The Relationship Between Prematriculation College Knowledge and Disillusionment: Was College What Students Expected?

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Disillusioned students are at risk for dropping out. This study examined the relationship between prematriculation college understanding and freshman students' unrealized expectations. A knowledge measure was created to assess preenrolled students' understanding of the academic, social, and environmental conditions of postsecondary institutions. Though levels of college knowledge were expected to be associated with lesser college disillusionment, the data revealed a complex relationship. Community college students with high levels of knowledge about community colleges were less disillusioned than those with less understanding. Similar relationships were not found for students attending public or private 4-year universities. Implications for academic advisors are discussed.

Researchers of higher education have explored the myriad of factors associated with college attrition. For example, Robert Baker and colleagues have completed a series of studies that examined students' expectations for their college adjustment as factors related to retention and achievement (Baker, McNeil, & Siryk 1985; Baker & Schultz, 1992a; Baker & Schultz, 1992b; Baker & Siryk, 1983; Baker & Siryk, 1984a; Baker & Siryk, 1984b; Graham, Baker, & Wapner, 1984). College adjustment, according to these authors, involved students' abilities to function in the academic and social campus surroundings (e.g., surviving the workload and making friends). To evaluate students' adjustments, Baker and Siryk (1984) developed assessments that measure students' expectations for college adjustment before enrollment [Anticipated Student Adjustment to College Questionnaire (ASACQ)] and their perceptions of actual adjustment to college [Student Adjustment to College Questionnaire (SACQ)] after enrollment. Baker and Siryk (1985) used these instruments in tandem to understand the degree to which student college expectations were realized. Their data revealed that students typically had very positive expectations about college prior to enrollment. However, college students' ratings of their adjustment declined after registration. Baker, Siryk, and McNeil (1985, p. 94) labeled this phenomenon the "matriculant myth—[*referring to*] the fact that, on the average, entering [*college students*] have expectations concerning college that are more positively toned than the actual experience of being in college."

Using the ASACQ and SACQ, Baker and Schultz (1992b) identified disillusioned students whose actual adjustment ratings were substantially less than their expected college adjustment. Extreme rate declines, as measured by a 10% or more drop from the expectation score to the subsequent adjustment score, indicated disillusionment (Baker & Schultz, 1992b). Baker and Schultz (1992b) observed that such students were more likely to seek counseling, have poor academic achievement, and drop out of college than students labeled nondisillusioned (i.e., students who experienced minimal or no declines from preenrollment adjustment ratings to postenrollment adjustment ratings). This research suggests a connection between students' expectations of college and subsequent persistence. As a result, the researchers recommended that future studies attempt to discover which students are at risk for disillusionment (Baker & Schultz, 1992b; Baker, McNeil, & Siryk, 1985).

This study examined a factor that has received little attention from researchers of higher education but plays a major role in college choice and student achievement: students' knowledge about postsecondary institutions. By assessing how much students know about the academic and social characteristics of different colleges and universities and determining how this knowledge relates to students' subsequent college adjustments, academic advisors can better understand how postsecondary knowledge is associated with college disillusionment and can assist students at risk for dropping out.

College Knowledge

Research on higher education and college choice, as well as studies in cognitive psychology and information processing, support the contention that knowledge of postsecondary educa-

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tion is a possible determinant of college disillusionment. Studies focusing on college choice (Dixon & Martin, 1991; Hossler, Braxton, & Coopersmith, 1989; Lappin, 1981; Sanders, 1990; Smith, 1990) and institution-student fit (Eccles & Midley, 1989; Williams, 1986) asserted the importance of students' knowledge of postsecondary education. Hossler, et al. (1989) suggested that students typically consider and choose a college that is familiar to them. Williams (1986) proposed that the best institution-student fit occurs when students are most familiar with a specific college that espouses goals and values consistent with their own.

By acquiring specific information about various postsecondary institutions, students may comprehensively consider relevant issues such as academic standards, social climate, and faculty demeanor to find the best institution for them (Astin, 1991, 1996; Chadwick & Ward, 1987; Kellaris & Kellaris, 1988). Furthermore, accurate knowledge of a postsecondary institution may also allow for speedy adjustment to higher education, thereby minimizing college disillusionment.

Research in cognitive psychology lends credibility to the idea that students' knowledge of postsecondary education is related to their college disillusionment. Cognitive research has emphasized the significant role that prior knowledge plays in learning, understanding, remembering, and making predictions (Augoustinos & Innes, 1980; Bransford, 1979; Hewstone, 1989; Johnson & Sherman, 1990). In particular, research supports the notion that prior knowledge in one area or related domain facilitates the processing of new information in another domain (Chi, Glaser, & Farr, 1988).

The role that prior knowledge plays in students' predictions of their college adjustment is pertinent. Johnson and Sherman (1990, p. 498) state that beliefs about future events are primarily based on facts and impressions that are "most accessible in memory." In other words, past experiences and knowledge make up the foundation on which people develop expectations. Applying this process to college adjustment, one could argue that high school students may make predictions about their college experiences based on what they already know of postsecondary education. Comparative studies on first- and second-generation college students substantiate this hypothesis (Pratt & Skaggs, 1989; York-Anderson & Bowman, 1991). In these studies, second-generation college students reported having greater familiarity with postsecondary education, more familial support from college-educated parents or siblings, and consequently adjusted to college better than did first-generation students. The cognitive psychology literature suggests that students with greater college knowledge, such as second-generation college students, may use their understanding to adjust to college and experience minimal disillusionment.

To examine the relationship between preenrolled students' understanding of college and subsequent disillusionment, this study assessed students' knowledge level of a variety of postsecondary institutions, focusing primarily on the institutions' academic and social characteristics. The College Knowledge Measure (Williams, 1996) was designed, drawing upon the expert/novice literature in cognitive psychology, which explores how knowledge is structured (Chi, Glaser, & Farr, 1988; Fiske, Kinder, & Larter, 1983; Lurigio & Carroll, 1985). In particular, cognitive psychologists explore how experts and novices differ with regard to understanding the process of learning, decision making, and predictions in a particular field (Chi & Van Lehn, 1991; Groen & Patel, 1988). Chi, et al. (1988), for example, found that experts out-perform novices in their domain; understand the field at a deeper, more principled level than newcomers; and thoughtfully engage in problem solving more than beginners, who typically plunge immediately into the problem. This literature provides a framework to understand how students with more college knowledge may perform academically and socially different from students with less understanding.

Does prematriculation knowledge have an important relationship to Baker's notion of college disillusionment? That is, would knowledge of postsecondary institutions have an inverse relationship with disillusionment? As college knowledge increased, would students' disillusionment with college decrease?

Methodology

Participants

Six-hundred-forty-one high school students completed the Student Demographic Survey, the College Knowledge Measure, and the ASACQ in the spring preceding their first year of college. These students were randomly selected from college preparatory and advanced placement classes in 10 southern California high schools. All students indicated that they were college bound, had completed the application process, and were awaiting (in some cases had received) acceptance

letters from colleges or universities. All students reported that they would be attending a postsecondary institution the following semester.

Two follow-up surveys, the SACQ and a College Demographic Survey were mailed to these students midway through their first semester/quarter of college. The surveys and two reminder letters were mailed to the participants' parents in the hope that the letter would be forwarded to students. Two hundred one students responded, 87 males and 114 females, and comprised the sample for this study. The racially diverse respondents had enrolled in a variety of different postsecondary institutions (e.g., West Point, UCLA, Santa Monica Community College, and others). One hundred seventeen students enrolled in public 4-year universities, 20 attended private universities, 50 went to community colleges, and 14 enrolled in other institutions (e.g., trade technical schools, small liberal arts colleges). It is unclear what percentage of the nonrespondents had chosen not to attend college.

Instruments

Student Demographic Survey. The survey focused on a student's college-choice process, the student's high school achievement and involvement (e.g., grade-point average and extracurricular activities), and the type of college the student planned to attend. Data on these and other variables, such as gender, SAT/ACT scores, parents' level of education, and siblings who had attended or were currently enrolled in college were also collected from the Student Demographic Survey. All the survey items have demonstrated some positive relationship to student academic achievement (Astin, 1991; Edwards & Waters, 1982; Spady, 1970; Terenzini, Pascarella, & Lorang, 1982), social adjustment (Baker, et al., 1985; Baker & Schultz, 1992b), or persistence (Pratt & Skaggs, 1989).

ASACQ and SACQ. Baker and Siryk (1984b), Baker, et al. (1985), and Baker and Schultz (1992b) developed the ASACQ and the SACQ to measure students' self-reported adjustment to postsecondary education. The scales are essentially identical in format and objective. However, the ASACQ is a preenrollment questionnaire that asks students to anticipate what their adjustment will be like 5 weeks into the freshman year. All statements are posed in the future tense and are preceded with "I expect." Students rate how closely each statement applies to them on a Likert scale (1 = "will apply closely to me" and 9 = "won't apply closely to me").

The SACQ is administered any time after initial enrollment (Baker, et al., 1985) and measures students' actual adjustment to college. All statements are phrased in the present tense. Using the same Likert scale as the ASACQ, students rated how closely each statement applies to them. The ASACQ has been used primarily in conjunction with the SACQ in studies showing the relationship between prematriculation expectations regarding adjustment to college and subsequent postmatriculation reality (Baker & Schultz, 1992a).

The ASACQ and the SACQ both have items comprising four subscales that relate to important issues of adjustment: a) academic, b) social, c) personal/emotional, and d) institutional. The academic adjustment subscale contains 24 statements that refer to educational demands; for example, "I expect to enjoy writing papers for courses" and "I expect my academic goals and purposes to be well defined." The social adjustment subscale has 20 components relevant to interpersonal-societal demands; for example, "I expect to get along very well with my roommate(s)" and "I expect to meet as many people, and make as many friends, as I would like at college." Fifteen items address physical and psychological states and constitute the personal/emotional adjustment subscale. Samples from this subscale include, "I expect my appetite to be good" and "I expect to be feeling in good health." An institutional attachment subscale consists of 15 items referring to feelings about being in college, in general, and being at the college of attendance, in particular. For example, students assess the following statements: "I expect to feel that getting a college degree is very important to me" and "I expect to be pleased about my decision to go to college." High ratings of each corresponding SACQ statement indicate better adjustment. These questionnaires yield four subscale scores and an overall adjustment score. Both scales have been demonstrated to be reliable and valid for assessment of college adjustment in previous studies (Baker, et al., 1985; Baker & Schultz, 1992b).

In this study, overall scores on the two measures were utilized to construct a measure of student disillusionment. Recall that disillusionment, according to Baker and Schultz (1992a), was defined as a 10% or more drop in ratings on the preenrollment ASACQ measure in comparison to the postenrollment SACQ measure. Disillusionment scores were calculated by subtracting the total SACQ score from the ASACQ score. The

magnitude of the positive score represents the degree of disillusionment.

College Knowledge Assessment. The development of this evaluation (Williams, 1996) was modeled after a Lurigio and Carroll (1985) study on the knowledge of probation officers. Based on expert/novice literature, researchers used a card-sorting procedure to measure the knowledge probation officers held about the types of criminal offenders.

To determine the amount of knowledge students had about postsecondary institutions, a sorting task was also used. Each student was given a printed table in which the left-hand column had a list of postsecondary institutional characteristics, and across the top, five types of postsecondary institutions were listed. The postsecondary characteristics pertain to important information about different types of colleges (Astin, 1991) and were divided into five categories: a) campus activities, b) student characteristics, c) typical years to graduate, d) institutional characteristics, and e) environment. Across the top of the page were five postsecondary institutions based on the institutional classification schemes developed by Astin (1991) and the Carnegie classification (1994): 4-year Public University, 4-year Private University, Community College, Liberal Arts College and Trade/Technical School. Students placed an "X" in the college/university type column for each characteristic they believed described the corresponding type of postsecondary institution. More than one institution could be marked, but each characteristic applied to at least one university/college type. For example, the characteristic "extensive dorm life" may have an "X" placed below 4-year Public Universities, 4-year Private Universities, and Liberal Arts Colleges. The final product is a grid in which each of the characteristics is matched to one or more postsecondary institutions.

Participants were scored by matching their responses on this item-matching task to the responses of an expert population. The expert population was a group of 16 doctoral graduate students in education who had experiential understanding of postsecondary institutions as well as knowledge obtained through academic study. For each postsecondary institution, several college/university characteristics were selected by more than 85% of the expert sample. See Table 1. For example, of the 32 characteristics, 10 were associated with 4-year public universities, 9 were associated with 4-year private universities, 6 were associated with community colleges, 2 were associated with liberal arts colleges, and 6 were associated with trade/technical schools.

Prospective college students were given a point for every marked item that was similarly identified by 85% or more of the experts. In addition, participants were given a point for every item that was also left blank by at least 85% of experts. A student who left the entire assessment blank could score higher than someone who marked items incorrectly. Therefore, an alternative scoring procedure was devised to account for random responses (Albanese & Sabers, 1988). Because the unmarked cells outnumbered the marked cells, I weighted the marked responses by multiplying the total number of marked cells (T) for each institution by two. This number was then added to the total number of correctly unmarked cells (F). Thus, the total possible score was 141. Students who responded like experts on the item-matching task were believed to have more knowledge about college. Students who matched items least like experts were believed to have less knowledge about college.

College Demographic Survey. This survey gathered information on the students' experiences in college. Questions focused on whether students were enrolled in college and if not, why not. Students were asked to report their college academic achievement thus far (which, for most of the participants, meant their college midterm grades). In addition, students were asked to report on other factors not examined in this study, including their attributions for success and failure in school, their satisfaction with school, their perceptions of college difficulty, and their adjustment relative to others.

Procedures

During the spring semester, high school seniors were informed that their participation in a long-term study would be needed to gather information about what students know about college. The study required that they participate in two sessions at the high school and return a mailed survey during their first quarter or semester of college. Parental consent forms, requesting the long-term participation of their child in the study, were sent home with all students.

First, the ASACQ and the Student Demographic Survey were administered to participating seniors at the high school. Students needed an average of 30 minutes to complete the survey. The College Knowledge Measure was administered at the high school on the following day. Students used approximately 15 minutes to answer the

Table 1 College Item-Matching Task

College Item-Matching Task (CIMT)	Public 4-year University	Community College	Private 4-year University	Liberal Arts College	Trade School
Campus Activities					
Extensive dorm life is present	(T)	(F)	(T)	( )	(F)
Major involvement with fraternities and sororities	(T)	(F)	(T)	( )	(F)
Major sport scholarship programs are available	(T)	(F)	( )	(F)	(F)
Internships are highly recommended	( )	(F)	( )	( )	( )
Limited extracurricular activities	(F)	( )	(F)	(F)	(T)
Student government plays a large role in campus life	( )	(F)	( )	( )	(F)
Extensive performing arts program is available	(T)	(F)	( )	( )	(F)
Student Characteristics					
Mostly middle to upper income class students attend	( )	(F)	(T)	( )	(F)
Mostly ethnic populations attend	(F)	(T)	(F)	(F)	( )
Mostly less academically inclined students attend	(F)	(T)	(F)	(F)	( )
Students are likely to transfer to another school	(F)	( )	(F)	(F)	(F)
Mostly commuter students attend this school	( )	( )	(F)	(F)	( )
Likely to come from out of state	( )	(F)	(T)	( )	(F)
Mostly students with very high academic achievement attend	( )	(F)	(T)	( )	(F)
Mostly male students attend	( )	( )	( )	( )	( )
Typical Years needed to Graduate					
4 or more years to graduate	(T)	(F)	(T)	( )	(F)
3 years or less to graduate	(F)	(T)	(F)	(F)	(T)
Institutional Characteristics					
Many opportunities to meet with faculty	(F)	( )	( )	(T)	( )
Professors focus more on their research than on teaching	(T)	(F)	(T)	( )	(F)
Professional training is widely available (e.g., Doctors, Lawyers, Professors, Teachers)	(T)	(F)	( )	( )	( )
Specialized vocational training is only available (e.g., Cosmetology)	(F)	( )	(F)	(F)	(T)
Professors focus on their teaching only	(F)	( )	( )	( )	( )
Graduate programs are available in many fields	(T)	(F)	(T)	( )	(F)
Widely perceived as prestigious	( )	(F)	(T)	( )	(F)
Limited library resources	(F)	(T)	(F)	(F)	(T)
Night classes are mostly common	(F)	(T)	(F)	(F)	(T)
Only Bachelor degrees are available	(F)	(F)	(F)	( )	(F)
GED/ CHSPE (High School Proficiency) education available	(F)	(T)	(F)	(F)	(F)
Campus Environment					
Large lecture halls are common	(T)	(F)	( )	(F)	(F)
Small group discussions are common	(F)	(F)	( )	(T)	(F)
Typically has a large campus	(T)	(F)	( )	(F)	(F)
Occupies only a few buildings	(F)	(F)	( )	( )	(T)

Note. T = True Agreement and F= False Agreement where 85% of experts agree.

questions. Students were encouraged to participate in the follow-up portion of the study that took place after enrollment into college.

The SACQ and the College Demographic Survey were mailed to participating students in the fall of their first quarter or semester of postsecondary education. Students were encouraged to promptly return the completed survey in an enclosed business-reply envelope. The first mailing was sent 5 weeks into the first semester—approximately the first week of November. Reminder cards were sent to students within the following 2 weeks and again during the first week of December. By February, 31% of the sample responded to the follow-up surveys and questionnaires.

Results

Separate block-wise, linear, hierarchical regression analyses were used to determine whether college knowledge was related to disillusionment and could subsequently be used in addition to established predictors (i.e., academic achievement and parents' level of education) to anticipate student disappointment. Students' knowledge about college was expected to have a negative relationship on disillusionment; that is, students with more college knowledge were expected to experience less disillusionment.

College disillusionment was calculated by subtracting students' SACQ from their ASACQ scores. Regression analysis considers the proportion of variance accounted for by sets of predictor variables partitioned incrementally and entered into the regression model (Pedhazur, 1973). With students' actual college disillusionment scores (DCQ) as the criterion variable, traditional disillusionment predictors, parents' level of education, and academic college achievement were included in the regression model. ASACQ scores were expected to account for a large portion of the variance and were entered into the equation first. By subsequently adding the other variables, the predictive strength of each could be demonstrated. Parents' level of education was entered into the equation in the second step followed by high school grade-point average and college midterm grades as a set called "academic achievement." College knowledge was entered into the equation last.

Table 2 reveals that with disillusionment as the criterion variable, the combined effects of ASACQ scores, parents' level of education, academic achievement, and college knowledge accounted for 28% of the variance ($F = 10.17$; $p < 0.001$), but all predictors accounted for a significant portion of college disillusionment's variance. For academic achievement, college midterm grades had an inverse relationship with disillusionment ($\beta = -0.19$; $t = -2.48$; $p = 0.01$). That is, higher college grades were associated with less disillusionment. College knowledge showed a positive relationship to disillusionment ($\beta = 0.21$; $t = 2.54$; $p < 0.01$): Students with higher college knowledge were more likely to be disillusioned with college.

Additional Analyses

The hypothesis, that students with more college knowledge would report less disillusionment with their college experience, was rejected. The unexpected findings prompted further questions. Specifically, was knowledge of specific types of postsecondary institutions related to disillusion-

Table 2 β coefficients and R^2 values of hierarchical regression analysis for values of college knowledge and other predictors of students' college disillusionment

	Disillusionment (DCQ)†	
Standard Predictors	**β**	**ΔR^2**
1. ASACQ	0.38**	0.19***
2. Parents' Education	–0.15*	0.02**
3. Academic Achievement		0.04
High School GPA	0.05	
College Midterm Grades	–0.19**	
4. College Knowledge	0.21**	0.04**
R^2		0.30**
Adjusted R^2		0.28*

Notes. *$p < 0.05$
**$p < 0.01$
***$p < 0.001$
† Disillusion scores (DCQ) = ASACQ score–SACQ score

ment differently? For example, knowledge of public 4-year universities may be more or less related to disillusionment for those who attended such schools than for students attending other types of institutions.

Further analyses disaggregated the sample by the type of institution where the students enrolled and examined the relationship between student postsecondary-institution knowledge and disillusionment within that setting. See Figure 1. Because only 16 participants had enrolled in trade schools or liberal arts colleges, only DCQ scores of students from public universities, private universities, and community colleges were used in the follow-up research. The regression analyses included DCQ as the criterion variable and the predictor variables were ASACQ scores; parents' level of education; student achievement; and under the category of "College Knowledge," public universities, community colleges, private universities, liberal arts college, and trade/technical schools were assessed by DCQ scores.

Figure 1 Students' ASACQ and SACQ ratings by institutional type

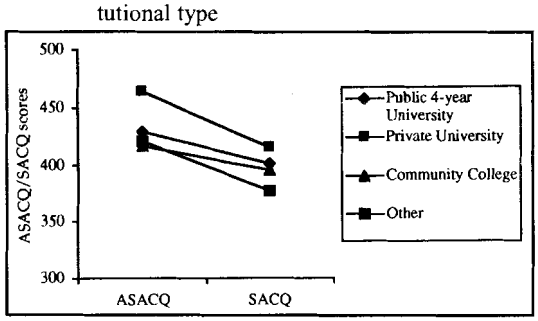

Table 3 reports the results of the regression models for the three types of postsecondary institutions. In most cases, these analyses showed similar relationships among ASACQ scores, parents' level of education, college achievement, and disillusionment. However, the analysis between level of disillusionment and institutional knowledge among community college students revealed an inverse relationship that supported the original hypothesis: greater knowledge is predictive of lesser disillusionment ($\beta = -0.84$; $t = -2.11$; $p < 0.05$).

The other models point to more complex relationships. For students enrolled in public universities, more knowledge about community colleges was related to greater college disillusionment ($\beta = 0.41$; $t = 3.33$; $p < 0.001$), but no significant relationship was indicated between knowledge about public universities and disillusionment. Although not statistically significant, the data indicate that more knowledge of private universi-

Table 3 β coefficients and R^2 values for a hierarchical regression analysis of college knowledge and other predictors of college disillusionment by postsecondary institution enrollment

	Public 4-year Universities		Private 4-year Universities		Community Colleges	
	β	ΔR^2	β	ΔR^2	β	ΔR^2
ASACQ	.40***	.21***	–.11	.007	.55**	.31**
Parents' Education	–.29**	.05***	–.76	.033	–.56*	.02**
Academic Achievement		.03***		.07		.01*
High School GPA	.07		.05		–.01	
College Midterm Grades	–.11		–.62		–.08	
College Knowledge		.13***		.56		.18
Public 4-year University	–.04		.85		.18	
Community College	.41**		–.29		–.84*	
Private University	–.16		.74		.61	
Liberal Arts College	–.05		–.57		.21	
Trade School	.13		.40		.04	
R^2		.42***		.67		.52
Adjusted R^2		.35***		.17		.26
Sample size (n)	117		20		50	

Notes. *$p < 0.05$
**$p < 0.01$
***$p < 0.001$

ties was related to greater college disillusionment for students enrolled in private universities.

Discussion

The literature in higher education (Hossler, et al., 1989; Hossler, Bouse, Schmit, & Vesper, 1991; York-Anderson & Bowman, 1991) as well as in cognitive psychology (Augoustinos & Innes, 1990; Bransford, 1979; Hewstone, 1989; Johnson & Sherman, 1990) led to the hypothesis that students' lack of prior knowledge of postsecondary education might be an important cause of student disillusionment. However, except for students enrolling in community colleges, the relationship was direct and unexpected: more prematriculation knowledge increased disillusionment. This finding is meaningful because colleges and universities place great importance on providing information to prospective students.

The results have implications for academic advisors and the advising process in general. This study suggests that providing the prospective student with prematriculation information in an attempt to insure a good student-institution fit does not prevent student disillusionment. Instead, disillusionment appears to be a common first-year experience. To counter the negative effects of student disappointment, the academic advisor should assume that most students will feel some degree of disillusionment, and advisors should be intrusive in their efforts to contact new advisees. Advisors should explore advisee understanding about the institution and the college experience, and advising programs and services should be provided to bring the advisee's knowledge and expectations into closer congruence. Freshman seminars and orientation courses are possible avenues to reach new students and help them adjust to their new lives in college.

These findings also support the programs at many postsecondary institutions that provide students with structured and scheduled opportunities to shadow upper-class students, talk with professors, and explore campus resources. Such experiences assist students in developing more realistic expectations of the institution. Providing information about the nature of college life and how to be successful in academics should help diminish college disillusionment, especially in those students attending private institutions. Results from this study suggest that students attending private schools held the highest expectations for their universities and were ultimately the most disappointed. Academic advisors at private institutions should help create a realistic university picture that enables students to feel efficacious about their successes.

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Author's Notes

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