Thomas W. Beckham
Vice Chancellor for Student Affairs

Gretchen Warner Kearney
Study Director

Appendix 5. --Survey Followup Letter

UIC

The University of Illinois at Chicago

Office of the Vice Chancellor for Student Affairs (M/C 800)
2705 University Hall
Box 4348, Chicago, Illinois 60680
(312) 996-7854

November 6, 1989

Ms. Leigh A. Sweeney
743 Suffolk Dr.
Janesville, WI 53545

Dear Ms. Sweeney,

About three weeks ago we wrote to you asking you to complete a survey of University of Illinois at Chicago transfer students. As of today we have not received your completed questionnaire.

Understanding your experiences and needs as a transfer student is a crucial step in the development of better programs and policies for all transfer students at UIC. We believe that a confidential survey is the best method of obtaining this important information.

We are writing to you again because of the great significance each questionnaire has to the usefulness of this study. Since only a small sample of students who transferred to UIC this fall are being asked to complete the survey, it is essential that all questionnaires sent out be returned. Otherwise, the results of this study will not be representative of all UIC transfer students.

In case your questionnaire has been misplaced, a replacement is enclosed.

Your cooperation is greatly appreciated.

Sincerely,

Thomas W. Beckham
Vice Chancellor for Student Affairs

Gretchen Warner Kearney
Study Director

Appendix 6. --Reminder Postcard

October 31, 1989

Last week the Survey of University of Illinois at Chicago Transfer Students was mailed to you. If you have already completed and returned it to us, please accept our sincere thanks. If not, please do so today. Because this survey has been sent to only a small sample of UIC transfer students, your participation is crucial to the success of the study.

If by some chance you did not receive the survey, or it was misplaced, please call Gretchen Warner Kearney at 996-7654 and another copy will be mailed to you right away. Thanks in advance for your cooperation!

Sincerely,

Thomas W. Beckham
Vice Chancellor for
Student Affairs

Gretchen Warner Kearney
Study Director



UIC

The University of Illinois at Chicago

SURVEY OF TRANSFER STUDENTS

DIRECTIONS:

The purpose of this survey is to discover the goals and educational backgrounds of students who transfer to the University of Illinois at Chicago (UIC). Please respond to all questions unless asked to skip a question, and circle one answer code for each question unless asked to do otherwise. If you have additional comments on any question, please feel free to write in the margins or in the space provided at the end of the questionnaire.

Thank you for your help.

Office of the Vice Chancellor for Student Affairs (M/C 600)
The University of Illinois at Chicago
2705 University Hall
Box 4348, Chicago, IL 60680

SECTION I

This first section focuses on your goals in transferring to the University of Illinois at Chicago (UIC).

1. What is your **MAIN** goal in transferring to UIC? (Circle number)

- 1 TO EARN A BACHELOR'S DEGREE FROM UIC
- 2 TO TAKE COURSES FOR TRANSFER TO ANOTHER COLLEGE
- 3 TO TAKE SOME JOB-RELATED COURSES
- 4 TO TAKE COURSES FOR SELF-IMPROVEMENT
- 5 NO SPECIFIC GOAL (SKIP TO QUESTION 3)

2. How important is it to you to achieve this goal? (Circle number)

- 1 EXTREMELY IMPORTANT
- 2 VERY IMPORTANT
- 3 SOMEWHAT IMPORTANT
- 4 NOT AT ALL IMPORTANT

3. Do you currently have (Circle all numbers that apply)

- 1 AN ASSOCIATE'S DEGREE
- 2 A VOCATIONAL OR TECHNICAL CERTIFICATE
- 3 A BACHELOR'S DEGREE
- 4 A MASTER'S DEGREE
- 5 NONE OF THE ABOVE

4. What is the highest degree you expect to earn in your lifetime? (Circle number)

- 1 BACHELOR'S DEGREE
- 2 MASTER'S DEGREE
- 3 DOCTORATE OR PROFESSIONAL DEGREE
- 4 DO NOT EXPECT TO EARN A DEGREE

5. When you decided to enroll at UIC, was it your (Circle number)

- 1 FIRST CHOICE COLLEGE
- 2 SECOND CHOICE COLLEGE
- 3 THIRD CHOICE COLLEGE
- 4 FOURTH OR LOWER CHOICE COLLEGE

6. How supportive was your family of your decision to transfer to UIC? (Circle number)

- 1 EXTREMELY SUPPORTIVE
- 2 VERY SUPPORTIVE
- 3 SOMEWHAT SUPPORTIVE
- 4 INDIFFERENT
- 5 NOT AT ALL SUPPORTIVE

7. How important was each of the following information sources in your decision to transfer to UIC? (Circle most appropriate number for each item)

	NOT AT ALL IMPORTANT			EXTREMELY IMPORTANT	
Teachers at my previous college	1	2	3	4	5
Counselors at my previous college	1	2	3	4	5
Friends attending UIC.....	1	2	3	4	5
Family member(s).....	1	2	3	4	5
UIC alumni.....	1	2	3	4	5
Radio, TV, newspapers.....	1	2	3	4	5
Materials sent to me from UIC...	1	2	3	4	5
College guidebook (for example, <u>Peterson's Guides</u>).....	1	2	3	4	5
Campus visit.....	1	2	3	4	5
High school teachers/counselors	1	2	3	4	5

8a. If you have decided on a college major, was this major available at the college from which you transferred to UIC? (Circle number)

- 1 YES (GO TO 8b)
- 2 NO (GO TO 8b)
- 3 DOES NOT APPLY; I HAVE NOT DECIDED ON A MAJOR (SKIP TO 9)

8b. How important was the availability of this major in your decision to transfer to UIC? (Circle number)

- 1 EXTREMELY IMPORTANT
- 2 VERY IMPORTANT
- 3 SOMEWHAT IMPORTANT
- 4 NOT AT ALL IMPORTANT

9. What were the most difficult aspects of transferring to UIC? (Circle all numbers that apply)

- 1 TRANSFERRING CREDITS TO UIC
- 2 FITTING IN AS A STUDENT HERE
- 3 FINDING MY WAY AROUND CAMPUS
- 4 OVERCOMING BUREAUCRATIC "RED TAPE"
- 5 REGISTERING FOR CLASSES
- 6 OTHER
- 7 NOT APPLICABLE; I DIDN'T EXPERIENCE ANY PROBLEMS

10. How difficult would it be for you to transfer to another college? (Circle number)

- 1 EXTREMELY DIFFICULT
- 2 VERY DIFFICULT
- 3 SOMEWHAT DIFFICULT
- 4 NOT AT ALL DIFFICULT

11. In choosing to transfer to UIC, you probably have expectations about what the college will be like (for example, its social atmosphere or academic programs). Please indicate how high or low your expectations are for each of the areas listed below by circling the appropriate number on the scale provided.

	EXTREMELY LOW EXPECTATIONS				EXTREMELY HIGH EXPECTATIONS
	1	2	3	4	5
Quality of academic programs.....	1	2	3	4	5
Variety of courses and programs	1	2	3	4	5
Faculty teaching ability.....	1	2	3	4	5
Faculty availability outside class	1	2	3	4	5
Reasonable class size for the type of course.....	1	2	3	4	5
Availability of financial aid and scholarships.....	1	2	3	4	5
Affordability of tuition and fees	1	2	3	4	5
Convenience of campus location...	1	2	3	4	5
Attractiveness of campus facilities and grounds.....	1	2	3	4	5
Social atmosphere.....	1	2	3	4	5
Availability of student support services (advising, counseling, career planning).....	1	2	3	4	5
Fairness of campus rules and regulations.....	1	2	3	4	5

12a. Of those areas of the college listed in Question 11, which do you feel most influenced your decision to attend UIC? Please return to the chart for Question 11, and place an "x" in front of the three areas which most influenced your decision. For example, if quality of academic programs was a big influence on your decision to come to UIC, your answer would look like this:

X Quality of academic programs

12b. Were there any other factors which influenced your decision to transfer to UIC? If so, please list them below.

SECTION 11

Section 11 of the survey focuses on the colleges you attended before transferring to UIC. There is a separate section for each college. Please start with the college you attended most recently (COLLEGE 1) and work your way backwards, filling out one section for each college. For example, if your last college before UIC was Loyola University, and before that you attended Triton College, College 1 would be Loyola and College 11 would be Triton. It is very important that you include all colleges you have ever attended, even if there were several years between colleges or if you only enrolled for a semester or quarter.

COLLEGE 1 (MOST RECENT COLLEGE ATTENDED)

1. What is the name of this college? _____
2. In what city/state is it located? _____
3. What was your main goal in attending this college?
 - 1 TO EARN AN ASSOCIATE'S DEGREE
 - 2 TO EARN A BACHELOR'S DEGREE
 - 3 TO TAKE COURSES FOR TRANSFER TO ANOTHER COLLEGE
 - 4 TO TAKE SOME JOB-RELATED COURSES
 - 5 TO TAKE COURSES FOR SELF-IMPROVEMENT
 - 6 NO SPECIFIC ACADEMIC GOAL
4. When you decided to attend this college, was it your
 - 1 FIRST CHOICE COLLEGE
 - 2 SECOND CHOICE COLLEGE
 - 3 THIRD CHOICE COLLEGE
 - 4 FOURTH OR LOWER CHOICE COLLEGE?
5. Which of the characteristics listed below were most important in your decision to enroll at this college? (Please circle the numbers of the THREE MOST IMPORTANT characteristics)

<ol style="list-style-type: none"> 1 QUALITY OF ACADEMIC PROGRAMS 2 VARIETY OF COURSES/PROGRAMS 3 FACULTY TEACHING ABILITY 4 AVAILABILITY OF FACULTY OUTSIDE OF CLASS 5 REASONABLE CLASS SIZE FOR THE TYPE OF COURSE 6 FAIRNESS OF CAMPUS RULES AND REGULATIONS 7 CAMPUS LOCATION 8 AVAILABILITY OF FINANCIAL AID / SCHOLARSHIPS 	<ol style="list-style-type: none"> 9 AFFORDABILITY OF TUITION / FEES 10 SOCIAL ATMOSPHERE 11 AVAILABILITY OF STUDENT SUPPORT SERVICES 12 ATTRACTIVENESS OF CAMPUS FACILITIES AND GROUNDS 13 CHANGE OF RESIDENCE (MOVED TO NEW CITY OR STATE) 14 PERSONAL / FAMILY CONSIDERATIONS 15 OTHER
--	--
6. Which of the characteristics listed above, if viewed negatively, were most important in your decision to leave (transfer out of) this college? Please return to the list for Question 5, and place an "x" in front of the three characteristics which most influenced your decision to leave.

Appendix 7. --Continued

(College I, continued)

7. Would you be able to name an individual staff or faculty member at this college who showed a personal interest in you or who helped you with a school-related problem? (Circle number)

- 1 YES
- 2 NO

8. Was your overall experience at this college (Circle number)

- | | |
|----------------------|----------------------|
| 1 EXTREMELY POSITIVE | 4 NEGATIVE |
| 2 POSITIVE | 5 EXTREMELY NEGATIVE |
| 3 AVERAGE | |

9. Was your decision to transfer out of this college primarily

- 1 YOUR OWN DECISION
- 2 YOUR PARENTS' DECISION
- 3 THE COLLEGE'S DECISION, FOR ACADEMIC OR OTHER REASONS
- 4 OTHER: PLEASE EXPLAIN _____

COLLEGE II (SECOND MOST RECENT COLLEGE ATTENDED)

1. What is the name of this college? _____

2. In what city/state is it located? _____

3. What was your main goal in attending this college?

- 1 TO EARN AN ASSOCIATE'S DEGREE
- 2 TO EARN A BACHELOR'S DEGREE
- 3 TO TAKE COURSES FOR TRANSFER TO ANOTHER COLLEGE
- 4 TO TAKE SOME JOB-RELATED COURSES
- 5 TO TAKE COURSES FOR SELF-IMPROVEMENT
- 6 NO SPECIFIC ACADEMIC GOAL

4. When you decided to attend this college, was it your

- | | |
|-------------------------|-----------------------------------|
| 1 FIRST CHOICE COLLEGE | 3 THIRD CHOICE COLLEGE |
| 2 SECOND CHOICE COLLEGE | 4 FOURTH OR LOWER CHOICE COLLEGE? |

5. Would you be able to name an individual staff or faculty member at this college who showed a personal interest in you or who helped you with a school-related problem?

- 1 YES
- 2 NO

6. Which of the characteristics listed below were most important in your decision to enroll at this college? (Please circle the numbers of the THREE MOST IMPORTANT characteristics)

- | | |
|--|---|
| 1 QUALITY OF ACADEMIC PROGRAMS | 9 AFFORDABILITY OF TUITION / FEES |
| 2 VARIETY OF COURSES/PROGRAMS | 10 SOCIAL ATMOSPHERE |
| 3 FACULTY TEACHING ABILITY | 11 AVAILABILITY OF STUDENT SUPPORT SERVICES |
| 4 AVAILABILITY OF FACULTY OUTSIDE OF CLASS | 12 ATTRACTIVENESS OF CAMPUS FACILITIES AND GROUNDS |
| 5 REASONABLE CLASS SIZE FOR THE TYPE OF COURSE | 13 CHANGE OF RESIDENCE (MOVED TO NEW CITY OR STATE) |
| 6 FAIRNESS OF CAMPUS RULES AND REGULATIONS | 14 PERSONAL / FAMILY CONSIDERATIONS |
| 7 CAMPUS LOCATION | 15 OTHER _____ |
| 8 AVAILABILITY OF FINANCIAL AID / SCHOLARSHIPS | |

7. Which of the characteristics listed above, if viewed negatively, were most important in your decision to leave (transfer out of) this college? Please return to the list for Question 6, and place an "x" in front of the three characteristics which most influenced your decision to leave.

8. Was your overall experience at this college (Circle number)

- | | |
|----------------------|----------------------|
| 1 EXTREMELY POSITIVE | 4 NEGATIVE |
| 2 POSITIVE | 5 EXTREMELY NEGATIVE |
| 3 AVERAGE | |

9. Was your decision to transfer out of this college primarily

- 1 YOUR OWN DECISION
- 2 YOUR PARENTS' DECISION
- 3 THE COLLEGE'S DECISION, FOR ACADEMIC OR OTHER REASONS
- 4 OTHER: PLEASE EXPLAIN _____

COLLEGE III (THIRD MOST RECENT COLLEGE ATTENDED)

1. What is the name of this college? _____

2. In what city/state is it located? _____

3. What was your main goal in attending this college?

- 1 TO EARN AN ASSOCIATE'S DEGREE
- 2 TO EARN A BACHELOR'S DEGREE
- 3 TO TAKE COURSES FOR TRANSFER TO ANOTHER COLLEGE
- 4 TO TAKE SOME JOB-RELATED COURSES
- 5 TO TAKE COURSES FOR SELF-IMPROVEMENT
- 6 NO SPECIFIC ACADEMIC GOAL

(College III, continued)

4. When you decided to enroll at this college, was it your
- | | |
|-------------------------|-----------------------------------|
| 1 FIRST CHOICE COLLEGE | 3 THIRD CHOICE COLLEGE |
| 2 SECOND CHOICE COLLEGE | 4 FOURTH OR LOWER CHOICE COLLEGE? |

5. Which of the characteristics listed below were most important in your decision to enroll at this college? (Please circle the numbers of the THREE MOST IMPORTANT characteristics)
- | | |
|--|---|
| 1 QUALITY OF ACADEMIC PROGRAMS | 9 AFFORDABILITY OF TUITION / FEES |
| 2 VARIETY OF COURSES/PROGRAMS | 10 SOCIAL ATMOSPHERE |
| 3 FACULTY TEACHING ABILITY | 11 AVAILABILITY OF STUDENT SUPPORT SERVICES |
| 4 AVAILABILITY OF CLASS OUTSIDE OF CLASS | 12 ATTRACTIVENESS OF CAMPUS FACILITIES AND GROUNDS |
| 5 REASONABLE CLASS SIZE FOR THE TYPE OF COURSE | 13 CHANGE OF RESIDENCE (MOVED TO NEW CITY OR STATE) |
| 6 FAIRNESS OF CAMPUS RULES AND REGULATIONS | 14 PERSONAL / FAMILY CONSIDERATIONS |
| 7 CAMPUS LOCATION | 15 OTHER _____ |
| 8 AVAILABILITY OF FINANCIAL AID / SCHOLARSHIPS | |

6. Which of the characteristics listed above, if viewed negatively, were most important in your decision to LEAVE (transfer out of) this college? Please return to the list for Question 5, and place an "x" in front of the three characteristics which most influenced your decision to leave.

7. Would you be able to name an individual faculty or staff member at this college who showed a personal interest in you or who helped you with a school-related problem? (Circle number)

- 1 YES
2 NO

8. Was your overall experience at this college (Circle number)

- | | |
|----------------------|----------------------|
| 1 EXTREMELY POSITIVE | 4 NEGATIVE |
| 2 POSITIVE | 5 EXTREMELY NEGATIVE |
| 3 AVERAGE | |

9. Was your decision to transfer out of this college primarily

- | |
|---|
| 1 YOUR OWN DECISION |
| 2 YOUR PARENTS' DECISION |
| 3 THE COLLEGE'S DECISION, FOR ACADEMIC OR OTHER REASONS |
| 4 OTHER: PLEASE EXPLAIN _____ |

IF YOU HAVE ATTENDED MORE THAN THREE PREVIOUS COLLEGES - Please fill out the insert which continues with College IV, located at the end of this survey.

SECTION III

In this final section of the survey you will be asked to answer a few background questions.

1. What is your marital status? (Circle number)

- | | |
|-----------|------------|
| 1 SINGLE | 3 WIDOWED |
| 2 MARRIED | 4 DIVORCED |

2. Has either of your parents attended college or received a college degree? (Circle one number in each column)

	MOTHER	FATHER
Did not attend college.....	1	4
Has some college education.....	2	5
Has a college degree.....	3	6

3. Was your individual program of study in high school

- | | |
|-----------------------------|-------------------------|
| 1 COLLEGE PREPARATORY | 3 BUSINESS / COMMERCIAL |
| 2 VOCATIONAL / OCCUPATIONAL | 4 OTHER |

4. Was your overall high school grade point average

- | | |
|------------------------|------------------------|
| 1 A- to A (3.5 - 4.00) | 5 C- to C (1.5 - 1.99) |
| 2 B to A- (3.0 - 3.49) | 6 D to C- (1.0 - 1.49) |
| 3 B- to B (2.5 - 2.99) | 7 Below D (0.0 - 0.99) |
| 4 C to B- (2.0 - 2.49) | |

5. Was your high school class rank

- | | |
|-------------------------|-------------------------|
| 1 IN THE TOP QUARTER | 3 IN THE THIRD QUARTER |
| 2 IN THE SECOND QUARTER | 4 IN THE BOTTOM QUARTER |

6. If you commute to and from campus (either from home or from work) approximately how much time (in minutes) do you spend commuting each day?

_____ minutes

7. What is your religious preference? (Circle number)

- | | |
|--------------|---------------|
| 1 CATHOLIC | 4 OTHER _____ |
| 2 JEWISH | |
| 3 PROTESTANT | 5 NONE _____ |

Appendix 7. --Continued

Please answer either Question 8 or Question 9, whichever is most appropriate to your situation.

8. If you are financially dependent upon your parent(s), please estimate the income of the parent(s) upon whom you are dependent by circling the category that comes closest to the amount.

- | | |
|-----------------------|-----------------------|
| 1 LESS THAN \$10,000 | 5 \$40,000 - \$49,999 |
| 2 \$10,000 - \$19,000 | 6 \$50,000 - \$59,999 |
| 3 \$20,000 - \$29,999 | 7 \$60,000 - \$69,999 |
| 4 \$30,000 - \$39,999 | 8 \$70,000 OR ABOVE |

9. If you are financially independent from your parents, please estimate your income for the last year, by circling the category that comes closest to the amount.

- | | |
|-----------------------|-----------------------|
| 1 LESS THAN \$10,000 | 5 \$40,000 - \$49,999 |
| 2 \$10,000 - \$19,999 | 6 \$50,000 - \$59,999 |
| 3 \$20,000 - \$29,999 | 7 \$60,000 - \$69,999 |
| 4 \$30,000 - \$39,999 | 8 \$70,000 OR ABOVE |

10. What is your employment situation? (Circle number)

- 1 EMPLOYED OFF-CAMPUS (GO TO 11)
- 2 EMPLOYED ON-CAMPUS (GO TO 11)
- 3 NOT CURRENTLY EMPLOYED (SKIP 11)

11. If you circled answer 1 or 2 for Question 10, approximately how many hours do you work per week?

_____ hours

THANK YOU VERY MUCH FOR YOUR COOPERATION!

Please add any additional comments you have concerning your experiences as a transfer student below and on the opposite page.

Appendix 8. --Transfer Paths of Students Classified as "Other"

Two or Three
Colleges
Prior to
UIC

High School	>>>	Two-Year	>>>	Two-Year	>>>	Four-Year	>>>	UIC	8
High School	>>>	Two-Year	>>>	Four-Year	>>>	Four-Year	>>>	UIC	8
High School	>>>	Two-Year	>>>	Four-Year	>>>	Two-Year	>>>	UIC	14
High School	>>>	Four-Year	>>>	Two-Year	>>>	Four-Year	>>>	UIC	18
High School	>>>	Four-Year	>>>	Four-Year	>>>	Two-Year	>>>	UIC	12
High School	>>>	Four-Year	>>>	Two-Year	>>>	Two-Year	>>>	UIC	8
High School	>>>	Two-Year	>>>	Two-Year	>>>	Upper- Division	>>>	UIC	2
High School	>>>	Four-Year	>>>	Two-Year	>>>	Upper- Division	>>>	UIC	1
High School	>>>	Upper- Division	>>>	Two-Year	>>>	UIC			1

Four Colleges
Prior to
UIC

High School	>>>	Two-Year	>>>	Four-Year	>>>	Two-Year	>>>	Two-Year	>>>	UIC	1
High School	>>>	Two-Year	>>>	Four-Year	>>>	Two-Year	>>>	Four-Year	>>>	UIC	2
High School	>>>	Two-Year	>>>	Four-Year	>>>	Four-Year	>>>	Two-Year	>>>	UIC	2
High School	>>>	Two-Year	>>>	Four-Year	>>>	Four-Year	>>>	Four-Year	>>>	UIC	1
High School	>>>	Four-Year	>>>	Two-Year	>>>	Two-Year	>>>	Four-Year	>>>	UIC	2
High School	>>>	Four-Year	>>>	Two-Year	>>>	Four-Year	>>>	Four-Year	>>>	UIC	2
High School	>>>	Four-Year	>>>	Two-Year	>>>	Two-Year	>>>	Two-Year	>>>	UIC	2
High School	>>>	Four-Year	>>>	Two-Year	>>>	Four-Year	>>>	Two-Year	>>>	UIC	3
High School	>>>	Four-Year	>>>	Four-Year	>>>	Two-Year	>>>	Two-Year	>>>	UIC	1
High School	>>>	Four-Year	>>>	Four-Year	>>>	Two-Year	>>>	Four-Year	>>>	UIC	2
High School	>>>	Four-Year	>>>	Four-Year	>>>	Four-Year	>>>	Two-Year	>>>	UIC	1

**Five or More
Colleges
Prior to
UIC**

High School	>>> Two-Year	>>> Four-Year	>>> Two-Year	>>> Four-Year	>>> Four-Year	>>> UIC	1
High School	>>> Two-Year	>>> Four-Year	>>> Two-Year	>>> Two-Year	>>> Four-Year	>>> UIC	1
High School	>>> Four-Year	>>> Four-Year	>>> Two-Year	>>> Two-Year	>>> Two-Year	>>> UIC	1
High School	>>> Four-Year	>>> Four-Year	>>> Four-Year	>>> Two-Year	>>> Two-Year	>>> Two-Year >>> UIC	1
High School	>>> Four-Year	>>> Two-Year	>>> Four-Year	>>> Two-Year	>>> Four-Year	>>> Two-Year >>> UIC	1
High School	>>> Two-Year	>>> Two-Year	>>> Four-Year	>>> Two-Year	>>> Two-Year	>>> Two-Year >>> Two-Year >>> UIC	1
High School	>>> Four-Year	>>> Two-Year	>>> Two-Year	>>> Two-Year	>>> Upper- Division	>>> Four-Year >>> Four-Year >>> UIC	1
High School	>>> Four-Year	>>> Two-Year	>>> Two-Year	>>> Two-Year	>>> Two-Year	>>> Four-Year >>> Four-Year >>> UIC	1

Appendix 9. --Institutions Attended by Multiple Transfer Students

Institution	State
Alabama State University	Alabama
Albuquerque Technical-Vocational Institute	New Mexico
American Academy of Dramatic Arts	New York
American Conservatory of Music	Illinois
American University of Paris	Foreign
Anne Arundel Community College	Maryland
Arizona State University	Arizona
Arizona Western College	Arizona
Aurora University	Illinois
Austin Community College	Texas
Austin Peay State University	Tennessee
Ball State University	Indiana
Belhaven College	Mississippi
Bellarmine College	Kentucky
Belleville Area College	Illinois
Bellevue College	Nebraska
Bethany Bible College	California
Bethel College	Indiana
Bishop College	Texas
Blackhawk College	Illinois
Boston College	Massachusetts
Bowling Green State University	Ohio
Bradley University	Illinois
Brooklyn College	New York
Bryant and Stratton Business Institute	New York
Burlington City College	New Jersey
Butler University	Indiana
California State University-Hayward	California
California State University-Long Beach	California
California State University-Los Angeles	California
Calvin College	Michigan
Cameron University	Oklahoma
Campbell College	North Carolina
Canisius College	New York
Carthage College	Wisconsin
Centenary College of Louisiana	Louisiana
Central Mississippi State University	Mississippi
Central Texas College	Texas
Chemeketa Community College	Oregon
Chicago State University	Illinois
Christopher Newport College	Virginia

Appendix 9. --Continued

Institution	State
City Colleges of Chicago:	Illinois
Chicago City Wide College	Illinois
Richard J. Daley College	Illinois
Kennedy-King College	Illinois
Malcolm X College	Illinois
Olive-Harvey College	Illinois
Harry S. Truman College	Illinois
Harold Washington College	Illinois
Wright College	Illinois
City College of Denver	Colorado
City College of the Air Force	Alabama
Clark County Community College	Nevada
Coe College	Iowa
Cogswell College	California
College of DuPage	Illinois
College of Lake County	Illinois
College of St. Francis	Illinois
Colorado State University	Colorado
Columbia College	Illinois
Concordia University	Illinois
Cornell College	Iowa
Corpus Christi State University	Texas
County College of Morris	New Jersey
Culver-Stockton College	Missouri
Curry College	Massachusetts
Dallas County Community College	Texas
Danville Area Community College	Illinois
DeAnza College	California
Defense Language Institute (Presidio)	California
Dekalb Community College	Illinois
DeLaSalle College	Illinois
Delmar College	Texas
DePaul University	Illinois
DePauw University	Indiana
DeVry Institute of Technology	Illinois
Divine Word College	Iowa
Drake University	Iowa
Earlham College	Indiana
East-West University	Illinois
Eastern Illinois University	Illinois
Elgin Community College	Illinois

Appendix 9. --Continued

Institution	State
Elmhurst College	Illinois
Fayetteville Technical Institute	North Carolina
Flathead Valley Community College	Montana
Florida State University	Florida
Florissant Valley Community College	
Fort Lewis College	Colorado
Fort Wayne Bible College	Indiana
Francis Marion College	South Carolina
Gateway Technical Institute	Wisconsin
Georgia Military College	Georgia
Glassboro State College	New Jersey
Glendale Community College	Arizona
Governors State University	Illinois
Grinnel College	Iowa
Harrington Institute	Illinois
Harvard University	Massachusetts
Hawaii Loa College	Hawaii
Hebrew Theological College	Illinois
Holmes Junior College	Mississippi
Howard University	District of Columbia
Illinois Benedictine College	Illinois
Illinois Central College	Illinois
Illinois Eastern Community College-Olney	Illinois
Illinois State University	Illinois
Illinois Wesleyan	Illinois
Illinos Institute of Technology	Illinois
Indiana University Northwest	Indiana
Indiana University of Pennsylvania	Pennsylvania
Indiana University-Purdue University at Fort Wayne	Indiana
Indiana University-Purdue University at Indianapolis	Indiana
Indiana University at South Bend	Indiana
Iowa State University of Science & Technology	Iowa
Jacksonville University	Florida
Johnson County Community College	Kansas
Joliet Junior College	Illinois
Judson College	Illinois
Kankakee Community College	Illinois
Kansas City Community College	Kansas
Kansas State University	Kansas

Appendix 9. --Continued

Institution	State
Katharine Gibbs School	Michigan
Katharine Gibbs School	Massachusetts
Kendall College	Illinois
Kendall College of Art and Design	Michigan
Kishwaukee College	Illinois
Knox College	Illinois
Lake Forest College	Illinois
Lane Community College	Oregon
Lansing Community College	Michigan
Lewis & Clark Community College	Illinois
Lewis University	Illinois
Lincoln College	Illinois
Lincoln Land Community College	Illinois
Long Beach City College	California
Loras College	Iowa
Louisiana State University Shreveport	Louisiana
Loyola University	Louisiana
Loyola University of Chicago	Illinois
MacCormac Junior College	Illinois
MacMurray College	Illinois
Macomb County Community College	Michigan
Mahattanville College	New York
Mallincrodt College	Illinois
Marion Military Institute	Alabama
Marquette University	Wisconsin
McHenry County College	Illinois
Meramec Community College	Missouri
Merritt College	California
Mesa College	
Mesa Community College	Arizona
Miami University	Ohio
Miami-Dade Community College	Florida
Michigan State University	Michigan
Michigan Technical University	Michigan
Millersville University	Pennsylvania
Millikin University	Illinois
Missouri Valley College	Missouri
Moody Bible Institute	Illinois
Moraine Valley Community College	Illinois
Morton College	Illinois
National College of Education	Illinois

Appendix 9. --Continued

Institution	State
National University	California
New England College	New Hampshire
New Mexico Military Institute	New Mexico
North Central College	Illinois
North Dakota State University-Bottineau	North Dakota
North Iowa Area Community College	Iowa
North Lake Junior College	Texas
North Park College	Illinois
Northeast Louisiana University	Louisiana
Northeastern Illinois University	Illinois
Northeastern University	Massachusetts
Northern Illinois University	Illinois
Northern Kentucky University	Kentucky
Northern Michigan University	Michigan
Northwestern University	Illinois
Oakland Community College	Michigan
Oakland University	Michigan
Oakton Community College	Illinois
Occidental College	California
Ohio State University	Ohio
Olivet Nazarine University	Illinois
Onondaga Community College	New York
Oregon State University	Oregon
Palm Beach Community College	Florida
Palomar College	California
Parkland College	Illinois
Phillipine School of Business Administration	Foreign
Phoenix College	Arizona
Pima Community College	Arizona
Portland Community College	Oregon
Portland School of Art	Maine
Powelson Business Institute	
Prarie State College	Illinois
Prarie View A & M University	Texas
Princeton University	New Jersey
Purdue University	Indiana
Purdue University Calumet	Indiana
Quincy College	Illinois
Quincy Junior College	Massachusetts
Rancho Santiago Community College	California
Regis College	Mississippi

Appendix 9. --Continued

Institution	State
Rend Lake College	Illinois
Richland Junior College	Texas
Robert Morris College	Illinois
Rock Valley College	Illinois
Rockford College	Illinois
Rockhurst College	Missouri
Rockland Community College	New York
Roosevelt University	Illinois
Rosary College	Illinois
Saint Leo College	Florida
Saint Mary's College	Nevada
Saint Olaf College	Nevada
Saint Xavier College	Illinois
Sangamon State University	Illinois
Santa Fe Community College	Florida
School of the Art Institute of Chicago	Illinois
Schoolcraft College	Michigan
Scottsdale Community College	Arizona
Shawnee Community College	Illinois
Shelton State Community College	Alabama
Sinclair Community College	Ohio
South Suburban College	Illinois
Southeast Missouri State University	Missouri
Southeastern Community College	Iowa
Southern Illinois University Carbondale	Illinois
Southern Illinois University Edwardsville	Illinois
Southern University A & M	Louisiana
St. Augustine College	North Carolina
St. Clair County Community College	Michigan
St. Louis Community College	Missouri
St. Louis University Main Campus	Missouri
St. Petersberg Junior College	Florida
Stephens College	Missouri
SUNY at Buffalo	New York
SUNY at Syracuse	New York
Suomi College	Michigan
Tacoma Community College	Washington
Texas Christian University	Texas
Thomas Nelson Community College	Virginia
Trinity Christian College	Illinois
Triton College	Illinois

Appendix 9. --Continued

Institution	State
Troy State University Dothan	Alabama
University of Arizona	Arizona
University of Arkansas Little Rock	Arkansas
University of California Berkley	California
University of California Los Angeles	California
University of California San Diego	California
University of California Santa Barbara	California
University of Chicago	Illinois
University of Cincinnati	Ohio
University of Detroit	Michigan
University of Hawaii Monoa	Hawaii
University of Hawaii-Leeward	Hawaii
University of Houston Central Campus	Texas
University of Illinois Urbana	Illinois
University of Iowa	Iowa
University of Kansas	Kansas
University of Maine-Orono	Maine
University of Maryland College Park	Maryland
University of Massachusetts Amherst	Massachusetts
University of Massachusetts Boston	Massachusetts
University of Miami	Florida
University of Michigan Ann Arbor	Michigan
University of Minnesota St. Paul	Minnesota
University of Mississippi	Mississippi
University of Missouri Columbia	Missouri
University of Missouri St. Louis	Missouri
University of Nebraska Omaha	Nebraska
University of Nevada Las Vegas	Nevada
University of Nevada Reno	Nevada
University of New Mexico	New Mexico
University of Northern Iowa	Iowa
University of Puerto Rico	Puerto Rico
University of Rhode Island	Rhode Island
University of Texas Arlington	Texas
University of Wisconsin LaCrosse	Wisconsin
University of Wisconsin Madison	Wisconsin
University of Wisconsin Milwaukee	Wisconsin
University of Wisconsin Oshkosh	Wisconsin
University of Wisconsin Parkside	Wisconsin
University of Wisconsin Stout	Wisconsin
Valencia Community College	Florida

Appendix 9. --Continued

Institution	State
Valparaiso University	Indiana
Wartburg College	Iowa
Washington University	Missouri
Waubonsee Community College	Illinois
Wayne County Community College	Michigan
Wayne State University	Michigan
Webster University	Missouri
Westchester University	Pennsylvania
Western Illinois University	Illinois
Western Kentucky University	Kentucky
Western Michigan University	Michigan
Wilberforce University	Ohio
William Rainey Harper Community College	Illinois
Winona State University	Minnesota
Wright State University	Ohio

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VITA

Gretchen Warner Kearney was born in Hammond, Indiana on December 14, 1955. She attended DePauw University in Greencastle, Indiana, graduating magna cum laude in 1978 with majors in art history and studio art and minors in applied music (piano) and psychology. While at DePauw, she was elected to Phi Beta Kappa and Alpha Lambda Delta scholastic honor societies. She received the M.A. from Indiana University - Bloomington in arts administration in 1981, and was awarded a fellowship from the National Endowment for the Arts in Washington, D.C. that same year.

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APPROVAL SHEET

The dissertation submitted by Gretchen Warner Kearney has been read and approved by the following committee:

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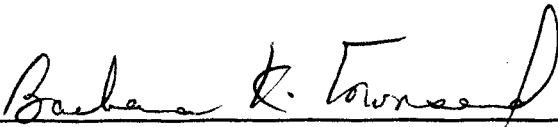
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The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is, therefore, accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

12/13/91



Date

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