



HEALTH

***Obesity and Poverty in America:
time and demographic trends***

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Why the Recent Obesity Epidemic?

- Many competing hypotheses
 - Transportation
 - Television
 - More work hours
 - Not enough exercise
 - Fast food
 - Affluence
 - Poverty
- Compatible with facts?



Different Theories Need Not Be Contradictory

- **Scope of theories narrower than proponents assume**
- **Synthesis often better than “either ... or”**
- **Misunderstandings because no common knowledge**
 - **facts or assumptions?**
- **Conventional wisdom unreliable guide**
- **Let’s start with looking at the bigger picture and data about societal trends**

Outline of Talk

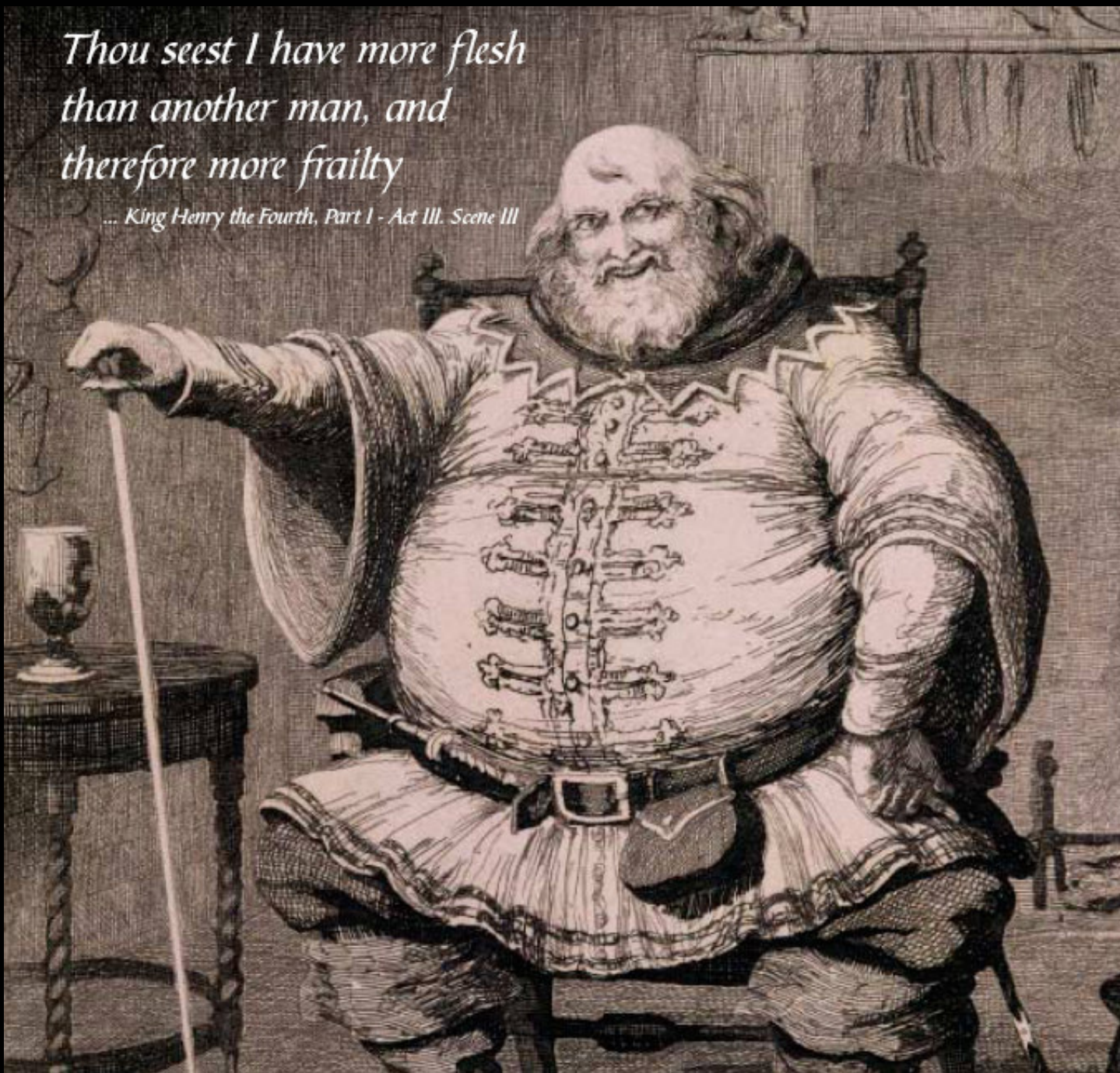
- **Poverty and Obesity**
- **What has changed in our lives?
Trends in time and money**
- **Time use differences by income groups**

Obesity and Poverty?

- **Not new idea that obesity has adverse health effects**
- **But isn't obesity really a disease of affluence?**
- **Traditionally the privilege of the wealthy**
 - **Still is in many countries**
 - **Shouldn't that reduce socioeconomic health disparities?**

*Thou seest I have more flesh
than another man, and
therefore more frailty*

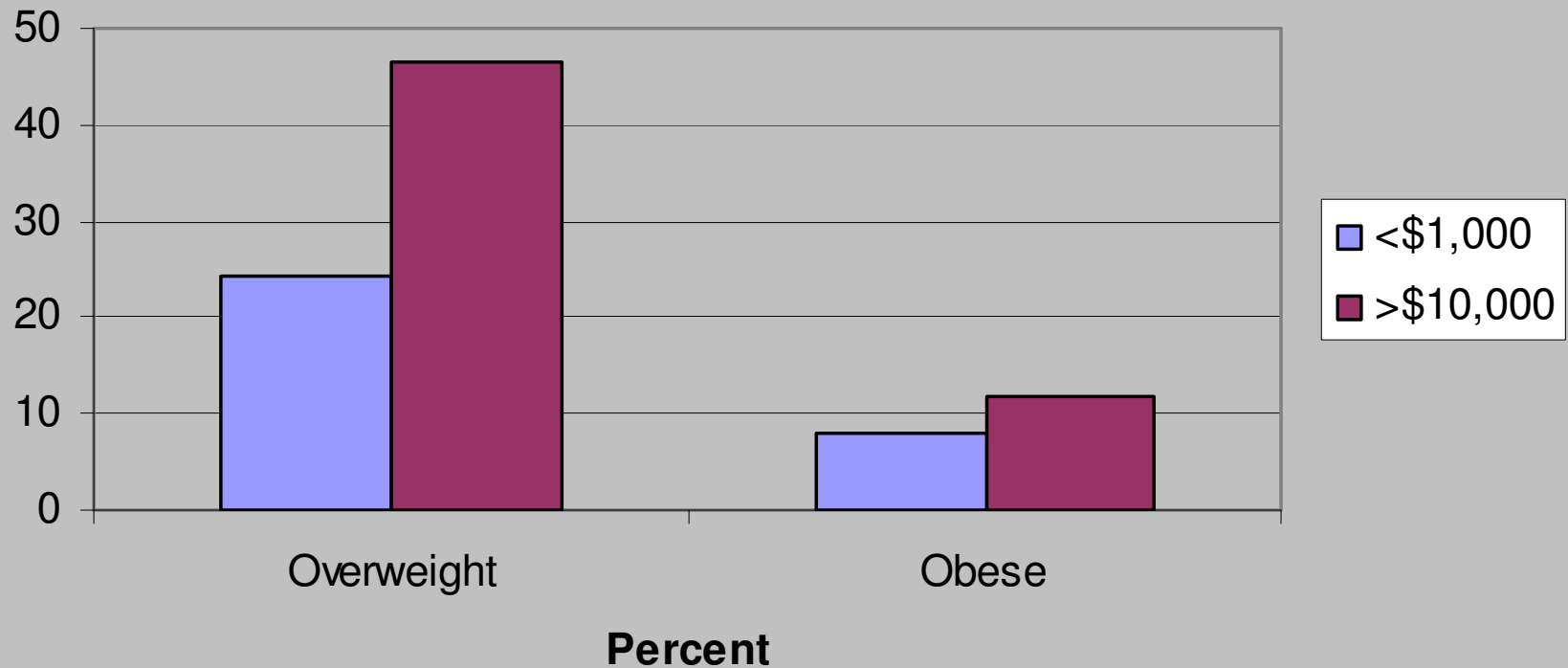
... King Henry the Fourth, Part 1 - Act III. Scene III



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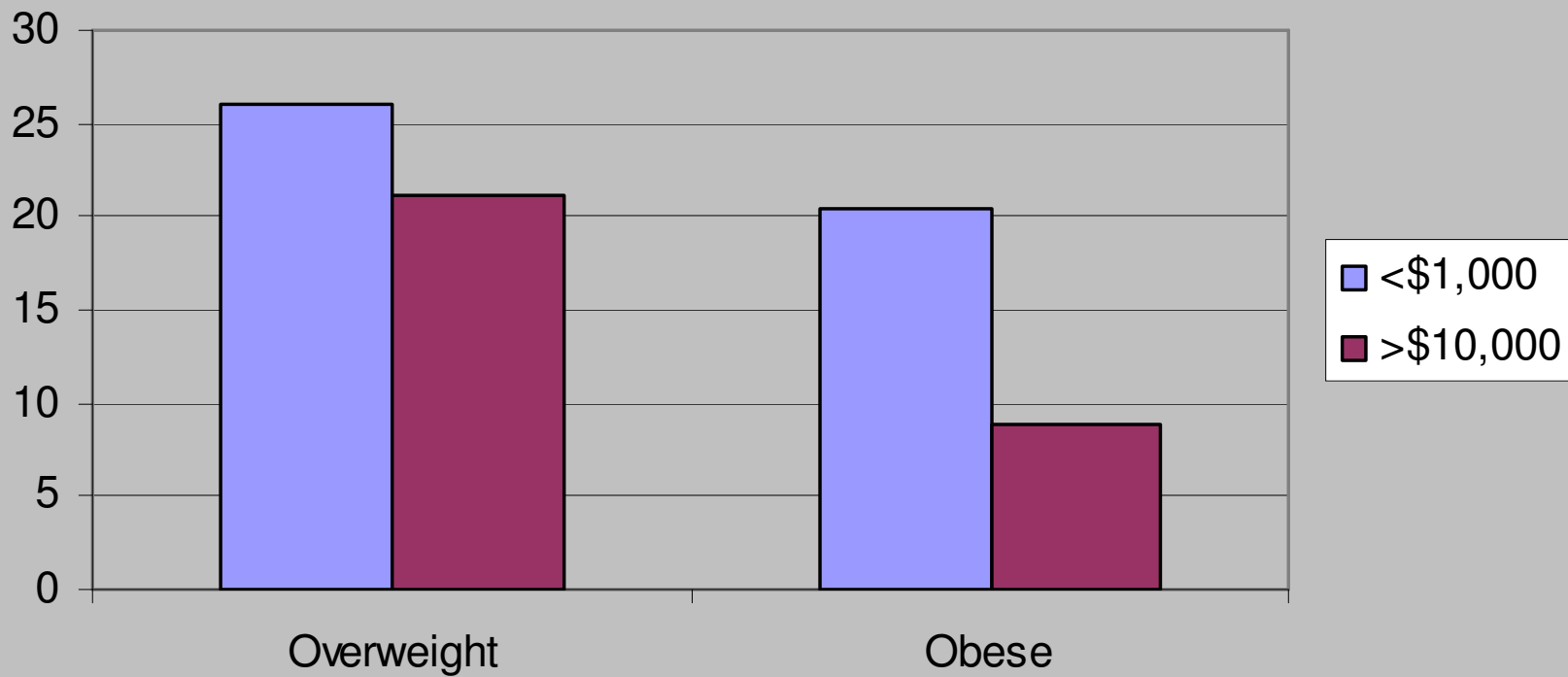
The fat cats were fatter 50 years ago

Overweight by Family Income, US men 1959-1962

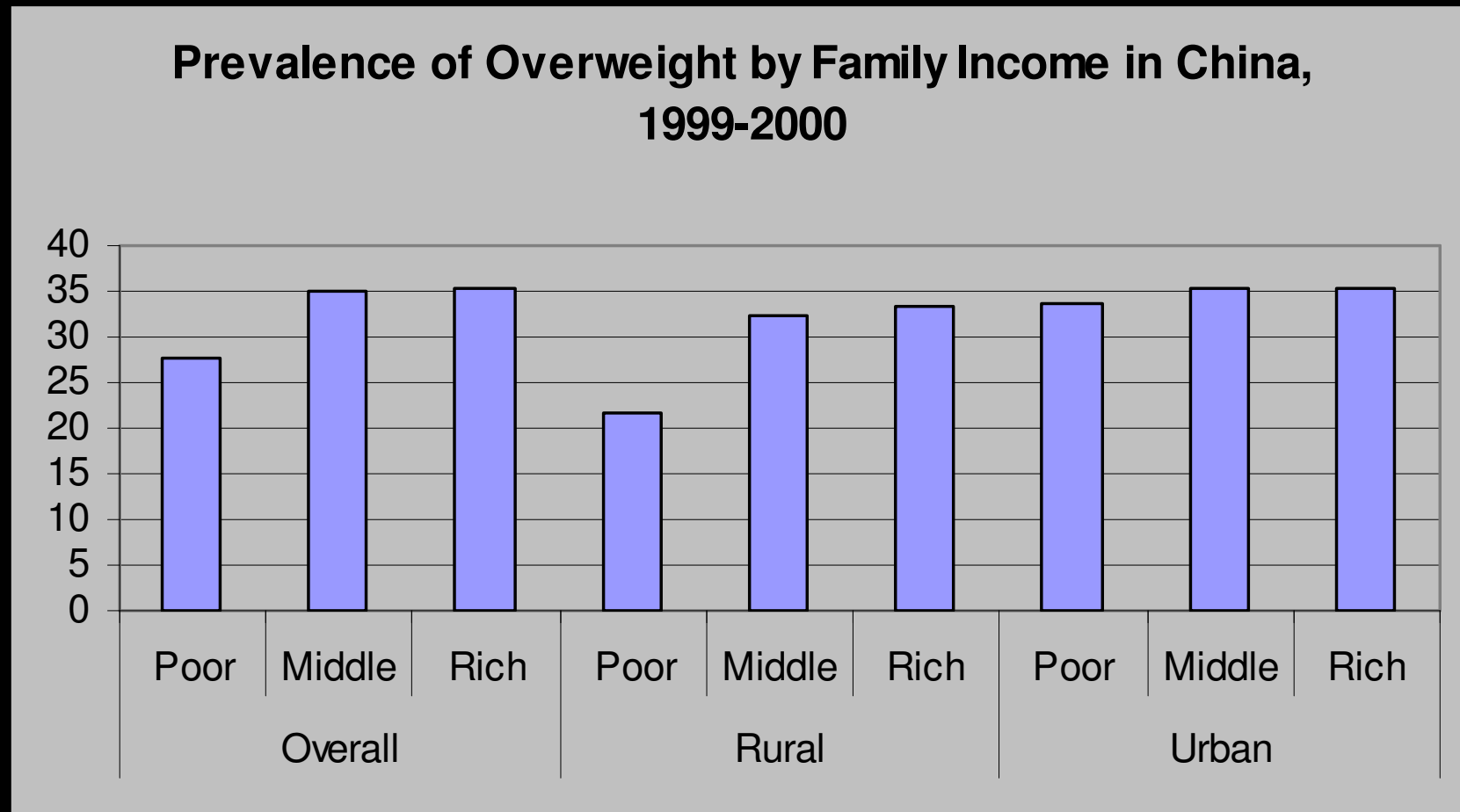


But not women

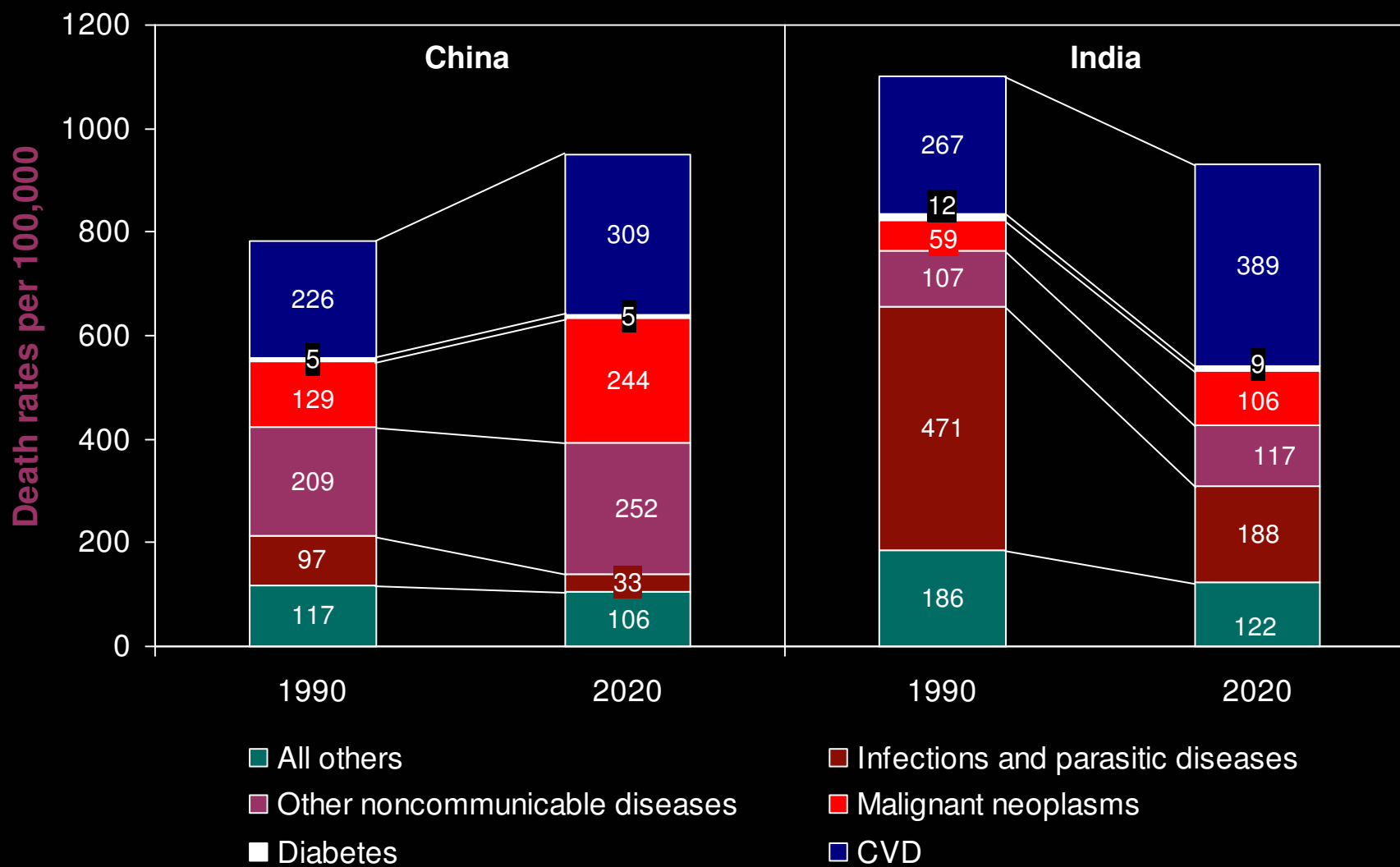
Overweight by Family Income, US women 1959-1962



The Poor Are Often Thinner in Other Countries



Even if Beyond the Health Transition: Mortality trends in China and India, 1990 and 2020



Murray and Lopez. Global Burden Disease.
Harvard University Press, 1996.



HEALTH

***In the US,
Obesity and Poverty now occur together
more often ...***

...Among Youth

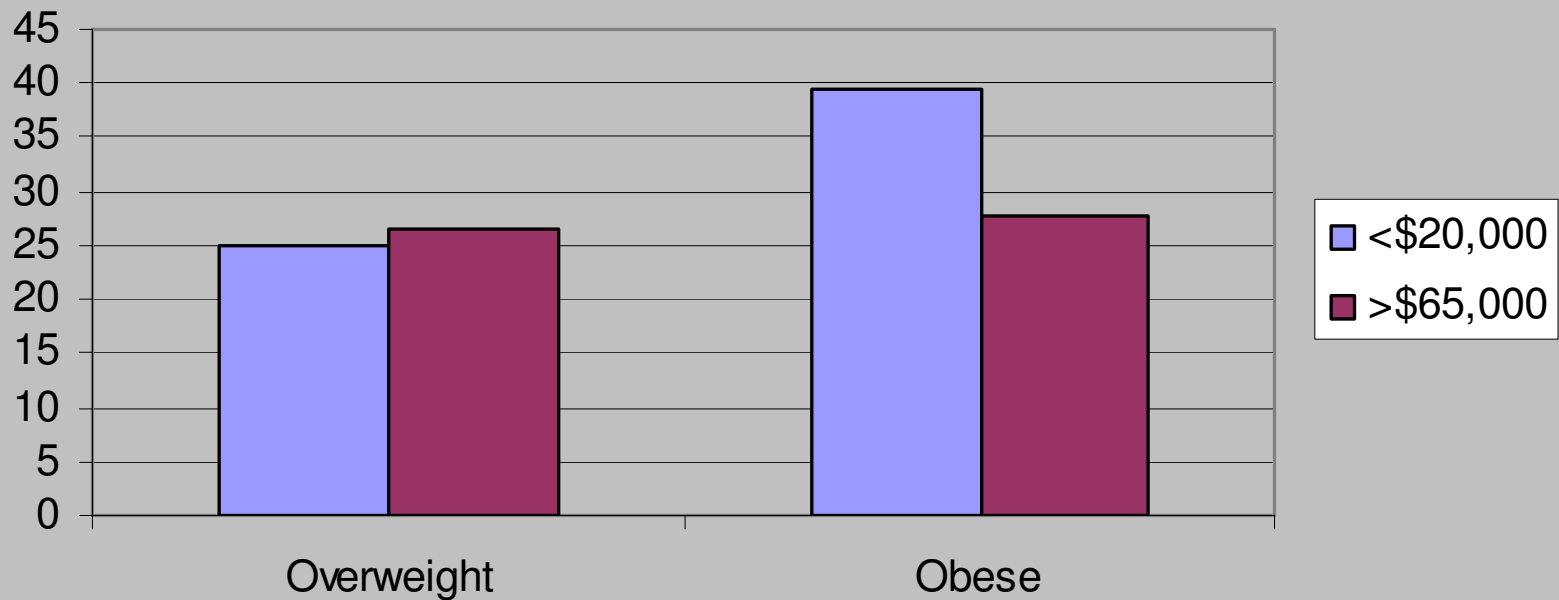
Overweight among Children and Adolescents by Federal Poverty Level, 2001-2004



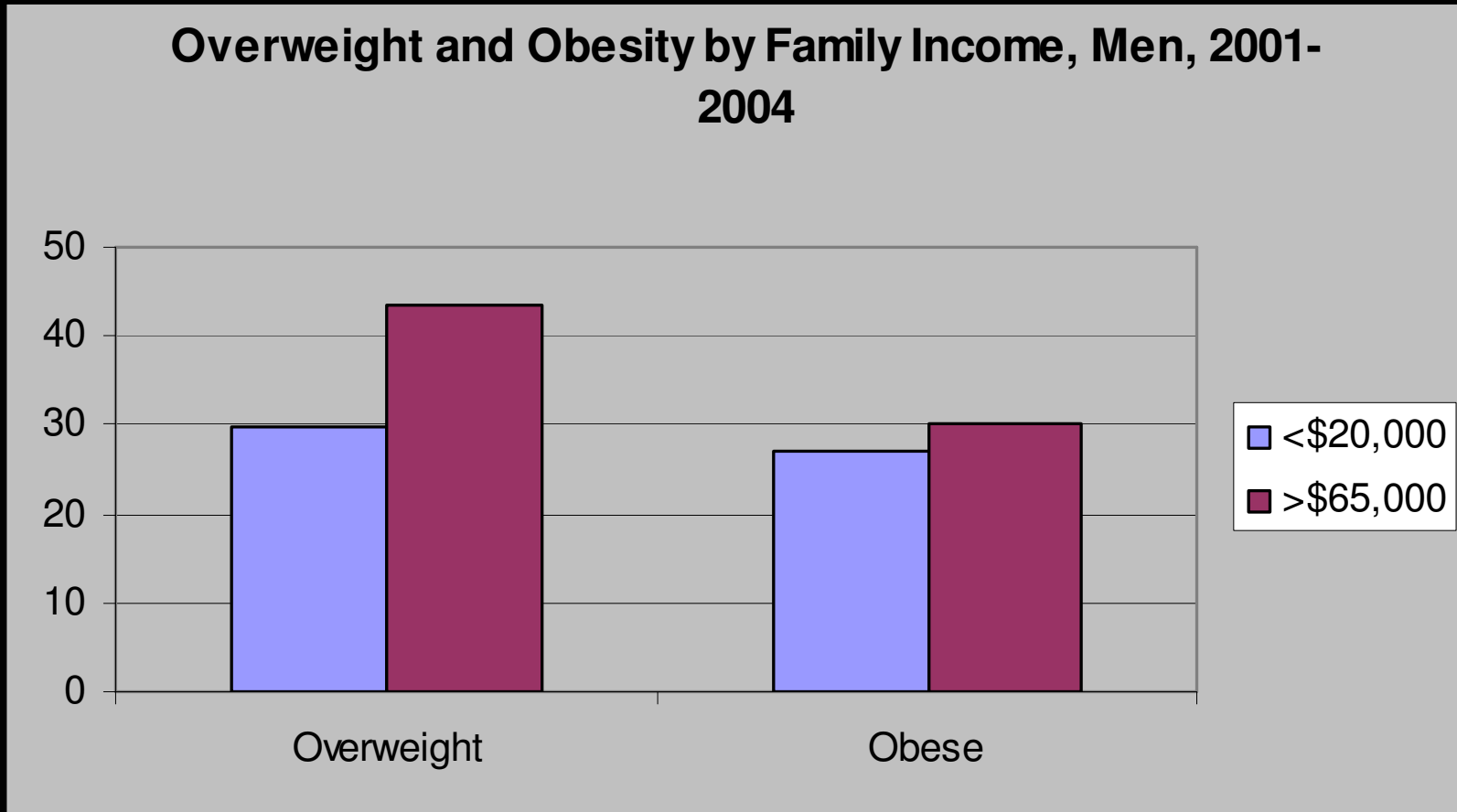
Based on Table 74, NCHS Chartbook, 2006

... Among Women ...

**Overweight and Obesity by Family Income, Women,
2001-2004**

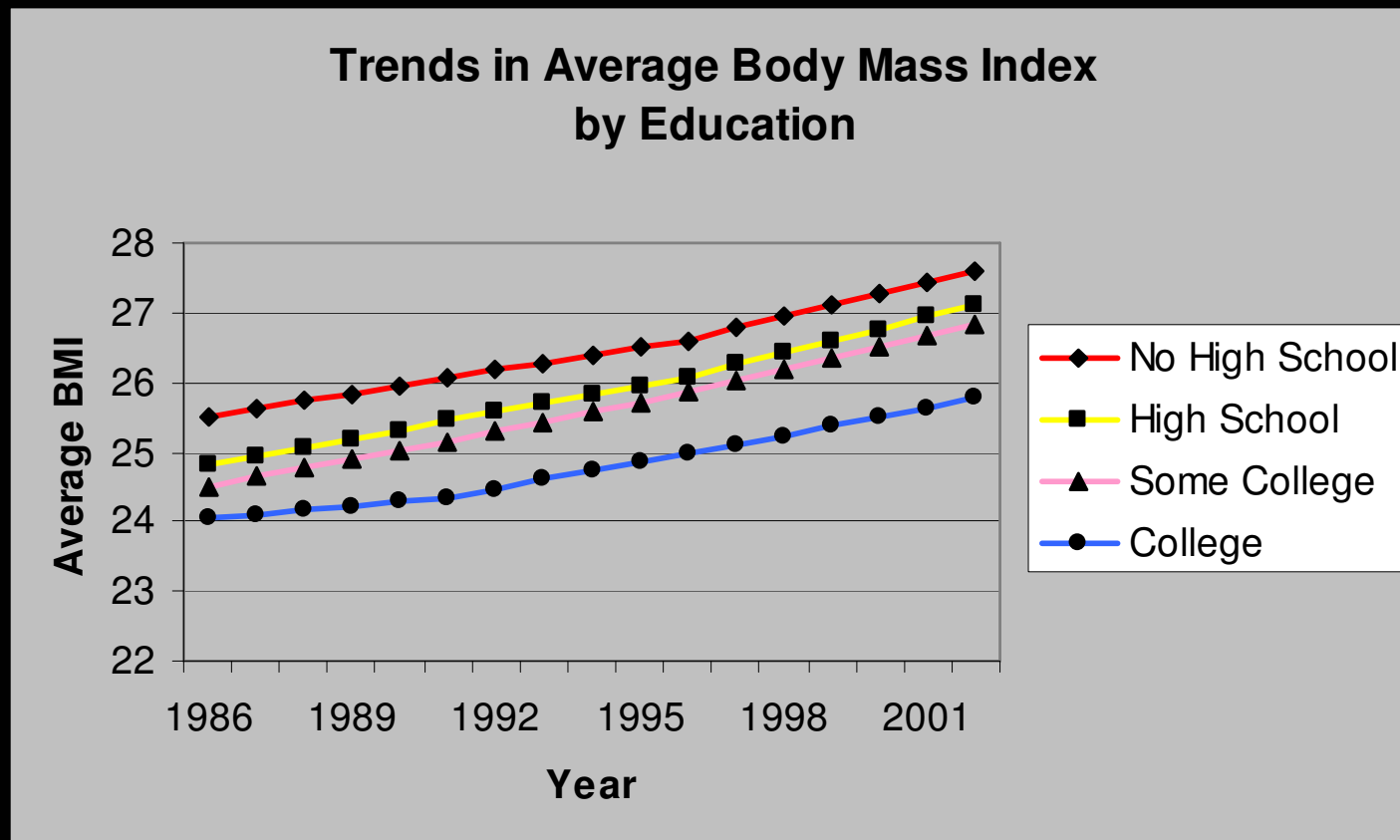


... But Not Among Men



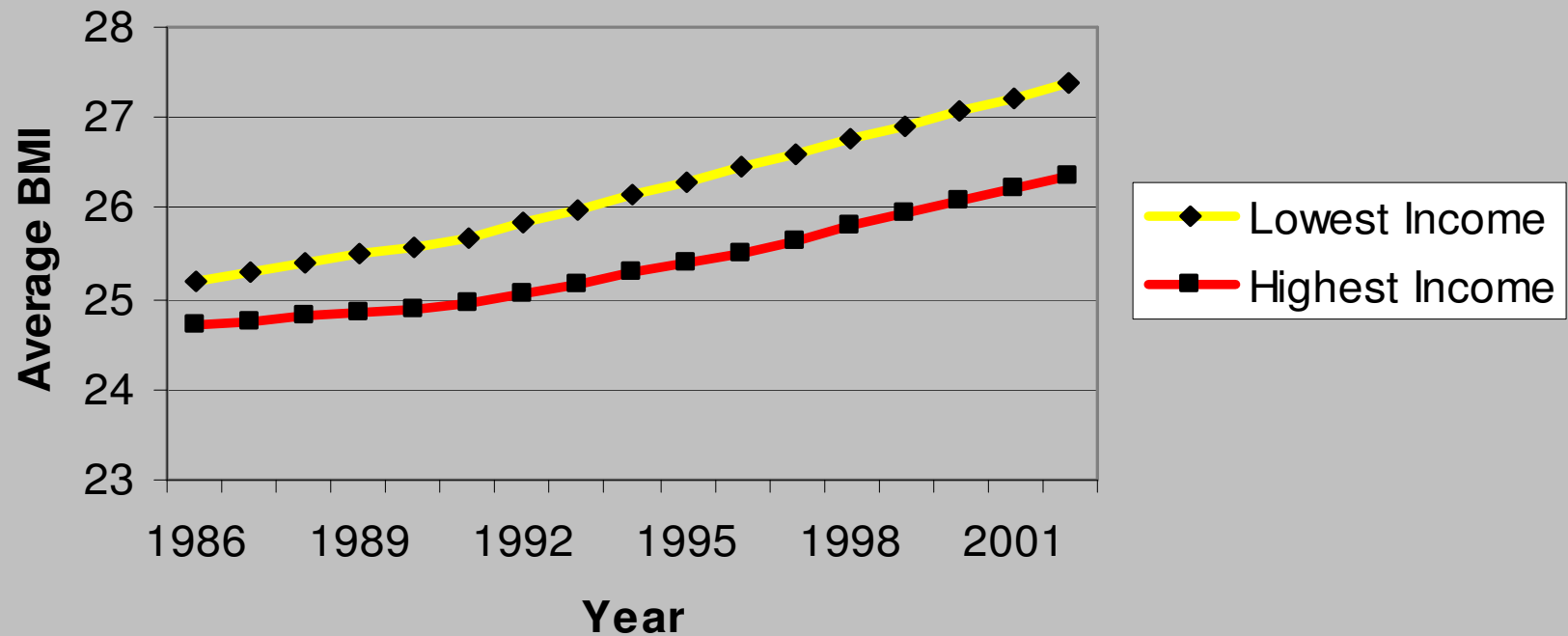
Subpopulations seem to have gained similar weight in last 20 years

- But consistent differences at every point in time
- Reversal must have occurred prior to “obesity epidemic”



Trends in Average Body Mass Index by Relative Income

(but income categories not really comparable over time)



Outline of Talk

- **Poverty and Obesity**
- **What has changed in our lives?**
Trends in time and money
- **The role of income**

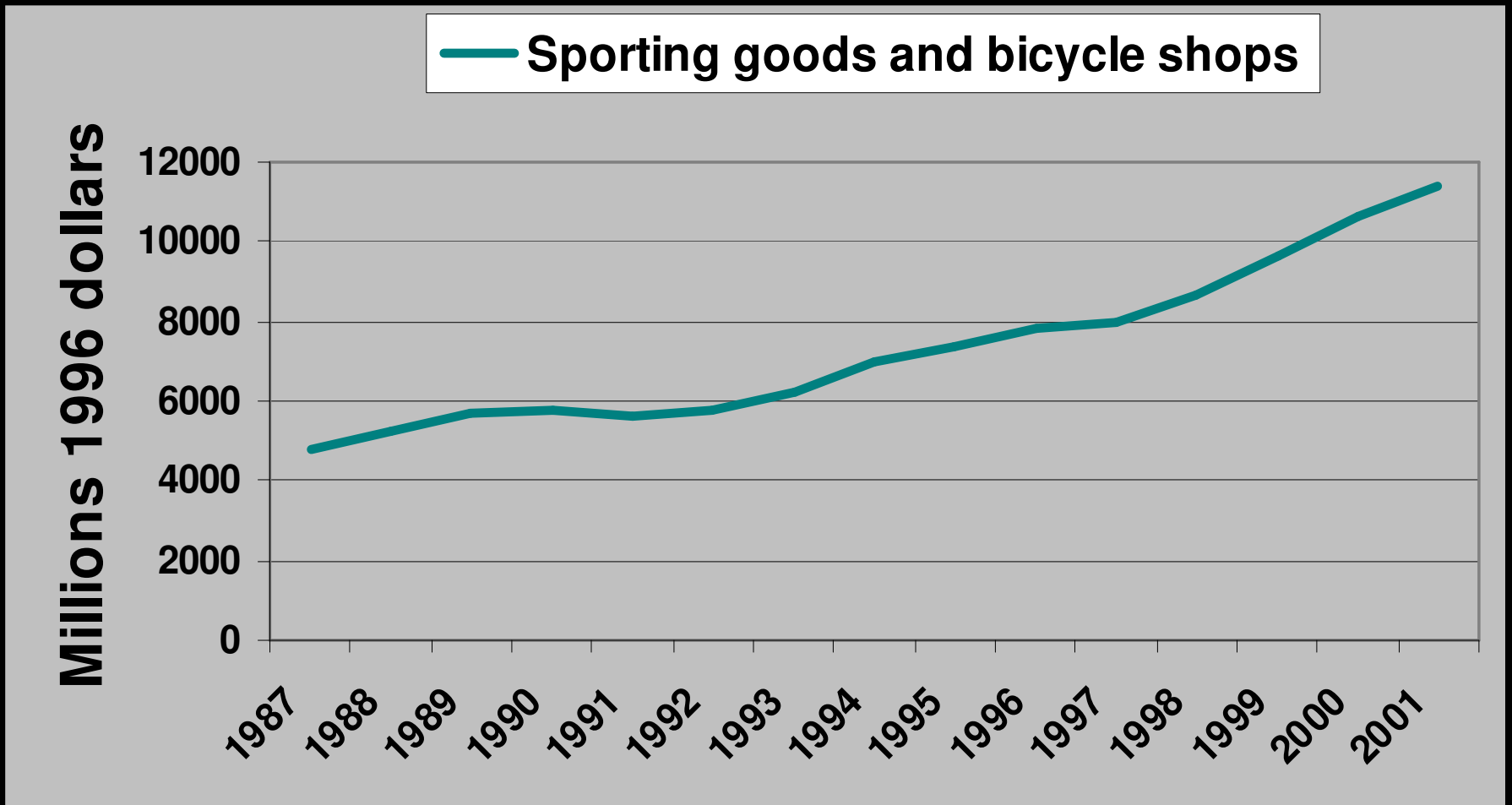
Time and Money

- **What do people do?**
 - **Time use data**
- **Why study time use?**
 - **Scarcest resource**
 - **Regardless of economic growth, a day has 24 hours**
 - **In contrast to money, everybody has the same amount each day**
- **Where does the money go?**
 - **Gross output by industry**

Where Does the Money Go?

- Leisure time industries outpace GDP growth
- “Active” industries at twice the rate of GDP
 - Sporting goods, fitness clubs, dance studio
- “Passive” industries grow even faster
 - Entertainment electronics
 - Spectator sports
- Food expenses declines as share of income, but buy much more energy
- Pushes puzzle one step back: Why the increase?
- Technological progress
 - Revolution in mass production of food

Retail: Sporting Goods Doubled, While Real GDP Increased 50%

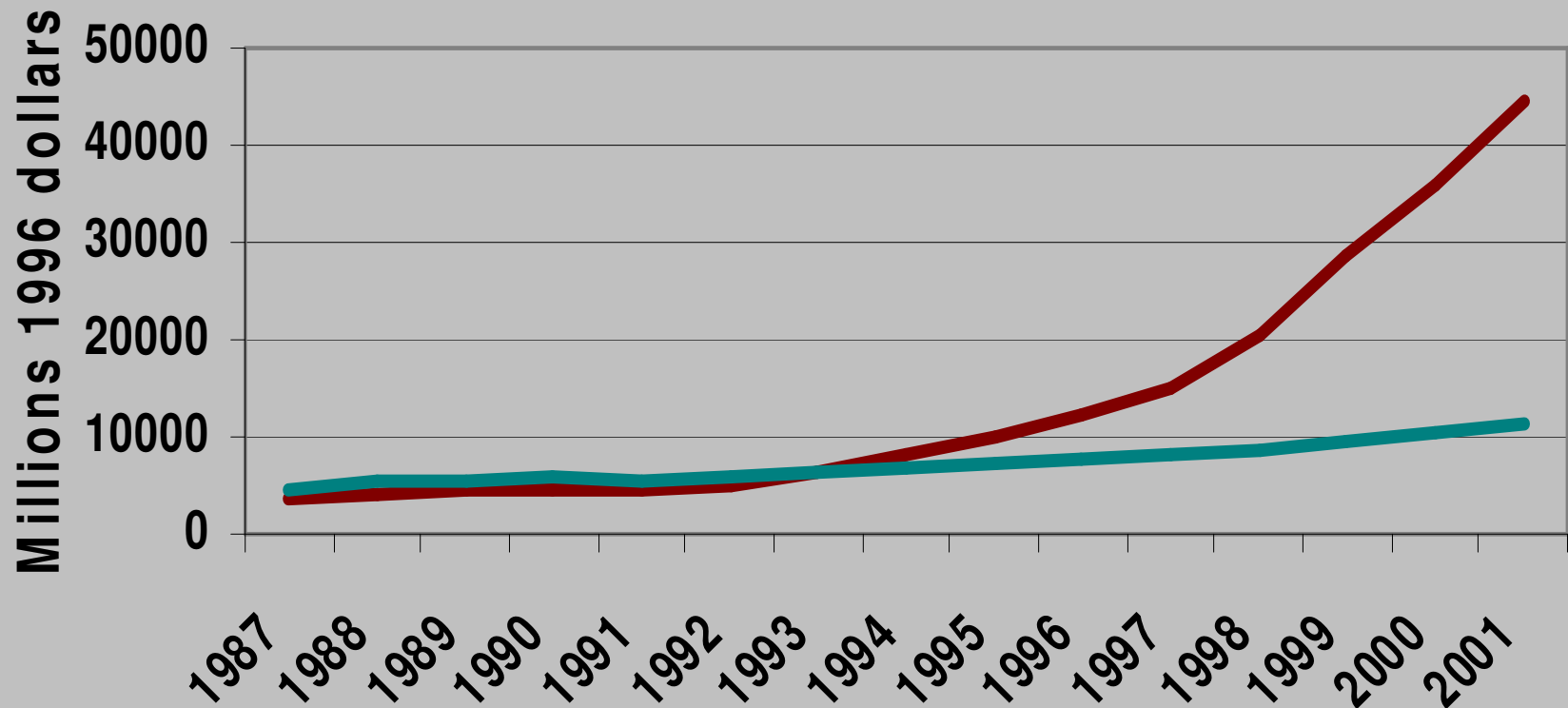


Source: Bureau of Economic Activity, Gross Domestic Product By Industry.

But Dwarfed By Growth of Home Electronics (TV, DVD)

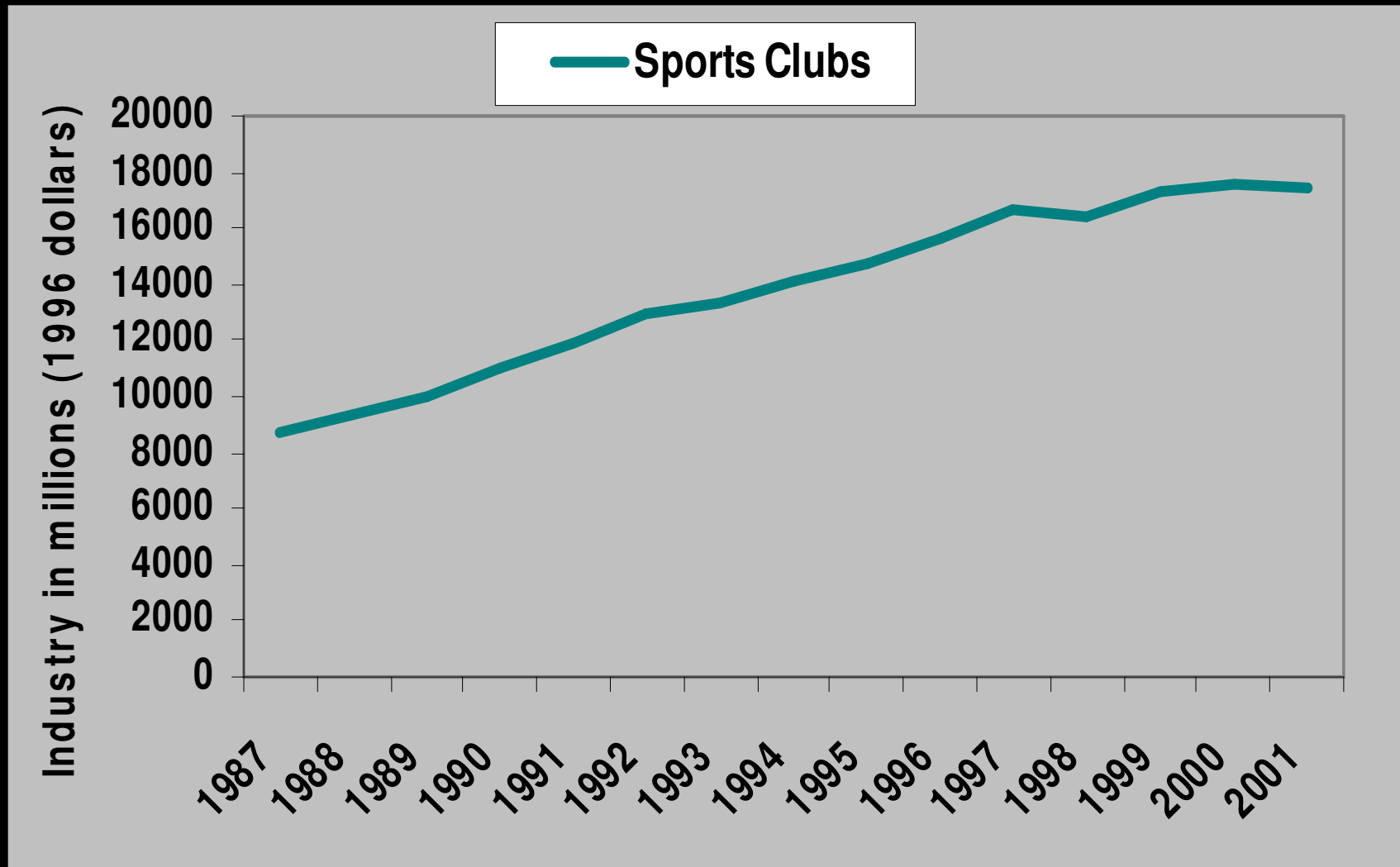
— Radio and TV stores

— Sporting goods and bicycle shops



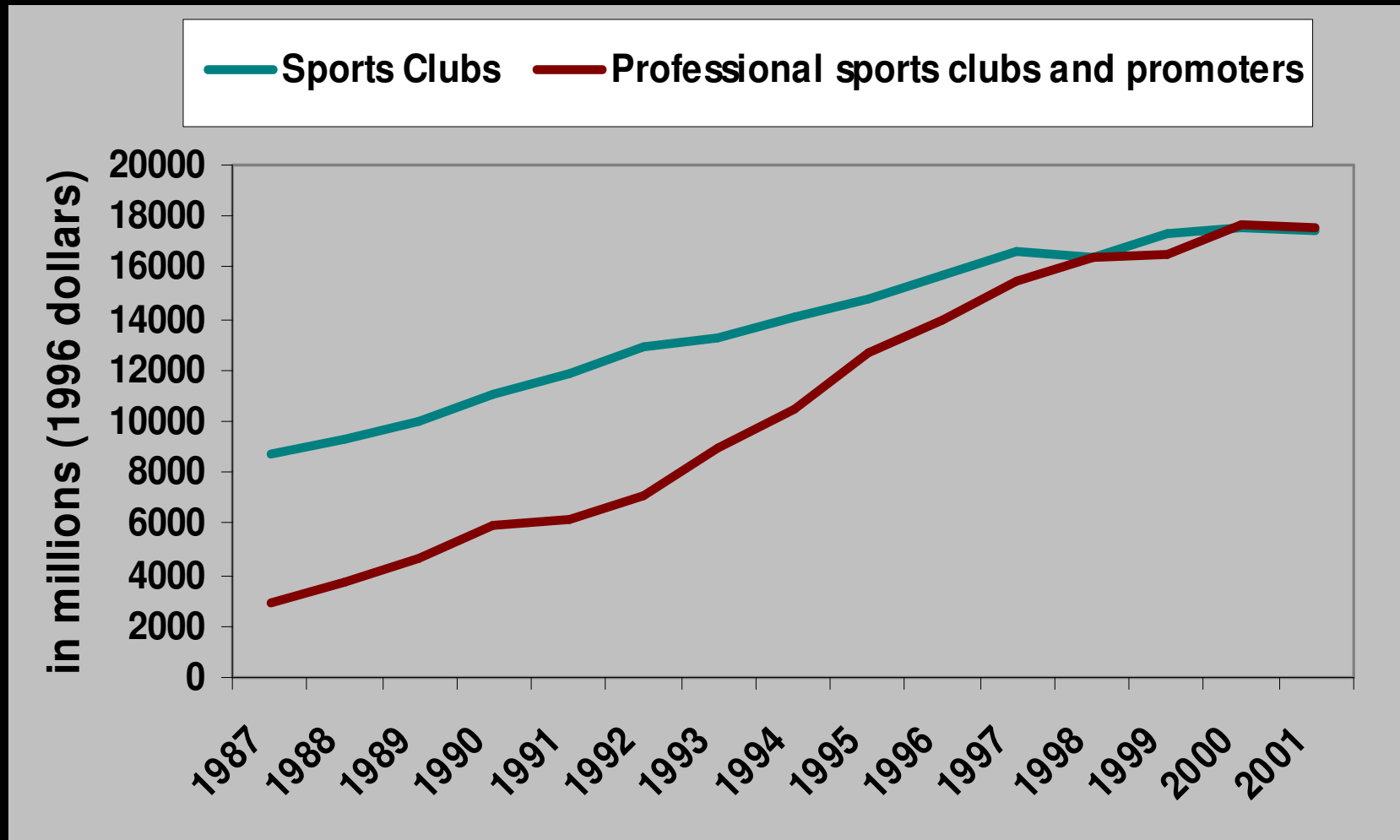
Source: Bureau of Economic Activity, Gross Domestic Product By Industry.

Industries More Closely Related to PA: Sports Clubs Doubled ...



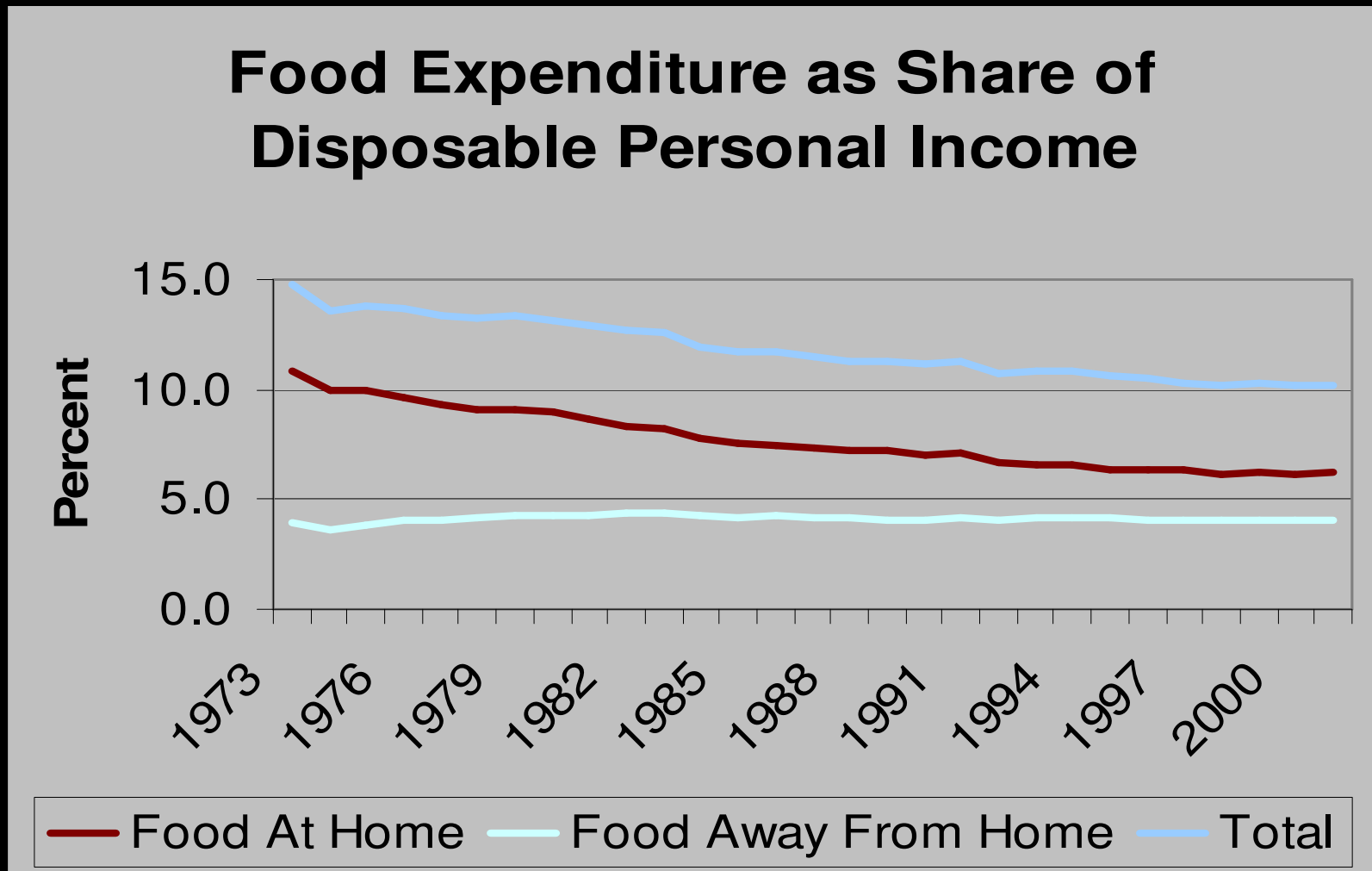
Source: Bureau of Economic Activity, Gross Domestic Product By Industry.

But Sedentary Spectator Sports Grew Faster...



Source: Bureau of Economic Activity, Gross Domestic Product By Industry

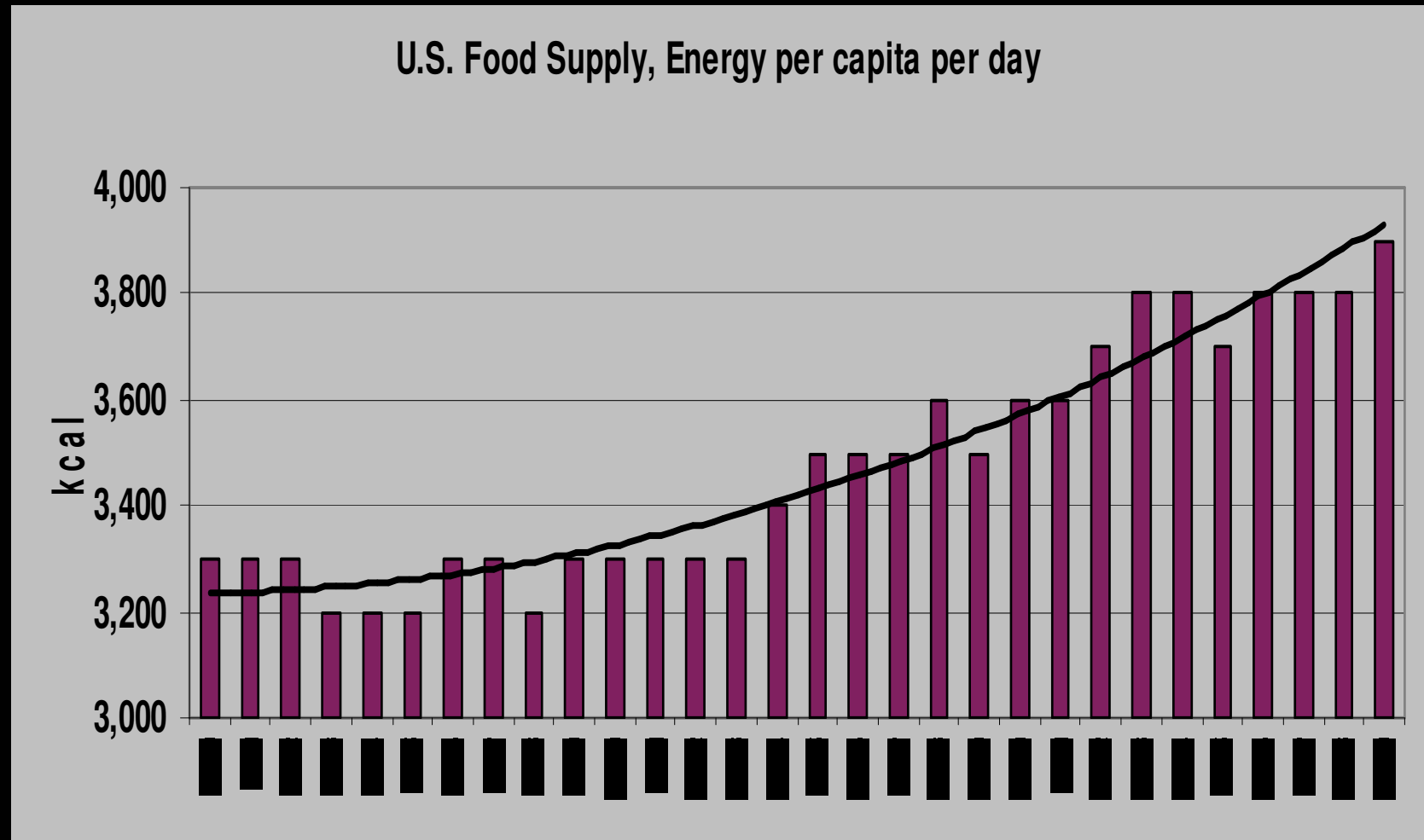
While Leisure Industries Are Growing Fast, Food Industries Decline in Importance ...



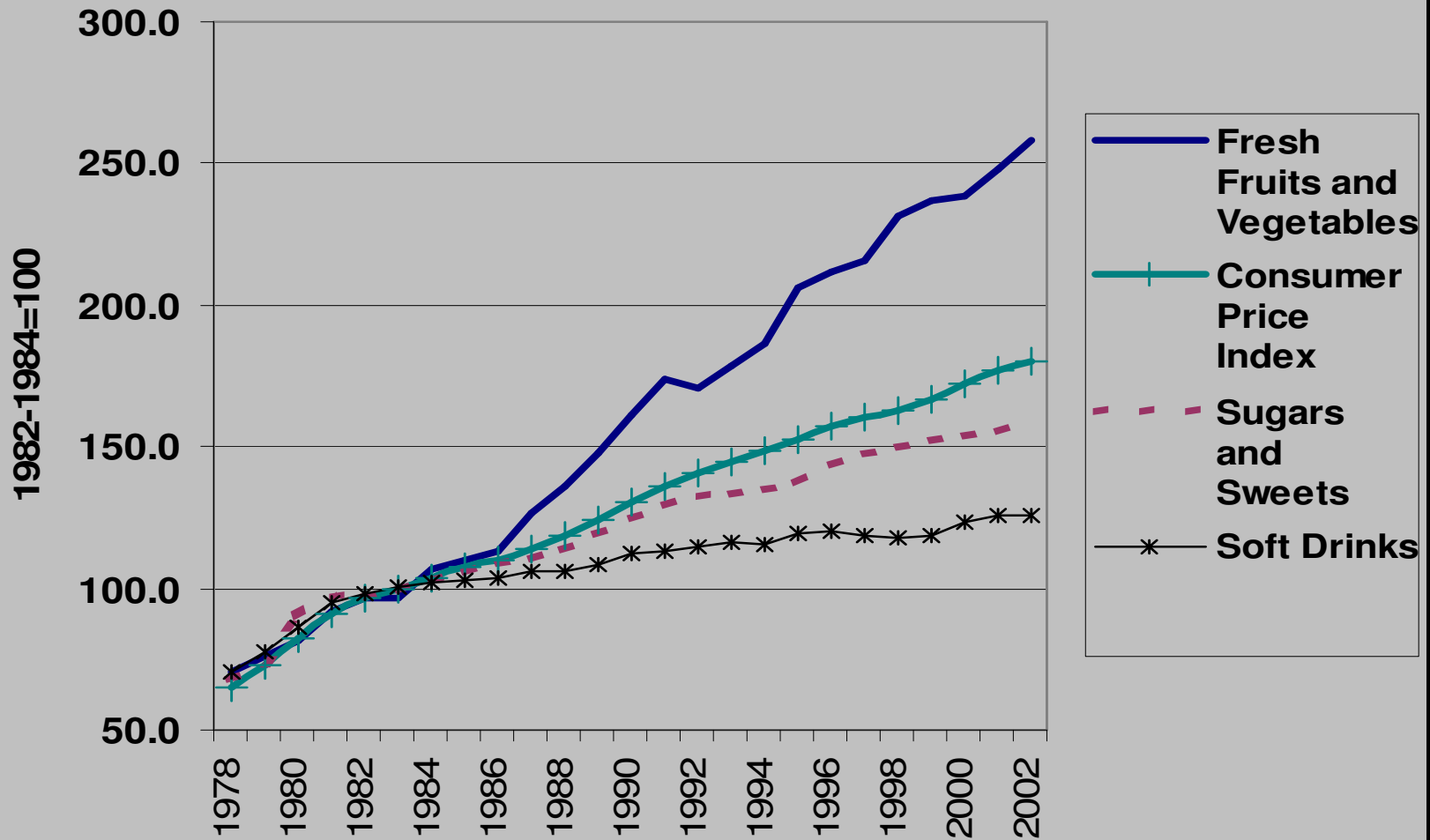
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Source: USDA, Economic Research Service

... But Supply More Calories



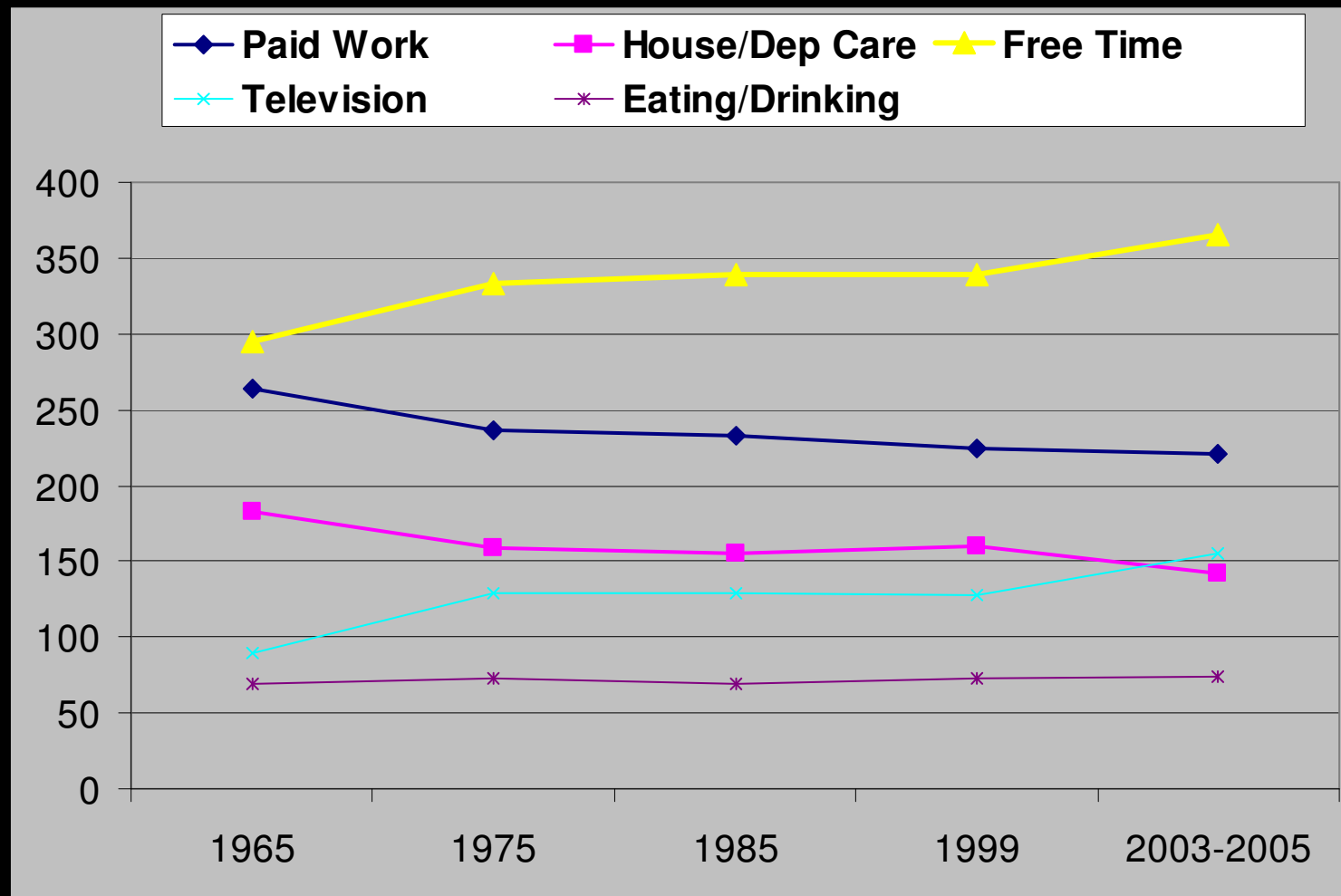
Price Indices



Price trends in food types likely to exacerbate income effects

- **Technological progress and production efficiencies affect relative prices**
 - **Less change for perishable/fresh goods means higher prices**
- **Double hit for lower income groups**
 - **“prudent” diets become relatively more expensive everywhere**
 - **Perishable, more expensive foods less available in small stores**
 - **Even though generally more food stores in low income neighborhoods, smaller size and less efficient means higher prices**

Where does the time go?



Source: 1965-1985: Robinson and Godbey; 1999: my calculation using FISCT 1999; 2003-2005: ATUS

Active Leisure Time Keeps Increasing

- In BRFSS, additional 20 mins/week in last decade in physical activity for the “typical” American
- Percent of inactive keeps falling
 - From 30.7 in 1990 to 27.4 in 2000
 - More than 3 percentage point
- But small relative to total increase in free time

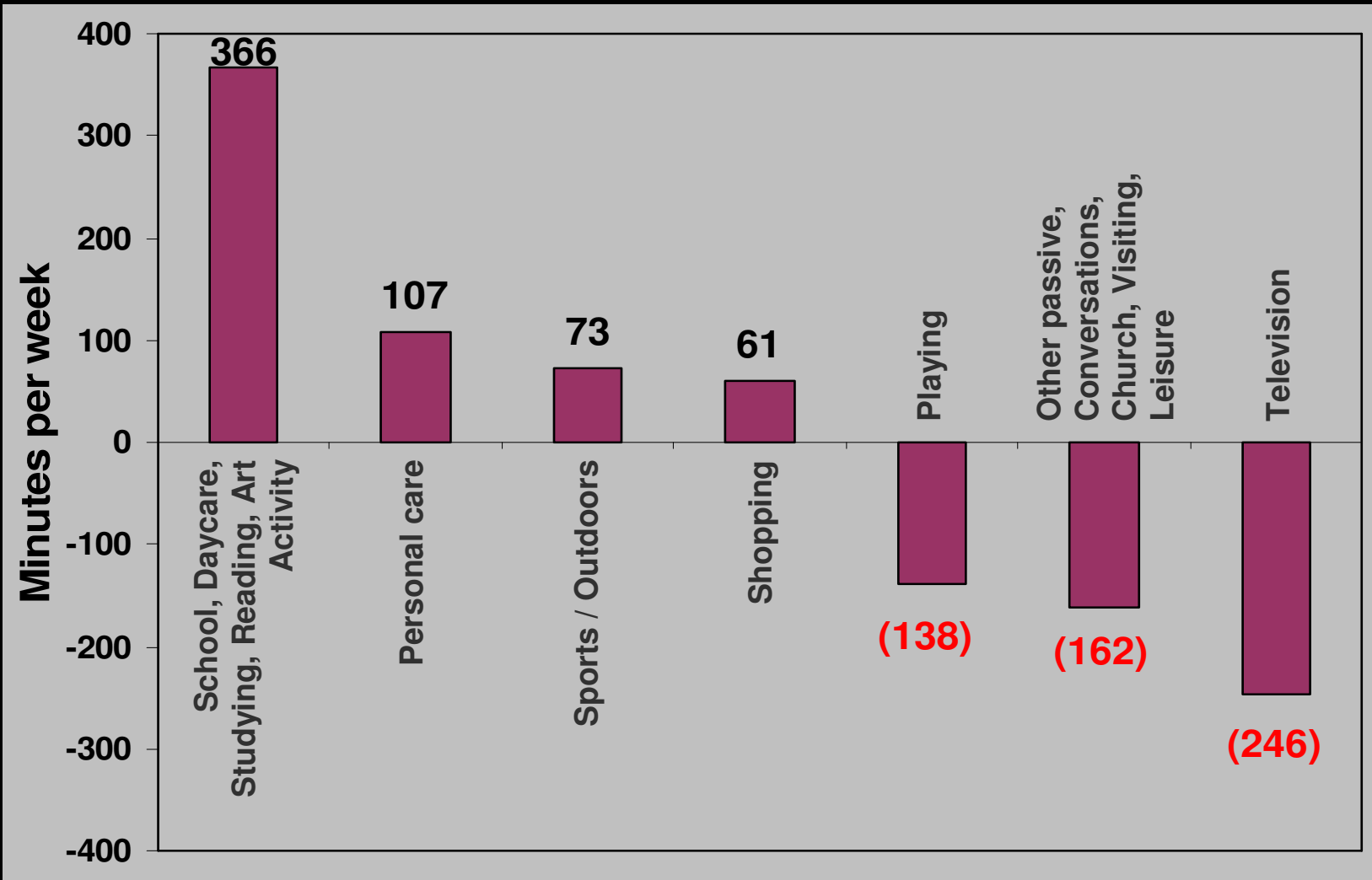
Home Production

- **Drop of 5 hours/week**
- **Biggest reduction in cleaning and meal preparation**
- **Meal preparation more important for diet than physical activity**
 - **Wider range and variety of prepared food available at lower TIME costs**
 - **Variety of snacks always available, including while watching TV/DVD**

Trends in Time Use Differ For Children

- **For adults 18-64, free time increased by 8 hours per week from 1965 to 2003-2005**
 - increase for both men and women
 - in or out of labor force
- **For children 3-12, free time decreased by 7 hours per week from 1981 to 1997**

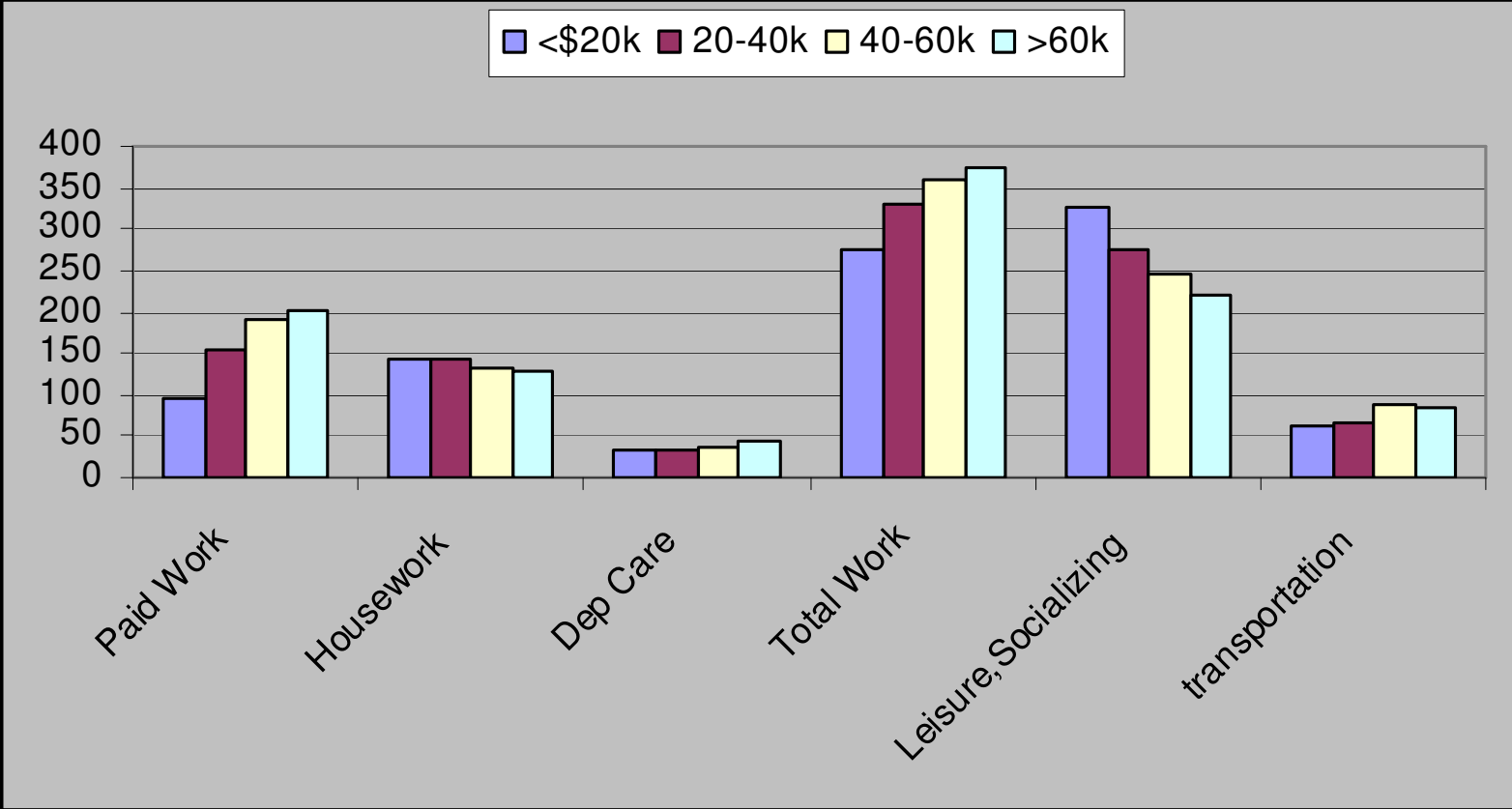
Changes in Weekly Minutes Spent on Activities from 1981 to 1997, Age 3-12



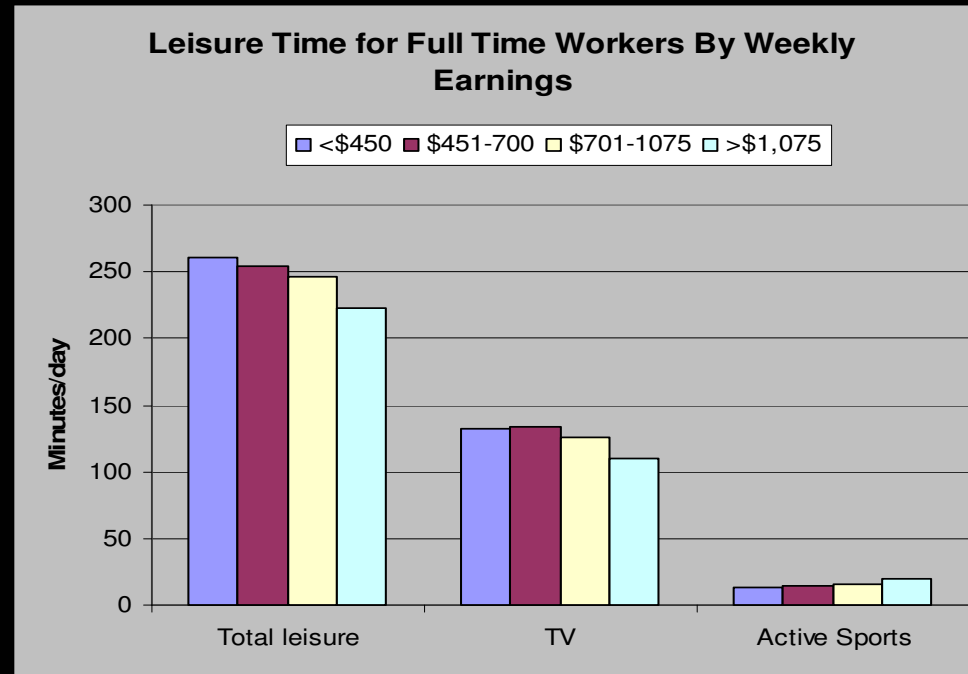
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Work and Leisure Time Among Women By Family Income



More Leisure Time Among Lower Income Full Time Workers



- **Lowest versus highest earnings group among full time workers**
 - more TV watching (22 mins/day), more games (7 mins)
 - more socializing (15 mins)
 - Less reading (8 mins/day)
 - Less active participation in sports (7.5 mins)

Differences between lowest and highest income women (adjusted for sociodemographics)

- Positive difference: more time in low income group
- No substantial or highly significant differences in:
 - Grocery shopping
 - travel time for groceries
 - Personal care
 - Housework other than food preparation
 - Religious activities
 - Telephone calls
- Race/ethnicity other important characteristic

Activity	Minutes
Sleep	17
Food Preparation	10
Eating	-5
Child Care	13
Paid Work	-26
Education	-13
Leisure, Relax	34
TV	34
Sports, Exercise	-7
Volunteer	-4
Transportation	-12

Differences between lowest and highest income men (adjusted for sociodemographics)

- **Positive difference: more time in low income group**
- **No substantial or highly significant differences in:**
 - Grocery shopping
 - travel time for groceries
 - Personal care
 - Education
 - Religious activities
 - Telephone calls

Activity	Minutes
Sleep	23
Household Work	-14
Eating	-10
Child Care	3
Paid Work	-8
Leisure, Relax	36
TV	42
Sports, Exercise	-14
Transportation	-13

Summary

- **Obesity and poverty currently correlated among women and youth in US**
- **Income marker for vulnerable groups even if causes and consequences are less clear**
- **Does obesity cause poverty?**
 - **marriage market likely pathway for women**
- **Does poverty causes obesity?**
 - **Some plausible pathways exist, empirical evidence less clear, one of the themes today**
- **Or unobserved other factors?**
 - **Likely for some subgroups (psychotic disorders)**

- “The *German Women* are generally so disagreeable to an English Eye, that it wou’d require great Portions to induce Englishmen to marry them.....dick und starcke, that is, thick and strong, always enters into their Description...”

Benjamin Franklin, ca. 1753, about immigrants