Review Essay

What Matters in College? Four Critical Years Revisited, by Alexander W. Astin. San Francisco: Jossey-Bass, 1993. xx + 482 pp. $30.95

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The early years of the 1990s have been good ones for the study of the impacts of colleges on students. In 1991 Pascarella and Terenzini [14] published their monumental review and synthesis of the research on college effects that had accumulated from 1967 through the 1970s and 1980s. And now, two years later (as of this writing), comes Alexander Astin's report on his revisit to the "four critical years" of college. His initial visit [1] was widely hailed by researchers, educators, policy makers, and others for its contribution to their understanding of how undergraduates are affected by the kinds of colleges they attend and the kinds of experiences they have there. This new visit, if anything, is even more productive than the first one. Not only was Astin able to confirm, reject, modify, and otherwise update his earlier

For the college population under study, Astin's primary interest was in explaining college effects (controlled for the characteristics of entering students) on some eighty-two student outcomes, which required that he work with a core of eighty-two regression analyses. Because of the large number of variables considered, the study ran "the risk of subjecting the reader to information overload" (p. xiv). Astin, therefore, decided on certain simplifying procedures in an attempt to make the reader's task more manageable. One of these was the decision to leave out a great deal of technical detail not crucial for the understanding of the basic findings. Thus, full regression tables have not been given, and selected beta and correlation coefficients are provided only when the actual magnitude of an effect seemed to be of central interest. Although it would be useful to know R^2 for each of the regression analyses, this strategy of selective presentation of technical data does work out fairly well in practice.

A more problematic decision, perhaps, was to focus almost exclusively on the undergraduate of traditional age who enters college soon after completing high school and to limit the study to students who begin their college studies full-time (although they may become part-time students at some later point). Astin vigorously defends this decision to ignore the large number of college students who are adults or part-time students, stating,

> I believe that it would be a serious mistake to lump these "nontraditional" students together with traditional-age full-time students in a single study. Anyone who has worked with adults and part-timers (as I have and as I assume many readers have) knows full well that the issues and problems confronting the adults and the part-time students are quite different from those confronting the traditional-age full-time student. It is also reasonable to assume that the environmental variables that affect one group may be quite different from those that are important to the other. By combining the two groups, we run a serious risk of confounding these different effects on student development. In other words, it is far better to obtain clear-cut findings on an important and well-defined population (the full-time undergraduate of traditional college age) than a watered-down set of conclusions based on a much more heterogeneous sample (pp. xviii).

The student outcomes in *What Matters in College?* are grouped into the following seven categories (with the discussion of the findings for each category forming a separate chapter): political identification of the

scores — to predict these outcomes. These input and environmental variables are introduced into the regression analysis in four "blocks" of

nicely with existing theory in the following areas: membership groups; reference groups; socialization; interpersonal influence, attraction, and affiliation; interpersonal environments and peer cultures; and subcultures in general [see, for example, 5, 6, 10, 11, 12, 13, 15, 17, 18].

The characteristics and behaviors of faculty also have important implications for student development. For instance, attending a college whose faculty is heavily research oriented increases student dissatisfaction with various aspects of college and has negative impacts on most measures of cognitive and affective development (although certain standardized tests — GREs, LSATs — are positively affected). Attending a college that is strongly oriented toward students and their development shows the opposite pattern of effects.

Another important general finding is that, although institutional type and control are associated with a number of student outcomes, such institutional characteristics have little *direct* effect on these outcomes once peer group and faculty characteristics are taken into account. That is, most effects of institutional type are indirect; they are mediated by faculty, peer group, and student involvement variables. Moreover, and somewhat surprisingly, the form of the institution's general education curriculum has a little direct impact on student development. Only a "true-core curriculum" that requires all students to take exactly the same course appears to have distinctive effects on student outcomes (in particular, high satisfaction with various aspects of college and positive effects on leadership).

What students are like when they enter college is hardly unimportant, of course. Astin reports particularly interesting differential college effects on students according to their gender, race, and socioeconomic status. He finds, for example, that colleges in the years of his study did *not* serve to eliminate or even reduce many of the stereotypic differences between male and female students. Women entered college already differing considerably from men on self-rated emotional and psychological health, standardized test scores (such as GREs), grade-point averages, political attitudes, personality characteristics, and career plans; and most of these differences *widened* during the undergraduate years. Likewise, white and African-American students showed contrasting patterns of change on a number of affective variables. They grew apart in their political attitudes, in their agreement with the proposition that racial discrimination is no longer a problem, in their commitment to the goal of promoting racial understanding, and in their likelihood to engage in campus protests. Finally, students from families of higher socioeconomic background, compared to other students, enjoyed a variety of more positive outcomes in college, regardless of their abilities, academic prepara-

tion, or other characteristics. Astin argues that these differential effects for students of different gender, race, and socioeconomic status may have been attributable to peer group effects — due in essence to the "differential association" (my use of this phrase, not his) of these different groups of students.

As for student involvement in college, Astin's research once again points to its unusually strong potential for enhancing most aspects of the undergraduate student's cognitive and affective development. Thus, learning, academic performance, and retention are positively associated with academic involvement, involvement with faculty, and involvement with student peer groups. Moreover, a wide spectrum of cognitive and affective outcomes is negatively affected by forms of involvement that either isolate the student from peers or remove the student physically from the campus (living at home, commuting, being employed off campus, being employed full-time, watching a lot of television, and the like).

I should point out — as does Astin himself — that the findings for student involvement are not without interpretive uncertainties and ambiguities. This is so because variables in this research were measured at only two points in time — at college entrance and at the end of four years of college. Thus, one set of involvement variables — the aforementioned "bridge" variables — has to do with forms of involvement that were ascertained at the point when the student initially entered college: freshman place of residence, financial aid package, initial choice of a major field of study (upon college entrance). The student, of course, may have changed his or her place of residence after (or even during) the freshman year or may not have majored in his or her initial choice of major fields, but this study was not able to take these changes into account in a clear-cut way. The second set of involvement measures came from the follow-up questionnaires given to students after four years of college. The difficulty here is that one cannot be sure exactly when the student experienced a particular form of involvement as recorded in the follow-up questionnaire. Thus, even assuming that students' retrospections about the nature and frequency of their involvement in college were accurate, it may still be that some change during college in the stu-

and individuals' interpretations of this process [see, for example, 3, 4, 16].

In the last chapter, entitled "Implications for Educational Theory and Practice," Astin suggests several possible approaches to ameliorating some of the problems confronting undergraduate education in the research university and in other kind of institutions that overemphasize research or have weak peer group structure. He also suggests how pedagogical practices and general education programs could be strengthened

somewhat better versed in the ways of social science (and quantitative methodology) than he hoped.

Those of us working in the field of higher education have long been indebted to the efforts of Alexander Astin. Starting in the early 1960s, he was a major pioneer in the modern study of college impacts, with its use of techniques of multivariate analysis and multiple regression procedures to control for student "input" in determining the effects of college environments on student "output." Throughout the past thirty years, both by example and exhortation he has asked us to do more than theorize, philosophize, polemicize, and fantasize about higher education and its effects. Rather, he has been indefatigable in insisting that the best possible empirical evidence be brought to bear on finding out how colleges and universities affect their students and on suggesting how these institutions of higher learning might improve their own effectiveness. With the publication of *What Matters in College?*, our debt to him has increased yet again.

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