

GENDER INEQUALITY AND HIGHER EDUCATION

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KEY WORDS: women's education, educational history, women's colleges, college majors, fields of study

ABSTRACT

This paper reviews a diverse literature on gender and higher education. Gender inequality is more pronounced in some aspects of the educational systems than in others. The analysis distinguishes 1) access to higher education; 2) college experiences; and 3) postcollegiate outcomes. Women fare relatively well in the area of access, less well in terms of the college experience, and are particularly disadvantaged with respect to the outcomes of schooling. Explanations of gender inequality in higher education should distinguish between these different aspects of education and should explain those contexts in which women have attained parity as well as those in which they continue to lag behind men.

INTRODUCTION

In this essay I draw on a disparate literature to discuss several key questions regarding the relationship between gender inequality and higher education. What aspects of education exhibit the most pronounced gender disparities? How does the education of women interface with gender inequality in the workplace and in the family? Has the expansion of education for women stimulated changes in other arenas, or has the educational system merely reflected developments in the rest of society?

I found research pertinent to these questions in diverse fields outside of sociology, including economics, history, social psychology, career counseling, and educational policy. One recent review of the literature on the effects of college on students included a bibliography running 150 pages (Pascarella &

Terenzini 1991). Rather than review every study that considers the question of sex differences, I focus on those issues that are central to the question of gender inequality. I examine areas that have been vigorously debated—such as the effects of single-sex colleges on women’s achievements. I also highlight topics that call for more careful scrutiny—such as why women’s achievements in higher education in the United States surpass those in many other industrial countries.

Educational theory and research remain focused on social class disparities. Classic studies of inequality in education typically have focused on disparities by social class among men (Blau & Duncan 1967, Bourdieu & Passeron 1977, Collins 1979, Karabel & Halsey 1977). When gender inequality is discussed, it receives relatively limited attention. For example, Aronowitz & Giroux (1993) devote less than 2 of 256 pages to gender issues. Gender often is mentioned as a variation on the central theme of social class inequalities (Davies 1995). Scholars who do focus on gender issues often treat all aspects of education as working to the disadvantage of women (Sadker & Sadker 1993, Sandler 1986, Byrne 1978). In contrast, I suggest that education is often a relatively advantaged sphere of social life for women, and that gender inequality is more pronounced in some aspects of the educational system than others. My analysis focuses on three processes: 1. access to higher education; 2. college experiences; and 3. postcollegiate outcomes. Women fare relatively well in the area of access, less so in terms of the college experience, and are particularly disadvantaged with respect to the outcomes of schooling. Explanations of gender inequality in higher education should distinguish between these different aspects of education and should explain those contexts in which women have attained parity as well as those in which they continue to trail men.

Many important issues are not covered in this essay: women’s athletics, gender equity in standardized testing, part-time and adult study, and the community college experience. The focus on gender differentials also means that relatively little attention has been devoted to variation among women—by class, race, and ethnicity. It is my hope that the focus on gender issues provides insights that help to situate future research on particular groups of women.

ACCESS

Women’s Access to College in the United States

In this section I review findings on the enrollment and degree completion of women compared to men, drawing on contemporary and historical data on the United States, as well as international comparisons. I then turn to explanations offered for these patterns, with theories organized under four broad rubrics:

critical or reproductionist, status attainment, comparative historical, and economic.

One of the striking features of education in the United States is the prominence of women among college students. In 1992, women represented 53.1% of enrolled college students. Of women who graduated from high school in 1992, 65.4% enrolled in college the following fall, compared with 59.7% of men. Women's share of degrees climbed steadily during the 1970s and 1980s (Karen 1991), during a period when the fraction of college-age young adults enrolled in school increased slowly but steadily (US Department of Education 1995). By 1982, women surpassed men in the number of bachelor's degrees earned. Women have garnered more bachelor's degrees than their male counterparts ever since. By 1992, 54.2% of bachelor's degree recipients were women. Women earned 58.9% of two-year degrees, 51.5% of master's and professional degrees, and 37.3% of PhD degrees (National Center for Educational Statistics 1994).

In recent years, women's advantage in college enrollment has been similar to that observed for earned degrees, which suggests that women and men complete their degrees at similar rates. Progression to graduate and professional degrees is now at parity by gender. This represents a marked change from earlier periods in this century, when women's completion rates trailed men's (Goldin 1995). Only among PhD recipients does women's representation continue to lag.

Are women equally represented at top-tier institutions? Hearn (1990) and Persell et al (1992) report, based on an analysis of data on 1980 high school seniors, that women were disadvantaged in access to elite schools. While women have made progress since 1980 (Karen 1991), they remain slightly overrepresented in schools with higher acceptance rates, lower faculty/student ratios, lower standardized test scores, and lower fees (Jacobs 1996). The small remaining sex gap at top-tier schools is due to two factors: 1. the relative scarcity of women in schools with large engineering programs and 2. the tendency of women to enroll in school part-time (lower-status institutions are more likely to accept part-time students). Selected reports on admissions as well as enrollment from leading institutions indicate that women are well represented among recent entering classes, except in schools that prominently feature engineering programs (Monthly Forum on Women in Higher Education 1995).

Adult or continuing education represents a substantial fraction of tertiary schooling in the United States (Kasworm 1990). Over one third (35.8%) of college students enrolled in the fall of 1991 were over age 24, including 17.1% of full-time students and 63.9% of part-time students. Women represent 61.8% of these older students, including 57.0% of those enrolled full-time and 63.7% of those enrolled part-time.

The parity women have achieved in college completion is a recent phe-

nomenon, but the 1950s and 1960s represented a historically depressed level. Women represented 41.3% of college graduates in 1940, slipping to 23.9% in 1950, and remaining at a historically low 35.0% in 1960 (US Bureau of the Census 1975). Goldin (1995) estimates, based on retrospective reports from the 1940 Census, that women's college enrollment rates exceeded 90% of men's from the late 1890s until the mid 1920s, although the inclusion of "normal schools," which were often less academically rigorous than other institutions, arguably inflates Goldin's figures (see also Graham 1978).

For the entire twentieth century in the United States, women have comprised a large proportion of students in primary and secondary schools. Women's rate of enrollment among 5–19 year olds has exceeded 90% of men's rate since as early as 1850, and 98% since 1890. Women have represented the majority of high school graduates since at least 1870—in 1920 over 60% of high school graduates were women (US Bureau of the Census 1975: pp. 369–70, 379). Analysis of individual-level data from the 1910 Census indicates that women's enrollments in elementary and high schools were comparable to their male counterparts for most immigrant groups (Jacobs & Greene 1994), although attendance data strongly favor males for certain ethnic groups, such as the Italians (US Immigration Commission 1911, Olneck & Lazerson 1974). The median years of schooling completed by women exceeded those by men for most of this century (Folger & Nam 1967), until the GI Bill after World War II enabled men to surpass women.

International Comparisons

Women in the United States surpassed their counterparts in other countries in access to schooling at both the secondary and tertiary levels for more than a century (Klemm 1901, US Commissioner of Education 1900). Today, the United States enrolls more college students per capita than virtually any other country, and women's share of college enrollments in the United States exceeds that in most other countries (see Stromquist 1989, Kelly 1989, Kelly & Slaughter 1991, King & Hill 1993, and Finn et al 1979 for informative reviews of women and education in developing countries). Data for selected countries are presented in Table 1. In most of the advanced industrial countries of Europe, women's share of enrollments is quite high. But even here, substantial variation persists, with women's share ranging from 40% of college students in Switzerland and 41% in Germany to 55% in France and 61% in Portugal (see also Byrne 1978). Women also fared well in terms of schooling in the socialist countries of Eastern Europe (Kelly 1991, Finn et al 1979), and socialist regimes in developing countries, in their initial years in power, typically emphasized schooling for girls (Carnoy & Samoff 1990). The postsocialist experience warrants close scrutiny, as women's status is eroding in many spheres in these countries (Bialecki &

Heyns 1993, Heyns & Bialecki 1992, Einhorn 1993).

Women's share of enrollment in Latin American colleges and universities is often quite high—Brazil, 53%; Argentina, 47%; Chile, 42%. Asian countries follow: In both China and India one third of college students are women. African countries include many with the lowest share of female enrollments in the world. Within each of these regions, there is substantial variation in women's share of enrollment.

Gender disparities are highest at the tertiary level, as young men typically pursue college before the women in their cohort do. Gender disparities in expenditures are greater than those in enrollments, because college education is more expensive than elementary or secondary schooling.

In terms of adult education, the United States ranked third among eight countries studied—behind Norway and Finland, but just ahead of Sweden and Switzerland—in the proportion of college-level adult students (OECD 1995). However, these figures include those in on-the-job training, in which the United States trails other countries (Lynch 1994). The standing of the United States on continuing education alone might well have been higher.

In some countries, including the United States, education has been relatively favorable to women, compared to other spheres of social life. Why do women get so much education? And why is there more access in the United States than elsewhere?

Explaining Access: Critical Approaches

Theorists who have focused most directly on the issue of gender inequality have approached the subject from a critical, feminist, or neomarxist perspective (Holland & Eisenhart 1990, Stromquist 1989, Connell et al 1982). Critical scholars seek to explain how the educational system reproduces gender inequality in society despite its provoking resistance to such inequality on the part of women students. Holland & Eisenhart argue that a culture of romance leads young women away from a focus on their studies and careers. Based on in-depth interviews and observations with students spanning several years at two southern colleges, they conclude that the college experience is tangential to intellectual and career development among young women. Their ethnographic research is the latest in a series of detailed investigations of undergraduate culture dating back to the 1930s (Hulbert & Schuster 1993, Angrist & Almqvist 1975, Komarovskiy 1971 (1953), 1985, Waller 1937).

Some basic flaws in the reproductionist approach make it unlikely that this perspective will be useful for elucidating gender issues. In my view, the central theoretical problem with the reproductionist model is that schools do not simply mirror the demands of the economy. Educational systems are surely influenced by vocational exigencies, but schools can easily expand in advance of employ-

Table 1 Comparative data on enrollment, and student and faculty sex composition¹

Country	Tertiary Enrollment (Per 100,000 Population)	University Faculty Percent Female	University Students Percent Female
<u>North & Central America</u>			
Canada	7197	21(%)	55(%)
Cuba	1836	47	58
El Salvador	1512	26	31
Haiti	107	26	29
Jamaica	950	29	63
Mexico	1478	–	45
Nicaragua	814	31	50
Panama	2377	–	58
United States	5687	31	53
<u>South America</u>			
Argentina	3293	35	47
Brazil	1075	38	53
Chile	2144	–	42
Columbia	1554	25	50
Ecuador	1958	–	39
Paraguay	769	–	46
Peru	3465	16	34
Uruguay	2180	30	53
Venezuela	2847	–	47
<u>Europe</u>			
Austria	2847	24	45
Belgium	2772	21	45
Czech Republic	1128	34	56
Denmark	2917	–	51
France	3414	28	55
Germany	3051	20	41
Greece	1928	29	53
Italy	2795	–	50
Netherlands	3280	21	43
Norway	3883	21	50
Poland	1521	38	52
Portugal	1935	31	61
Russian Federation	1900	–	50
Spain	3335	31	52
Switzerland	2147	12	40

(continued)

Table 1 (continued)

Country	Tertiary Enrollment (Per 100,000 Population)	University Faculty Percent Female	University Students Percent Female
<u>Middle East</u>			
Algeria ^a	1163	20	31
Egypt	1697	29	38
Iran	1061	18	31
Iraq ^a	1240	25	38
Israel	2790	32	51
Jordan	2497	12	42
Kuwait	1135	22	68
Saudi Arabia	1064	25	42
Syria	1695	20	38
Turkey	1569	33	37
<u>Asia & Pacific</u>			
Afghanistan	147	22	42
Bangladesh	382	12	20
China ^a	191	12	20
Hong Kong	1534	23	40
India	556	19	32
Indonesia ^a	1032	8	14
Japan	2338	12	29
Korea (South)	4208	22	30
Malaysia	679	24	46
Pakistan	266	17	24
Philippines ^a	2596	53	54
Thailand	2060	51	53
Vietnam	153	22	24
Australia	3178	31	53
New Zealand	4332	26	52
<u>Sub-Saharan Africa</u>			
Ivory Coast	204	–	19
Kenya	187	–	28
Liberia	–	20	24
Morocco	158	19	37
Nigeria	320	10	27
Senegal	266	15	22
S. Africa	1231	29	48
Tanzania	21	6	15
Zimbabwe	582	16	26

¹Source: UNESCO, 1995. Figures pertain to most recent year, typically early 1990s. No data are earlier than 1980.

^aFigures pertain to all tertiary education, not just universities and equivalent institutions.

ment needs or lag behind the economy. Many European countries developed extensive educational systems well in advance of industrialization (Graff 1979, 1987); some produced far more college graduates than their economies could absorb (Barbagli 1982). Moreover, the mechanisms that explain the correspondence that does occur must be specified.

There are also fundamental problems with extending the logic of class reproduction to the case of gender inequality. The analogy between class and gender fails because these two forms of inequality bear a fundamentally different relationship to the educational system. Differential access to higher education is a principal support for racial and social class inequality. In other words, the disadvantaged social position of (*a*) those holding less prestigious positions in society, (*b*) racial and ethnic minorities, and (*c*) the unemployed stems in large part from the fact that they do not have the educational credentials—especially college degrees—of the more socioeconomically successful groups. However, as we have seen, in the United States women have attained access to higher education more or less on par with their male counterparts (although among middle-aged and older women the gender disparity in education attained during the 1950s remains). Gender inequality in earnings persists despite rough equality in access to education, whereas class inequality is based on sharp differences in access to education.

My objection to the resistance approach is that it sometimes infers resistance among students where none exists, while it ignores organized feminist activism in higher education. In the search for student resistance, Holland & Eisenhart, along with others (Lees 1986, Griffin 1985, McRobbie 1982), drew on Willis's (1977) influential study of working class boys in a British secondary school. Holland & Eisenhart found only relatively subtle and individualistic resistance to the culture of romance, compared with somewhat more strident and collective disobedience on the part of Willis's subjects. Yet Holland & Eisenhart look for resistance in the wrong place. Feminist activism is responsible for much of the expansion in opportunities for women, from the founding of elite women's schools (Woody 1929, Solomon 1985, Rosenberg 1982) to the ongoing organizing activity of the American Association of University Women (AAUW) (Levine 1995), to Betty Friedan's (1963) influential critique of the narrow options available to college-educated women, to the passage of equal educational opportunity legislation for women (Stromquist 1993). Women's access to higher education did not emerge because of the dictates of the captains of industry, but because women successfully demanded a place. This does not mean that interviews with a small group of women students during a conservative period in history will reflect clear-cut resistance to patriarchy.

Explaining Access: Status Attainment

Status attainment is an alternative framework for explaining gender inequality. For attainment researchers, gender is an ascriptive characteristic like race. Early attainment studies included gender as a predictor of years of schooling completed (Alexander & Eckland 1974, Marini & Greenberger 1978). More recent studies have not devoted a great deal of attention to gender, although there are some notable exceptions (Alexander et al 1987a, 1987b, Hearn 1992), because gender tends not to be a significant predictor of educational attainment. Anderson & Hearn (1992) review the literature on educational status attainment (see also Karen 1991).

Some research that explores family composition effects has investigated the possibility that particular combinations of brothers and sisters might reduce parental investments in daughters' schooling (Powell & Steelman 1989, 1990, Butcher & Case 1994). However, given the relatively high levels of educational attainment of women in recent years, there is little reason to expect that parents continue to favor sons over daughters in terms of the decision to pursue college (Hauser & Kuo 1995; see also Behrman et al 1986). The number and spacing of siblings undoubtedly influence the enrollment of children, but at present in the United States these constraints probably do not inhibit parental investments in daughters more than in sons.

The lack of sex differences is viewed as evidence for the triumph of achievement over ascription, but the problem is accounting for universalism that exists in some contexts but not others. In attainment terminology, how does relatively universalistic access in the United States coexist with sharp ascriptive differences in educational process and outcomes? Status attainment researchers are well positioned to determine whether gender per se or other factors are responsible for whatever sex gaps may be observed, but as yet they have not offered a theory of when gender can be expected to matter and when its effects are attenuated. Moreover, international variation has not been explored. To the best of my knowledge, no attainment studies have attempted to explain why young women trail young men in college graduation in some countries more than others.

In principle, proponents of the attainment framework should be able to address gender inequality just as easily as they have addressed race and socioeconomic inequality. At its broadest, the attainment framework is designed to explain later outcomes from earlier inputs. Its individualistic bias can easily be modified by the incorporation of context-level variables. Development of the framework has been stymied by the absence of gender inequality in educational attainment and in the preferred measure of career outcomes, socioeconomic status (England 1979, Jacobs & Powell 1987). This combination

has led attainment researchers to focus little attention on gender inequality in the college experience and has led researchers interested in gender to explore different indicators of gender inequality.

Mickelson (1989) has attempted to explain women's high levels of educational attainment. The puzzle, as she poses it, is why women persist in schooling despite the limited financial returns they face. She considers four possible explanations for this paradox: female reference groups, unrealistic expectations, improved access to high status husbands, and sex-role socialization. While there may be some truth to each of these suggestions, none explains why the attainment of women relative to men is so much higher in the United States than in many other industrial countries, and moreso in developed countries than in less developed ones. Neither can these suggestions account for the rise over time in the level of women's education relative to men's.

Explaining Access: Comparative Historical Approaches

Another sociological approach explores comparative and historical variation in education experiences (Meyer & Hannan 1979, Meyer et al 1979, Rubinson 1986). Again, this approach should be ideally suited for elucidating gender inequality. Yet practitioners of this approach remain focused on class and race issues and have yet to devote sustained attention to the connection between schooling and gender inequality. Only a few studies explore gender patterns of schooling, and not all of these have focused on explaining the extent of gender disparities. For example, Walters (1986) finds that expanding employment opportunities contributed to the growth of higher education for women between 1952 and 1980. But the remaining puzzle is why the gender gap in education has narrowed more than that observed in labor force participation.

Ramirez & Boli (1987) explore international trends in enrollment through 1975 (see also Ramirez 1980, Ramirez & Weiss 1979). They suggest that there has been diffusion across countries of a model of the relationship between states and individuals that is predicated on the compulsory education of all citizens, and which inevitably results in the incorporation of females into the educational system. They suggest that the demands of citizenship predict an increasing female share of higher education, although applying the notion of citizenship to explain enrollments in higher education seems like a bit of a stretch. More such studies with a longer time frame and more countries would be informative. [See Behrman & Rosenzweig (1994) for cautions regarding the comparability of educational data across countries.]

Clark (1992) reports that the more multinational investment in a developing country, the less higher education is provided for girls. He argues that this is due to the influence of multinational corporations on local political systems as well as on gender role ideology and job opportunities for women. Clark's research

is part of a growing interest in the effect of the world system on women's status and employment opportunities (Ward 1990).

Comparative studies of international enrollment trends conducted by economists focus on the influence of national income levels, urbanization, and fertility. Schultz (1987) shows that the enrollment of girls climbed faster than that of boys in the poorest countries during the period 1961–1980. Specifically, he finds that the elasticity of enrollment with respect to national income is higher for girls than for boys. His findings are consistent with those of Tan & Mingat's research in Asia (1992), who show that gender disparities in elementary and secondary enrollments taper off as countries approach universal enrollment. However, it does not necessarily follow that the same pattern will characterize higher education, since universal enrollment remains unlikely at the college and university level.

A number of informative studies of US women's educational history have been conducted, although most of the focus is on elite schools for women (Solomon 1985, Horowitz 1993, Schwager 1987, Cott 1993, Woody 1929; see also Delamont 1989). Yet a comprehensive comparative historical account of women's access to higher education that highlights the relatively favorable position of US women remains to be done. Some factors that might well contribute to the distinctive position of women in higher education in the United States are 1. the decentralized structure of higher education (Jencks & Reisman 1968), with over 3000 public and private institutions, which allowed for the creation of specialized colleges for women; 2. the existence of the social space for the independent political mobilization of women, which enabled them to create some of the first schools for women; and 3. the ideology of individual opportunity, which women successfully exploited to justify their pursuit of higher education.

Culture and politics feature prominently in comparative historical research, while they are frequently relegated to a minor role in other treatments of education. To what extent do cultural factors impede schooling for girls? The case of women's education in Muslim societies may be instructive in this regard. In some traditional Muslim societies, the requirement that boys and girls attend separate schools may reduce access for girls. The education of girls can suffer when there are not enough schools for girls or when the distance to these schools creates parental concerns about safety, propriety, and the loss of daughter's time for household chores. But this effect is most pronounced in poor countries: oil-related wealth has produced marked improvements in the education of girls. In Kuwait, for example, elementary and secondary education is universal for both sexes, and women attend college in larger numbers than do men (El-Sanabary 1993).

The Muslim preference for same-sex teachers reduces the job opportunities available to women, who otherwise generally garner the lion's share of elementary teaching positions. On the other hand, the expectation of same-sex doctors creates an opportunity for women physicians in some Muslim countries that exceeds women's share of medical positions in many western countries.

The rapid rise of women's education in the oil-producing countries may be interpreted by some as evidence that traditional constraints on women can be overcome by modernization. Put in economic terms, culture acts as a drag on rational allocation of resources, but this lag is overcome more or less easily as incomes rise. Traditional cultures are assumed to be static, acting only as a lag on the forces of modernization and universalism (Ogburn 1922).

But cultures can be dynamic as well as static. Cultural change often occurs with the formation of a nation state. Ramirez & Weiss (1979) stress the importance of political centralization in educational diffusion for women at the elementary and secondary levels in developing countries. Their approach follows Meyer et al's (1979) emphasis on educational expansion as a key step in nation building.

Education serves many gods: It can be used to pursue salvation, vocation, civilization, participation, and recreation (Kelly 1983, cited in Coats 1994). The relative importance of these goals is a matter of history, politics, and culture. The connection between culture and education for women, both positive and negative, needs more thorough exploration.

Wars tend to create employment openings for women, but also educational opportunities as well. The case of women's higher education in Germany during the Third Reich is a case in point. Pauwels (1984) shows that women's enrollment in universities declined markedly from 1933–1939 both in absolute numbers and relative to men, as the Nazis stressed women's familial roles, sought to boost women's fertility, and questioned the intellectual capabilities of women. Ironically, the growing enlistment of young men in the military created a vacuum in college for women to fill, and the war years saw a sharp increase in women's enrollments, both in absolute and relative terms. Barbagli (1982) presents similar evidence for Italy during both the First and Second World Wars (see also De Grazia 1992). In both Germany and Italy these gains were rather quickly eroded in the postwar period (UNESCO 1967). In the United States, women's share of college degrees soared during the Second World War, but women's college enrollment actually declined in absolute terms relative to prewar levels (US Bureau of the Census 1975: 385–386). Women's enrollment in particular fields, such as medicine, did sharply increase during the war, only to tumble abruptly to prewar levels at the conclusion of hostilities (Walsh 1977).

Explaining Access: Economic Models

While the comparative literature on education remains sparse, there is an extensive literature on the returns to schooling and individual-level determinants of education in particular countries (King & Hill 1993, Stromquist 1989, Moore 1987). Parental economic resources are central determinants of attainment, but this effect is often greater for girls than for boys (Stromquist 1989). The same holds for parental education. Distance from school is often more important for girls than boys, especially in countries with single sex schools and a cultural emphasis on propriety. Boys often have more opportunity to make money that draws them into the labor market and out of school, but girls often have more obligations to help with housekeeping and childcare activities. Some studies in moderate income countries find that many girls who are not attending school are engaged in neither income-generating activities nor household chores (Stromquist 1989; see Durbin & Kent (1989) for similar evidence on the United States). My discussion of the economic approach to education centers on whether this perspective captures how children and their families decide to pursue or terminate schooling. In particular, does this literature help us to understand the share of schooling conferred on young women?

Several prominent economists have offered distinctive approaches to understanding women's educational investments. Becker (1975) writes that parents would be rational to invest less in their daughters' schooling than in their sons, even if the percentage change in earnings with an additional year of schooling were identical for both sexes, because their daughters could be expected to work full time for fewer years than do sons. The expected lifetime payoff of a son's education would thus exceed that of a daughter's. This is the private (sometimes referred to as internal) return in terms of earnings to education. This prediction was consistent with the lower investments in young women's college education when Becker formulated this approach during the 1960s, and it is consistent with the lower level of college enrollment for women in many countries today. But this approach does not account for the parity in college enrollments women have achieved in recent years in the United States and in a number of other developed countries.

Becker and others also seem to ignore the fact that men have a larger base level of earnings than do women, so the same percentage return is worth more for sons than daughters. I suspect parents would rather get a 10% return on a \$20,000 earnings base (for a son) as opposed to a 10% return on a \$15,000 base (for a daughter).

Schultz (1993a,b) maintains that Becker's approach is flawed because it ignores the increased social productivity of women who do not work. He posits

that the increased productivity of women in nonmarket work is identical to that in market work. He also emphasizes that the social returns to schooling—those reaped by society at large rather than the family itself—for women are high, and consequently he urges more investment in their education (see discussion of outcomes of schooling below). This recommendation is consistent with Benavot's (1989) findings that educating girls gives a larger boost to economic development than does educating boys. But Schultz is left with the problem of explaining why parents underinvest in their daughters' schooling.

A third approach to calculating the payoff from women's schooling is offered by Goldin (1992, 1995), who holds that husbands' earnings should be included in the calculation of the costs and benefits of a college education (see also Becker 1975, Behrman et al 1986, Boulier & Rosenzweig 1984). Educational homogamy in marriages is extensively documented (Mare 1991, Lichter 1990). It is evident in second marriages as well as in first marriages (Jacobs & Furstenberg 1986) and characterizes interethnic and interracial marriages as well as endogamous ones (Jacobs & Labov 1995).

Goldin (1995) suggests that during the 1950s women were drawn into college by the financial value of the "Mrs." degree. College attendance increased the chances of marrying a college-educated husband with high earnings potential: 64% of women aged 30–39 in 1960 with 16 or more years of schooling married college-educated husbands, compared with only 11% for women with a high school degree. Indeed, Goldin estimates that 57% of women graduates married before or during their year of college graduation. Goldin concludes that the private rate of return to college approximately doubles if husband's earnings are added to what a college-educated woman could bring home herself.

However, Goldin applies this logic only to the cohort attending college during the 1950s. Ironically, this was the cohort of daughters with the lowest share of college attendance compared to their brothers. If this logic motivated college attendance, the gap between young women and men should have narrowed, rather than widened. The gender gap in enrollment did not narrow until the 1960s, when the career dimension rather than marital dimension of women's college decisions began to rise.

Moreover, if husbands' incomes were included in the financial calculus for the first generation of women college graduates, the total returns to college would be negative, since nearly one third of this group never married (Goldin 1995, Solomon 1985, Rosenberg 1982) and thus lost the prospect of a husband's earnings. The positive effect of college on women's marriage prospects was not taken for granted by the first generation of women attending college. Indeed, there was widespread concern over the low marriage rates of college-educated women (Solomon 1985, Cookingham 1984). If one applies Goldin's family

income calculus consistently, one would have to conclude that the decision to enroll in college was a poor investment for the first generation of women college graduates.

By the 1920s, however, the marriages rates of college-educated women markedly improved, and the marriage-market dimension of college became evident (Horowitz 1993, Frankfort 1977). Smock & Youssef (1977) describe a similar transformation in attitudes regarding educated wives in Egypt, while Hooper (1984) reports that male Chinese college students voice reluctance to seek a college-educated bride (cited in Tilak 1993). This transformation of women's education from marriage-inhibiting to marriage-promoting deserves further attention. In a number of countries, however, men remain ambivalent about, if not actively hostile to, educated wives.

Finally, there is a problem in including husband's earnings for international comparisons. If educational homogamy is the rule, this logic would predict that college is typically a good deal for women, since it helps them secure an affluent husband. The task of explaining the high historical level of women's college enrollments in the United States must do so in a way that differentiates the United States from other countries with much lower shares of college attendance by women.

Manski (1993) points out that economists assume adolescents and their families are able to make exceedingly complicated calculations regarding the costs and benefits of college. The approaches of Becker, Schultz & Goldin make it clear that estimating the economic payoff to college for women is probably even more complicated than the standard economic formulation. Nor do these approaches exhaust the range of economic considerations: Education after all may be viewed as consumption and not strictly as an investment (Schultz 1987).

In summary, parents and children surely take the financial consequences of schooling into account when making educational decisions. However, there are many relevant considerations, and many ways to be rational. Consequently, in my view, economic calculations contribute to but are not sufficient to explain variation across countries and over time in the share of schooling obtained by women.

PROCESS

If college provided an undifferentiated education conferred equally on young men and women, then the issue of access would settle the question of gender inequality. But in fact women and men experience college differently and face markedly different outcomes. Of the many respects in which the college experience differs by gender, I consider five: fields of study, women's studies, faculty, harassment, and women's colleges.

Fields of Study

Women and men pursue different fields of study in college. In the United States, 30% of women would have to change fields of study in order for women to be distributed in the same manner as men (Jacobs, 1995a). The sex typing of fields of study is a worldwide phenomenon (Moore 1987), yet it varies between countries. For example, 51.6% of engineering students are women in Kuwait, compared with 3.3% in Switzerland and Japan (UNESCO 1995). One of the most striking contrasts is within the divided Germany: in the former East Germany, 32.4% of engineering graduates were women, compared with only 7.5% in West Germany. In Poland, 62.7% of mathematics and computer science degrees went to women, compared with 35.9% in the United States and 21.0% in Egypt. Kelly (1989) suggests that segregation of fields of study increases as women's representation in higher education increases, but she does not marshal specific evidence in support of this hypothesis.

In the United States during the early 1960s, women were concentrated in an extremely limited range of fields. Education drew almost half of women undergraduates, and over 70% of women graduates were concentrated in just six fields: education, English, fine arts, nursing, history, and home economics. Now business is the leading field of study for women. In 1990, women garnered 51% of life science bachelor's degrees, 47% of mathematics degrees, 47% of business degrees, but only 14% of engineering degrees. Segregation across majors declined substantially from the mid-1960s through the mid-1980s but has reached a plateau during the last 10 years (Jacobs 1995a).

Women have not always been segregated into separate fields from men. Founders of the most prominent women's colleges tried hard to maintain curricula that matched or exceeded men's in scope (Solomon 1985, Horowitz 1993). During the early years of land-grant schools, no separate curriculum for women existed (Thorne 1985). A peculiarly feminine curriculum began to emerge with the development of home economics. This development reflected an enduring emphasis on female domesticity but also was promoted in part by women academics, who were excluded from other fields and sought to create a field of expertise and set of job opportunities for which they would be uniquely suited (Solomon 1985, Rosenberg 1982, Clifford 1989). At the same time, this development contributed to the emergence of a distinctively feminine college experience for young women that served to limit the career prospects of most graduates.

Studies of choice of majors have addressed many issues. Social psychologists have searched for personality congruence between students and their majors (Betz & Fitzgerald 1988, Betz et al 1990, Wolffe & Betz 1981). Vocational counseling research has explored the vocational maturity of students and their career realism (Holland 1985, Walsh & Osipow 1994).

The sex typing of fields can be attributed to precollege socialization (Wilson & Boldizar 1990), since students enter college roughly as segregated as they leave. However, about half of students change subjects during college. Therefore, college plays an essential role in maintaining level of segregation (Jacobs 1995, 1989). Many studies have attempted to document the effect of college on students. For example, Hearn & Olzak (1981) suggest that high status majors are competitive, and both men and women leave such fields. Their results also show that women fared poorly in high status fields with close occupational linkages. Yet most research on college effects is typically ahistorical. The net change in the sex segregation of students during college has varied over the last three decades. During the late 1960s and 1970s, the college experience resulted in students being less segregated as seniors than they were as freshmen; during the 1980s there was little or no net change during the college years (Jacobs 1995a, 1989). This finding suggests that change during the college years may reflect social changes in society at large in addition to the experiences unique to the college environment.

Economists have sought to explain the sex typing of fields as due to the desire for women to maximize their lifetime earnings. Polachek (1978) has suggested that female-dominated fields lead to jobs with high rewards early in life and a low earnings trajectory. By entering these majors, women position themselves to earn the most during the period when they are most likely to be working. This hypothesis has not been supported by the evidence. Women's fields pay less initially and exhibit slower earnings growth than do male fields, so that earnings maximization cannot be the explanation of such choices (England 1984, England et al 1988).

Decisions regarding majors in part reflect options in the labor market, but it should be noted that there has been more change in college than in the labor market. Sex segregation in college majors declined by 40% between 1960 and 1990, while sex segregation in the labor market declined by approximately 20% (Jacobs 1995a, Reskin 1993).

Much attention has been devoted to why women are underrepresented in science and engineering (Brush 1991, Yarrison-Rice 1995). The research has focused on sex differences in preparation (Ethington & Wolfle 1988), career orientation (Ware & Lee 1988), parental influences (Maple & Stage 1991) and attrition (Strenta et al 1994, Seymour 1992, Frehill 1996). This line of research has identified many of the steps needed to plug the leaky pipeline that results in relatively few women pursuing careers in mathematics and science. Most of these studies focus on such individual issues as psychological obstacles or lack of social support, or examine specific programs designed to improve women's achievement. However, some studies connect the issues of math and science to broader patterns in education and society. Green (1989) notes that the scarcity

of women in scientific fields needs to be understood in the context of low overall enrollments in science. As we have seen, the sex gap in science and mathematics enrollment varies substantially across countries.

Women's Studies

Another important change in the curriculum has been the creation of women's studies (Musil 1992, Chamberlain 1988, Guy-Sheftall 1995, Stimpson 1986). Since the first women's studies program was founded in the 1969–1970 academic year, over 600 schools have established programs. The number of women's studies programs listed by *Women Studies Quarterly* continues to rise, from 449 in 1984, to 502 in 1989, to 606 in 1994. Wood (1981) showed that larger, more selective schools offering graduate degrees were the first to institute this organizational innovation. Women's studies now exists in many countries, although the extent of its institutionalization varies widely (Kelly 1989).

The National Center for Educational Statistics reports that only 189 bachelor's degree recipients majored in women's studies in 1990 (187 women and 2 men), although undoubtedly there were many more students who included women's studies as a second major or a minor area of concentration within a traditional field of study, such as history or literature. Colleges and universities now offer upwards of 20,000 women's studies courses. (Guy-Sheftall 1995).

Women's studies has had an important impact on the intellectual development of the humanities and the social sciences, most notably in the fields of literature, history, sociology, and anthropology (Farnham 1987, Langland & Gove 1983). Evaluations of the disciplinary impact of women's studies will necessarily be ongoing, as women's studies and the relevant fields evolve. A number of innovative programs have attempted to promote the mainstreaming of gender issues in courses outside women's studies programs (National Council for Research on Women 1991, Fiol-Matta & Chamberlain 1994). It would be valuable to know the extent to which gender issues have been incorporated in courses outside women's studies.

More research assessing the impact of women's studies on students is in order. Luebke & Reilly (1995) show that women's studies majors report that their major significantly enhanced their feminist consciousness and personal self confidence, but unfortunately the study samples students chosen on the recommendation of women's studies program directors. This study is not likely to be any more representative than that of Patai & Koertge (1994), which is largely based on interviews with faculty disillusioned with women's studies. Some studies have examined the impact of women's studies courses, although these assessments tend to be short term (Pascarella & Terenzini 1991:316, Stake & Rose 1994). It would be interesting and valuable to know what fraction of

undergraduates take one or more women's studies courses and what if any lasting impact these courses have on students. Such information would provide sound basis for a discussion of curriculum reform and might displace the shrill charges and countercharges often made regarding feminism, multiculturalism, and the decline of the established canon.

Faculty

Men represent the great majority of college and university faculty worldwide (see Table 1). The figures cited in Table 1 include women at marginal institutions and in marginal positions, and thus they surely overstate women's attainments. In the United States, 31.8% of faculty were women in 1991. Women's representation declines with the prestige of the institution: 37.9% in public two-year schools, 28.9% in the public comprehensive schools, and 19.5% in private research universities. The number of women also declines with faculty rank. Women represent 47.9% of lecturers and instructors, 39.7% of assistant professors, and 17.2% of professors (National Center for Educational Statistics 1994). The US record actually looks quite favorable by comparison with the professoriat in Britain and France, which were 2.3% and 8.7% female, respectively, during the early 1980s (Clark 1987). Graham (1978) notes that women's representation on the faculty of US colleges and universities actually declined between 1930 and 1970, before beginning a sustained advance during the 1970s and 1980s.

There are many reasons that women's entrance into faculty positions is so low. Until recently women were a small proportion of PhD recipients; women are concentrated in a limited number of fields; women entered academia in large numbers during a period of retrenchment, and pursued fields that were facing sharp declines in enrollments (Slaughter 1993). Nonetheless, women's progress remains far slower than would be expected. Viewed optimistically, if a sizable fraction of women who are currently assistant professors are granted tenure, then the sex composition of the faculty will change dramatically during the next decade or two. Parity is unlikely for quite a long time because of the number of fields in which women PhDs remain severely underrepresented (Ransom 1990).

Much research has examined the position of women faculty members (Chamberlain 1988). Studies have examined gender inequality with respect to hiring patterns (Tolbert & Oberfield 1991, Konrad & Pfeffer 1991, Bowen & Schuster 1986, Bach & Perrucci 1984), promotion rates (Hurlbert & Rosenfeld 1992, Long et al 1993, Long & Fox 1995), publication rates (Ward & Grant 1995), mobility between institutions (Rosenfeld 1987), job satisfaction (Tack & Patitu 1992), turnover (Tolbert et al 1995), salaries (Bellas 1994, Tolbert 1986, Fox 1981, Bowen & Schuster 1986, Astin & Snyder 1982, Langton & Pfeffer

1994), and the sense of personal and professional marginalization (Aisenberg & Harrington 1988).

The notion of cumulative disadvantage seems to be a reasonable summary of the underrepresentation of women in faculty positions. In other words, women have been disadvantaged to some extent in every stage of the academic career process. This would account for women's underrepresentation in the higher echelons of university administration (Touchon et al 1993, Chamberlain 1988, Sandler 1986, Sagaria 1988, Sturnick et al 1991), in higher ranks and in higher status institutions. Graham (1978) suggests that the extreme exclusion of women from Ivy League institutions undermined the position of all women faculty, because, with the emergence of the research university as the pinnacle of the higher education system, these schools came to set the pattern for higher education as a whole.

A number of researchers see the position of women faculty as evidence of a chilly climate for women throughout higher education (Sandler 1986). But the effects of faculty composition on students continue to be debated. Tidball (1986, 1980) finds that the proportion of female faculty is strongly associated with the number of women high achievers, even in coeducational schools. This finding is probably less vulnerable to the lack of institutional controls than are Tidball's other findings (see below) and is a result that bears further scrutiny with longitudinal data. Rothstein (1995) finds that women students with female advisors are more likely to continue their education after college. Evidence on student satisfaction with same sex advisors (Erkut & Mokros 1984) and faculty (Ehrenberg et al 1995) is mixed. These issues require more detailed investigation of particular environments on particular groups of women, such as math and science majors. Sadker & Sadker (1993) make the case for gender bias in the classroom, but this evidence is principally based on research in high schools.

There are ironies in the history of women faculty as role models. The first generation of women faculty was expected to forego marriage. As Horowitz (1993) notes, by the 1920s women college students, most of whom planned marriage and not career, did not entirely identify with their female faculty mentors, who had sacrificed so much for the sake of women's education. The faculty were often perplexed and disappointed at the students who followed them (Clifford 1989). Same-sex role models can of course be beneficial, but it is important to understand the context of the student-faculty relationships in order to develop firm generalizations in this area.

Harassment

Sexual harassment as a legal concept is quite new, dating back to MacKinnon's (1979) treatise on the subject. Since that time, a substantial body of research

has been conducted on the issue (Borgida & Fiske 1995, Tinsley & Stockdale 1993, Gruber 1992, 1989, Paludi 1990). The incidence of harassment varies with the status of the perpetrator, the type of behavior, and the length of exposure (Rubin & Borgers 1990). Peer harassment exceeds faculty-student harassment, and verbal harassment is much more common than demands of sexual favors or physical assault, but estimates of the latter are disturbingly high.

Roiphe (1993) sheds much heat but little light on this subject. Criticisms of the estimates of sexual assault launched by Gilbert (1993) were rebutted in detail by Koss & Cook (1993). One of Gilbert's main points is that sexual assault figures from college surveys surpass those found in federal crime reports. However, it is possible that the figures included in crime reports are too low. Indeed, federal statistics on sexual assault are being revised upwards, reflecting an adjustment in survey procedures to more closely follow those used by Koss and others (Sniffen 1995).

Faculty harassment can be especially consequential for graduate students, who have more exposure to faculty and who depend more on a limited set of advisors for their career prospects (Schneider 1987). Williams et al (1992) show that the incidence of faculty/student harassment declined after a sexual harassment policy and grievance procedure was established. More research on which policies work best is in order (Paludi & Barickman 1991).

Harassment may be viewed as part of a hostile climate for women on campuses (Sandler 1986), although little research to date has made such connections. The potential connections between harassment and the choice of major, the extent of career commitment, and other long-term consequences remain to be explored.

The topic of harassment is one aspect of a larger question of whether the college environment is equitable to women (American Association of University Women 1992). This larger set of issues includes classroom interactions (Wilkinson & Marrett 1985), informal counseling of students by faculty (Pascarella & Terenzini 1991:478-80), and the broader social scene (Holland & Eisenhart 1990), including sororities and fraternities (Sanday 1990).

Coeducation and Women's Colleges

One way to assess the effect of college environments on female students is to compare all-female schools to coeducational ones. If the former are more supportive environments for women, the difference in outcomes between the two can be viewed as an estimate of the sum of all of the deleterious effect of college environment on women in coeducational schools. The research on women's colleges has great theoretical importance even though only about 1.3% of women receive degrees from such colleges today (author's calculation, based on school-level Earned Degrees Conferred data, National Center for

Educational Statistics), and less than 3% of female high school seniors even consider attending such schools (Horowitz 1993).

In a series of papers, Tidball and her colleagues document the disproportionate number of graduates of women's colleges among prominent women (as listed in *Who's Who* (1980), women medical school students (1985), and women scientists (1986). The initial *Who's Who* research pertained mostly to students who had graduated before 1960 (Tidball & Kistiakowsky 1976), but the medical school and natural science PhD data include information on the 1970s as well. Rice & Hemmings (1988) find a decline in the advantage of women's colleges in producing achievers during the 1960s and 1970s, but because they do not control for the declining share of graduates attending such institutions, their results are suspect.

The problem with this line of research is that controls for institutional characteristics, such as selectivity, are not included, nor are controls for the attributes of incoming students available for analysis (Crosby 1994). Tidball shows that her results are not solely due to the effects of the elite seven sister colleges, but she does not control for potential selectivity of other women's schools. Tidball's results may be due in part to student self-selection in terms of socioeconomic status and desire to pursue careers, and not solely due to the college experience per se.

Crosby et al (1994) reanalyzed Tidball's data on entrants into medical school and found that the positive effect of single-sex schools disappeared after selectivity was taken into account. Stoecker & Pascarella (1991) find no effect of female schools on four student outcomes measured nine years after students' freshman year. Unfortunately, the high sample attrition in the data they employ (reported in Astin 1982 and not in their article) introduces uncertainty into Stoecker & Pascarella's conclusions. Riordan's (1992) findings are consistent with Tidball's in a study of the High School Class of 1972 in results for both 1979 and 1986. Bressler & Wendell (1980) and Solnick (1995) find more movement of women into male-dominated fields of study in single-sex than in coeducational schools during the period 1967–1971. Smith (1990) finds students in women's colleges report greater satisfaction with all aspects of the college experience except social life. Further research in this area is needed that includes individual and institutional controls and that follows students for a long period of time after college.

Single-sex schools are just one instance of a broader question of how gender inequality varies across schools. Organizational sociologists have treated schools as "loosely coupled systems" (Ingersoll 1993, 1994) but have not focused on the organizational correlates of gender inequality in the educational context. In other words, Acker's (1990) approach to gendered organizations has yet to take hold in the context of higher education. This area promises much,

since surely substantial variation exists among the several thousand colleges and universities in the United States, as well as between countries in the organization of higher education. Two exceptions are Studer-Ellis's (1995) examination of the determinants of the founding of women's colleges and Wood's (1981) analysis of the diffusion of women's studies programs (see also Pascarella & Terenzini for a review of studies on college effects).

OUTCOMES

Much of the discussion of gender inequality in the labor market has been written in response to the writings of the human capital school of economics, which holds that gender inequality stems from inadequate investments on the part of women (Jacobs 1995b). As we have seen, this is no longer the case in the United States. England (1993) has noted that working women have surpassed men in median years of schooling completed for much of the century; only during the period since the GI Bill have men surged past women. By 1990, working women once again had caught up with men in average educational attainment (author's estimate, based on the March 1993 *Current Population Survey*).

Gender differences in earnings persist despite the parity in education attained by women. Table 2 displays annual earnings by sex by years of schooling completed. Women earn less than men even with the same level of education. Indeed, the sex gap in earnings hardly varies by educational level.

The economic benefits of college have increased since the mid-1970s (Freeman 1994). The gender gap in earnings has narrowed at all educational levels, due in part to the decline in men's earnings (Bernhardt et al 1995). Yet the gender gap in earnings among college graduates remains similar to that at other educational levels.

A significant portion of the gender gap in earnings can be attributed to gender differences in majors (Gerhart 1990, Eide 1994, Fuller & Schoenerger 1991, Angle & Wissman 1981, Daymont & Andrisani 1984, Wilson & Smith-Lovin

Table 2 Median annual income of year-round full-time workers, by years of school completed and sex, 1990

	Women	Men	Women/Men
Less than 9 years	\$12,251	\$17,394	.70
1-3 years high school	\$14,429	\$20,902	.69
4 years high school	\$18,319	\$26,653	.69
1-3 years college	\$22,227	\$31,734	.70
4 years college	\$28,017	\$39,238	.71
5 or more years college	\$33,750	\$49,304	.68

U.S. Bureau of the Census, "Money income of families and persons in the united states" current population reports, series p-60, no. 174, 1991.

1983). Majors play a larger role in early-career earnings, although they may influence later career earnings indirectly through occupational tracking.

Formal schooling does not exhaust the range of possible sources of skill differences between men and women. The gender gap in wages may be due in part to gender differences in skills acquired in on-the-job training (Lynch 1994, Jacobs 1985b) and informal experience. Space does not permit an in-depth exploration of all the sources of gender inequality in the labor market. The point here is that the gender gap in earnings in the United States does not stem from the fact that women spend too few years in formal schooling. Some feminists have found reason for despair in these figures. Gender inequality can persist despite high levels of education for women. However, there are important additional effects of schooling on gender inequality besides earnings that bear mention.

Studies find that higher education results in more support for egalitarian gender role attitudes on the part of women (Pascarella & Terenzini 1991:293–97), particularly if the students took courses related to women's roles in society (Pascarella & Terenzini 1991:316). Klein (1984) finds education increases women's support for feminism. Freeman (1975) suggests that education raised women's expectations and created a sense of relative deprivation, leading them to support feminism.

Woody (1929) suggests that highly educated women leaders were indispensable to the success of the suffrage movement. Campbell (1979) found that highly educated women with small families, and especially those employed as professionals, were disproportionately represented among suffragists, based on analysis of a sample of 879 prominent women in 1914. On the other hand, Kelly (1991) reviewing the international evidence is more skeptical that additional education for women leads to greater political power.

As noted above, economists distinguish between the private returns to schooling—such as higher wages and higher household income—and the social or public returns, which may involve improvements to health, welfare, and society. Two principal nonmonetary effects of schooling for women that have been extensively researched are improved health of their infants and lower fertility. In developing countries, women with more education marry later, are more likely to use contraceptives, desire smaller families, have their first child later (but breastfeed for fewer months), and have a lower total fertility rate than do less educated women (Schultz 1993a,b). Much of the research described by Schultz compares girls with primary education to those with no education in developing countries, but the depressing effect of education on fertility is a consistent finding in affluent countries as well (Sweet & Rindfuss 1983, Martin 1995).

The 1994 United Nations International Conference on Population and Development (1995) held in Cairo stressed the importance of empowering women in order to promote sustainable economic development and population control. Women's education is a central element in this agenda. Education may thus have significant implications for women's status with respect to gender relations throughout society, but these effects are historically contingent and depend on the character as well as the extent of women's education.

CONCLUSION

I have suggested that access, process, and outcomes are distinct aspects of higher education that need to be examined separately. The trends in these areas often do not coincide with one another, and consequently separate explanations of these facets of higher education are needed. For example, women remain a minority of faculty and are disadvantaged in terms of rank and institutional prestige. Yet as students in the United States, women represent a majority of students at nearly all levels of higher education and are not distinctly disadvantaged in terms of institutional position. Clearly, treating women's standing among the faculty and in the student body as one phenomenon will not do, since the extent of women's progress differs between these two statuses.

I remain surprised at how much mainstream research in the sociology of education ignores women, and how much of the rest considers gender interactions rather than gender inequality. In other words, gender often becomes a matter of variations on the main theme of socioeconomic or racial inequality. My first recommendation for further research, then, is that gender deserves the attention of sociologists of education. Gender presents many interesting puzzles, when gender inequality is evident as well as when it is not. We need a theory of when gender is likely to be consequential and when it is likely to be unimportant. We also need a theory of what economic, social, cultural, and political trends can be expected to affect the role of gender in the educational sphere.

Second, I believe that educational decision-making processes need more attention. Studies relying on widely available panel data sets tend to promote an input-output view of education. While this may make reasonable sense for studying certain outcomes, such as test scores, it tends to downplay individuals' views of their own motives. Moreover, this data framework abstracts away from socially embedded processes.

Third, aspects of the college experience need to be incorporated into a general account of educational inequality. As we have seen, gender inequality in the United States is now less a matter of inequality in access, and more a matter of gender differentiation in educational experiences and outcomes. Process and outcomes need to be linked to access in a general analysis of the educational

system. There are many studies in the area of educational process, but these have not been synthesized into a general account of gender disparities.

Fourth, the relationship between gender and institutional development needs further attention. Educational research focuses heavily on individuals and tends to deemphasize the role of the institutional setting. More research that highlights the institutional context pertaining to gender inequality would be welcome.

Fifth, international comparisons also warrant further research. Accounting for women's share of access across countries would seem to be the logical first step. Assessing the role of gender in the educational process across countries would appear to pose more fundamental conceptual and measurement challenges, but it should also be addressed. The study of outcomes is complicated by international variation in linkages between school and work, but this analysis is needed.

In my view, the principal challenge facing research on gender in education is to go beyond documenting specific gender effects to developing a more theoretically motivated account of the status of women in the educational system. This perspective would have to account for the relative status of women in each aspect of the educational system as well as for variation across time and space. The challenge is to situate gender inequality economically, historically, culturally, and politically. The substantial research in various fields on women in education should set the stage for the next generation of researchers to tackle some of the fundamental issues regarding gender and the educational system. In particular, the relationship between gender inequality in education and that in the rest of society is a fundamental question for future theory and research.

ACKNOWLEDGMENTS

The author wishes to thank Kevin Dougherty, James Hearn, Barbara Heyns, David Karen, Demie Kurz, Brian Powell, Rachel Rosenfeld, and Susan Sturm for their constructive comments and suggestions, and Keren Polsky for her efficient research assistance.

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