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ABSTRACT

This issue analyzed college completion rates across populations and over time. It examined the ratios of highest degree completed to the total population that entered college from 1992 to 2000 with specific characteristics such as gender, race/ethnicity, and year. The analysis was designed to be useful in understanding patterns and trends in undergraduate degree completion for those who start a college education. Analysis of the Census Bureau data showed that among 25- to 29-year-olds who had enrolled in college, 49.8 percent had completed a bachelor's degree, an additional 14.9 percent had completed an associate degree, and 35.3 percent had not yet completed a degree. While degree completion rates were quite similar between men and women, they varied widely across racial/ethnic groups. They were highest for Asians (77.4 percent) and lowest for Hispanics (46.8 percent). The issue also reviews projections of bachelor degree attainment by gender from 1980 to 2000, and examines family income by educational attainment of householder from 1956 to 1999. (EV)

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Among those who start college, about two thirds will earn an undergraduate degree from college, either an associate's degree or a bachelor's degree by the time they are 25 to 29 years old. Nearly a third will start college but leave before obtaining a degree.

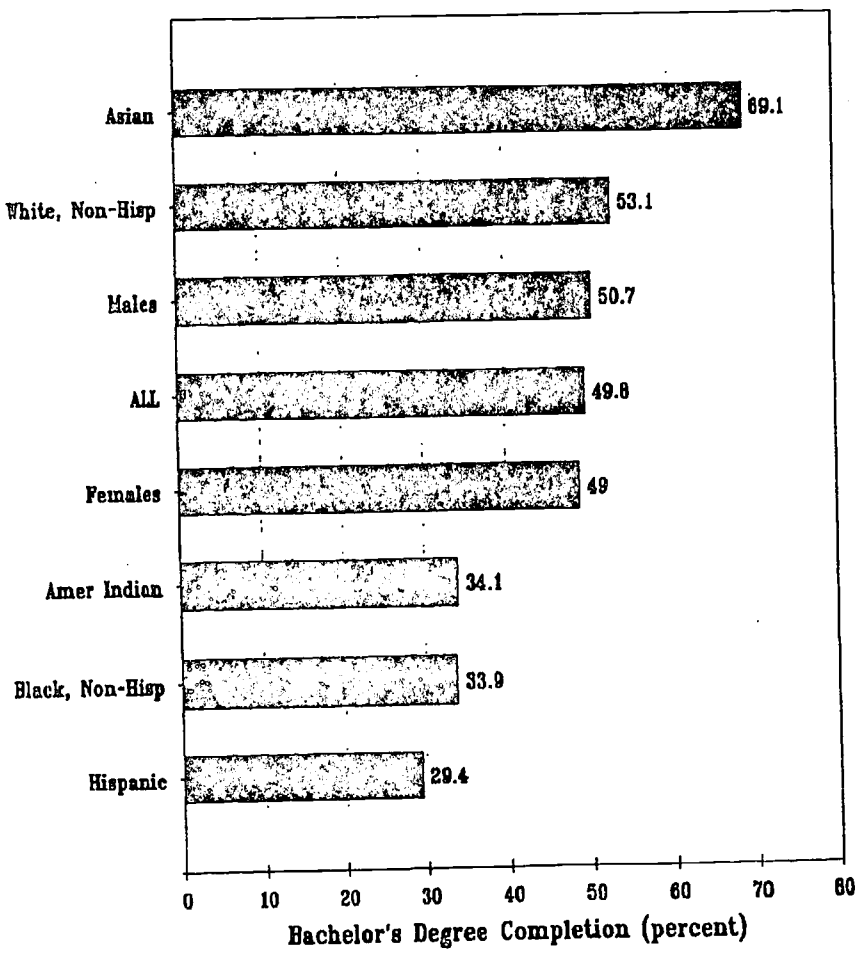
These completion rates vary widely across different population groups. Over three-quarters of Asians/Pacific Islanders who start college will obtain a degree. But less than half of all Hispanics will leave with an associate's or bachelor's degree by the time they are 25 to 29 years old.

American Indians are most likely to leave college with an associate's degree (perhaps because so many tribal colleges are two-year institutions). Asians are most likely to leave college with a bachelor's degree.

Among those who started college, by age 25 to 29 years the proportion of those whose highest degree completed was a bachelor's degree increased from 48.3 to 49.8 percent between 1992 and 2000. The proportion whose highest degree completed was as an associate's degree increased from 13.5 to 14.9 percent during the same period.

These and other findings are gleaned from data collected, tabulated and reported by the Census Bureau. These data are available in the current form for the nine years between 1992 and 2000. Major changes in data definitions implemented by the Census Bureau with the 1992 Current Population Survey limit comparisons between data collected prior to 1992 with the data collected beginning with

Bachelor's Degree Completion by Age 25 to 29 for Those Who Have Entered College 2000



Source: Census Bureau

the March 1992 Current Population Survey. These changes in definitions represent improvements to data examined for our purposes here.

Moreover, more recent improvements in racial/ethnic reporting implemented in the 1999 Current Population Survey offer highly significant insights into patterns and trends in undergraduate degree completion.

What this analysis does is examine college completion rates across populations and over time. That is, we look at the ratios of highest degree completed to the total population that entered college with specific characteristics such as gender, race/ethnicity and year. This analysis is intended to be useful to understanding patterns and trends in undergraduate degree completion for those who start a college education.

The Data

All of the data used here have been either reported by the Census Bureau, or derived from reported Census Bureau data.

These data are collected in the March Current Population Survey (CPS). The CPS is a monthly survey of about 50,000 households. It is mainly designed to gather data on employment and unemployment. Monthly supplements to the basic CPS questionnaire gather data on school enrollment (October) and educational attainment (March).

Newburger, E.C., and Curry, A.A. (December 2000). *Educational Attainment in the United States (Update).* Current Population Reports, P20-536. Washington, DC: U.S. Department of Commerce, Census Bureau.

Data collected in recent years, including much of what is analyzed here, is available from the Census Bureau's website:

http://www.census.gov/population/www/socdemo/educ-attn.html

Beginning in 1992 the Census Bureau made two major changes to its definitions of educational participation and completion. First, Census changed its definition of educational attainment from years of school completed to highest degree earned. Through 1991 the CPS reported, for example, its count of the number of students that had completed four years of college. Beginning in 1992 Census reported highest degree completed, e.g. associate, bachelor's, master's, etc.

The second change involved those with any college. Prior to 1992 only those who had completed one year of college were counted. Beginning in 1992 Census began counting and including those who had begun but not completed one year of college. This increases the size of the denominator in the ratios we have calculated.

Census has now published nine years of CPS data under the new definitions. It is these new data that we examined for this report.

A more recent reporting change concerns racial/ethnic reporting. Through 1998, the standard racial/ethnic categories were:

total
white
black
Hispanic

where Hispanics could be of any race, but about 95 percent were already counted in the data for whites.

Beginning in 1999 Census began reporting:

total
white, non-Hispanic
black, non-Hispanic

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

Password: RichardJohnston

Asian/Pacifidslander-non-Hispanic
Hispanic

These racial/ethnic classification schemes invited and continue to invite our elaboration.

- For example, under the former racial/ethnic classifications, assuming all Hispanics were white we could derive non-Hispanic white data by subtracting Hispanic from white.
- Similarly, we could derive "other race" (mainly Asians, but including American Indians) by subtracting white and black from population totals.
- We have derived American Indian data from the 1999 and 2000 data by subtracting from the population total white non-Hispanic, black non-Hispanic, Asian/PI non-Hispanic and Hispanic.

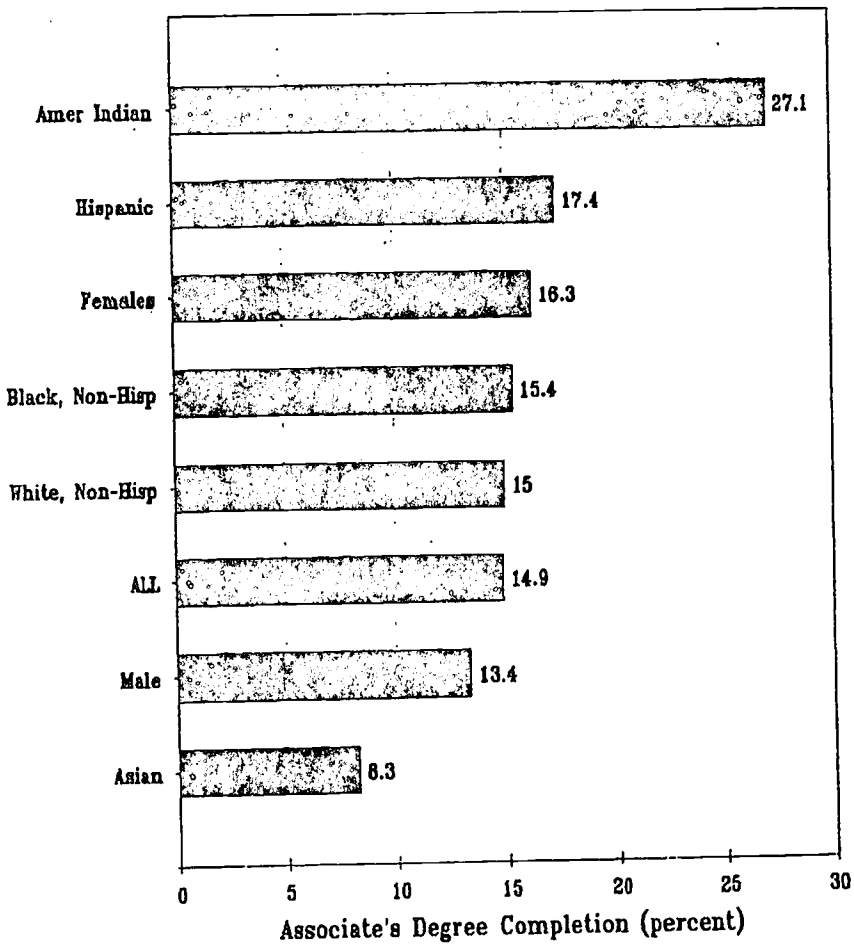
While these elaborations on data published by the Census Bureau may appear to be just exercises, two valuable insights into the data are gained. First we have expanded our insight into white non-Hispanic, Asian and American Indian college completion behaviors in ways not heretofore reported.

Second, this elaboration reveals significant and rapid changes in the racial/ethnic character of the 25 to 29 year old population with any college in the short period between 1992 and 2000. Among those with any college, the following were the percentage changes in the population of each distinct racial/ethnic group between 1992 and 2000:

population	+8.2%
white, non-Hispanic	-2.8%
black, non-Hispanic	+36.0%
other race (mainly Asian)	+72.2%
Hispanic	+52.6%

Changes such as these are of clear significance to those planning for diversity in college enrollments and future workforces.

Associate's Degree Completion by Age 25 to 29 for Those Who Have Entered College 2000



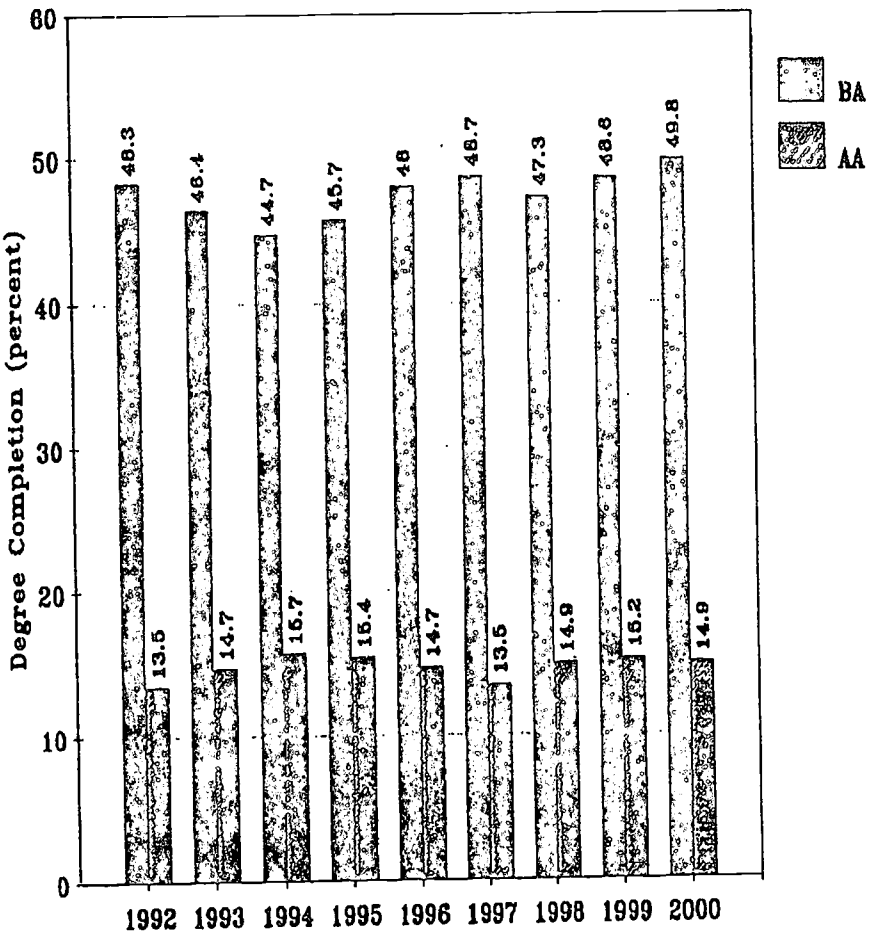
Source: Census Bureau

Degree Completion

In March of 2000 there were 10,657,000 people between the ages of 25 and 29 years who had entered college at some point in their lives. Of this total, 6,895,000 had completed an associate degree or more from college. This was 64.7 percent of the population of those who had started college. Again out of the total, 5,307,000 had completed a bachelor's degree or more from college. This was 49.8 percent of those who had started college. Both of these rates are undergraduate degree college completion rates.

For our analyses here, we disaggregate undergraduate degrees into those who completed an associate's degree only, and those who completed a bachelor's degree (or more). Among the 25 to 29 years olds in March of 2000, 1,588,000 people had completed the associate degree as their highest degree. Of this total 821,000 were occupational associate degrees and 767,000 were academic associate degrees, to use the Census Bureau terminology.

Undergraduate Degree Completion by Age 25 to 29 for Those Who Enter College 1992 to 2000



Source: Census Bureau

Among the 25 to 26 year olds, 5,307,000 had completed a bachelor's degree or more. Of this number, 4,313,000 had bachelor's degrees as their highest degree completed, 735,000 held the master's degree as their highest degree, 184,000 held professional degrees and 75,000 held doctorate degrees.

Of course not everyone receives an undergraduate degree. In 2000, of those 25 to 29 who had started college, 3,762,000 had some college but no degree. This was about 35 percent of those who had started college. Of course some of these students may still be enrolled, or will enroll later and complete their undergraduate degree. The 2000 data suggests a few more will complete a bachelor's degree. But the same is not true for associate degrees. Only about 70 percent of associate degrees appear to have been awarded by age 25 to 29 years. More will be awarded after 29.

Racial/Ethnic and Gender

The chart on page 1 of this issue of OPPORTUNITY shows bachelor's degree completion rates for both genders and each measurable and distinct racial/ethnic group as of March 2000. While 49.8 percent of the total 25 to 29 year old population that had started college sometime had completed a bachelor's degree, the rates varied widely.

By gender, males were slightly more likely than females to have completed at least a bachelor's degree if they started college, 50.7 to 49.0 percent.

But across racial/ethnic groups the differences in bachelor's degree completion rates were far greater. Non-Hispanic Asian/Pacific Islanders who had entered college had a bachelor's degree completion rate of 69.1 percent. At the other extreme, Hispanics with some college had a bachelor's degree completion rate of 29.4 percent, or less than half that of the Asians.

Notably, the groups with the highest bachelor's degree completion rates-Asians and whites--had the highest median family incomes. Those with the lowest bachelor's degree completion rates had the lowest median family incomes--Hispanics, blacks and American Indians.

The chart on page 3 shows associate degree completion rates by gender and race/ethnicity in March of 2000. This is the highest completed degree for these 25 to 29 year olds. In 2000 there were about 1,588,000 25 to 29 year olds with associate degrees as their highest completed degree. Of all who had started college, for 14.9 percent this was the highest degree completed. Of this total 821,000 were occupational and 767,000 were academic.

Trends

The data on college completion rates are available for the nine years between 1992 and 2000. While this is a relatively short period to study

trends, some results are interesting and a few quite important.

The chart on page 4 shows bachelor's degree and associate degree completion rates for all 25 to 29 year olds. For this population, the proportion with an undergraduate degree--either AA or BA--was 64.7 percent in 2000. This was the highest rate for the nine years of available data. In 1992, the first year of these data, 61.8 percent had completed an undergraduate degree. This dropped to a low of 60.7 percent in 1994, before rising to the recent record high level.

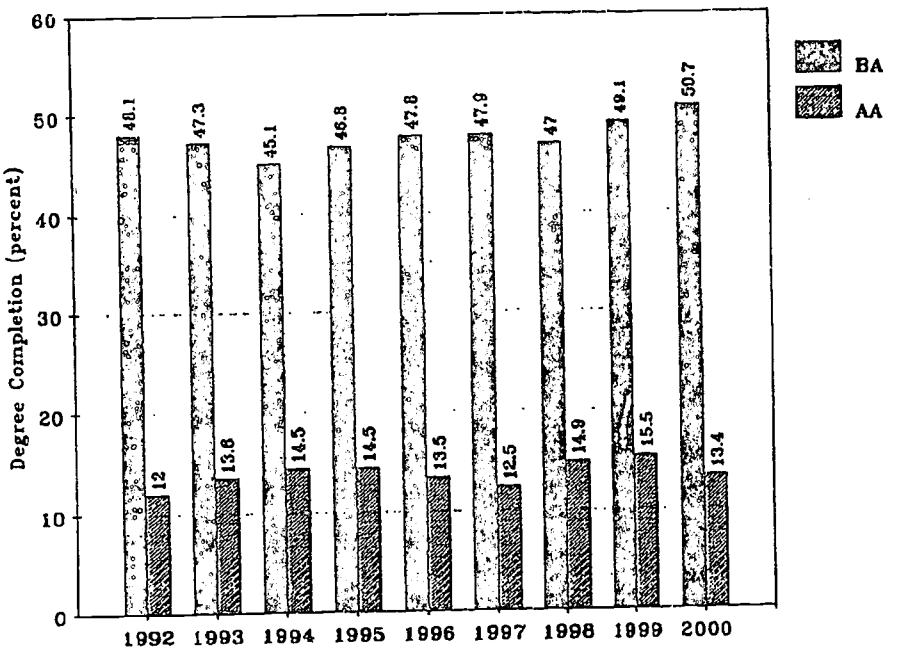
This chart shows something else of interest. Between 1992 and 1994, while the bachelor's degree completion rate was declining, the associate degree completion rate was increasing. Then, between 1994 and 2000, the bachelor's degree completion rate rose while the associate degree completion rate declined.

These shifts are small. But they appear to follow changes in the business cycle that are know to affect college enrollments. The economic recession of the early 1990s appears to have benefitted two-year degree completion, while the subsequent and prolonged economic expansion appears to have benefitted four-year degree completion.

Gender. The preceding patterns tend to hold for both males and females in undergraduate degree completion by age 25 to 29 years, as shown in the charts on this page.

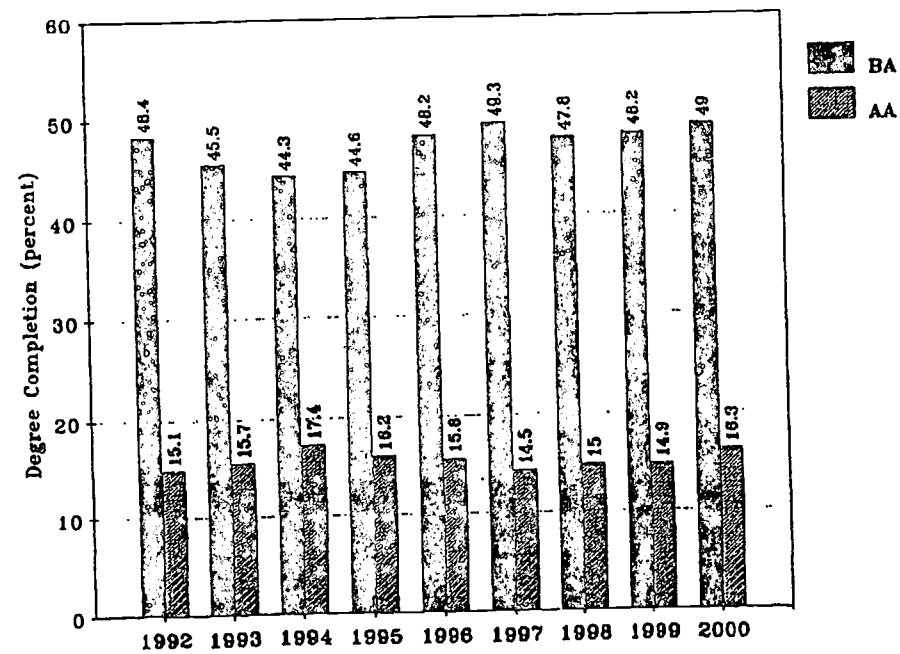
Out of 4,925,000 males age 25 to 29 that had entered college by March 2000, 3,155,000 had an associate degree or more, or 64.1 percent. 2,498,000 had a bachelor's degree or more, or 50.7 percent of those that had started college. 1,770,000 males had some college but had completed no undergraduate degree.

Undergraduate Degree Completion for Males by Age 25 to 29 Years for Those Entering College 1992 to 2000



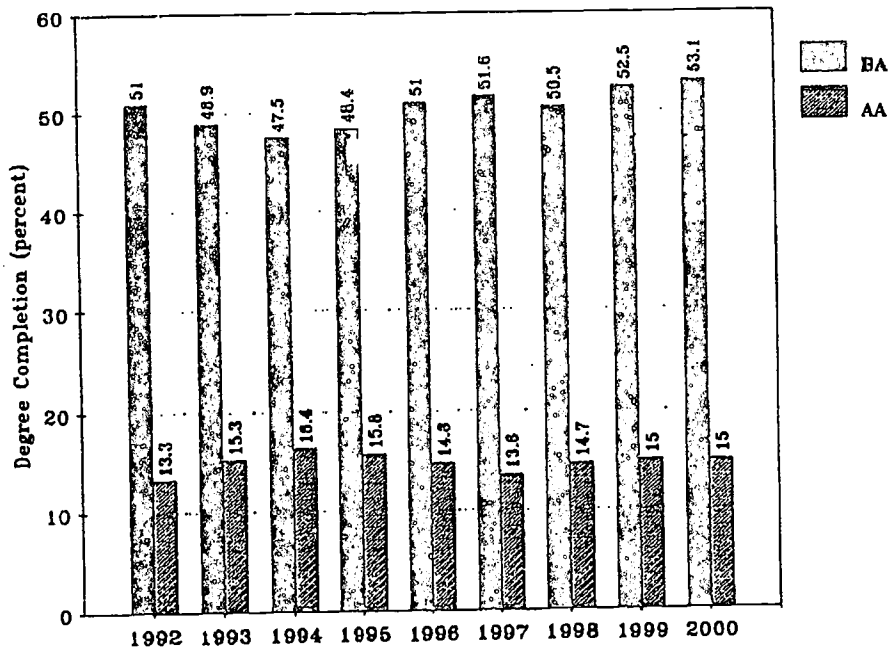
Source: Census Bureau

Undergraduate Degree Completion for Females by Age 25 to 29 Years for Those Entering College 1992 to 2000



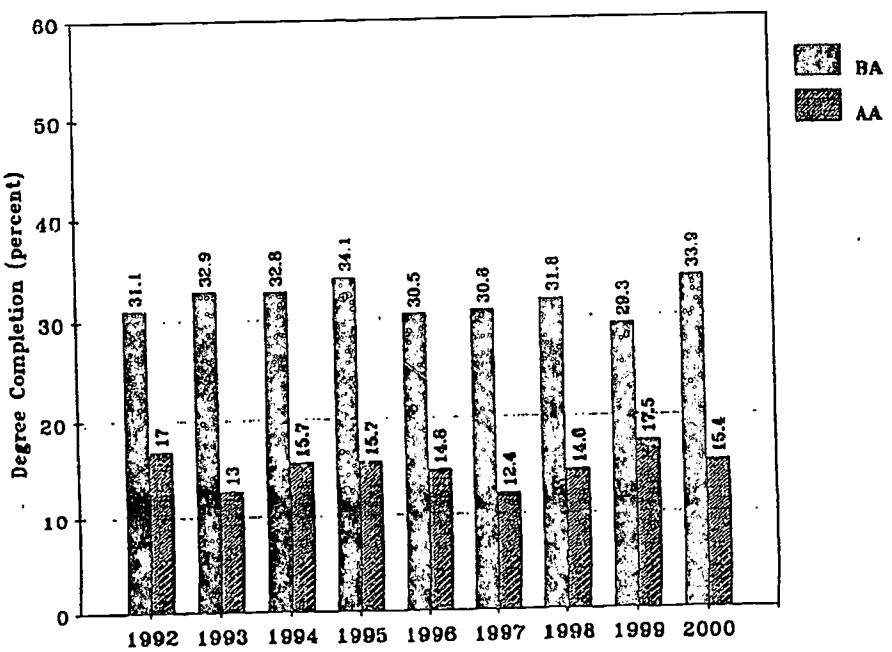
Source: Census Bureau

Undergraduate Degree Completion for Non-Hispanic Whites by Age 25 to 29 Years for Those Entering College 1992 to 2000



Source: Census Bureau

Undergraduate Degree Completion for Blacks by Age 25 to 29 Years for Those Entering College 1992 to 2000



Source: Census Bureau

Out of 5,735,000 females that had started college, 3,743,000 had an associate degree or more, or 65.3 percent. A subset of these, 2,811,000, had a bachelor's degree or more from college. This was 49.0 percent. Another 1,992,000 women had started college but had not yet earned an undergraduate degree.

Non-Hispanic whites. In March of 2000, 7,622,000 non-Hispanic whites age 25 to 29 years had started college. Of these 4,047,000 had a bachelor's degree (or more), and another 1,144,000 had associate degrees. Of those with any college, 53.1 percent had bachelor's degrees, and 15.0 percent had associate degrees. 3,575,000 had some college but no degree. Between 1992 and 2000, the number of whites age 25 to 29 with any college declined from 7,781,000 7,622,000.

Non-Hispanic Blacks. In this analysis data from 1992 through 1998 are for all blacks. Data for 1999 and 2000 are for non-Hispanic blacks. In 2000 there were 1,267,000 blacks age 25 to 29 with at least some college. Of these 429,000 or 33.9 percent had at least a bachelor's degree. Another 196,000 had associate degrees, or 15.4 percent of the total. 642,000 had some college but no degree. Between 1992 and 2000 the number of blacks age 25 to 29 with any college increased from 964,000 to 1,267,000.

Non-Hispanic Asian/Pacific Islander. This racial group stands out from other racial/ethnic groups by their relatively high bachelor's degree and low associate degree completion rates. In March of 2000, out of 771,000 25 to 29 year olds with any college, 533,000 or 69.1 percent had completed a bachelor's degree or more, and another 64,000 or 8.3 percent had completed associate degrees. The total degree completion rate was 77.4 percent. The remaining 174,000 had some college but no

college degree.

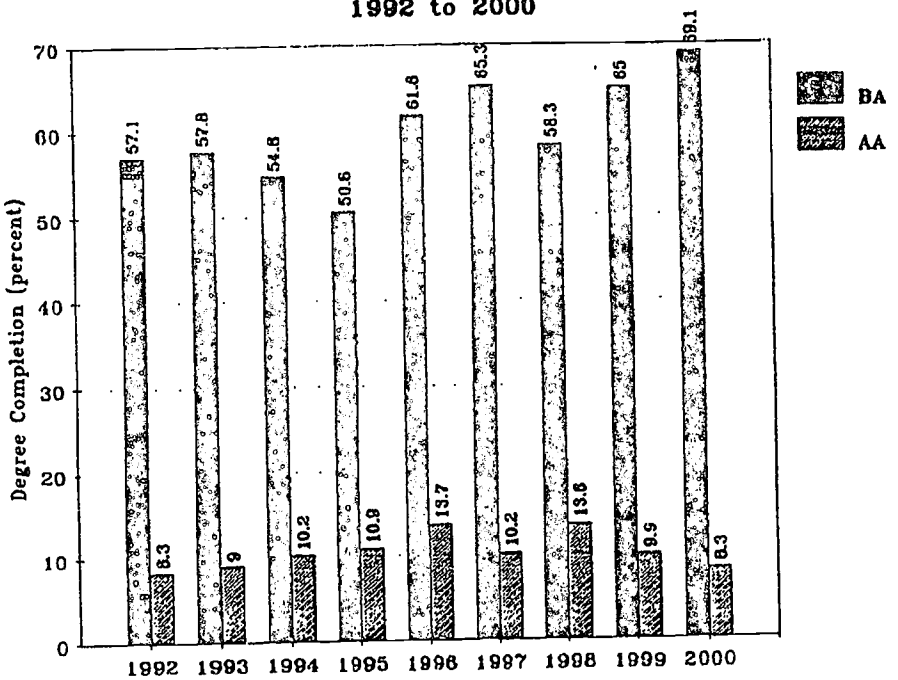
Hispanics. Hispanics may be of any race, although this group is about 95 percent white. They are the only ethnic group separately identified in reports produced annually from the Current Population Survey. Between 1992 and 2000 the number of Hispanics between the ages of 25 and 29 years with at least some college increased from 608,000 to 928,000.

In March of 2000 273,000 Hispanics in this age range had at least a bachelor's degree from college, for a college completion rate of 29.4 percent. An additional 161,000 had an associate's degree, or 17.3 percent completion rate. Thus 46.8 percent had an undergraduate degree. An additional 494,000 had some college but no degree. Hispanics had the smallest share of 25 to 29 year olds with any college who had completed any undergraduate degree.

American Indians. We have derived some questionable data from the published CPS data that probably mainly describes American Indians. Out of about 85,000 25 to 29 year olds with at least some college in 2000, 29,000 had a bachelor's degree (or more). This is 34.1 percent of the total. Another 23,000 had associate degrees, or 27.1 percent of those with some college. This is far larger than for any other group.

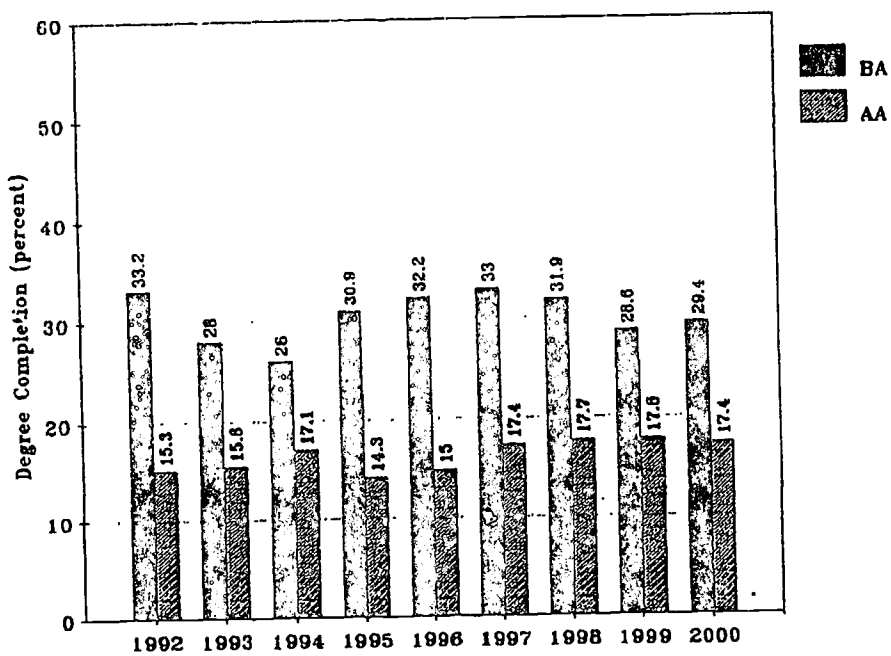
Our analysis of data recently released by the Census Bureau shows that among 25 to 29 year olds who had enrolled in college, 49.8 percent had completed a bachelor's degree, an additional 14.9 percent had completed an associate degree, and 35.3 percent had not yet completed a degree. While degree completion rates were quite similar between men and women, they varied widely across racial ethnic groups. They were highest for Asians (77.4 percent) and lowest for Hispanics (46.8 percent).

Undergraduate Degree Completion for Asian/Pacific Islanders by Age 25 to 29 Years for Those Entering College 1992 to 2000



Source: Census Bureau

Undergraduate Degree Completion for Hispanics by Age 25 to 29 Years for Those Entering College 1992 to 2000



Source: Census Bureau

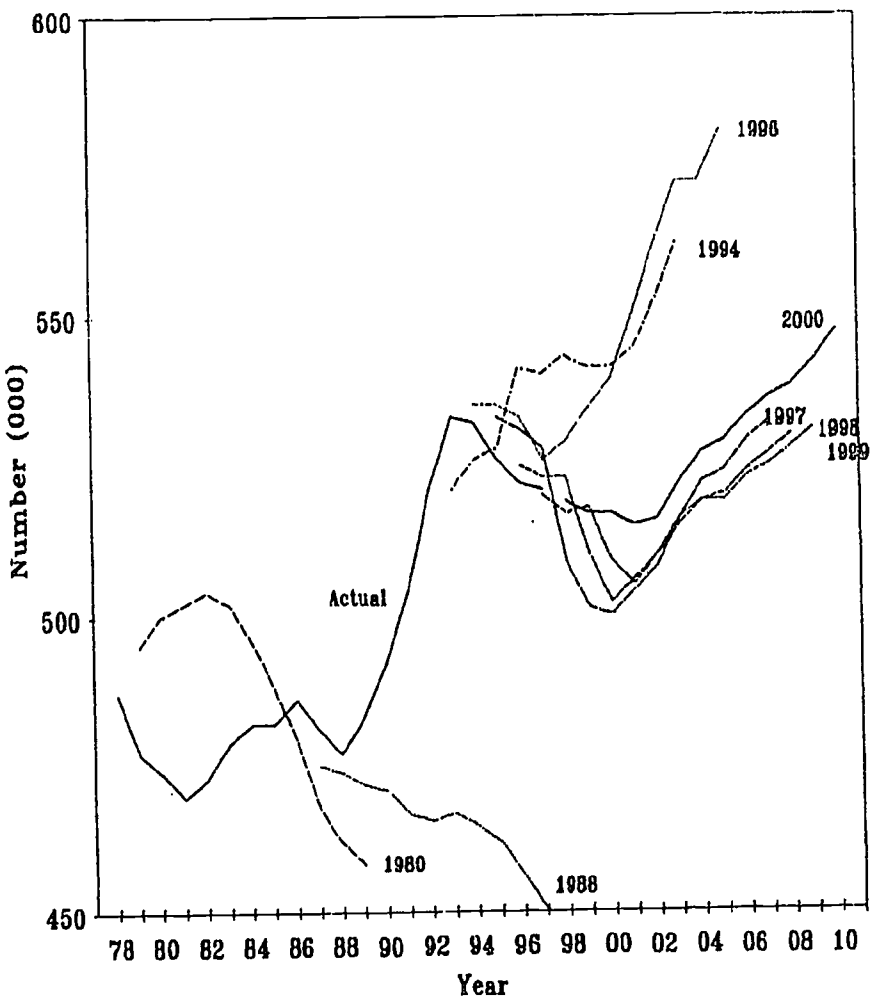
Projecting Bachelor Degree Recipients by Gender 1980 to 2000

Historical data since 1870 have shown a steady growth in the proportion of bachelor's degrees awarded to women. In 1870 14.7 percent of all bachelor's degrees were awarded to women. By 1997 this had grown to 55.6 percent. On October 1, 2000, females were 49.0 percent of the population between the ages of 20 and 24 years according to the Census Bureau.

Since 1964 the National Center for Education Statistics has published projections of bachelor degree production by U.S. colleges and universities. These projections are prepared for women and men separately. They are published each year in the annual NCES report *Projection of Education Statistics* along with other education projections.

Recently we reviewed these projections to see how well they captured the dramatic growth in the numbers of bachelor's degrees awarded to women over the last two decades. The growth in bachelor's degrees awarded to women, combined with the lack of comparable growth in bachelor's degrees awarded to males, has produced the gradual, persistent and significant redistribution in bachelor's degrees awarded by gender noted above.

Actual and Projected Male Bachelor Degree Recipients 1980 to 2010



Source: National Center for Education Statistics

All projections, by their very nature, turn out to be wrong. Actual numbers nearly always turn out to be higher or lower than the projections. However, projections remain useful because they indicate future conditions that are relevant to public policy makers. Some projection factors, such as the size of the population to be served, are well know decades in advance. Other factors, such as participation and completion rates, are subject to unknowable future conditions such as the stage of the business cycle.

The accuracy of the NCES projections by gender are not at issue here. Rather, we wanted to see how well these projections captured the gender shift from majority male to majority female during the last two decades.

Our review of the past projections finds that until about 1996 NCES has poorly projected bachelor's degrees by gender.

- The NCES projections produced in 1980, 1988, 1994 and 1996 missed the gender shift in bachelor degree awards completely. Not only the magnitude, but more importantly the direction of change turned out to be wrong.
- The NCES projections for 1997, 1998, 1999 and 2000 appear to have captured the gender shift, but it is too early by several years to know for sure.

What we conclude is that the projection models used by NCES did not capture the gender revolution while it was underway. In fact it had been underway for many years and it was not recognized. NCES projections produced beginning in 1997 appear to have a fuller appreciation of the gender revolution occurring in higher education enrollments and bachelor degree awards.

The Data

All of the data on bachelor's degree awards by gender used in this analysis are either collected or produced by the National Center for Education Statistics.

The historical data on bachelor's degrees by gender have been collected by NCES or its predecessors since 1870 from institutions. Currently these data are collected in the annual IPEDS survey. When they are compiled and reviewed by NCES, they are published first in ED Tabs reports, and eventually appear in summary tables in the annual *Digest of Education Statistics*.

Morgan, F. B. (November 1999.) *Degrees and Other Awards Conferred by Title IV Eligible, Degree-granting Institutions: 1996-97.* National Center for Education Statistics. NCES 2000-174. Washington, DC: U.S. Department of Education.

The projected data on bachelor's degrees by gender are also produced by NCES, albeit by different staff. These data appear in the following publication, which has recently been updated through 2010 on the internet:

Gerald, D. E., and Hussary, W. J. (July 1999.) *Projections of Education Statistics to 2009.* National Center for Education Statistics. NCES 1999-038. Washington, DC: U.S. Department of Education.

We have used reports from this projection series that were prepared in 1980, 1988, 1994, 1996, 1997, 1998, 1999 and 2000 in this study.

The projection models for male and female bachelor's degree awards are detailed in a technical appendix to the report. The regression equations and variables used, as well as the assumptions are described in the appendix. The most recent report is available from the NCES website at:

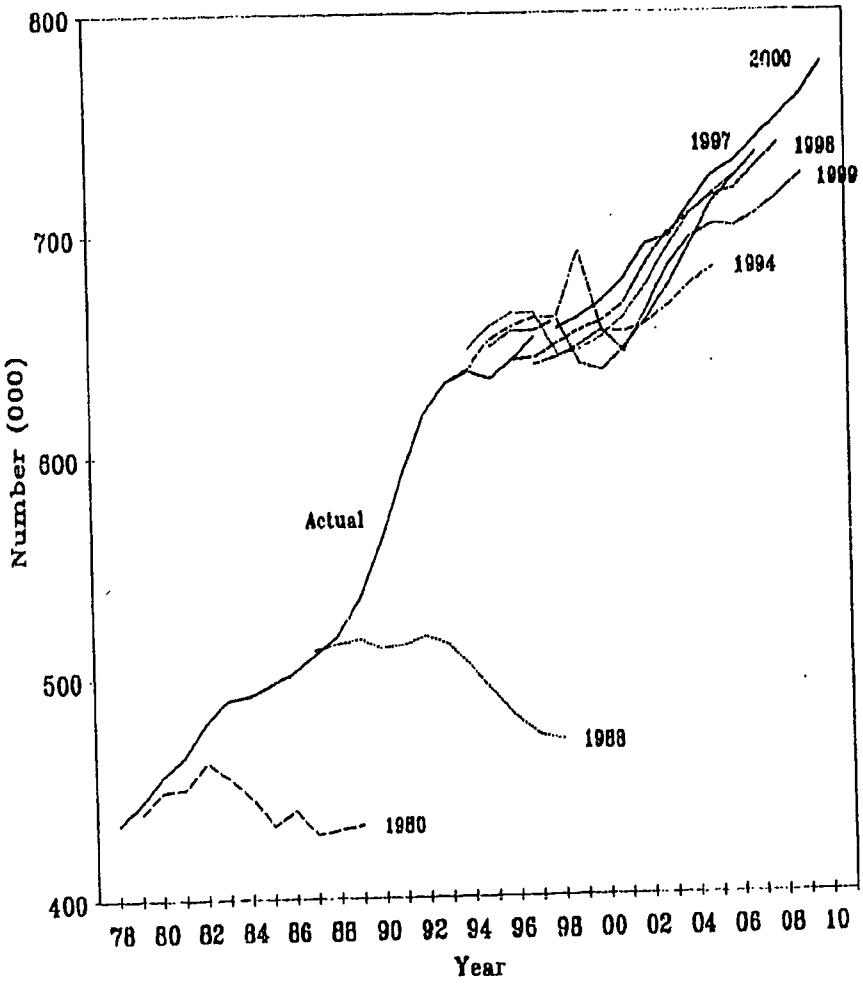
http://nces.ed.gov/pubs2000/projections

Our tabulation and analysis of the actual and projected data is available in an Excel spreadsheet on our website at:

http://www.postsecondary.org

Look under the Spreadsheets button.

Actual and Projected Female Bachelor Degree Recipients 1980 to 2010



Source: National Center for Education Statistics

Actual and Projections

Between 1978 and 1997 the number of bachelor's degrees awarded in the United States increased from 921,204 to 1,172,879, an increase of 27.3 percent. During this same period the number of bachelor's degrees awarded to females increased from 433,857 to 652,364, or by 50.4 percent. The number of bachelor's degrees awarded to males during this period increased from 487,347 to 520,515, or by 6.8 percent. During this period the proportion of bachelor's degrees awarded to men declined from 52.9 to 44.4 percent.

1980. In April of 1980, NCES made projections of bachelor degree awards by gender for 1979 through 1989. (There is a two-year delay between the completion of the academic year and reporting of degree recipient data from which the projections are made.) For males, these projections were well above actual and subsequent counts between 1979 and 1984, but thereafter fell well below actual numbers. For females, projected numbers of bachelor degree awards were consistently below subsequent actual numbers, by an increasingly wider margin in the later years of the ten-year projection.

As a result of these disparities, the 1980 projections substantially underestimated the actual gender shift in bachelor degree awards that occurred between 1979 and 1989. By 1989, 47.4 percent of the bachelor's degrees were actually being awarded to men whereas in 1980 NCES had projected 51.4 percent in 1989.

This underestimation of the gender shift was to be repeated again and again in subsequent NCES projections of bachelor degree awards by gender.

1988. In September of 1988 NCES released projections of bachelors degrees by gender for 1987 through 1998. For males, NCES projected a decline in the number of bachelor's degrees from 475,000 in 1987 to 450,000 by 1997. Actually, the number increased during this period from 480,782 to 520,515 in 1997.

The 1988 projections for females were even farther from the actual mark. The projections were that the number of bachelor's degrees awarded to women would decline from 512,000 in 1987 to 473,000 by 1997. Actually the number increased from 510,482 to 652,364 by 1997.

In these 1988 projections, NCES projected that the proportion of bachelor's degrees awarded to males would increase from 48.1 to 48.8 percent between 1987 and 1997. Actually, the male share declined from 48.5 to 44.4 percent.

1994. The December 1994 NCES projections continued the previous patterns of underestimating the progress of women, and overestimating the progress of males. For males, these projections were that the number of bachelor's degrees would increase from 521,000 in 1993 to 540,000 by 1997. Actually the number declined from 532,881 to 520,515 during this period. For females the projection was increased from 632,000 in 1993 to 661,000 by 1997. Actually, the numbers grew from 632,297 to 652,364 during this period. The projected share of bachelor's degrees awarded to males was from 45.2 to 45.0 percent during this period. Actually it declined from 45.7 to 44.4 percent between 1993 and 1997.

Recent projections. The most recent NCES projections of bachelor's degrees by gender show declines for males followed by increases through 2010.

For females the projections all show significant, continuing growth, with the just-released 2000 projections through 2010 projecting the greatest increases.

Gender Shift

The NCES projections of bachelor's degrees by gender have failed to capture and understand the enormous changes occurring in the production of bachelors degrees by American colleges and universities. As guides to the next decade, they have utterly missed the mark. Like all of us, the projection models--built by humans--did not see what was happening in the educational system that has produced such starkly different results in bachelor degree awards to men and women.

These measures of the attainment of the genders through the bachelor's degree are like the canary in the coal mine. Many small changes affecting the educational experiences of boys and girls, and of men and women, in the educational system become most apparent at college graduation, at the end of the education pipeline. The shifting gender balance in the awarding of bachelor's degrees is a reflection of differences in the educational and other experiences of boys and girls growing up. This reflection strongly suggests the success of these experiences in preparing girls and young women for the adult worlds of work, family and civic life. It also strongly reflects our failure to improve the educational experience for boys and young men--to make it interesting, attractive and engaging.

The most recent NCES projections just released show a more pronounced gender shift in the award of bachelor's degrees than any produced to date. By 2010 just 41.? percent of the bachelor's degrees will be awarded to men, although men represent 51 percent of the population between the ages of 20 and 24 years. To judge by

NCES's past record of substantially underestimating the gender shift, even these new estimates may understate what will happen a decade from now. We could just wait and see what happens, or we could try to do something to stop the gender imbalance from worsening from its currently unbalanced state. That would, of course, require an effort that thus far no one is undertaking.

Context

The first article in this issue of OPPORTUNITY finds that males who start college are now somewhat more likely than females to complete a bachelor's degree by age 25 to 29 years. Thus, the gender shift in bachelor degrees awarded does not appear to be the result of different rates of success *for those who make it to higher education.*

Rather, the problems for males appear to begin earlier in the educational system. Remember that for every 100 girls born in the U.S., 105 male babies are born. This has been constant over at least the last two decades. About 51 percent of the babies born each year are boys.

Males maintain this population advantage through age 24, then have about equal numbers with women through 29. By age 30 women barely outnumber men, and thereafter the gender gap in the population grows steadily ever wider as men die earlier in their lives than do women.

Men received just 44.4 percent of the bachelor's degrees awarded in the U.S. in 1997. The source of the gender gap does not appear to be in college completion for those who make it to college. Thus, the source of the gender disparity must predate higher education enrollment.

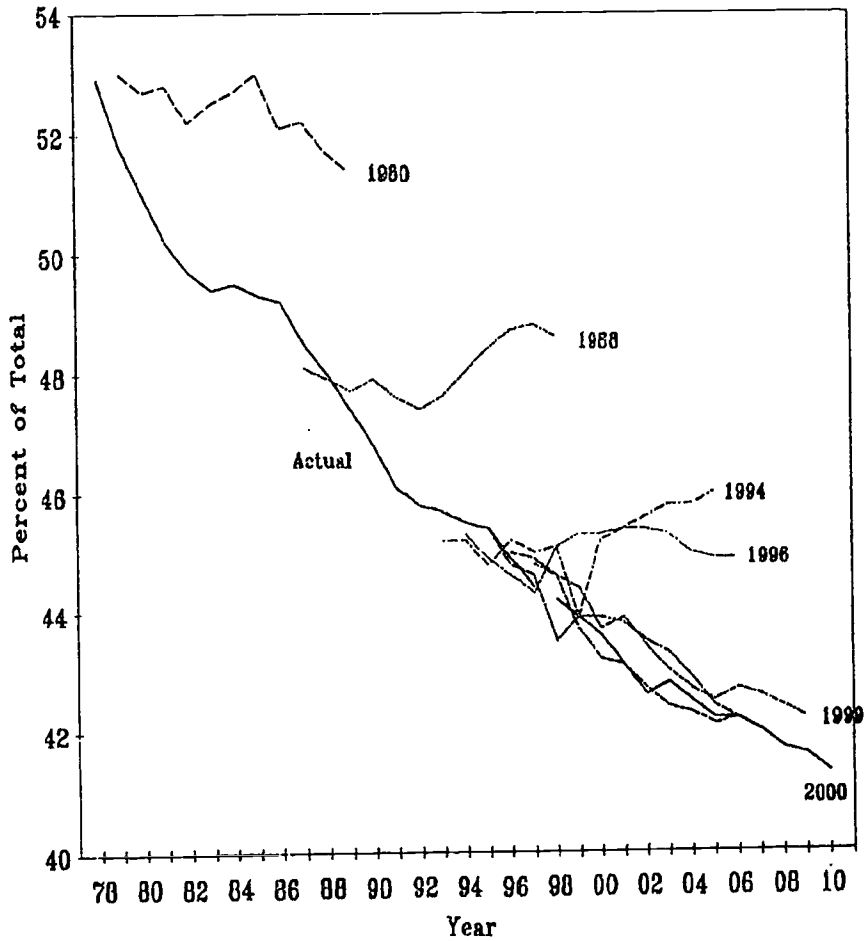
Something is occurring differently in the lives of boys and girls while growing up. And whatever this differential influence is, it has developed over the last twenty five years.

We have speculated on its causes--urbanization and labor market changes, that favor women and no longer favor men--mostly to get an inteliigent national discussion started on the future of the male gender. We do not consider affirmative action for males in college admission to qualify as an intelligent response to the growing gender imbalance in college enrollments. Nor do we think colleges that beef up their sports programs to attract males to qualify as an intelligent response.

Rather we should be asking why adult males are disengaging from their traditional labor market, family and civic roles. We should be asking if the problems of adult men are adversely affecting their own sons.

Maybe if we were farther along on this discussion, our projections of bachelor's degrees by gender would be more accurate than they have been in the past.

Actual and Projected Shares of Bachelor's Degrees Awarded to Males 1980 to 2010



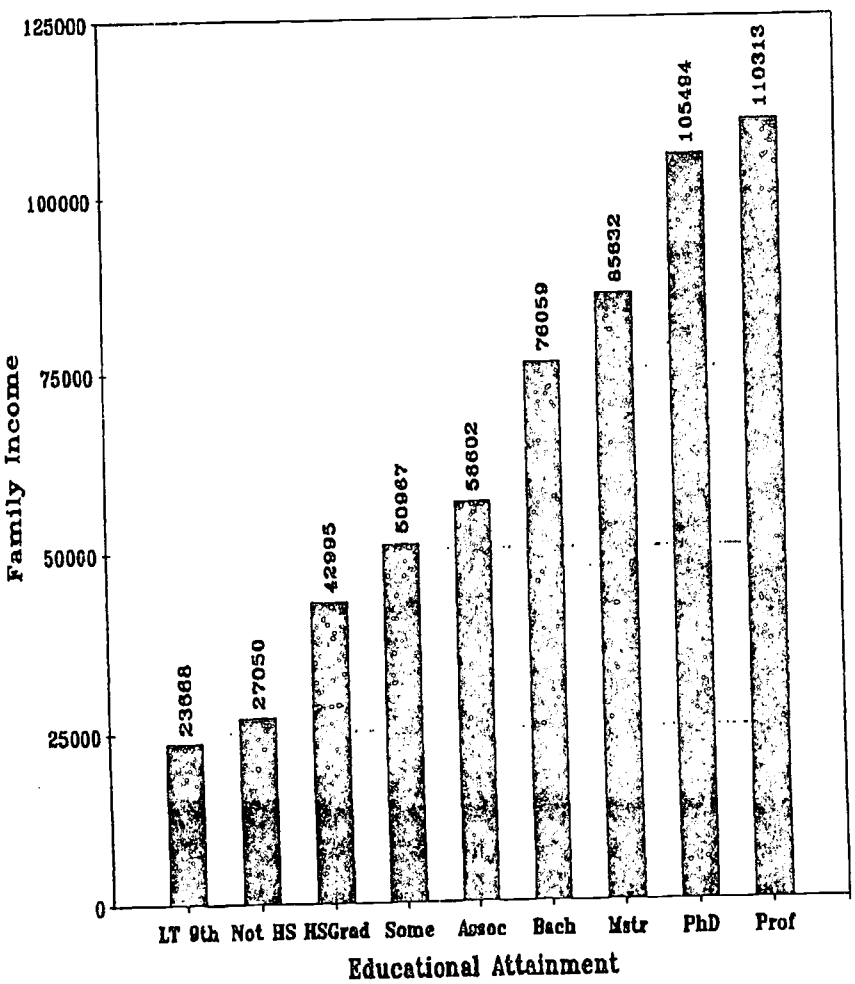
Source: National Center for Education Statistics

Family Income by Educational Attainment of Householder 1956 to 1999

Most Americans live most of their lives in family units. In 1999 about 82 percent of all Americans were living in families. In 1999 average family size was 3.2 members, but varied by race and ethnicity. Hispanic families average 3.9 members, compared to 3.4 for blacks and 3.0 for non-Hispanic whites.

Families are where we raise our children, but families include other arrangements too. The Census Bureau defines a family to be two or more people related by birth, marriage or adoption living in the same housing unit. In 1999 fewer than half (49 percent) of all family households had own children under 18 living at home. 14.4 percent of the family households had own children age 18 and over living at home.

Median Family Income by Educational Attainment of Householder 1999



The welfare of families is substantially determined by the amount of money available to live on. Less money yields lower living standards. More money yields higher living standards. Thus, family income is a useful measure of family welfare.

And increasingly, family income (and welfare) is determined by the educational attainment of the breadwinners in the family. More education leads to more income which in turn produces higher family living standards. (Yes, it is just that simple.)

Not only has this relationship persisted over time, since the early 1970s the relationship has strengthened. Families headed by persons with the most formal education have seen real gains in their incomes and living standards. Families headed by persons with the least formal education have seen real declines in their incomes and living standards.

Here we update and extend our many previous analyses of the relationship between educational attainment and family income. Recent release of 1999 family income data by the Census Bureau enable this update. Additional unpublished Census Data extend the analyses.

In so many respects it is this simple, straightforward relationship that underpins public policy designed to foster opportunity for postsecondary education and training. More is better, especially in this materialistic society. And especially since 1973. Indeed, our futures depend on it.

The Data

Data on 1999 family income became

available when in September the Census Bureau released results from the March 2000 Current Population Survey. This report is available on the Census Bureau's website at:

http://www.census.gov/hhes/www/income.html

These data were collected in the March supplement to the monthly Current Population Survey (CPS). This is a monthly survey of about 50,000 American households designed to collect data on employment and unemployment. The March supplement includes a major demographic component that asks additional questions on income and educational attainment.

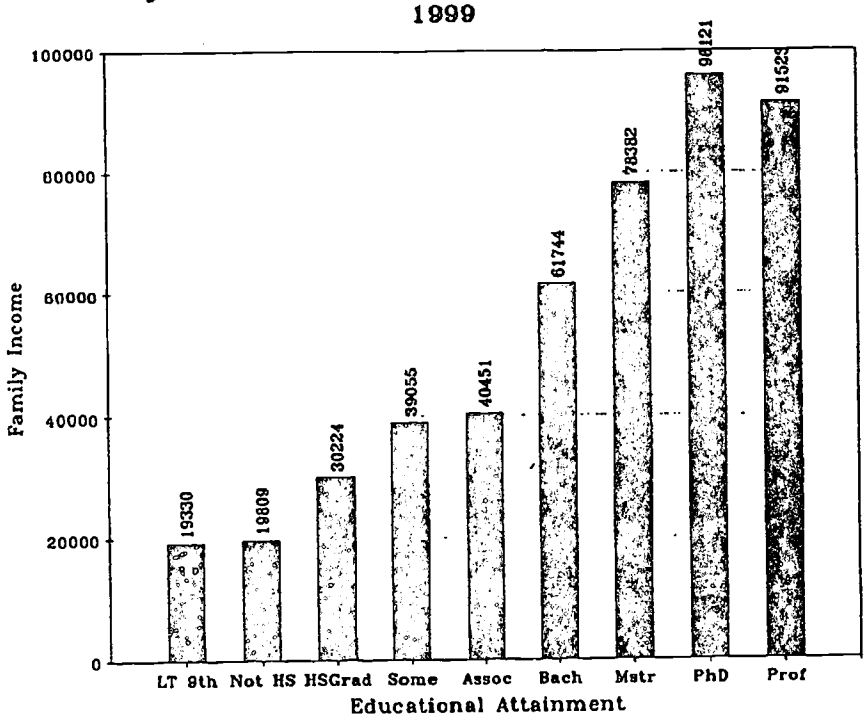
The official definition of money income includes for each person in the CPS sample 15 years and over the amount of money income received in the previous calendar year from each of the following sources:

1. Earnings.
2. Unemployment compensation.
3. Worker's compensation.
4. Social security.
5. Supplemental security income.
6. Public assistance.
7. Veterans' payments.
8. Survivor benefits.
9. Disability benefits.
10. Pension and retirement income.
11. Interest.
12. Dividends.
13. Rents, royalties, and estates and trusts.
14. Educational assistance.
15. Alimony.
16. Child support.
17. Financial assistance from outside of the household.
18. Other income.

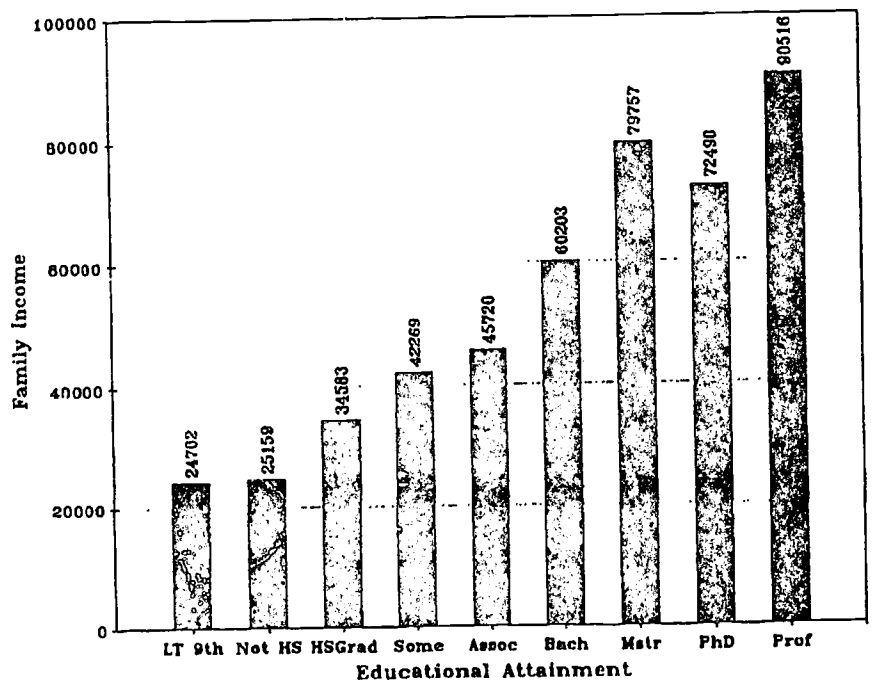
Educational Attainment

The chart on the previous page shows median family income by educational attainment of the householder for 1999. (Census reported median family income for householders with

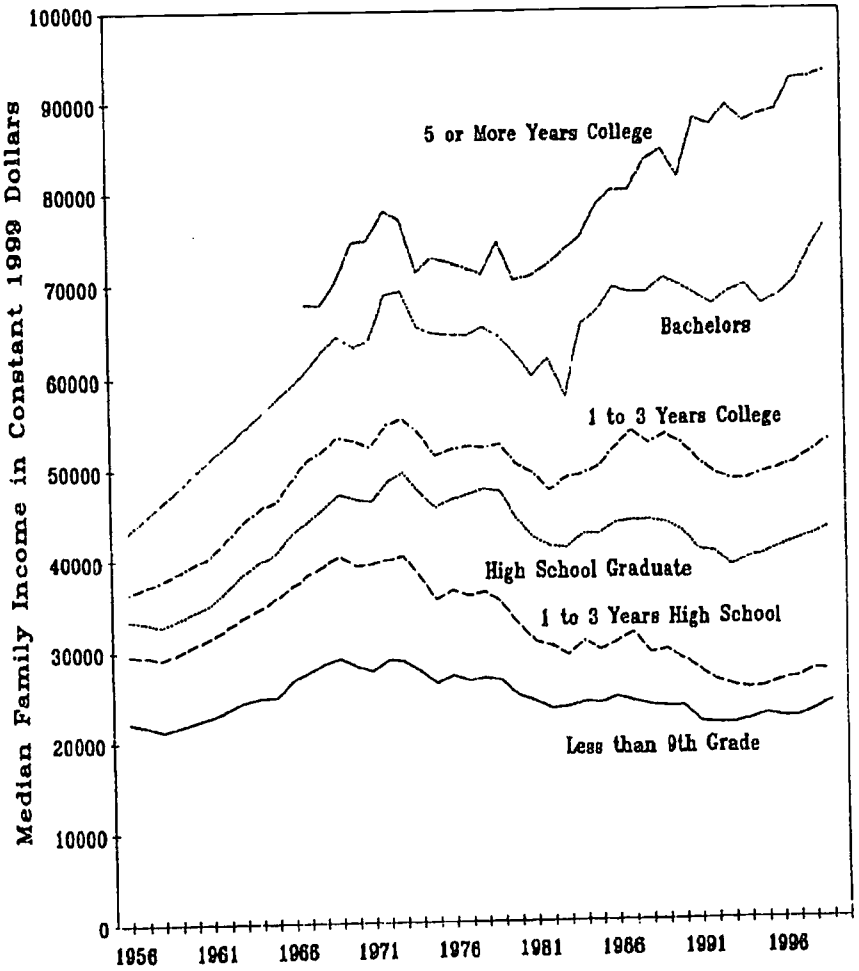
Median Family Income for Black Families by Educational Attainment of Householder 1999



Median Family Income for Hispanic Families by Educational Attainment of Householder 1999



Median Family Income by Educational Attainment of Householder 1956 to 1999



doctorates and professional degrees at exactly $100,000. So we have substituted our own estimates by extrapolation.)

Across levels of educational attainment, median family income rises:

- For families headed by persons with some high school but less than a high school diploma, median family income in 1999 was just over $27,000.
- For high school graduate-headed families, median family income rises to nearly $43,000.
- In families headed by a persons with an associate degree, median family income is closer to $57,000.
- For families headed by a person with a bachelor's degree, the median is over $76,000.
- In families headed by persons with doctorate or professional degrees, the median family income is over $100,000.

Race/ethnicity. Beginning with 1998 the Census Bureau began reporting family income by race/ethnicity. The 1999 family income data are reported for white, black, Hispanic and non-Hispanic white at:

http://ferret.bls.census.gov/macro/032000/faminc/new01_000.htm

As shown in the charts for black and Hispanic families on page 13, the basic pattern for all families on page 13 holds here too. Median family income increases with educational attainment in all racial/ethnic groups.

Income per Family Member

Another way of examining the importance of educational attainment is to look at income per family member. Obviously income at a given level would be more important to larger families than it would to smaller families. Fortunately, the Census Bureau has controlled for family size, and calculated family income per family member.

The chart on the following page shows this relationship. Family income per member ranges from $8,873 in families where the householder has less than a 9th grade education, to $48,391 in families where the householder has a professional degree.

By way of reference, 1999 weighted average poverty thresholds by family size were as follows:

One person (under 65)	$8,667
Two people (under 65)	$11,214
Three people	$13,290
Four people	$17,029
Five people	$20,217
Six people	$22,727
Seven people	$25,912
Eight people	$28,967
Nine people or more	$34,417

While our chart on the following page shows this relationship for all families, the Census Bureau has calculated and reported these data for each racial/ethnic group: white, black, Hispanic and non-Hispanic white. These data are available at the above Census Bureau website.

Trends

The chart on page 14 shows trends in two distinct periods: pre- and post-1973.

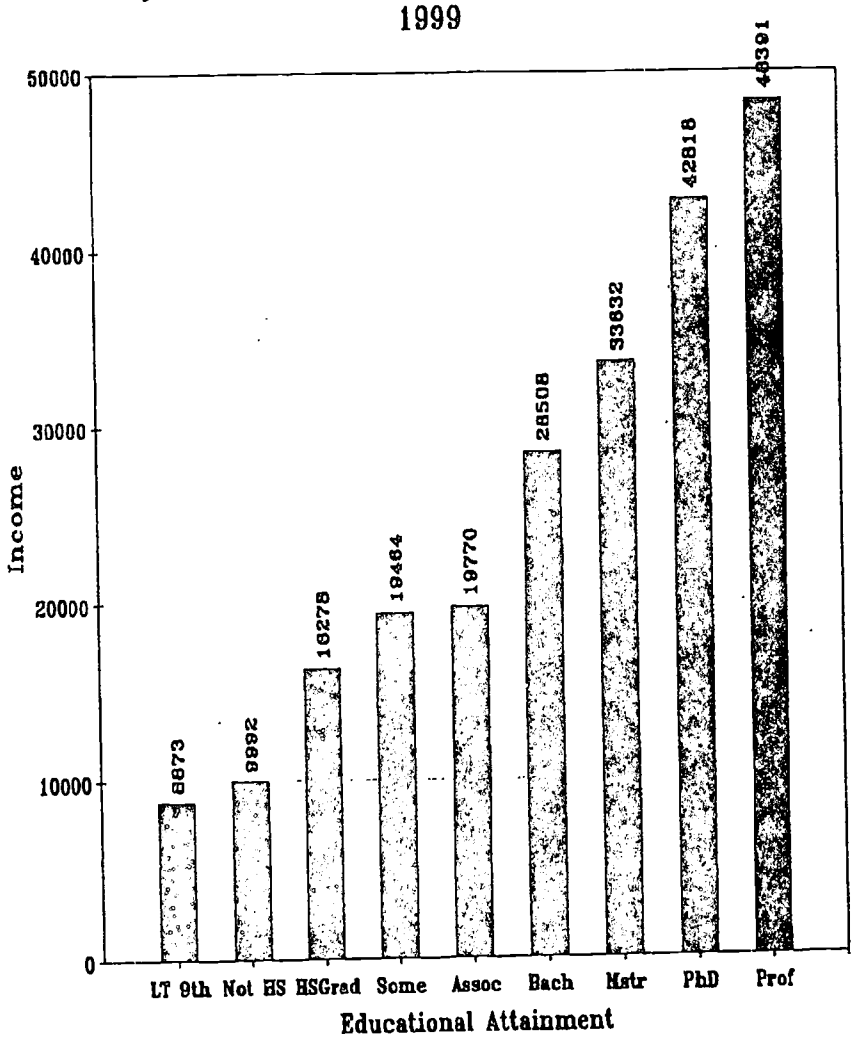
During the first period, median family income in constant dollars increased at all levels of educational attainment. This period spanned at least the period from 1956--when Census began reporting these data--through about 1973. This was the era when the rising tide lifted all boats, and it ended nearly three decades ago.

The second period spans the years from 1973 through the present. During this period, median family income for all families remained about flat. But during this period, family income was significantly redistributed away from families headed by persons with lower levels of educational attainment toward those families headed by persons with the most formal education. This is the human capital era when real family income gains go only to those with college educations.

How families at different levels of educational attainment have fared since 1956 may be shown with a few examples. Dollars are constant 1999 dollars.

- Families headed by persons with some high school but no diploma saw their median family income increase from $29,600 in 1956 to a peak of $40,300 in 1973. Since then they have declined to $27,100 by 1999.
- Families headed by persons with a high school diploma only have seen their median family incomes increase from $33,400 in 1956 to a peak of $49,500 in 1973, then fall back to $43,000 by 1999.
- Families headed by persons with 1 to 3 years of college have seen their real median family incomes increase from $36,400 in 1956 to a peak of $55,400 in 1973. After 1973 the median has fluctuated between $48,300 (1993) and $53,900 (1987), and in 1999 stood at $52,700.
- Families headed by persons with a bachelor's degree have seen their real median incomes increase from $43,000 in 1956, to $69,200 in 1973, to a record $76,100 in 1999.
- The families with the greatest real income gains are those with five or more years of college. Real median incomes have increased from $67,800 in 1967 to $77,000 by 1973 and further to a record high of $93,000 in 1999.

Income per Family Member
by Educational Attainment of Householder
1999



Interpretation

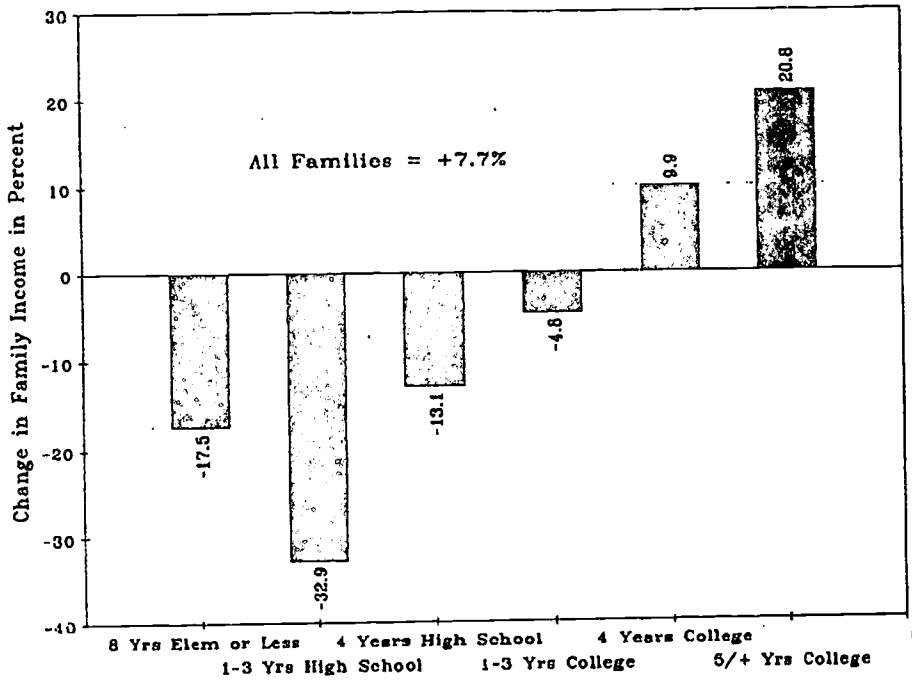
Clearly, those families headed by persons with a bachelor's degree or more from college have seen substantial real gains in their median incomes since 1956. Those with a high school education prospered between 1956 and 1973, but have since experienced substantial erosion in their real incomes and living standards.

There is another way to interpret this redistribution of family income since 1973--through a demand/supply

model. The labor market's need for college educated workers has grown faster than the supply since 1973. Thus, the market value of workers with the highest levels of education and training has increased since 1956. Also, there are more workers than jobs that require a high school education or less. Thus the market value of these workers has declined.

Our interpretation of these data is that the need for higher educated workers of the American economy has increased faster than the supply of such workers since 1973. While the federal government has been expanding its investment in higher education, states have been curtailing their investments, particularly since 1980. States have grown more short-sighted in refocusing state resources away from long term human capital growth into meeting shorter term needs for prisons and Medicaid.

Change in Median Family Income
by Educational Attainment of Householder
Between 1973 and 1999



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