of "the past" is germane to analyses of "the present." Indeed, the present is configured in and through the ways in which a past is mobilized as the ground against which it is configured. To "know" or classify things is to historicize those things, to "look back" at them *as* things. This certainly clicks with the recent revival of interest in collective memory. Most provocatively, Dening develops the idea that we are "entertained" by the meanings we put on the past. "In entertainment—on the stage or in our mind—we set up conditions to distill meaning" (p. 48). Similarly, history has poetics—it is a literary mode—and thus it is an object of anthropological concern. The metaphor of history as "cargo" is interestingly applied to autohistory. The past is fashioned into objects that we haul around with us; an anthropology of history can thus study how such objects are fashioned, where they're found, how they're preserved, restored, jettisoned, and how they are used to define occasion, self, other.

Dening's focus implies close attention to history's craft, its micropolitics, its "history worlds," and its participation in and mobilization of symbolic conventions. From there, and perhaps most intriguingly, we can begin to study history as an active ingredient in building social lives and their patterns of relation.

Lost Talent: Women in the Sciences, by **Sandra L. Hanson.** Philadelphia, PA: Temple University Press, 1996. 220 pp. $39.95 cloth. ISBN: 1-56639-446-5.

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In *Lost Talent*, Sandra Hanson mines the *High School and Beyond* data to pinpoint the causes of women's departure from mathematics and science. Hanson's analysis has several important virtues. First, she analyzes trajectories rather than treating participation in science as a static event. Second, she distinguishes among science achievement, course taking, attitudes toward science, and, in some analyses, science activities such as being in a science club or using a computer. Third, she focuses on the gender gap in science without ignoring variation among women. This book is filled with findings that are displayed in detailed tables that enable the reader to assess Hanson's conclusion.

In my opinion, a few strategic decisions detract from the study. First, I believe Hanson exaggerates the importance of socioeconomic resources in facilitating success in science. Socioeconomic resources facilitate entry into college and into college preparatory tracks in high school. Thus, Hanson shows that being in a high-school preparatory track is perhaps the best predictor of continued science course taking. But boys and girls have similar socioeconomic backgrounds, similar representation in college preparatory tracks, and similar college attendance rates, so this factor is unlikely to explain gender differences in science attainment. I would suggest that the pursuit of science and math may be better understood by separating the contributions of sex-typing and socioeconomic advantage at each stage in the educational process.

Second, while Hanson makes a virtue of distinguishing between science course taking, achievement levels, and attitudes toward science, she carries these distinctions beyond the point of diminishing returns. She shows that some students retain favorable attitudes toward science despite taking no courses and knowing little about the subject. While this is useful information, unfortunately Hanson funnels these scientific illiterates into what she calls the "attitudes pipeline," and proceeds to produce table after table of the determinants of attrition, reentry, and persistence in this "channel." I was not convinced that it was worth the effort. Surely one is lost to the world of science if one stops taking science courses, although favorable attitudes and a solid background may facilitate further study in this area.

Third, in the early chapters Hanson stresses the importance of distinguishing between mathematics and science. She shows, for example, that women's attrition from science now begins to occur earlier than that from mathematics. But I was hoping for some distinctions among scientific fields. Women are much better represented in the health sciences and in biology than in engineering and the physical sciences. It would be nice to know what factors explain women's greater success in some science fields than others.

Although the conceptual framework Hanson develops seems quite sensible, I object on one rather fundamental point. Hanson

clings to the pipeline terminology despite substantial evidence that it does not fit the trajectories of many students. The leaky pipeline metaphor suggests that women are lost at various stages in the process of becoming scientists, and it implies that once lost, there is little chance of returning, nor is there much hope of being a late entrant. But Hanson presents substantial evidence to the contrary. Surely becoming an engineer or a research scientist requires continued enrollment in mathematics and science courses. But there are many careers that require some foundation in science, such as nursing and computer programming, where reentry after a hiatus is probably more common. Hanson herself raises some questions about the pipeline metaphor, but it remains the organizing principle of her book.

Finally, the policy recommendations of this research are not nearly as detailed as the data analysis. This is not Hanson's fault, but rather reflects the fact that the High School and Beyond data do not include information on specific teachers in specific subjects. Hanson's analysis is overwhelmingly a supply-side analysis. Thus Hanson is unable to bring her data to bear on many specific questions about school policies and classroom practices that might promote success for women. Fortunately, future researchers will be able to turn to the National Educational Longitudinal Survey (NELS) for more detailed data in these areas.

One specific policy suggestion occurred to me while reading this book. Why not require four years of math and science for high school graduation? This reform would eliminate the gender disparity in course taking that begins to emerge in between the eighth and tenth grades. This requirement would raise math and science achievement levels, narrow if not eliminate the gender, race, and socioeconomic differentials in science course taking, and give a much broader range of students the foundation with which to pursue further study in these important areas.

In a longer version of this review available on my home page (http://www.ssc.upenn.edu/~jacobs), I discuss a number of technical and measurement issues that may be of interest to those conducting research in this area.

Talking About Leaving: Why Undergraduates Leave the Sciences, by **Elaine Seymour** and **Nancy M. Hewitt.** Boulder, CO: Westview Press, 1996. 429 pages: NPL cloth. ISBN: 0-8133-8926-7.

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Seymour and Hewitt's stated goal in this study was to discover the factors that lead large numbers of capable undergraduates to switch from science, math, and engineering (S.M.E.) college majors to "nonscience" majors. Committed to the idea that undergraduates are expert informants who are especially qualified to describe the strengths and limitations of their educational experience, the authors conducted ethnographic interviews and focus group discussions with over 400 students, including both "switchers" and "non-switchers," from seven diverse universities in the United States. The result is a book that both achieves its main goal and, with its numerous, insightful student quotes, is a delight to read.

One intriguing finding is that "switchers" and "non-switchers" did not differ appreciably from each other in the grades they earned in S.M.E. classes, in their perceived level of conceptual difficulty with the curriculum, or in the nature of their criticisms of S.M.E. departments. In fact, both "switchers" and "non-switchers" conveyed a sense of frustration with the competitive, nonsupportive S.M.E. culture designed to "weed out" less capable students. Ironically, the "weed-out" process, which was described as being remarkably similar at all seven institutions, did not filter out students who were less competent by evaluative criteria, such as grades in S.M.E. classes or SAT math scores. Instead, those who switched out of S.M.E. majors were found to be less comfortable in this competitive environment and had a harder time retaining a sense of self-competence while earning the low test grades that are common in S.M.E. classes. (Students at all seven universities report that test averages are commonly in the 30 to 40 percent range). The result is that highly capable students routinely switch out of S.M.E. majors; and women and minorities, who react more negatively to the competitive atmosphere and low grades experienced by all students, have higher