

governed by strict conventions. Male-initiated dating had not yet taken hold, and among the middle class relationships still developed under the watchful eyes of relatives in parlor settings. Then at college the informal and regular contact of men and women in classes and campus activities called forth new codes of behavior and visions of the opposite sex. Chicago women warned one another that college relationships were evanescent, ending with the term, and California men welcomed more casual and permissive styles of dating when a kiss on the lips would not signal engagement to be married.

Previous historians have viewed Progressive-Era women students' relationships with men in and after college as signs of declension from the pinnacle of seriousness scaled by the first generation of women students. Gordon exonerates college women of the years 1890 to 1920 from these charges of frivolity by showing how they moved from a strategy of separatism to a campaign for full and equal inclusion in campus life. And after college Progressive-Era college women pursued a similar strategy by combining marriage and employment. Though most graduates found their employment in teaching, some entered new fields, especially domestic economy and sanitary science, in which colleges and universities had recently begun to offer courses. And higher education could suggest even more daring alternatives. At Vassar, a student writing in the 1917 yearbook envisioned her classmates becoming model mothers or working for the suffrage cause, agitating for labor, or going to Europe for war work.

Gender and Higher Education should also encourage historians of higher education to abandon their understanding of the academic past as man-made. As Mary O. Furner has previously argued in *Advocacy and Objectivity: A Crisis in the Professionalization of Social Science*, some late-19th-century male academics wanted the social sciences to have direct impact on American social and political life, whereas others denigrated reform efforts and argued that academics owed their allegiance to a purer vision of scholarship. Gordon's account of women students in the Progressive Era fills in this story. The gendered dichotomy between reform and scholarship had its grass roots in the reality of women students' academic and career interests. It was not scholars exclusively whose value system deemed women's concerns second-rate; also men students and administrators who devalued women's campus life.

Finally, Gordon's view of campus life offers an alternative to that popularized by Helen Horowitz, whose book *Campus Life* pictured college life as warfare—students

versus faculty and administrators. Colleges were and are complex social organizations; their various constituencies often had and have overlapping interests. So women students of the Progressive Era often found allies and supporters among women faculty, administrators, donors, members of the enervating community, and alumnae. At Chicago, where the purpose of administrators coincided with that of women students in inhibiting the growth of a campus life dominated by sports and rituals such as fraternity rushes and hazing, the men's student newspaper suggested that the word "coed" was "discourteous and vulgar." At Vassar, faculty members formed friendships with students, encouraged their interest in social issues, and promoted their desire to pursue careers and socially responsible volunteer work. And at the southern colleges, alumnae took as their responsibility providing students with role models and mentors.

One cannot have everything in a book. I would like to know more about the students. In what particular part of the middle class did they have their origins? Were some of them second-generation college women, and were they building upon the experiences of their mothers? Also, there is more to know about the curriculum. Gordon's definition of campus life excludes consideration of students' course choices, and this omission seems less than wise if she wants full proof for her contention that faculty lessons inspired student interests and career plans. Finally, Gordon may underestimate the case for college as a transforming experience. She is disappointed to find so few suffrage organizations on campus. But my own survey of women achievers in Massachusetts shows that pro-suffrage women were far more likely to have gone to college (61%) than were women achievers who supported the antisuffrage cause (37%). Suffrage organizations may have been rare on campus, but college graduates usually supported the suffrage cause.

It is my hope that *Gender and Higher Education in the Progressive Era* will win a readership among those interested in women's education and higher education in general. If faculty members, academic administrators, and concerned citizens wish to change campus life, the past as described in this book contains useful models for our future. Thanks to Gordon's research, historians now face the task of reconceptualizing the history of education so that descriptive models encompass the experiences of both men and women.

LOUISE STEVENSON
Department of History,
Franklin and Marshall College,
Lancaster, PA 17604

Current Patterns

Educated in Romance. Women, Achievement, and College Culture. DOROTHY C. HOLLAND and MARGARET A. EISENHART. University of Chicago Press, Chicago, IL, 1990. xiv, 273 pp. \$19.95.

What deters women from careers in science? Holland and Eisenhart set out to answer that question with a grant from the National Institute of Education in 1979 that supported a largely quantitative study of women college students in two institutions in the South, one a historically black college and one a predominantly white university. Although this provided the authors with baseline data, they found themselves increasingly drawn to the students' self-revelations in the qualitative interviews they were also conducting. This book is the outcome of those 23 in-depth interviews as well as long-term follow-up (to 1987) of the interviewed students to see "how their plans came out."

The entry into science as such is no longer the central focus of the study. For the students, the distinction between scientific and other career options was simply not the most salient dimension of difference. Although these women students, both black and white, talked about the importance of a career to them, they also gradually redefined what a career was. For most of them, it became a secondary pursuit, a way of supporting oneself that would not interfere with the more significant pursuit of a suitable marriage partner. As the authors followed the twists and turns of the students' thinking, they became intrigued with the myriad ways by which women students both absorb and resist the messages that college education provides.

One of the most discouraging discoveries of the study was how small a role the classroom and instructional program played in the experience of higher education. Peer culture, at least in these southern institutions, strongly supports the importance of romance as what gives meaning and purpose in life. Young women learned from their peers that their attractiveness was their chief asset and that attractiveness could only be demonstrated—to oneself as well as others—by attracting a man. Courses, grades, and interactions with faculty exist in a shadowy realm outside the concerns of peer culture, defined as private matters but also as interpersonally insignificant. Rather than finding peers reacting positively or negatively to sex-atypical choices of majors, as has often been supposed, Holland and Eisenhart depict them as frequently ignorant of what major or grades even their close friends have, but deeply concerned about who their boyfriends are and how they treat them.

The follow-up interviews suggested that only the minority of students who approached school with the genuine orientation to "learn from experts" and to master a body of knowledge that they saw as useful were able to translate career interests into actual careers. For most of the students, getting good grades or simply getting a degree and getting out defined their orientation to their academic work. Their classwork was unrewarding, their grades disappointing to them. Over time, they shifted to less demanding fields of study and put less of their time or energy into career preparation relative to the pursuit of romance. And years later most were in marginal jobs, replicating the gender division of labor in their career "choices."

As much as I would like to believe that this disappointing pattern occurs today only in southern colleges, I fear that it is more widespread. Though it perhaps does not occur for the majority of women students elsewhere and though the peer culture of the North may have more subgroups of students

who actively and collectively challenge the ethos of romance, the capitulation that Holland and Eisenhart describe is surely pervasive on coeducational campuses around the country. The "sexual auction block" on which women students are placed by peer culture is an influence strongly competing with the achievement messages that faculty endorse.

Instead of blaming women for succumbing to the pressure of peer expectations, Holland and Eisenhart make a good case for the complicity of the schools in making romance the hidden curriculum of coeducation. If administration, faculty, and other organized groups in the institution fail to mount a successful challenge to the dominance of peer culture, how can individual young women hope to resist? The peer culture is itself, the authors argue, a form of resistance to the debilitating and dehumanizing dynamics of the classroom, but this type of resistance backfires for women. Peer indifference to what happens inside the classroom is mirrored by faculty indifference

to what happens outside it. In the clash of cultures, women students are the losers.

What is of necessity missing from this book is any indication of where and how peer culture could function for women, rather than undermining them. Similar ethnographies of women's colleges with good records of placing women in career paths, of subcultures of support for women students in women's studies at coeducational schools, and of other "experimental" programs that do not strictly separate the students' personal lives from their classroom experiences would contribute to sketching the outlines of successful solutions to the dilemmas that Holland and Eisenhart depict so graphically. For faculty and students to confront together in the classroom the issues that this book raises might even be a step in that direction.

MYRA MARX FERREE
Department of Sociology,
University of Connecticut,
Storrs, CT 06269-2068

Cosmic Thinkers

Standing on the Shoulders of Giants. A Longer View of Newton and Halley. Essays Commemorating the Tercentenary of Newton's *Principia* and the 1985-1986 Return of Comet Halley. NORMAN W. THROWER, Ed. University of California Press, Berkeley, CA, 1990. xxvi, 429 pp., illus. \$39.95. From a conference, Los Angeles, CA, Aug. 1985.

Mark Twain delighted in telling audiences he had come into the world with Halley's comet and expected to go out with it, as indeed he did. It is an ironic coincidence, given the astronomical phenomenon's crucial role in moving comets from the realm of the ominous to the system of the world. The comet's return in 1985-86 presented another such coincidence, occurring as it did on the eve of the tercentenary of Newton's *Principia*, in which, in a real sense, the comet had its origin as an orbiting body. Although Edmond Halley's name attaches only to the comet, he bears responsibility for the book as well. He coaxed it out of Newton and saw it through the press, ready to pay its way if need be. The papers in this volume, originally delivered at a conference prompted by the more recent coincidence, look beyond Halley's role as facilitator to probe the intellectual relations between the two men; to bring

out from behind Newton's shadow Halley's own considerable talents as an astronomer, geographer, and military engineer; and to explore the scientific and cultural implications of putting comets into orbit.

The 18 papers in the volume are grouped in four categories: Newton and Halley; Newton; Halley; and Comets. Part 1 deals less with the honorees' collaboration than with their parallel careers. In "Newton, Halley, and the system of patronage," Richard S. Westfall and Gerald Funk place the two men in quite different orbits of influence. The strange relation between them stemmed in part at least from the fact that Halley did not need Newton's help as a patron; he had others even more powerful. Derek Howse reviews the tortuous relations between Halley and John Flamsteed at the Royal Observatory, and Suzanne Débarbat follows the traces of Newton and Halley through the archives and murals of the Paris Observatory.

Except for I. Bernard Cohen's account of "Halley's two essays on Newton's *Principia*," part 2 focuses on a Newton less familiar to the general reader. Despite the subtitle, the book has little to say about the *Principia* as a whole or even about the theory of comets in it. In "Such an impertinently litigious lady:

Hooke's 'Great Pretending' vs. Newton's *Principia* and Newton's and Halley's theory of comets," David Kubrin examines the context of Robert Hooke's notorious claim on the inverse-square law to reveal its role in Hooke's theory that earthquakes caused changes in the earth's axis and magnetic poles. Halley, following Newton, argued that comets were responsible for those changes. But as comets became cyclical rather than extraordinary events, that theory entailed an eternal, cyclically changing, yet passive earth, rather than an active earth with a beginning and an evolving history. Priority was less at stake than was a whole way of looking at the world. James E. Force asserts a "sleeping argument" in Newton's writing, uniting science and religion not only in the argument from design but in the realization of scriptural prophecy; history moved to the heavens. Betty Jo T. Dobbs then pulls the two views together in "Newton as alchemist and theologian," concluding that "it is thus in a religious interpretation of all of Newton's work that we may find a way to reunite his many strangely divergent but well-polished facets."

Part 3 brings out the many dimensions of Halley. His most important contribution to astronomy, argues Albert van Helden, lay in establishing the study of transits and in showing how the transits of Venus could resolve the question of the sun's parallax. Alan Cooke and D. W. Waters make use of