

NASFAA Conference 2002  
New Orleans, Louisiana

**Student Loans and Graduate  
School/Career Choices**

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The Pennsylvania State University

# Outline

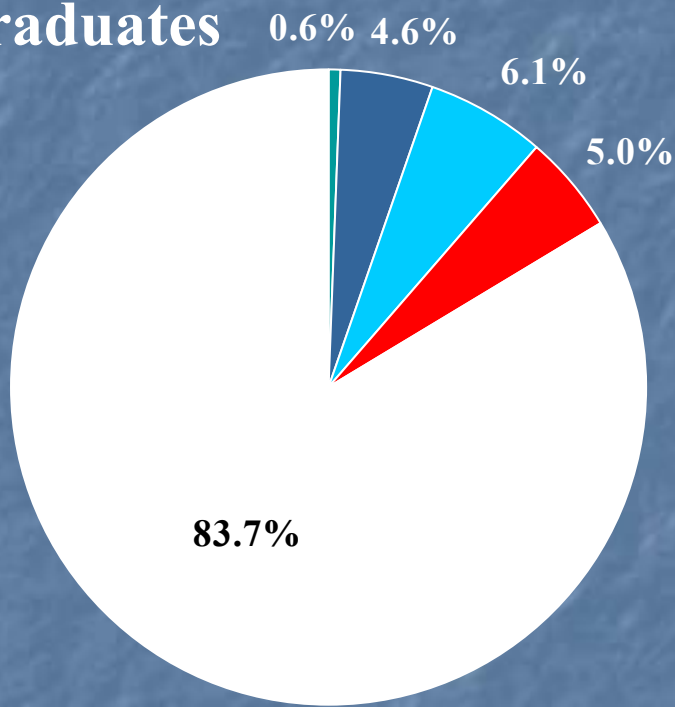
- Portrait of the Class of 1993
- Borrowing and repayment patterns
- Post-baccalaureate job and graduate school choices
- Student loan repayment burden
- Joint determinants of graduate school enrollment
- An update since 1993
- Conclusions and discussion

# Data Source

- NCES, Baccalaureate and Beyond Survey – 11,000 graduating students in 1992-1993 academic year
- Statistically representative of the population of bachelor's degree recipients that year (1.2 million)
- Surveyed:
  - Final year in college
  - One year after graduation (1994)
  - Four years after graduation (1997)

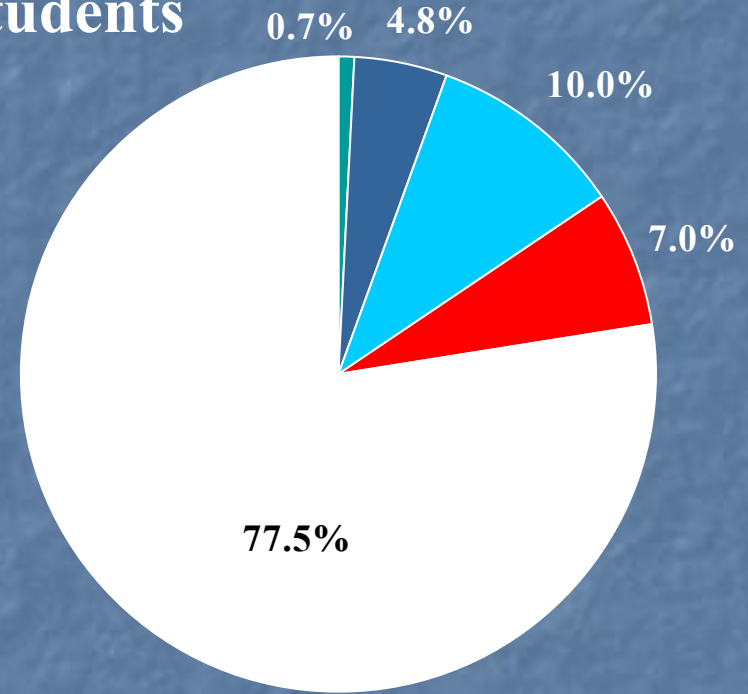
# Portrait of the Class of 1993

## Graduates



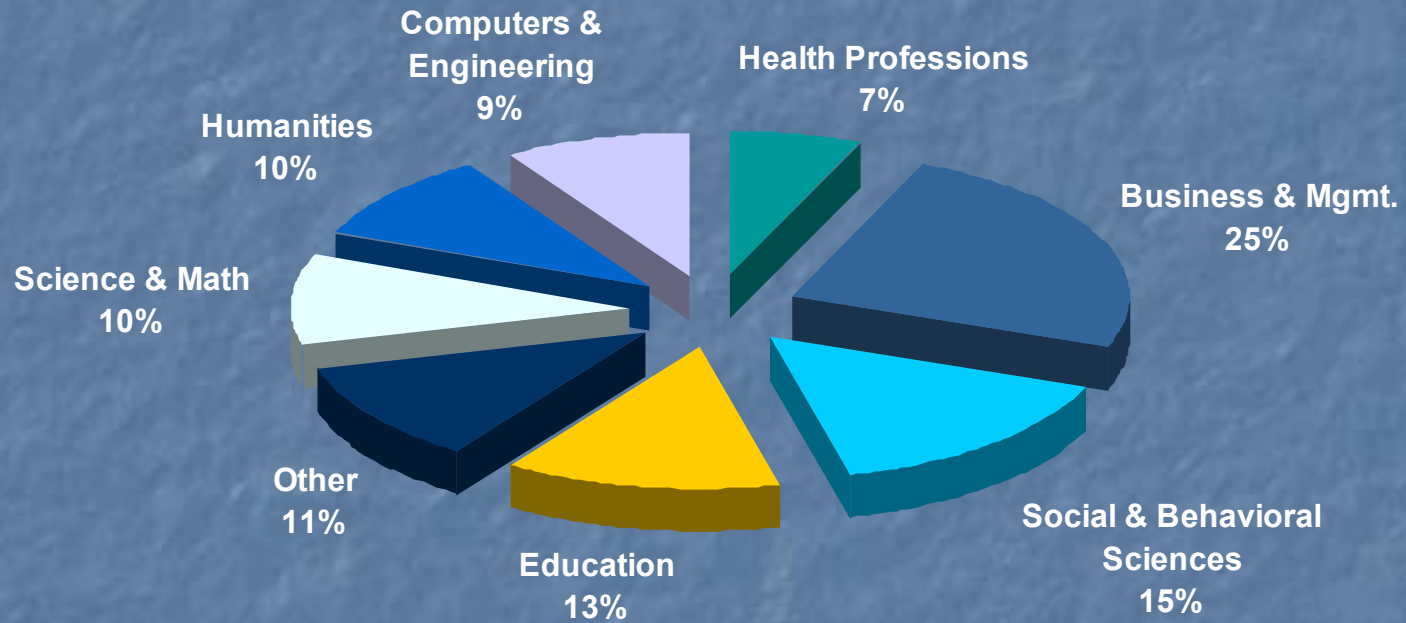
- Native American
- Asian American/Pacific Islander
- African American
- Hispanic
- White

## All Students



- Native American
- Asian American/Pacific Islander
- African American
- Hispanic
- White

# Majors

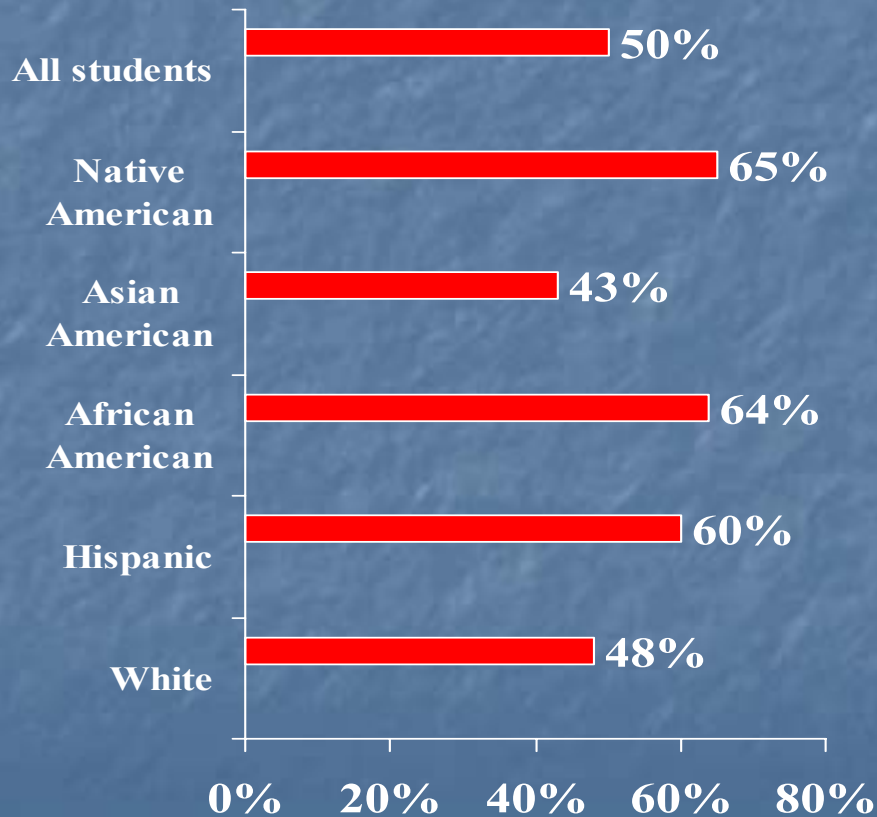


# Other Statistics

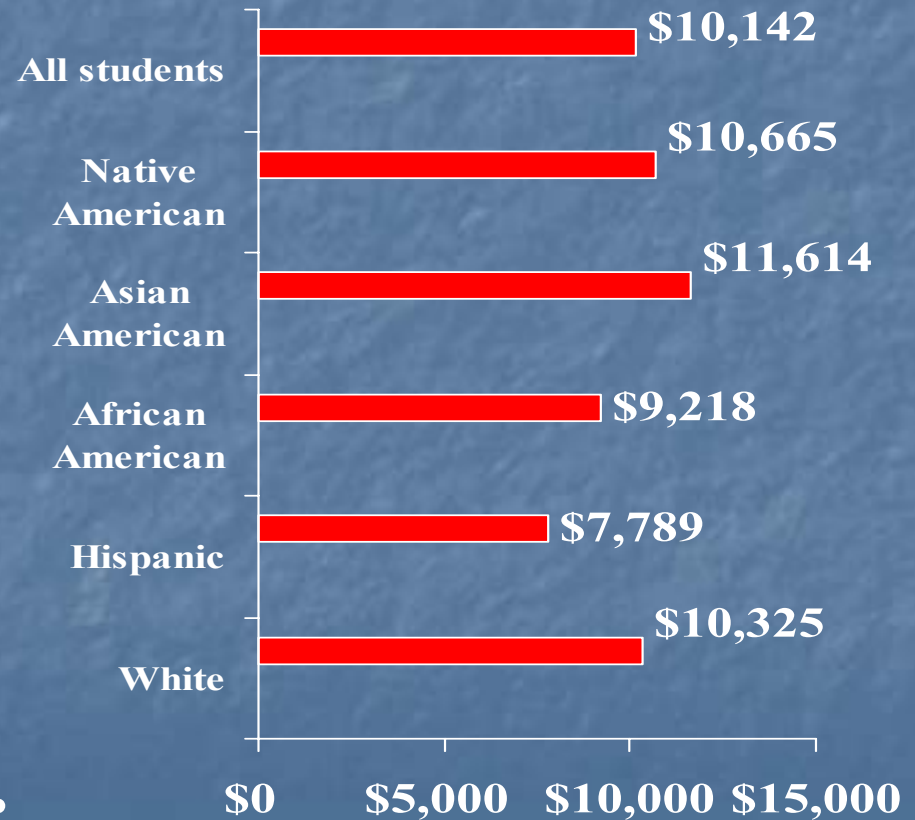
- Gender: 55% female
- Dependency: 59% dependent
- Sector: 67% public, 56% doctoral-granting
- Mean income
  - Independents: \$23,012
  - Dependents: \$65,621
  - Census – All families with 2 or more children under 18: \$40,500
- Mean cost: \$4,403 tuition, \$11,400 COA

# Borrowing Patterns – by Race

## Proportion Borrowing\*



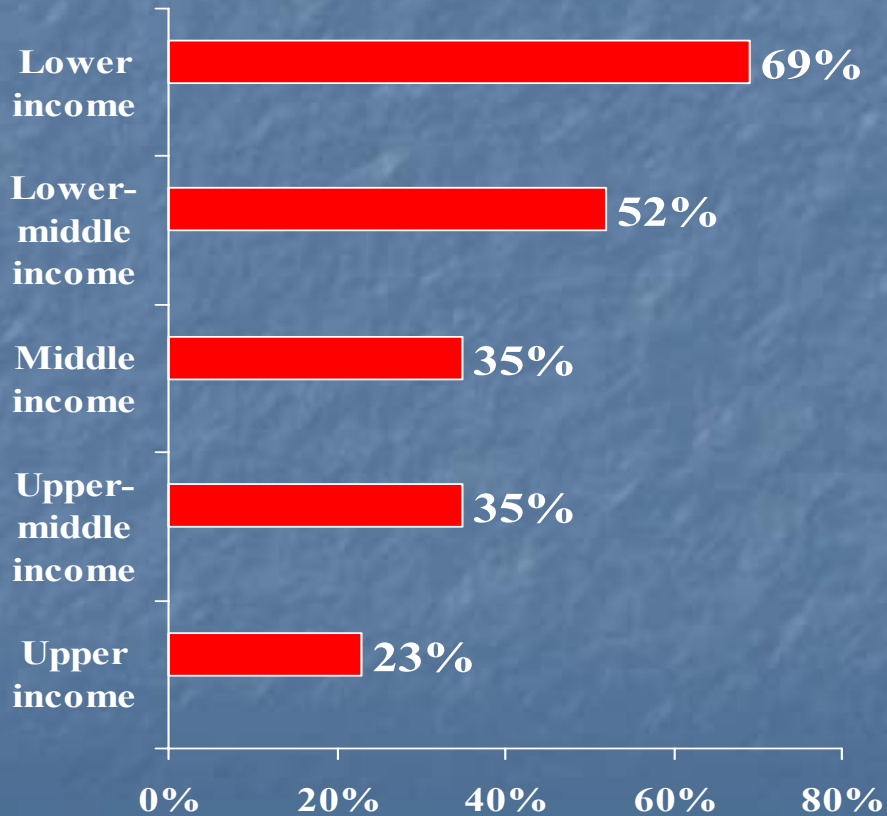
## Mean Amount Borrowed\*



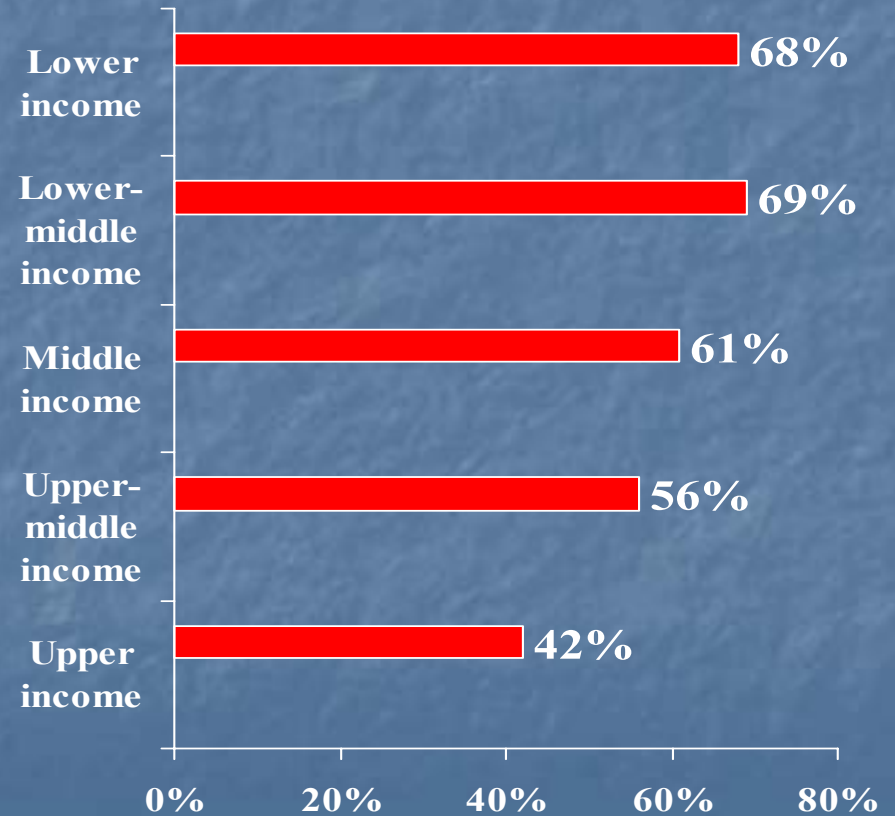
\*Statistically significant difference

# Proportion of Students Borrowing

## Dependent Students\*

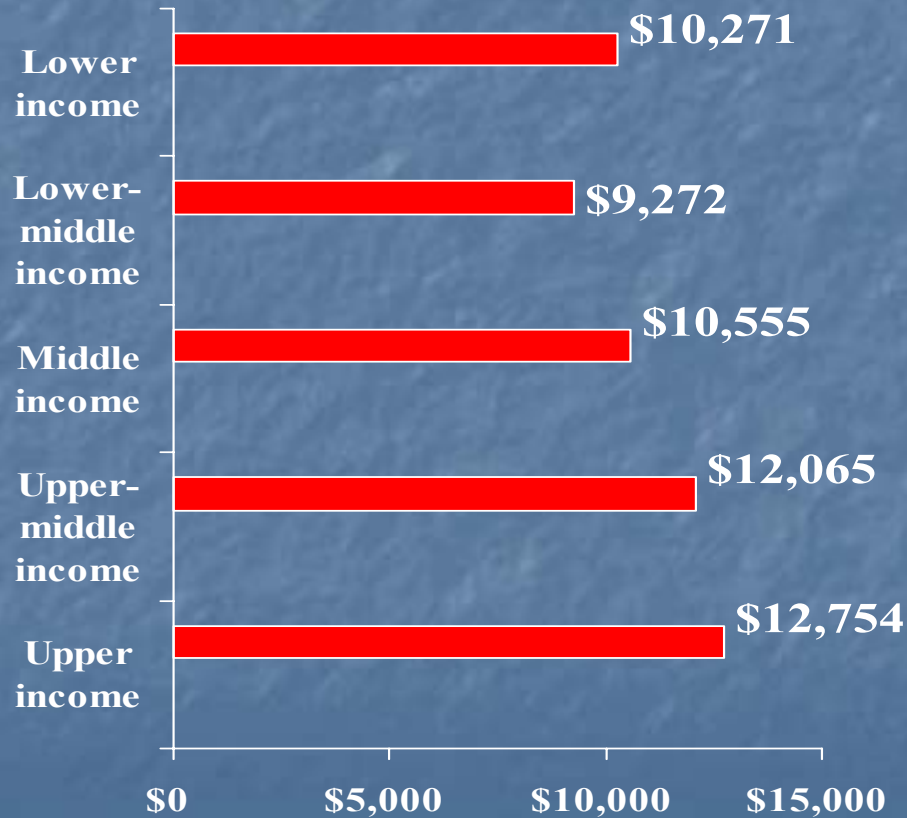


## Independent Students\*

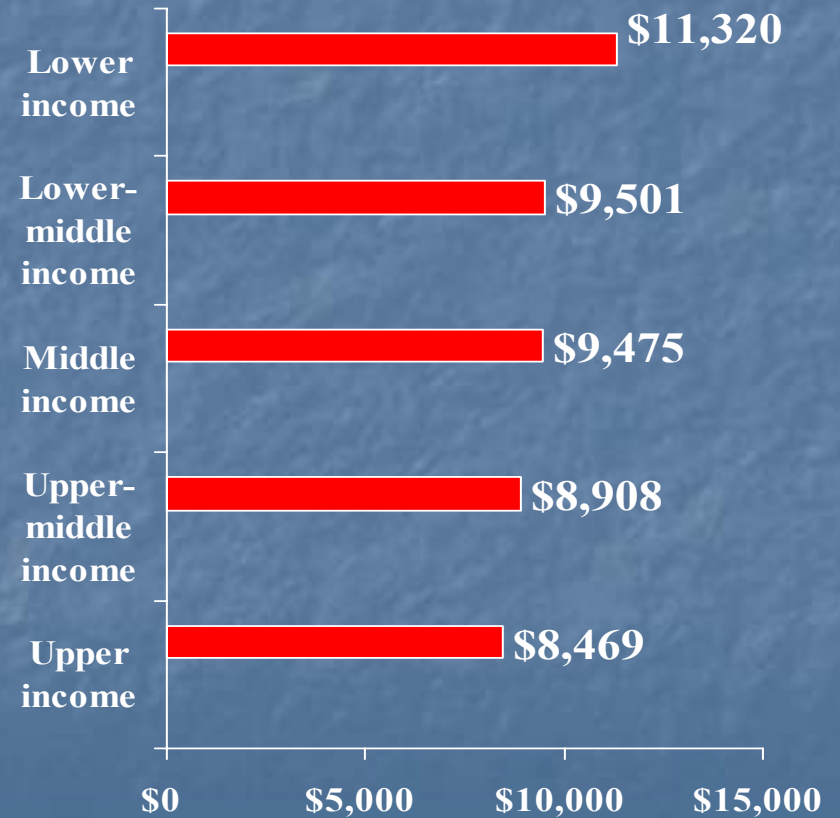


# Mean Amount Borrowed

## Dependent Students\*

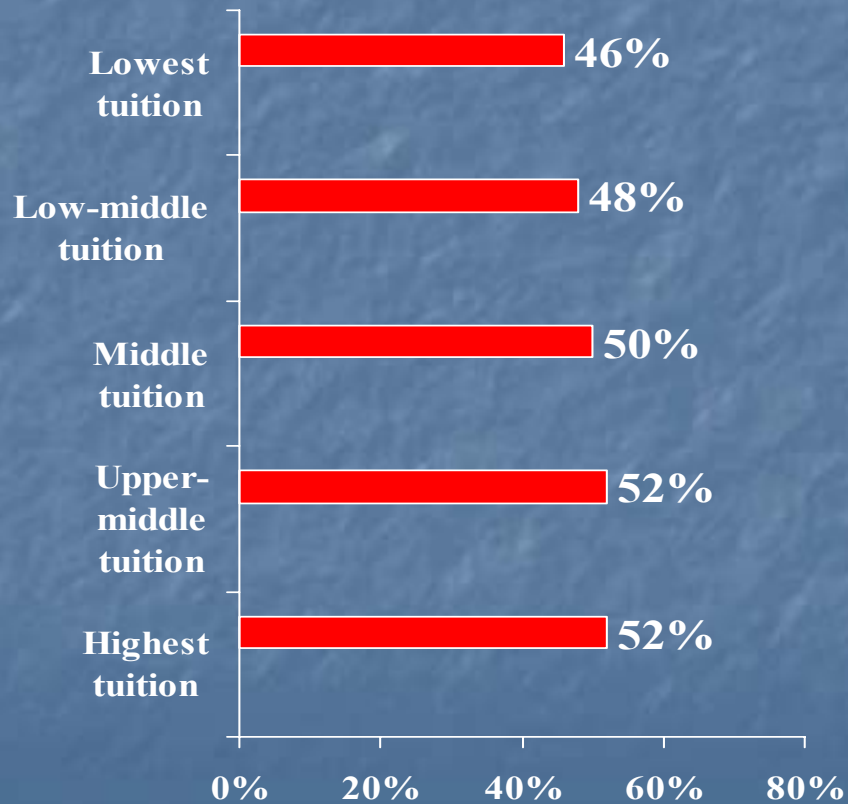


## Independent Students\*

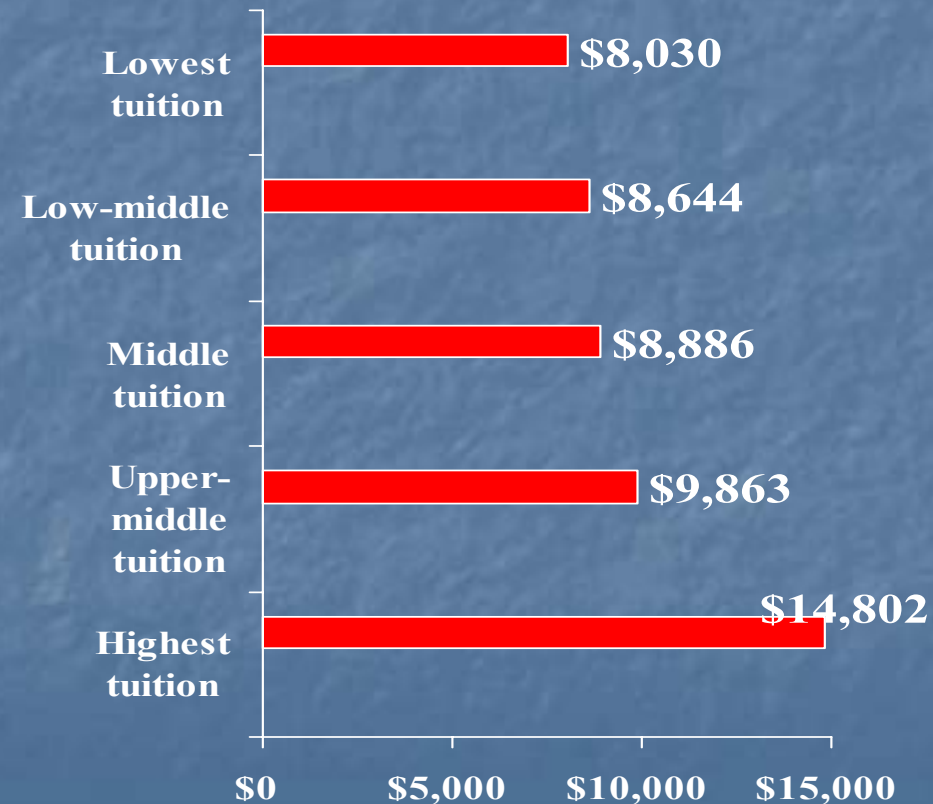


# Borrowing Patterns – by Tuition

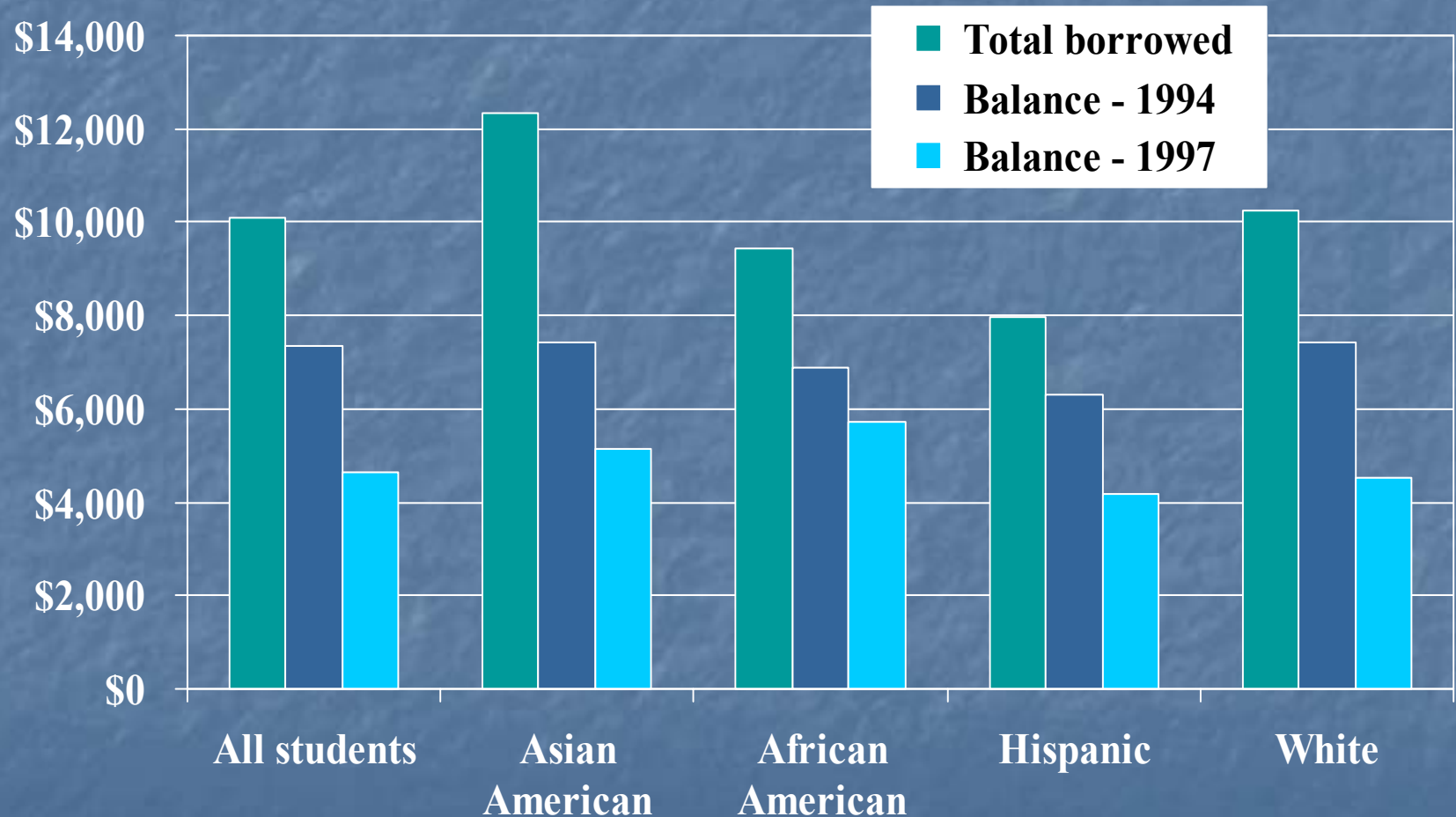
## Proportion Borrowing



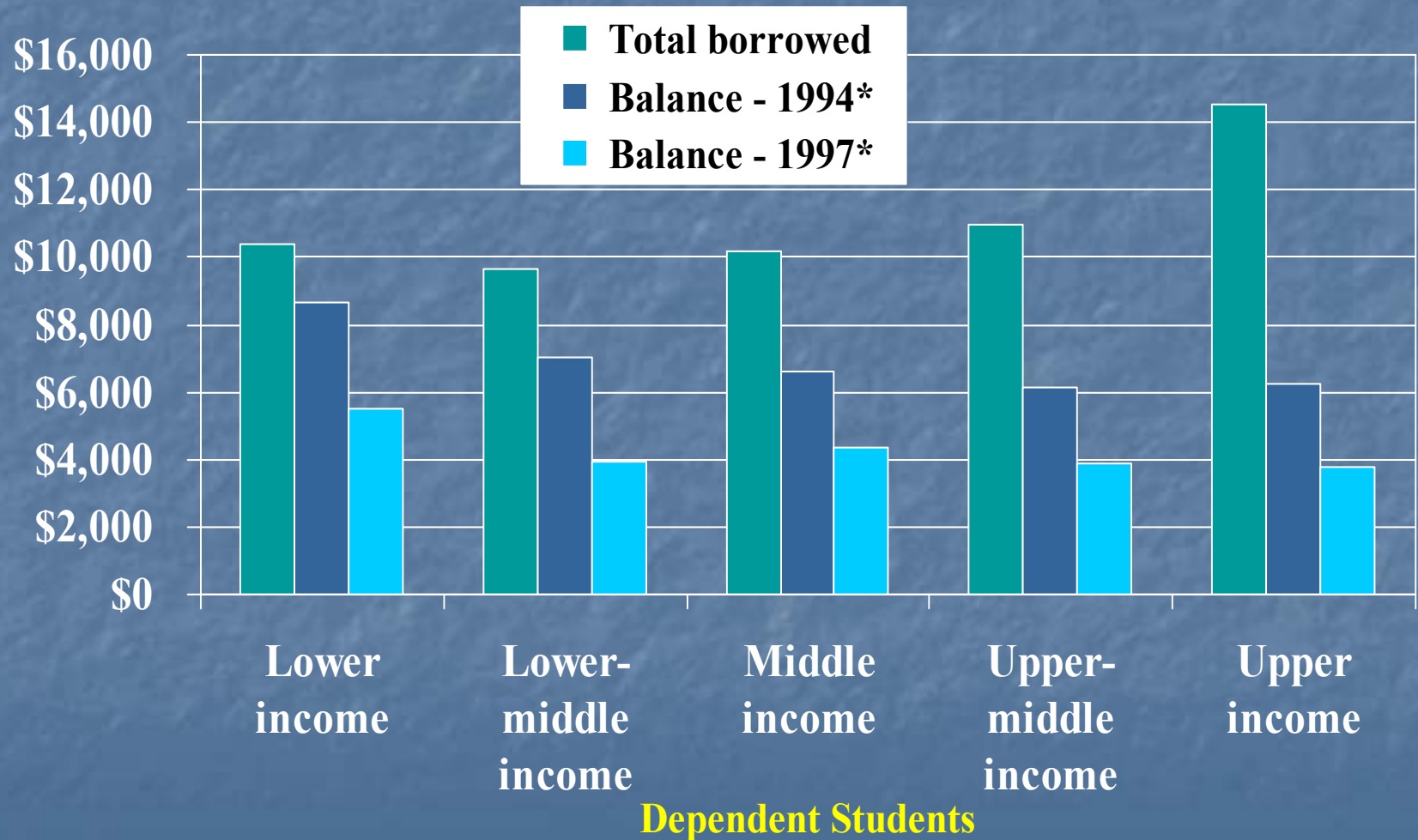
## Mean Amount Borrowed\*



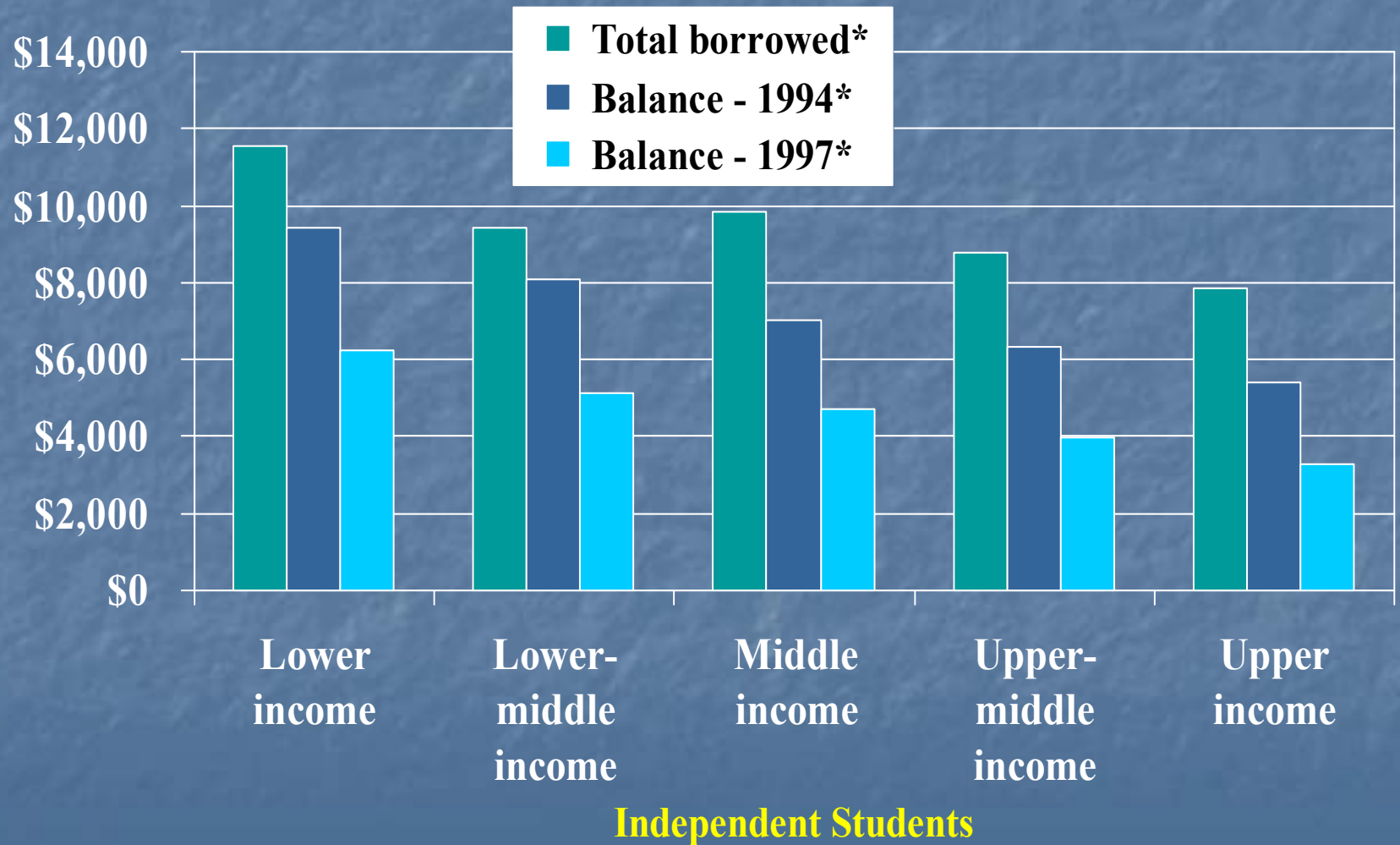
# Repayment Patterns – Students Not Enrolled in Graduate School



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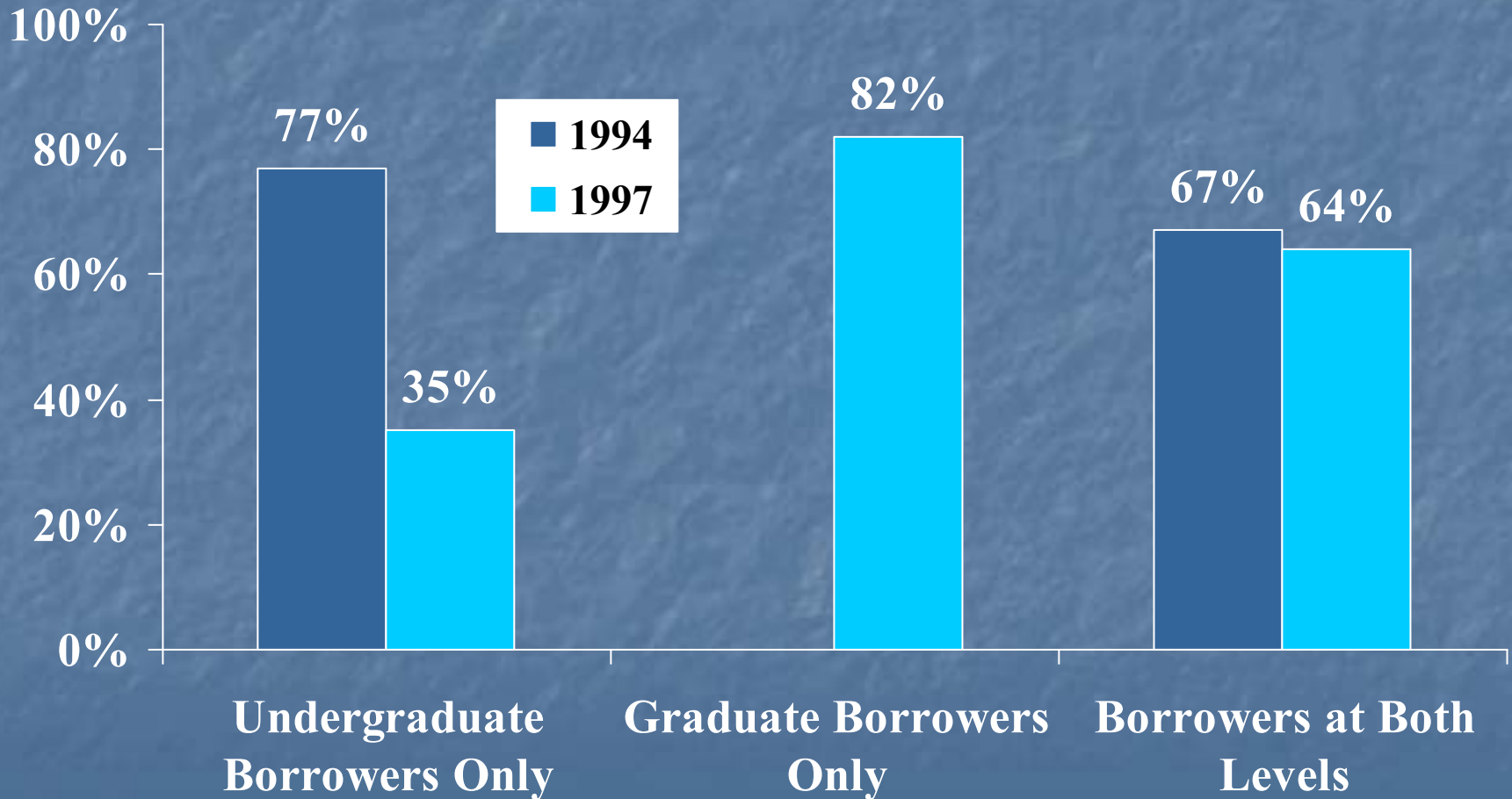


# Repayment Patterns – Students Not Enrolled in Graduate School



# Repayment Patterns – Students Enrolled in Graduate School

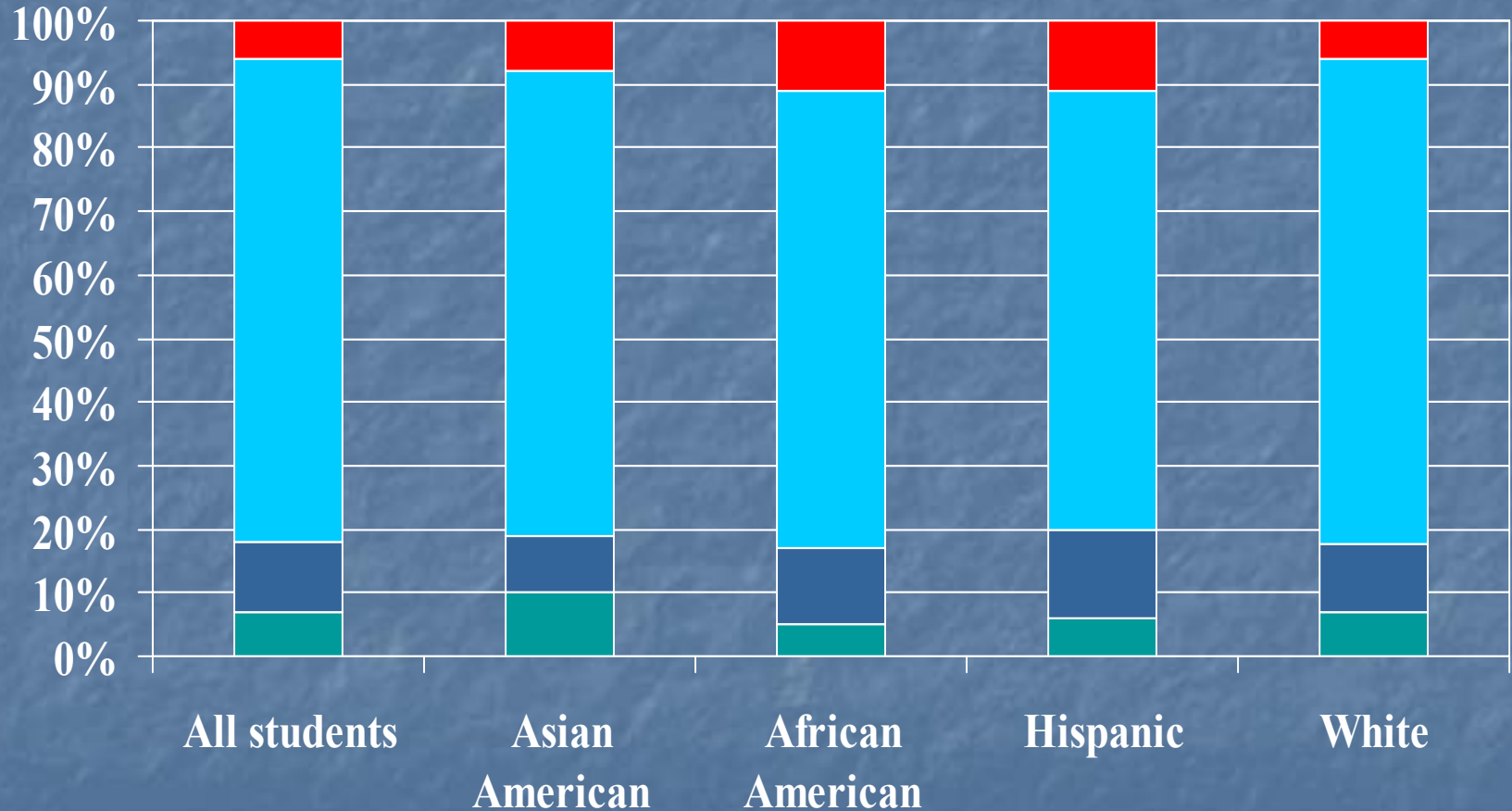
Percentage of Total Loans Outstanding



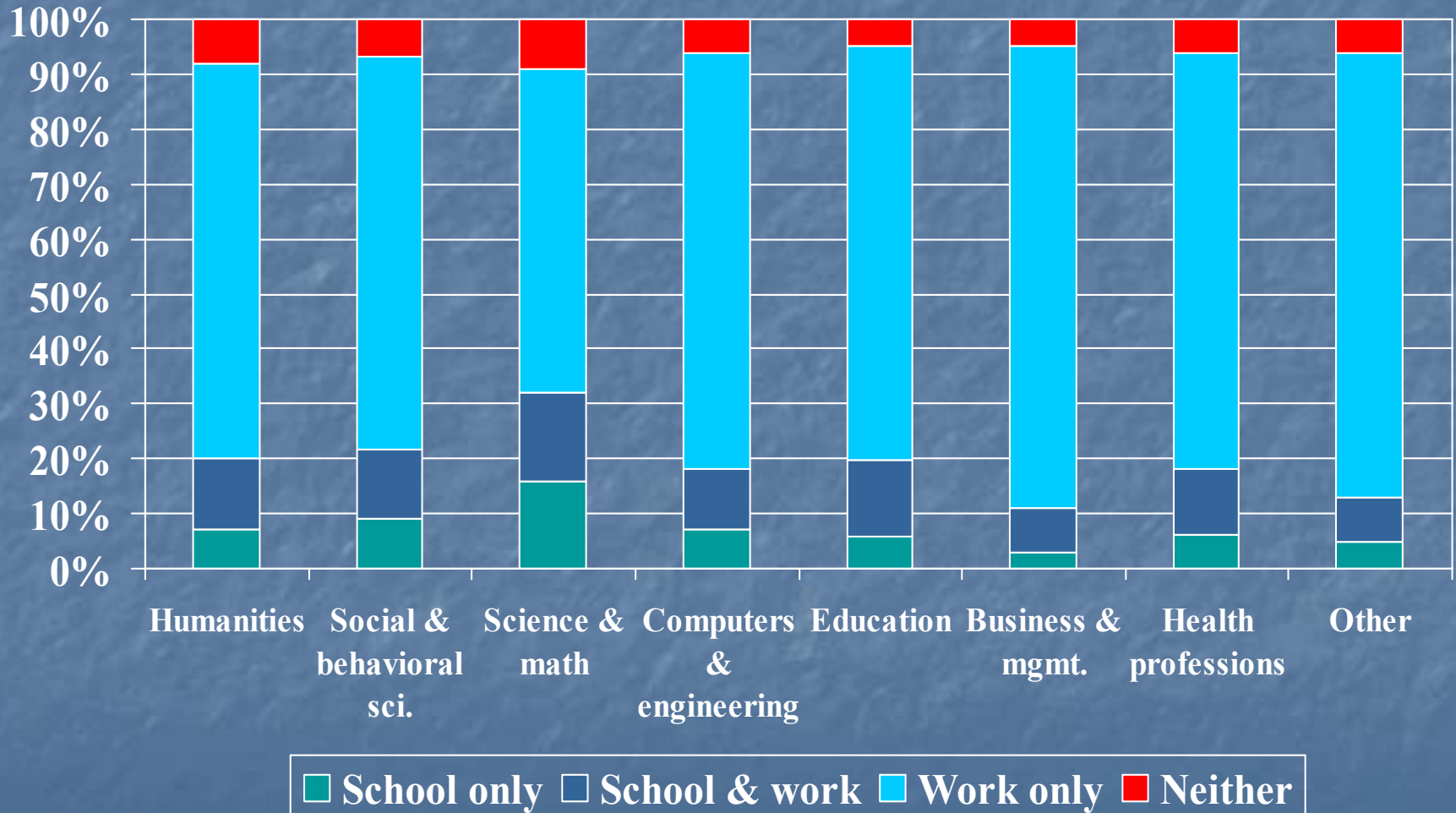
# Post-baccalaureate status

- Four categories
  - Enrolled in graduate school and not working (outside of school-related employment)
  - Both enrolled and working
  - Working and not enrolled
  - Neither working nor enrolled
- Examined status in 1994 and 1997

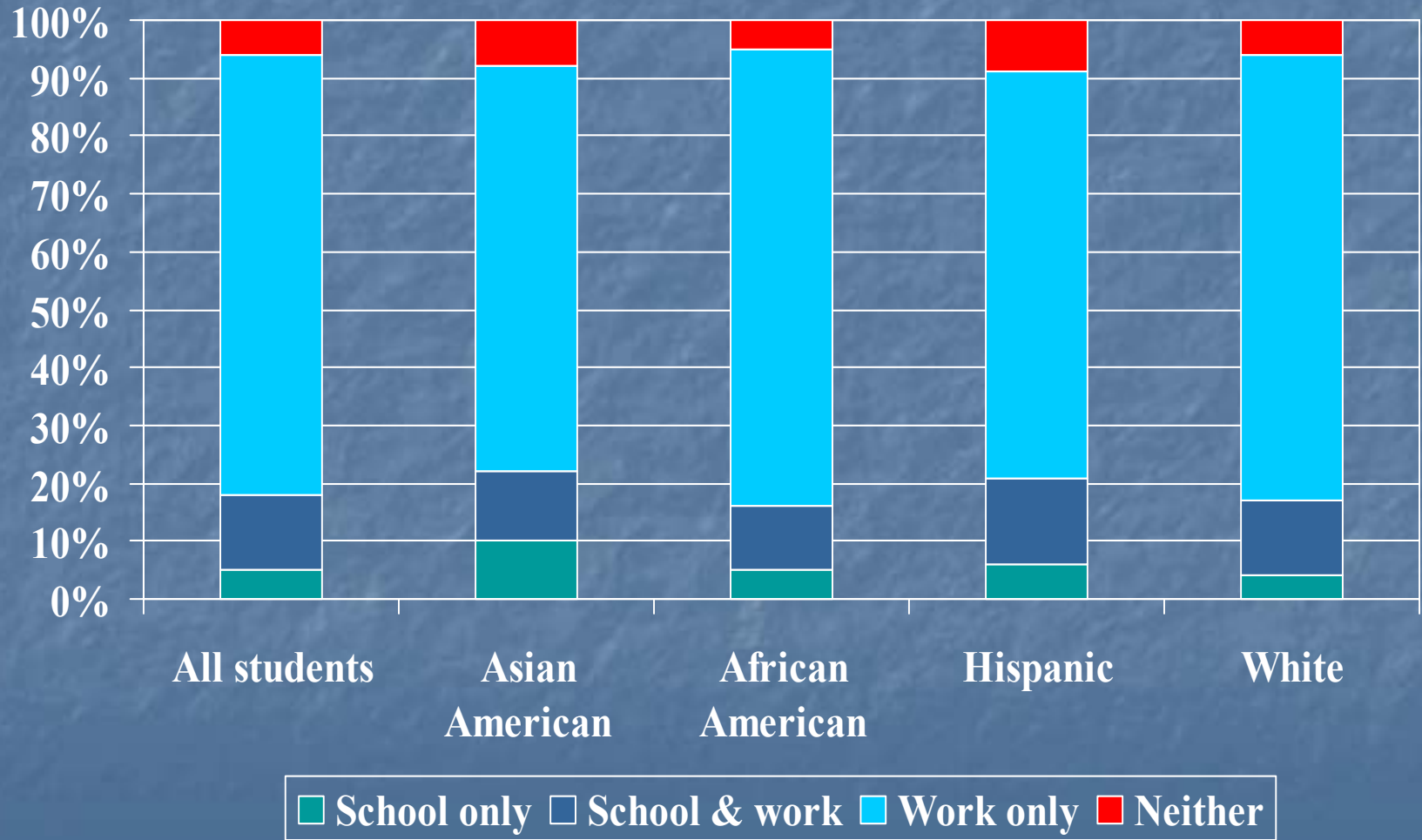
# Status in 1994 – by Race\*



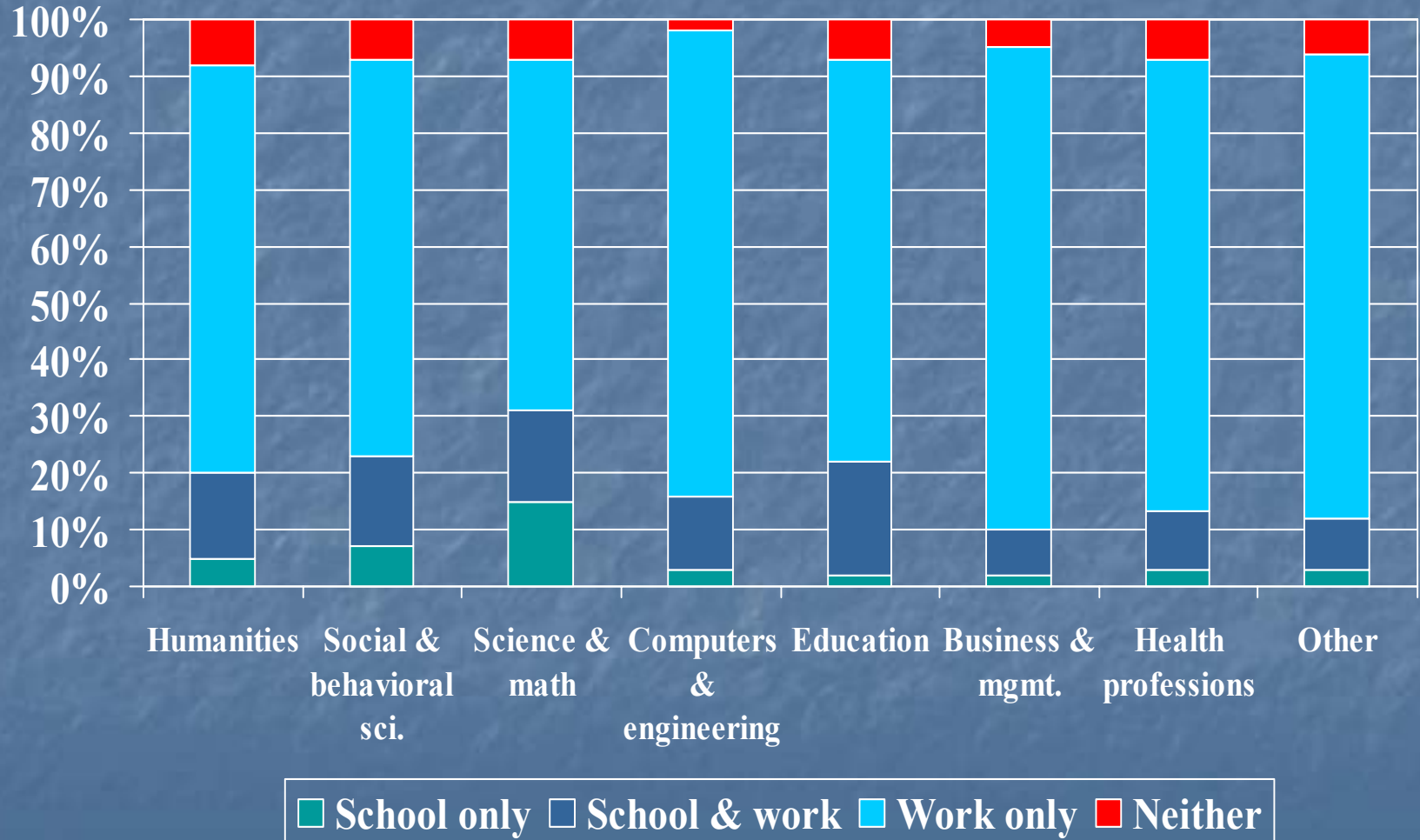
# Status in 1994 – by Major\*



# Status in 1997 – by Race\*

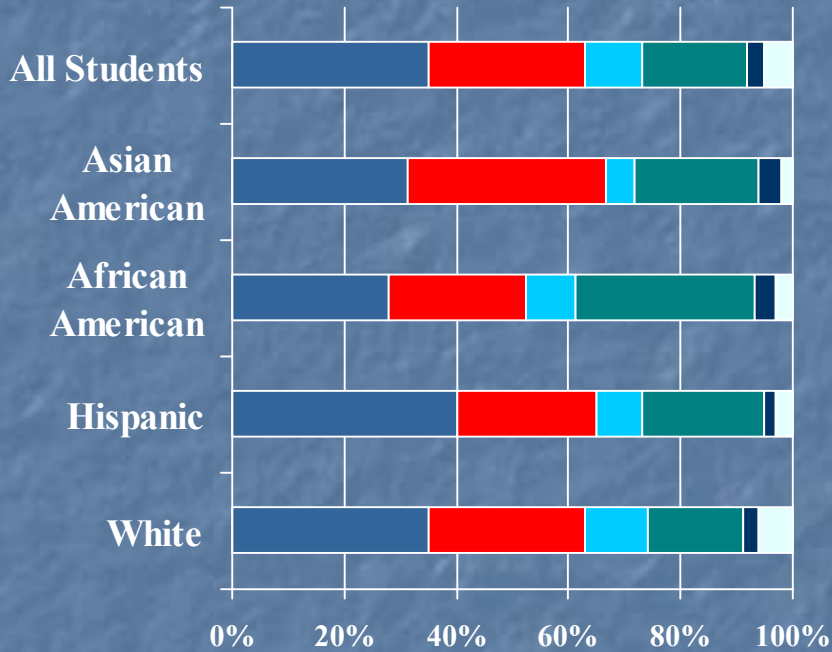


# Status in 1997 – by Major\*

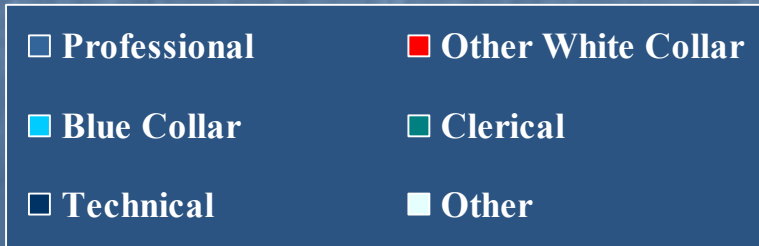
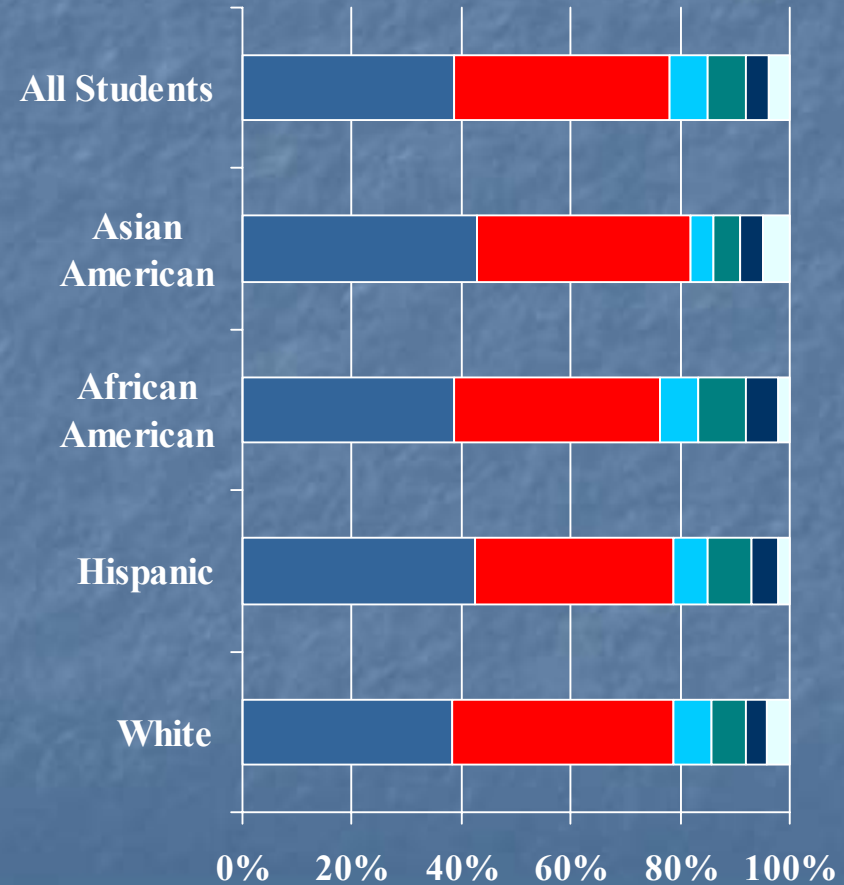


# Occupation Choice – by Race

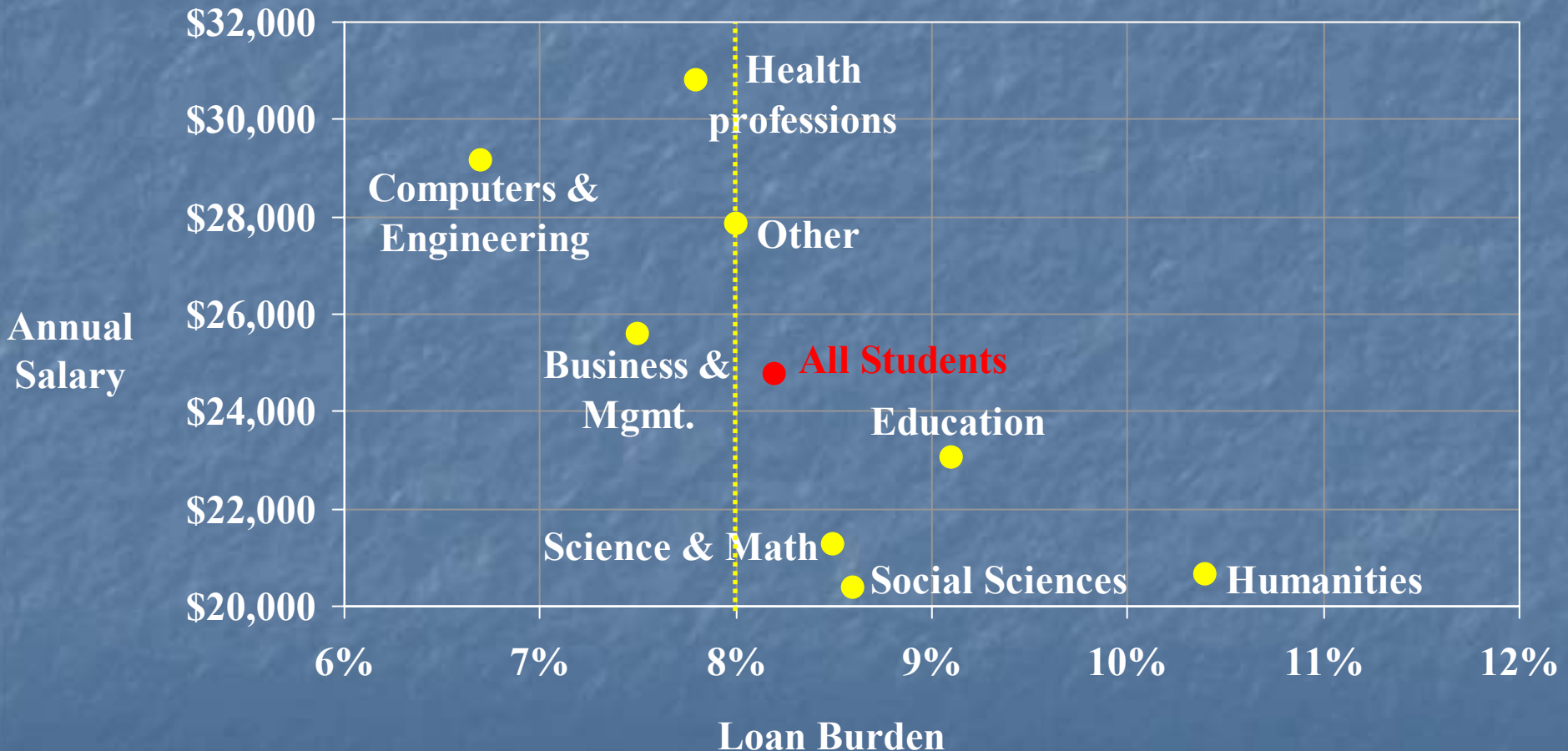
1994\*



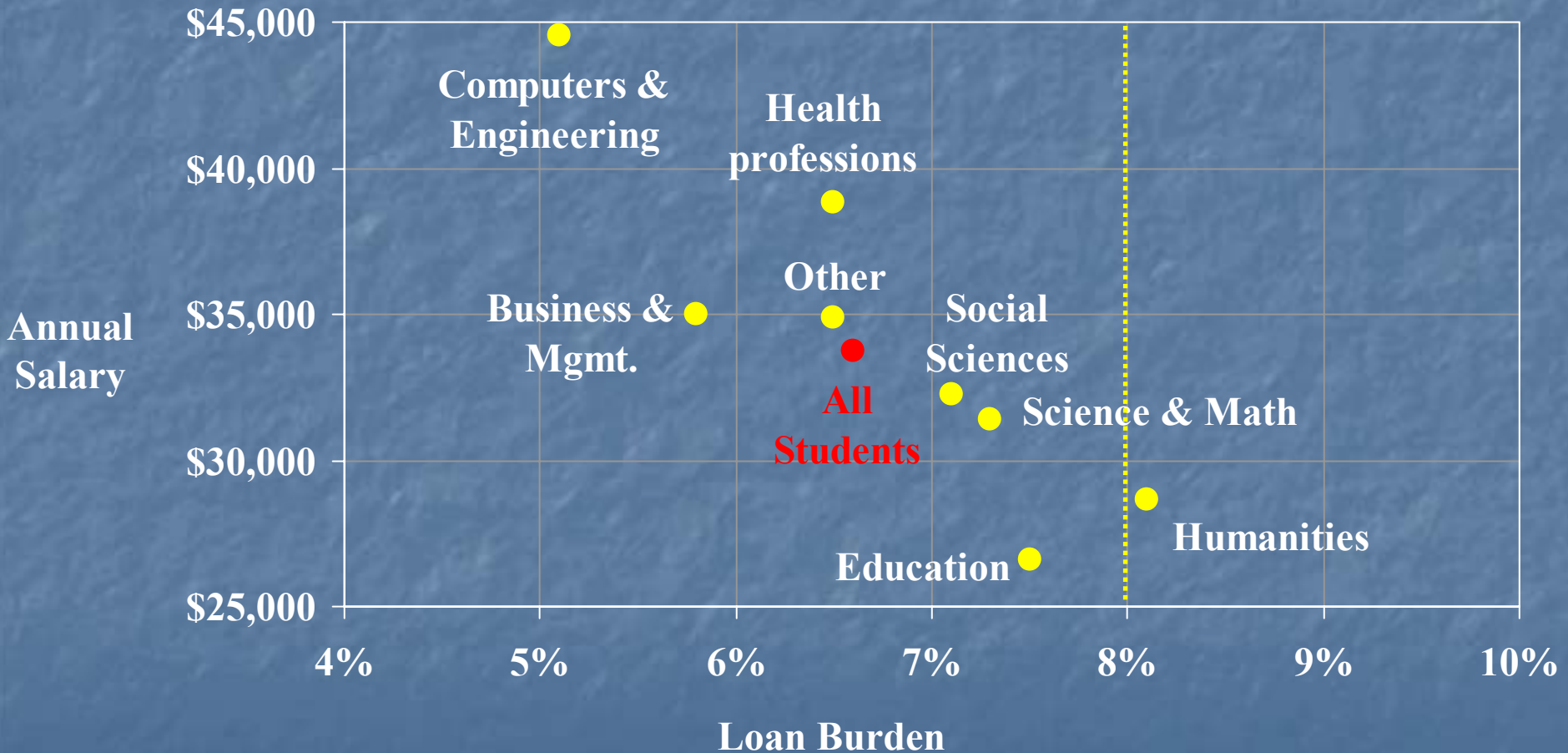
1997\*



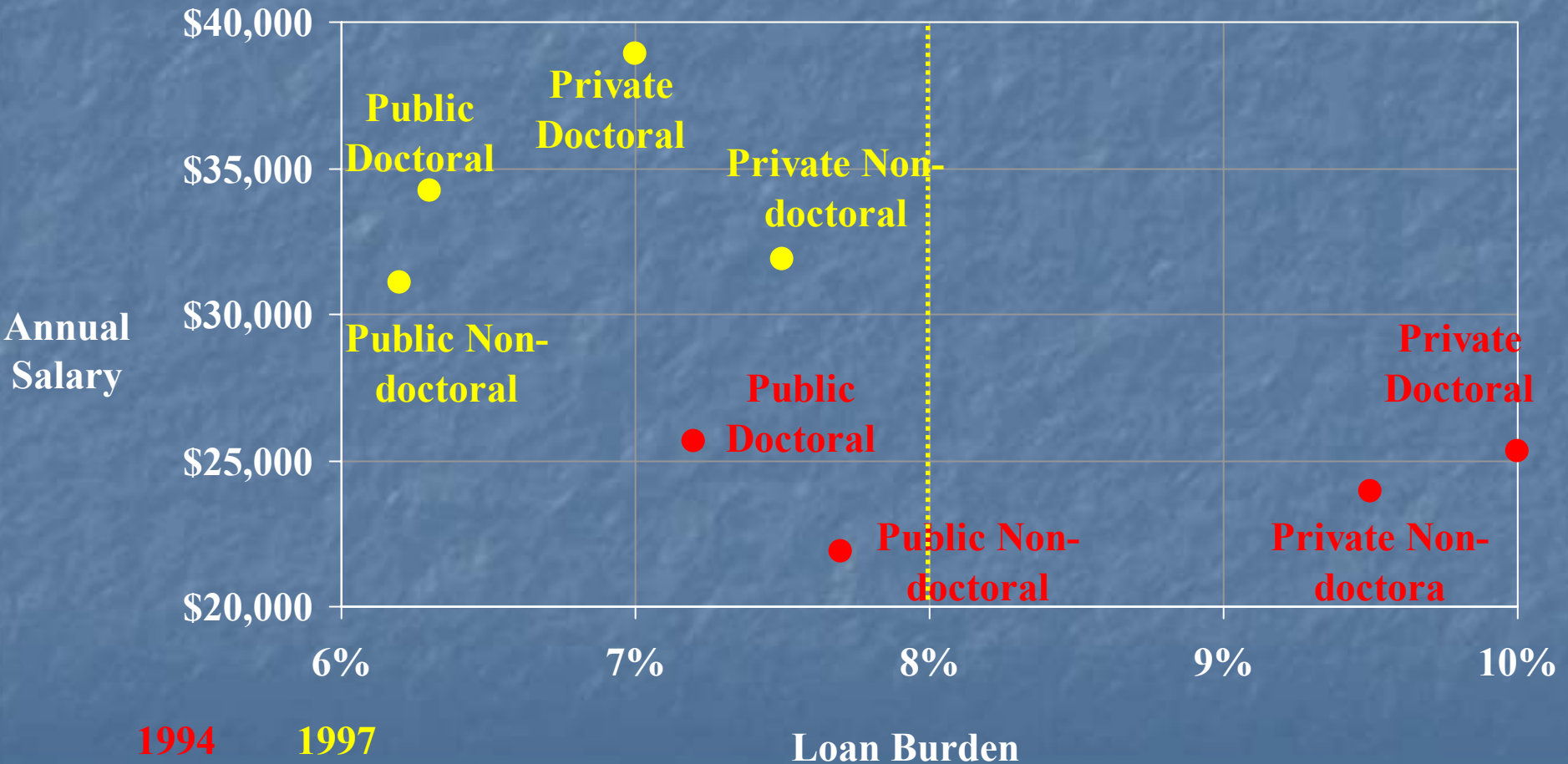
# Salaries and Repayment Burdens - 1994



# Salaries and Repayment Burdens - 1997



# Salaries and Repayment Burdens



# Joint Determinants of Graduate Enrollment

- Logistic regression models predicting whether individuals would enroll in graduate school by 1994 and 1997
- Factors examined
  - Student background (sex, race, age, income, dependency, parental education)
  - Undergraduate institution (sector, tuition rate)
  - Undergraduate academic (major, degree expectation, GPA)
  - Post-baccalaureate (marital status, children)
  - Undergraduate borrowing (total amount)

# Predictors of Graduate Enrollment by 1994

- Proportion enrolling: 16%
- Predictive factors 

	<u>% impact</u>
■ Independent students	-6%
■ Age as of 12/31/92	+2% per 5 years
■ Undergraduate sector:	
Public non-doctoral	-3%
Private non-doctoral	-5%
■ Degree expectation:	
Bachelor's	-16%
Doctorate or 1 <sup>st</sup> Prof.	+28% and +30%
■ Majors:	
Science & math, computers & engineering, education	+8% to +12%
■ Undergraduate GPA (per point)	+15%
■ Married	-4%
■ Total borrowing (per \$1,000)	-0.1%

# Predictors of Graduate Enrollment by 1997

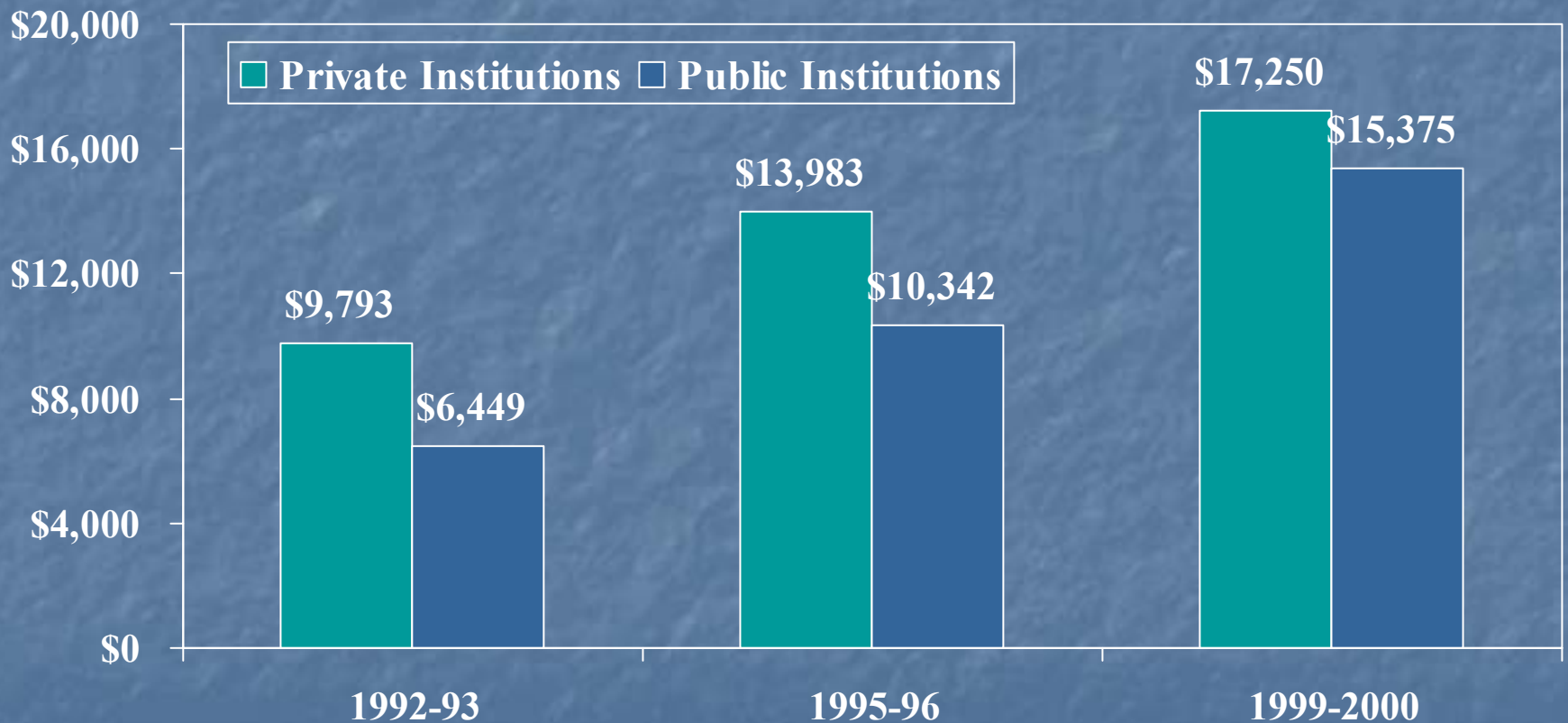
- Proportion enrolling: 30%
- Predictive factors 

	<u>% impact</u>
■ Independent students	-6%
■ Age as of 12/31/92	+3% per 5 years
■ Parental education:	
HS grad or less	-5%
Bachelor's degree	-4%
■ Undergraduate sector:	
Public non-doctoral	-3%
Private non-doctoral	-5%
■ Degree expectation:	
Bachelor's	-27%
Doctorate or 1 <sup>st</sup> Prof.	+31% and +38%
■ Majors (other than business):	+7% to +20%
■ Undergraduate GPA (per point)	+18%
■ Number of children:      One, 2 or more	-4% and -5%
■ <b>Total borrowing (per \$1,000)</b>	<b>-0.2%</b>

# Update Since 1993

- Loan limits increased in 1992 reauthorization of HEA
  - Dependents: from \$17,250 to \$23,000
  - Independents: from \$37,250 to \$46,000
  - PLUS: from \$4,000 to no limit
- Needs analysis liberalized
- Tuition has continued to increase
- **Borrowing has increased**

# Federal Loan Program Borrowing Since 1993



ACE, *Student Borrowing in the 1990s*

# Conclusions

- While there are real differences in borrowing and repayment patterns, total borrowing has little impact on enrollment in graduate school when other factors are taken into account
- Academic factors – degree expectation, major, GPA – are much stronger predictors of enrollment
- An important caveat: Borrowing has continued to increase, so we do not know yet if it has reached a level where it does impact graduate enrollment

**For more information**

**Lumina Foundation (to download the report):**  
**<http://www.luminafoundation.org>**

**My website:**  
**<http://www.personal.psu.edu/deh29>**