1. AN UNPLANNED JOURNEY INTO HIGHER EDUCATION

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The editor, John Smart, has invited me to describe how I entered higher education as a field of study, highlighting major individuals and developments that shaped my career. In addition, he asked that I give my perspectives on how the field of higher education has evolved during my career and offer suggestions to current scholars about possible future developments. I am honored to have this opportunity and especially pleased to be the first woman to write an autobiographical essay in this series. As I collected my thoughts, I was struck first by how unplanned my career development has been; second, by how vastly different my story is from those of my esteemed male colleagues who have written articles in this series; and third, by the fact that I am the first writer in the group whose advanced degree was in higher education rather than in a traditional discipline.

BALANCING GENDER, AMBITION, AND OPPORTUNITY IN THE 1950S

I certainly never aimed to be a higher education professor or researcher. Looking back, however, I suppose there were some predictors, such as my involvement in student government at Syracuse University. In fact, the positive interactions of Syracuse administrators with student leaders in the 1950s strongly influenced me. Over the years, I have observed that many individuals study higher education because of such influences during their undergraduate years. Other than this exposure to the roles of campus administrators, my career development was for the most part accidental. In the 1950s, what a young woman should *not* aspire to was much more important than what she *should* aspire to. Reflecting on what brought me to the field of higher education has

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caused me to realize how important gender used to be and how the context for women's career development has changed over the years. My male colleagues' careers were often influenced by issues related to military service but, apparently, seldom by gender or family demands; my story is quite different from that.

My school teacher parents had high expectations and, in their view, high ambitions for me. My father encouraged me to study the sciences (definitely not the impractical arts or literature!) and believed that a teaching certificate was good insurance for a young woman. After spending three college summers as an analytical chemist at Eastman Kodak, a job with minimal human contact, I accepted more readily the idea that I should be a public school science teacher. My father was also convinced that I should begin teaching immediately after graduating from Syracuse, so that my master's degree study would be more meaningful. Thus, I was pleased when, in my senior year in 1956-57, the chemistry department at Syracuse invited me to be a teaching assistant in general chemistry, replacing a graduate student who left.

For a brief period that year, I wondered aloud why I was not applying to medical school like most of my classmates. Despite my father's scientific interests, he was quite certain that medical school would be wasted on me since, like most young women, I would surely marry and have children rather than practice. My mother thought nursing or dental hygiene much more fitting than medicine or dentistry. Of course, had I strongly desired to become a doctor, I could have prevailed. Or, had I been convinced that the life of a research chemist was desirable, I might have accepted a casual invitation to follow one of my professors to his laboratory at a new university. Instead, I obtained a fellowship for full-time master's study in science education at Teachers College, Columbia University. When my father became severely ill just after my college graduation, I abandoned that path and under the duress of financial uncertainty fell back on his original plan. I got a job teaching physics at a high school close enough to New York City to let me start my graduate work at Columbia, part time.

My mother felt that when I was married I would be "settled," i.e., out of moral danger, during times when increasing freedom involved "temptations" for young women. Protecting me from such hazards, she thought, would then be my husband's responsibility. I became "settled" when I met Bill Stark, a merchant marine captain who was studying mathematics education at Teachers College, and married him during the spring of my first year of teaching. I went on maternity leave in May of the second year and the first of our four children was born in July. It caused quite a stir that I was allowed to teach for eight months of my pregnancy, since the school district's rules in 1959 dictated that a pregnant teacher must leave before the condition was "visible." Because the school very much wanted students to pass the New York State Regents examinations and because substitute physics teachers were hard to find, I was allowed to continue

despite several parents who complained that their daughters should not view a pregnant teacher. Times certainly have changed. My three daughters have had the right to remain at their jobs until the day they gave birth, if they wanted to.

Finances were tight during our son's and first daughter's infancies. Because a kindly mother of six was willing to baby-sit, I taught as a substitute in several Long Island high schools while continuing my graduate studies. I enjoyed the academically-oriented schools, especially when students perceived I could offer them something in science and math classes. It was miserable at some other high schools, especially when I was called upon to teach physical education or even wood shop. Meanwhile, at Teacher's College, I changed my specialization from science education to educational administration and became certified as a high school principal in New York State. Somehow, I was convinced that when I finally returned to teaching full time, I could do more to improve schools as an administrator.

A turning point in my life occurred when a Columbia professor asked me to edit a paper he was preparing for a conference. His confidence and appreciation led me to write to several publishers proposing that I might do hourly freelance work on science and mathematics textbooks. I explained that I wanted to spend more time with my children but I also needed work. I was in luck. The early 1960s was a period of extensive curriculum revision in math and science and my skills fit a niche. For about nine years I worked at home on emerging programs in physics and chemistry and the "new math." As I gave birth to our third child, I progressed from editing copy and preparing indexes to writing answer books and teachers' manuals. Yes, I was a ghost writer for authors who didn't want to bother to develop materials for teachers. I learned to add and multiply in bases two, three, and four as quickly as I could in base ten!

After far too many years, I realized that I could ask to be listed as a co-author or otherwise acknowledged in some of these materials. Having publications with my name on them helped me to bridge the employment gap that so many women experienced in the 1960s and 1970s when they tried to reenter the job market after a period of child-raising.

DOCTORAL STUDY, 1967-71

The first publication with my name on it and our fourth child appeared at about the same time. Almost simultaneously, Bill's community college needed a adjunct chemistry instructor on short notice for an evening class. I was offered the position for one semester — as a special exception to the anti-nepotism laws then in effect. I ended up teaching several semesters and this opportunity, more than anything else, led directly to my ensuing career in higher education.

It was the late 1960s, and collective bargaining was just beginning in the

2. STUDENT MOTIVATION AND SELF-REGULATED LEARNING IN THE COLLEGE CLASSROOM

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College student motivation is a persistent and persuasive problem for faculty and staff at all levels of postsecondary education. Faculty at community colleges, comprehensive universities, small liberal arts colleges, and private and public research universities all bemoan the lack of student motivation. The questions that college faculty and staff raise include: why don't the students seem to care about their work, why don't they seem more interested in the disciplinary content of the courses, why do they only care about their grades but not learning, why don't they try very hard, why don't they study very much, why do they procrastinate and try to study for an exam at the last minute, or try to write a paper the day before it is due, why can't they be more organized and plan their work better, and why don't they learn or perform very well. All of these issues can be partially explained by a motivation and self-regulation perspective on student learning in the college classroom. Of course, there are other models of college student cognition and learning that are relevant, but in this chapter we will focus on motivational and self-regulatory constructs. The purpose of this chapter is to provide an overview of current research on college student motivation and self-regulated learning that should provide some insights into these general problems.

Given the scope and page limitations of this chapter, we cannot review all the different theoretical models and all the research literature on the topic. In fact, we do not think a review of all the different theories and models is that helpful at this point in the development of our understanding of college student motivation and self-regulation. Accordingly, we organize our chapter around some general constructs that cut across different theoretical models; we hope that the model will then provide a conceptual framework that is useful for higher education researchers, college faculty, and college administrators and staff. In addition, we will propose some first-order principles or generalizations

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about motivation and learning based on empirical studies from our research program at Michigan as well as other studies. These generalizations should be useful in guiding future research as well as practice. The model explicitly focuses on college student motivation and self-regulation regarding academic learning, not motivation for non-academic activities (e.g., relationships, friendships, athletics, careers). Finally, the model is best applied to the college classroom or course level, not college in general, as there are other models that attempt to explain how college attendance influences a host of student outcomes including motivation and learning (see Pascarella and Terenzini, 1991).

This focus on the college classroom level has both theoretical and practical value. First, most of the current research on student motivation and self-regulation at the college and precollegiate levels has been at the classroom level and therefore is very relevant for developing a model of academic motivation and learning. More importantly, most academic student learning is situated in a college classroom or course context that includes not just the time spent in the actual classroom itself, but also the time spent outside formal class time working on the specific course tasks and assignments. Finally, a classroom level focus is the most meaningful and pragmatic for college instructors and our own teaching. We cannot change or easily influence factors outside our classroom (such as the institutional and community norms and structures, the attitudes and beliefs of the students' friends and roommates, or the students' family background and beliefs), but we can change and control what we do in our own classrooms. Of course, we are always operating under constraints in our classrooms, such as class size, time, and curriculum demands; nevertheless, we still have more control over our own classrooms than other aspects of the college environment. Accordingly, we have focused this chapter on the college classroom context and students' motivational beliefs and self-regulation in relation to various classroom and course features.

Before we discuss our general model, a description of two students who show differing patterns of motivation and self-regulation may help to ground the model in the realities of college student learning. Both Mike and Lyndsay were good students in high school, but both are having some difficulties in college. Mike studies in the same way for all his classes, even though they differ greatly in terms of their requirements (papers, exams, lab reports) and the nature of instruction (discussion, lectures, small group work). He doesn't think much about his goals for different classes, he just wants to get good grades such as an A or a B in all his courses. He studies by reading the course material over and over and when he studies for an exam, he concentrates on memorizing important terms and ideas. He finds some of his classes interesting, but others are fairly boring to him. He spends much more time on those classes where he likes the content, and as the term progresses, he finds it harder and harder to do the

work in the boring classes. It always seems that when he sets aside time to work on those classes, his roommates ask him to go out with them; and he usually goes, instead of studying. He tends to wait until the week of an exam or the week a paper is due to start working on it and often feels rushed and realizes that he did not do his best work. In some of his classes his grades are fine, but in others he is getting C's or lower. When he thinks about why he does not do well in those classes, he thinks that he lacks the ability to do well in those classes — and they are boring anyway. He rarely asks other students or the instructors for help. He just keeps on working and studying the way he did in high school, since it worked for him then — although he does worry about his ability to succeed in college, since it is much harder than high school. Mike is not a terrible student. He does try to do his work and he does study, just as most college students do, but he is not as successful as he could be if he were more self-regulating.

Lyndsay approaches the same courses differently. She, too, wants to get good grades; but she also wants to learn and understand the material. She knows she will be able to use the course material in other classes and in her career, so she focuses not just on grades but on understanding. In addition, she thinks about how the courses are different and realizes that different tasks like exams and papers require different approaches to studying and learning. In some classes, where the exams test for recall, she does spend some time memorizing the important terms. However, in all her classes, when she reads the material, she tries to paraphrase it, write summaries, or make outlines of the text. This helps her see the connections between the lectures and the readings. Also, when she is studying, she gives herself mini-quizzes on the material and these self-tests help her to monitor her understanding. When she finds that she can't get 100% of the questions correct on her own quizzes, she goes back over the material and figures out what she did not understand. She also tries to keep a regular study schedule and plans her work by the week and month, so that she is not starting a paper the week it is due. Of course, when an exam is coming up or a paper is due, she concentrates on that course, but she usually feels prepared since she is not doing the work at the last minute. Of course, she finds some of the course material boring, but she makes sure she spends more time on those courses since she knows it is harder for her to concentrate on that material. She often studies with her friends. They work together, and then go out for a pizza after several hours of studying. She thinks of these pizza breaks as a reward for her studying. She also incorporates her friends into her study routine, which helps her regulate her studying and keep focused on her task, rather than having her friends be a distraction that takes her away from school work as in Mike's case. In the long run, Lyndsay will be much more successful than Mike. She may struggle with the transition to college, as do most college students, but she

3. College Students' Degree Aspirations: A Theoretical Model and Literature Review With a Focus on African American and Latino Students

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Quite a few comprehensive studies on undergraduate experiences and general models of degree attainment and attrition have highlighted the importance of measuring educational aspirations. Many researchers theorize that student educational aspirations have strong effects on (or strong relationships with) a variety of outcomes, particularly college choice, student retention, and graduate school enrollment (Astin, 1977; Tinto, 1993

However, educational aspirations are less often studied as *outcomes*. A few higher education researchers have studied the factors that influence educational aspirations (e.g. Astin, 1977, 1993; Hearn, 1987, 1991; Pascarella, 1984), but scholars and researchers still have cursory knowledge about why the aspirations of racial/ethnic minority students and White students differ significantly.

The purpose of this chapter is to review and synthesize the literature related to educational aspirations. This review attempts to summarize what is known about aspirations in general and the aspirations of African American and Latinos specifically. I also posit a research and conceptual model, based on empirical research and existing theory, for understanding what affects educational aspirations.

Much of the literature described in this chapter has its foundations in sociology. Students' educational goals are the function of several elements, including internal psychological processes, social interactions, and structural processes; in this chapter I will focus on the formation and change of aspirations as a result of social interactions and structural processes. The main reason for this emphasis is that the concepts presented can contribute to theoretical advances in the study of educational aspirations and have practical implications for campus programming and institutional policies.

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In a review of aspirations studies of the 1960s and 1970s, Pascarella (1984) stated that researchers tend to use methods relying on empirical examinations of aspirations as opposed to theoretical examinations of aspirations. Pascarella developed a model of affective outcomes that posits that individual characteristics and secondary school achievement will have stronger effects on later educational aspirations than institutional environment variables. Pascarella's model has proven useful in understanding the process by which students' aspirations change over time, but there is still a need for understanding the unique processes by which the aspirations of students of color change over time.

The study of aspirations in general can be characterized as lacking in clarity. One key area that researchers have noted as needing greater understanding and theoretical specificity is the formation and maintenance of educational aspirations — particularly in populations who continue to be underrepresented in higher education institutions (Kao & Tienda, 1998).

The aspirations of students of color often do not fall into easily predictable patterns. In several studies, African American students tend to have higher than expected aspirations (Astin, 1990; Hanson, 1994), which some researchers have called "unrealistic," while other researchers have found that high aspirations for African Americans are the mediating factor in whether they attend college (St. John, 1991).

As early as the 1960s, research comparing the college-going behaviors and attainments of African American and White youth discovered significant differences in the aspirations and aspirations-change process between the two racial groups. In some studies, the researchers found that African American youth had lower aspirations than White youth while in others, the aspirations of African American youth were higher than or similar to those of White youth (Portes & Wilson, 1976; St. John, 1991). Regardless of the direction (or lack) of difference in aspirations levels, it has been clear that the variables affecting aspirations can differ in magnitude and direction between the racial groups.

There has been much less research on the aspirations of Latino high school and college students. The educational attainment rates of Latinos are at crisis levels; Latinos (particularly Mexican Americans) have much lower high school completion rates and college-going rates than White students, and tend to be concentrated in two-year institutions.

Researchers have suggested that "increasing minority participation in graduate programs is an important national goal to be realized. . . . It is for the collective benefit of society that the representation of minority group persons among those earning advanced degrees be increased" (National Board on Graduate Education cited in Deskins, Jr., 1994, p. 144). Indeed, a recent study found that the racial representation of physicians affects available health care in poor and minority communities (Komaromy, Grumbach, Drake, Vranizan, Lurie,

Keane, & Bindman, 1996). Therefore, the aspirations and subsequent graduate degree attainments of minority students not only have an impact on individual factors such as income, but also can have an impact on the welfare of entire communities.

This chapter is organized in two parts: the first addresses theoretical foundations relating to the study of aspirations, and the second describes a model of educational aspirations and highlights the empirical studies that relate to aspects of the model.

THEORETICAL FOUNDATIONS FOR ASPIRATIONS STUDIES

STATUS ATTAINMENT

Status attainment literature in the field of sociology provides the main foundation for the study of the educational aspirations of high school and college students. Blau and Duncan (1967) developed the first status attainment model, which focused on the occupational attainments of males from White and African American populations. Blau and Duncan's model assumes that ascriptive characteristics (father's education and income) determine the male's occupational attainment. The model is quite parsimonious and is composed of the five following variables: father's educational attainment and father's occupational status, and the respondent's educational attainment and first-job status. The first two are predictors of the latter two, and all four variables are predictors of the respondents' eventual occupational attainment. Educational aspirations were not included in Blau and Duncan's original model, but subsequent status attainment research has developed the model to take aspirations into account.

Many researchers have noted one main weakness in Blau and Duncan's model: the relationships between the variables could not be sufficiently explained (Kerckhoff, 1984; Sewell, Haller, & Ohlendorf, 1970; Sewell, Haller, & Portes, 1969). The model has been criticized because there seems to be little theoretical support for the concept that fathers' education determines sons' occupational attainments besides a strict notion of social reproduction (that is, people's socioeconomic status is determined by the status of their parents and there is little mobility between generations). In attempting to further enhance Blau and Duncan's model by explaining the processes by which a parent's socioeconomic status can affect the status of the adult child, Sewell, et al. (1969) and others expanded the model to include social psychological variables. In developing this expanded model, called the social psychological model of status attainment, the "Wisconsin model", or a socialization model, it was the position of the