

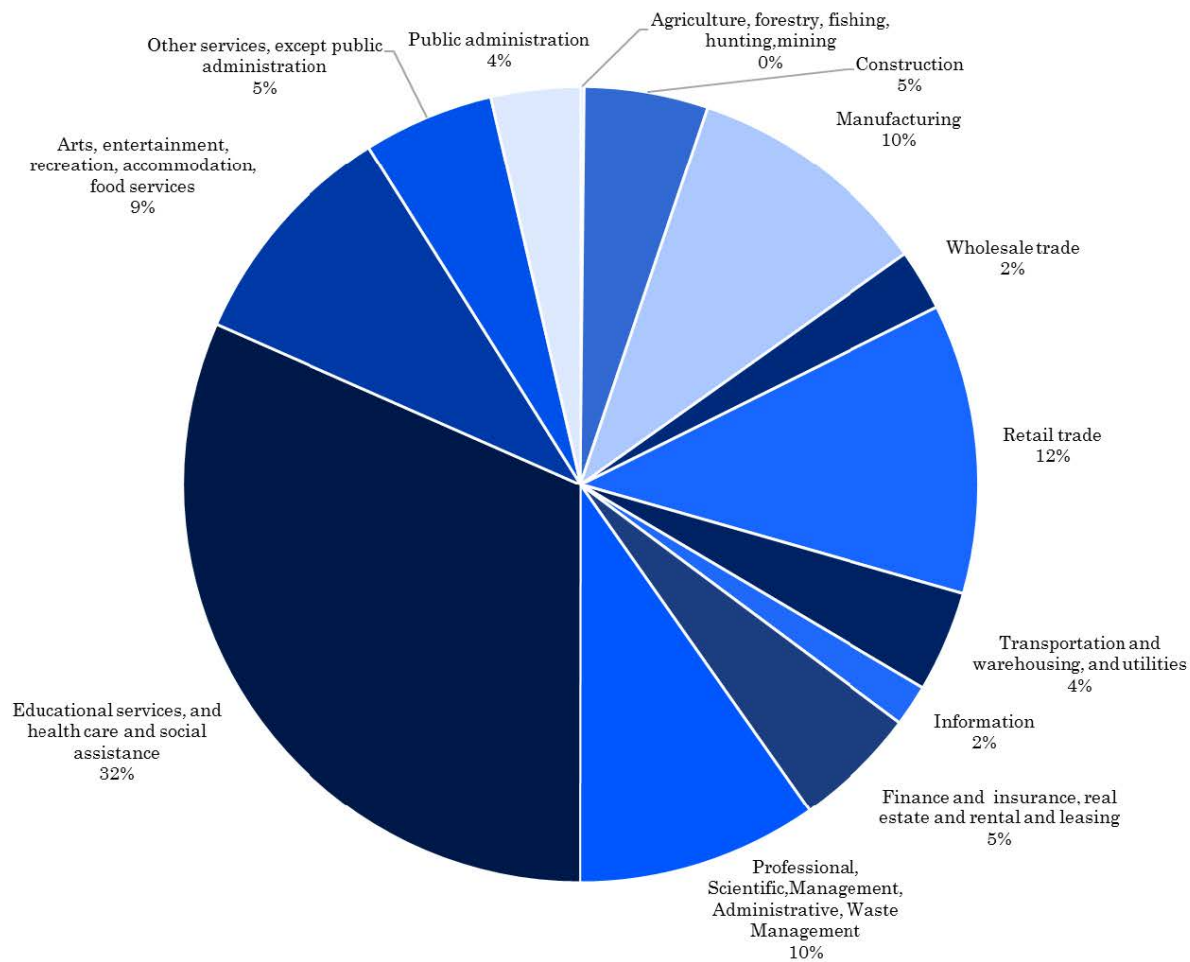
# Education

## The Changing World of Work – Class 3

# Class schedule

Class	Theme
3/22	Introduction
3/29	Government and Politics – Dr. Smriti Rao
4/5	<b>Education</b>
Note: no class on 4/12	
4/19	Business – Asima Silva, IBM
4/26	What's ahead?

- Readings and presentations are available at <http://queenlake.com/wise/wise-spring-2017/the-changing-world-of-work/> .



## How Worcester makes a living

Source: [Worcester Regional Research Bureau - Worcester Almanac](#)

# Who makes how much in Worcester?

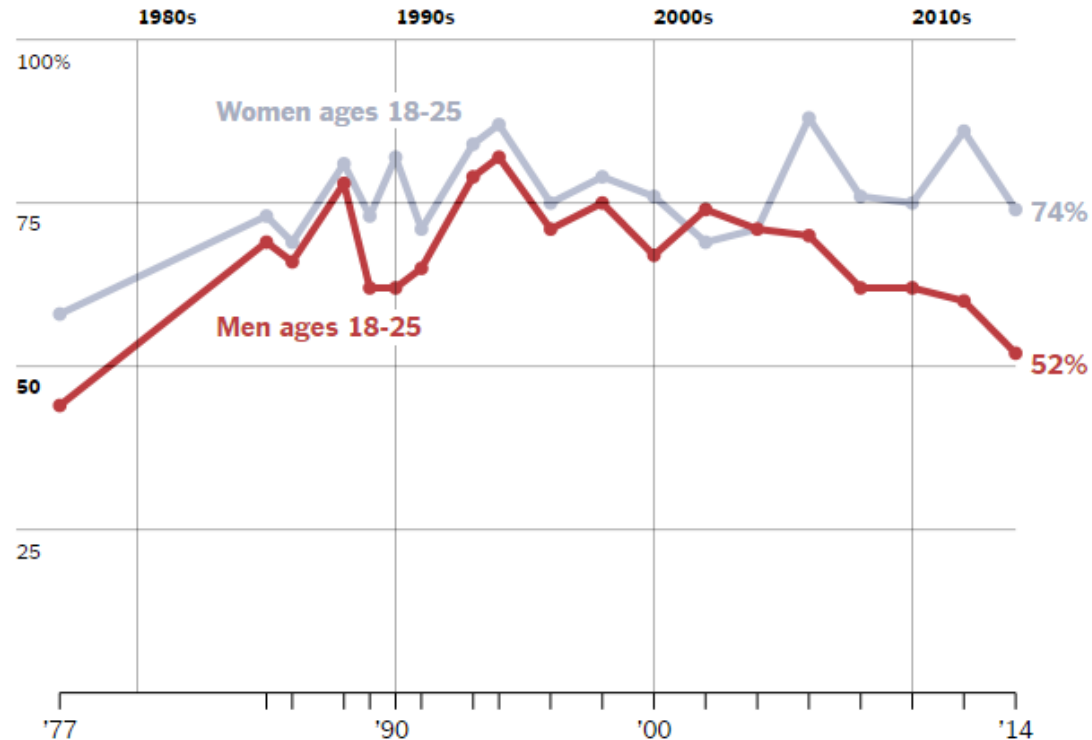
Worcester: Employment & Wages by Industry, 2015

Industry, Population Over 16 Employed	2015	Median Earnings
Public Administration	3,059	\$53,796
Finance and Insurance, and Real Estate and Rental and Leasing	4,252	\$44,689
Information	1,410	\$41,389
Professional, Scientific, Management, Administrative Waste Management	8,225	\$41,196
Manufacturing	8,399	\$40,697
Construction	4,226	\$40,369
Wholesale Trade	2,086	\$34,625
Educational Services, Health Care, Social Assistance	26,568	\$31,759
Transportation, Warehousing, Utilities	3,449	\$30,763
Agriculture, Forestry, Fishing, Hunting, Mining	135	\$26,250
Retail Trade	9,901	\$22,129
Other Services, except Public Administration	4,455	\$21,896
Arts, Entertainment, Recreation, Accommodation Services	7,967	\$15,916

Source: [Worcester Regional Research Bureau - Worcester Almanac](#)

## Young People, Old-School Views

Percentage of young Americans who disagreed with this statement: "It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of the home and family."

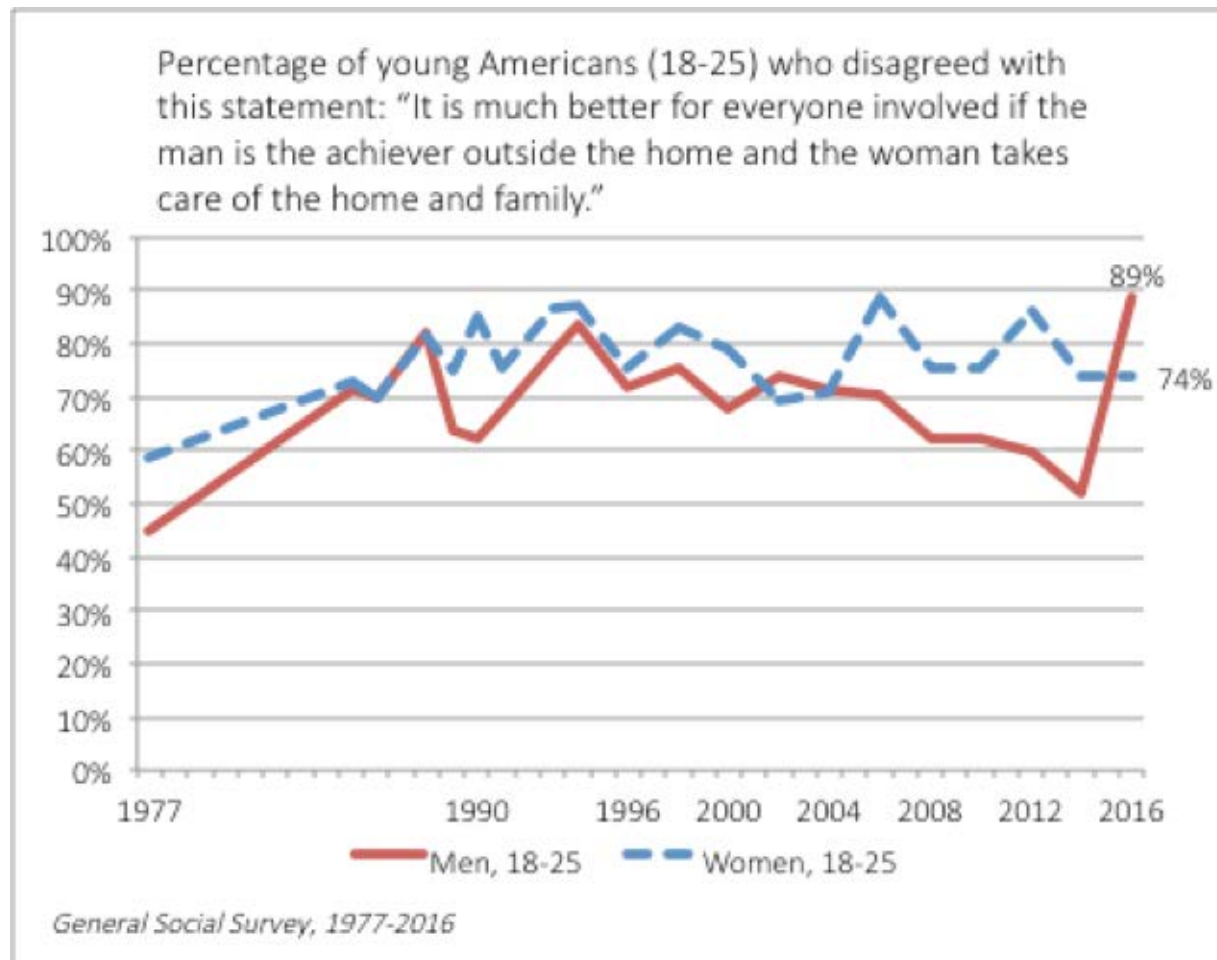


Source: General Social Survey

By The New York Times

## Women in the workforce

Source: NYT: [Do Millennial Men Want Stay-at-Home Wives?](#)



## But wait, there's more:

[adventures in garbage millennial confirmation bias](#)





## Officials: Pot industry will create jobs, help economy

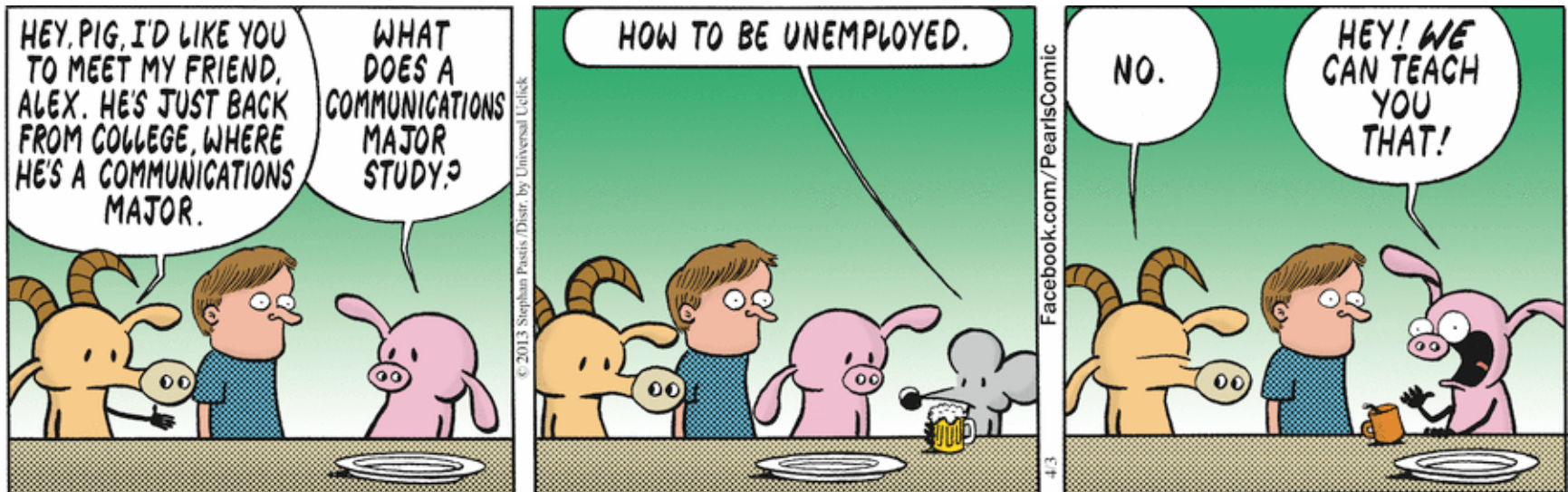
Denver marijuana industry is eating into area's restaurant jobs



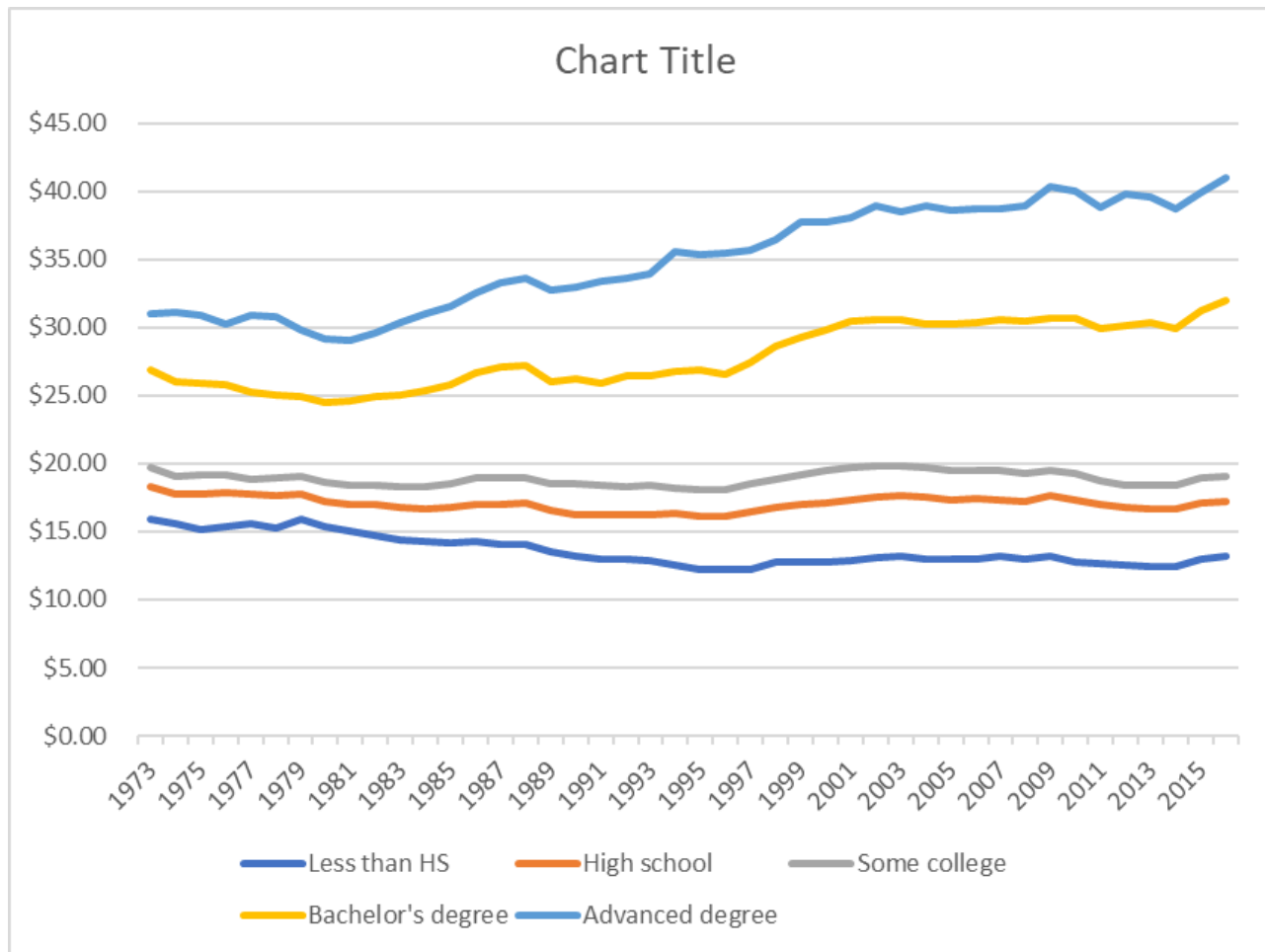
And so it begins ...

Swedish company implants microchips in employees





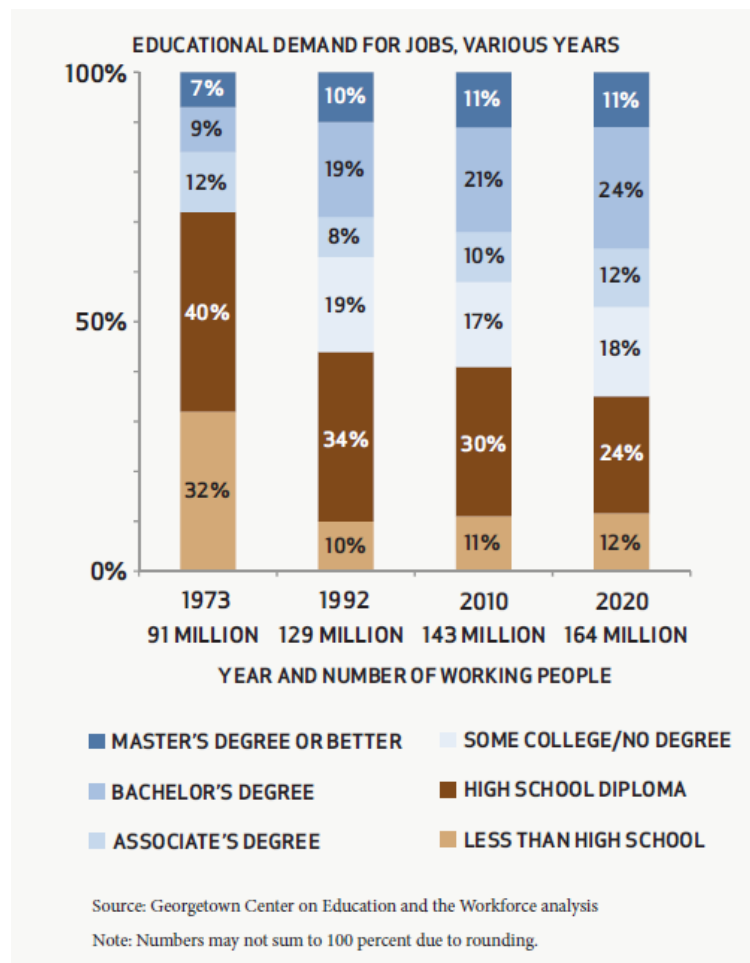
# Is college worth it?



## Education still pays off

Economic Policy Institute: [Wages by education](#)

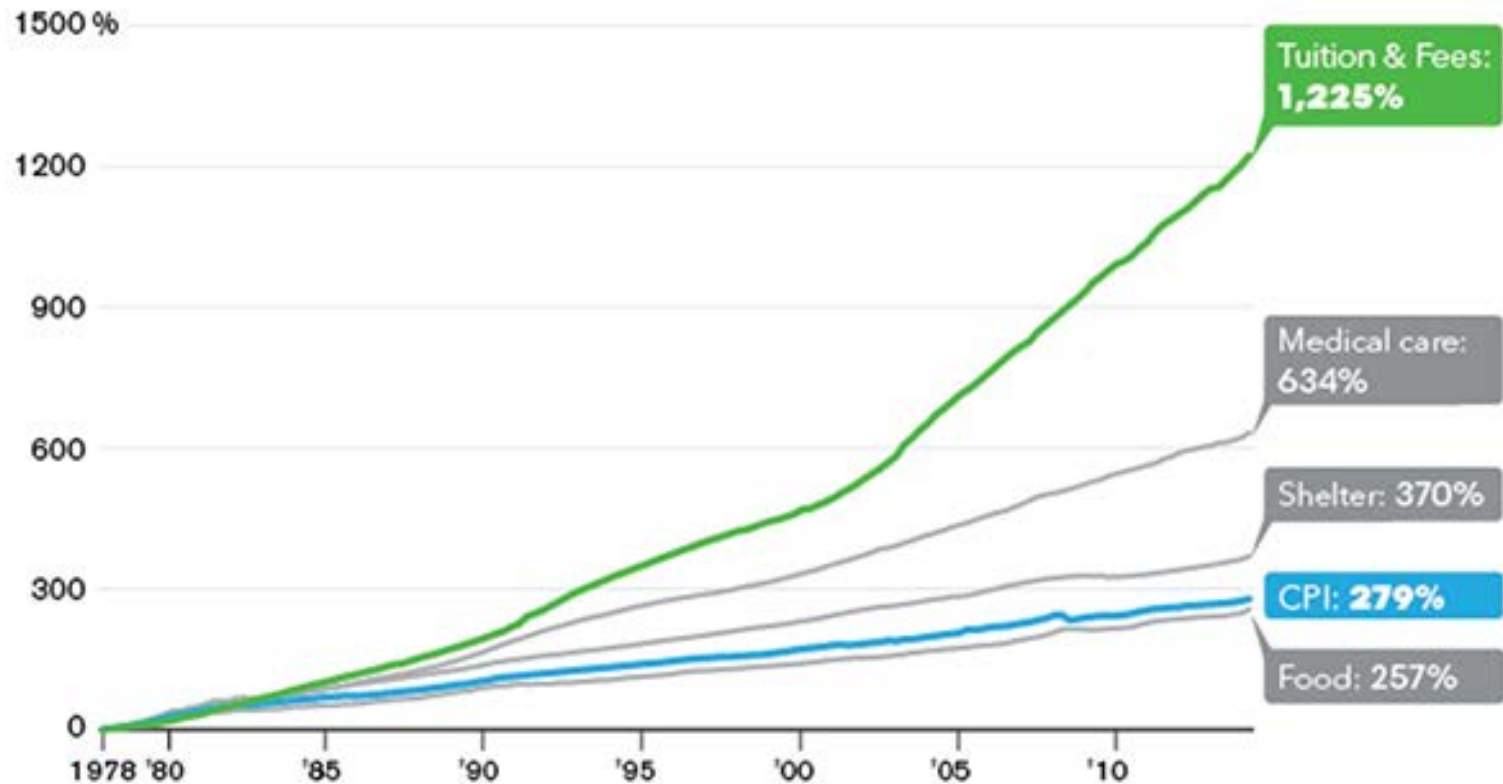
Chart shows average wages by educational level. 2016 median wage is \$17.86 per hour or ~ \$37,148.80/year.



# College required, whether needed or not

Georgetown University: [Recovery: Job Growth And Education Requirements Through 2020](#)

## Percentage increase in consumer prices since the first quarter of 1978



Source: Bureau of Labor Statistics

Bloomberg Visual Data

# Costs are going up and we really don't know why

Considerations on Cost Disease

**Table 3**  
**Educational Attainment of World War II Veterans and Nonveterans**

Year of Birth	World War II Veterans			Nonveterans			Absolute Difference			Percentage Difference		
	Fraction High School Graduate	Average Years of College	Fraction College Graduate	Fraction High School Graduate	Average Years of College	Fraction College Graduate	Fraction High School Graduate	Average Years of College	Fraction College Graduate	Fraction High School Graduate	Average Years of College	Fraction College Graduate
1915	.57	.76	.14	.45	.46	.08	.12	.29	.06	.28	.64	.69
1916	.58	.75	.13	.45	.47	.08	.13	.29	.05	.29	.61	.65
1917	.59	.76	.14	.45	.49	.09	.14	.26	.05	.31	.54	.53
1918	.59	.78	.14	.43	.51	.09	.16	.27	.04	.38	.53	.46
1919	.60	.76	.13	.43	.47	.08	.16	.29	.05	.38	.62	.60
1920	.62	.83	.15	.44	.51	.09	.17	.32	.06	.39	.62	.60
1921	.63	.85	.15	.45	.49	.09	.19	.36	.06	.42	.74	.69
1922	.64	.90	.17	.43	.45	.08	.21	.45	.08	.49	.99	.98
1923	.64	.93	.18	.43	.42	.08	.21	.51	.10	.50	1.21	1.32
1924	.64	.99	.19	.40	.40	.08	.24	.59	.12	.60	1.46	1.51
1925	.63	1.01	.20	.41	.44	.08	.23	.57	.11	.56	1.29	1.37
1926	.63	1.04	.20	.41	.52	.10	.22	.52	.10	.52	1.00	.96
1927	.65	1.07	.21	.43	.54	.11	.22	.52	.10	.51	.96	.95
1928	.63	.96	.18	.51	.64	.12	.11	.32	.06	.22	.50	.45
1929	.56	.63	.10	.53	.72	.14	.03	-.09	-.04	.06	-.12	-.28
1930	.56	.48	.06	.53	.76	.15	.03	-.27	-.09	.05	-.36	-.59
Summary 1923–28	.64	1.00	.19	.43	.48	.09	.21	.52	.10	.50	1.07	1.09

SOURCE.—Data are from a 3% sample of the 1970 decennial census.

NOTE.—This tabulation includes observations for white men born between 1915 and 1930 who served in World War II and who did not serve in the military (any conflict). See app. A for further details of sample restrictions. “Nonveteran” includes men who did not serve in any military conflict. Annual levels represent fixed-weight averages across quarter-of-birth cohorts.

## The G. I. Bill – it’s complicated

### Going to War and Going to College

Comparison to Non-Completers	Mean	SD	Min.	Max.
Associate degree				
Tuition/fees	\$11,860	5,790	\$750	\$30,000
Lost income in college	\$3,610	1,230	\$470	\$8,190
Earnings gain post college	<u>\$97,640</u>	<u>42,720</u>	<u>\$13,960</u>	<u>\$245,780</u>
Net gain	\$82,180	43,146	-\$17,340	\$228,740
Certificate				
Tuition/fees	\$5,140	2,280	\$750	\$30,000
Lost income in college	\$2,170	950	\$0	\$8,190
Earnings gain post college	<u>\$30,960</u>	<u>31,560</u>	<u>-\$101,020</u>	<u>\$159,840</u>
Net gain	\$23,380	31,670	-\$111,470	\$152,240

## Is a two-year degree worth it?

Labor Market Returns to Sub-Baccalaureate Credentials: How Much Does a Community College Degree or Certificate Pay?



Twelve years after graduation (in 2012), solo practitioners in the Class of 2000 reported a median income of just \$50,000, with a full quarter of them reporting no income at all.

Could Atticus Finch make a living these days?

[Michigan State Law Review, p. 1043, 2015](#)

[What Happened to the Class of 2010? Empirical Evidence of Structural Change in the Legal Profession](#)

Today, students are borrowing an average of \$32,289 each year to attend a public law school and \$44,094 for a private one.

The prospect of paying off \$97,000 to \$132,000 of law school debt, plus college debt, plus accrued interest—all with weaker employment outcomes than earlier classes—may overwhelm prospective students

It gets worse

Ibid.

# Doctor vs. Dog Walker

	Resident Physician	Dog Walker
Pt/day	30+	5
Hrs/wk	90+	< 35
\$/day	\$123	\$125
\$/pt	\$4.10	\$25
Salary	\$45,000	\$45,625

## Dog Walker Wins!

Do dog walkers make more money than doctors?



## Adjunctification of education

Kimberly Ellis-Hale has been teaching at Wilfrid Laurier University in Waterloo, Ont., since 1998 but still has to re-apply for her job every four months. (Leonardo Palleja/CBC)

“Though lawyers still earn much more in the New York area in both nominal terms and net of housing costs, janitors now earn less in the NY area after housing costs than they do in the Deep South.”

## Impact of housing costs on mobility

[Why Has Regional Income Convergence in the U.S. Declined?](#)

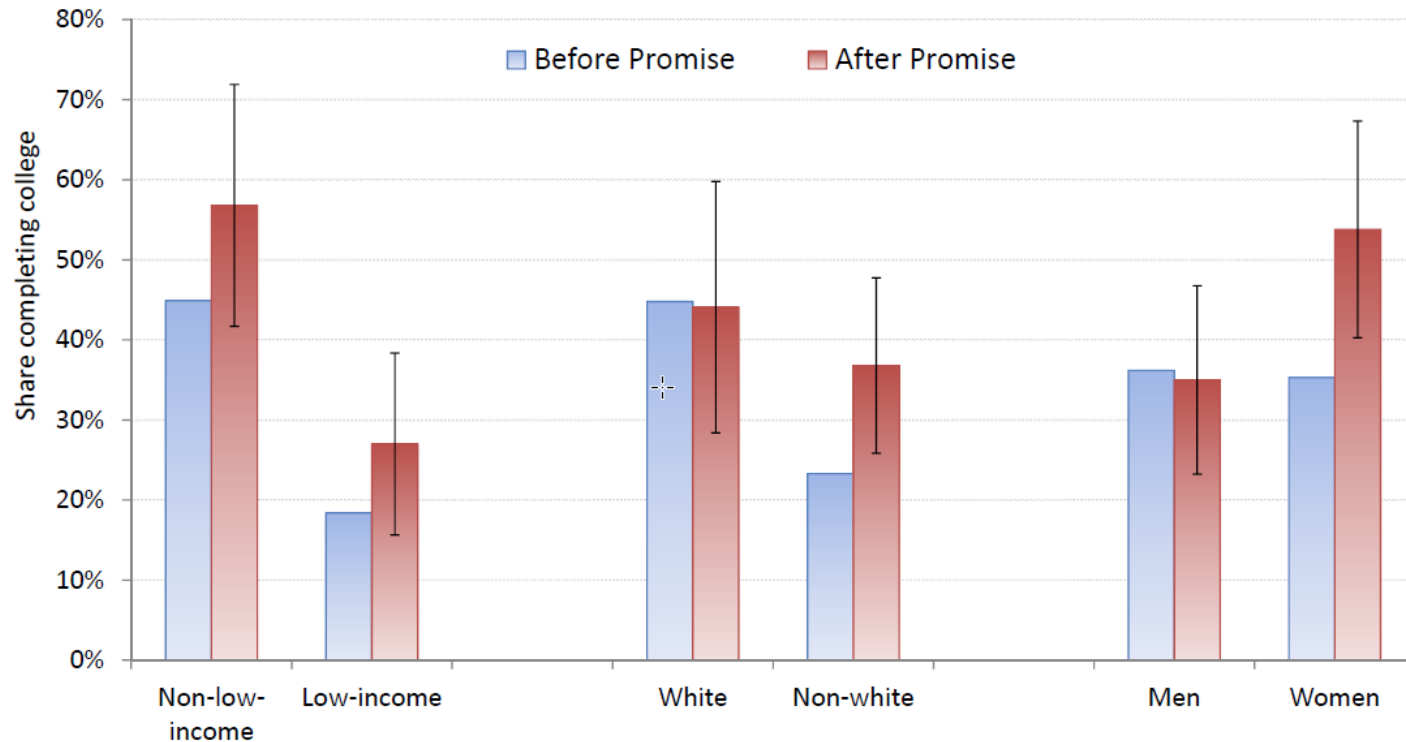


## The Kalamazoo Promise





## Any college credential within six years, by subgroup



Source: Bartik, Hershbein, and Lachowska (2015). Note: Estimates correspond to the fifth and sixth columns of table 7 in the paper. Whiskers show 95 percent confidence intervals around estimate in Promise period.

# It appears to be working

[Impact of the Promise](#) and [The Short-Term Effects of the Kalamazoo Promise Scholarship on Student Outcomes](#)



So what's missing?



# Are college graduates ready for work?

April 2017

## Cities with the Largest Scarcity of Skills

- |                              |                      |
|------------------------------|----------------------|
| 1 San Francisco Bay Area, CA | 6 Los Angeles, CA    |
| 2 Austin, TX                 | 7 New York City, NY  |
| 3 Washington, D.C.           | 8 Denver, CO         |
| 4 Seattle, WA                | 9 Raleigh-Durham, NC |
| 5 Boston, MA                 | 10 Charlotte, NC     |



"Scarcity" is when employer demand for a certain skill exceeds worker supply of that skill. To develop the list of cities with the largest scarcity of skills we calculated 50 of the largest U.S. cities' (in terms of LI membership) total skills gaps, determined what percentage of their skills gaps are caused by a scarcity of skills, and then compared each city's skills scarcity relative to each other.

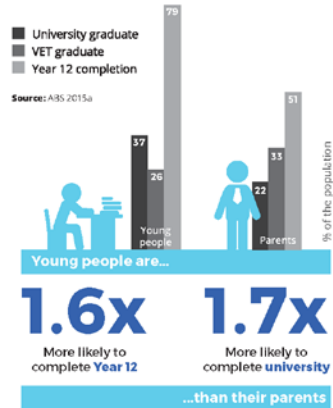
LinkedIn

## Skills gap vary by location

LinkedIn Workforce Report | United States | April 2017

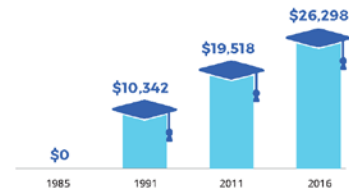
## Transitions from education to work are becoming more complex and uncertain

Young people are spending more time in education than previous generations



They are paying more than double the cost for higher education than the generation before - and much more than the free education obtained by their parents' generation

Average cost of a 3 year undergraduate degree (inflation adjusted):



Sources: Chapman and Higgins 2013 and PIA estimate using band 2 student contribution amounts. Further details in the appendix.

Yet there is evidence that the time and money spent dedicated to education isn't preparing them for work

More than half of students and 71% of VET students are being trained for jobs that will be radically affected by automation in the next 15 years.

Of newly employed graduates of bachelor degrees



had jobs where they felt their field of study wasn't important.

Of newly employed graduate VET students



had jobs that were not relevant to their course.

Sources: PIA 2015, Graduate Careers Australia 2015 and NCVET 2015

fya.org.au 5





## Adulting School Teaches Young Adults Grown-Up Skills





# What about adult and lifelong learning?



David Parki

“Pushing people into ever-higher levels of formal education at the start of their lives is not the way to cope.”

The Economist: [Equipping people to stay ahead of technological change](#)



## AARP – Should you go back to school after 50?

Assistant Principal Sheelah Brown, 83 (with students at Miller-Driscoll School in Wilton, CT) got her Ph.D. in education at 64.



“People younger than 24 make up 22% of all adult education and literacy teachers. They earn \$25.90 an hour on average, or \$53,872 a year, and the number of jobs grew by 5% from 2013 to 2017.”

## Adult and literacy teachers

[The 15 best jobs if you're under 25—and they pay at least \\$40k](#)

**Level 3  
Employers &  
Collaboratives**



**Level 2  
Industry  
Associations**



**Level 1  
National Business  
Associations**



# Who should lead – colleges or business?

[U.S. Chamber of Commerce Recommends Larger Role for Employers in Accreditation](#)

digital

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*Presents this Certificate to*

KARL A. HAKKARAINEN

*for successfully completing a course of instruction in*

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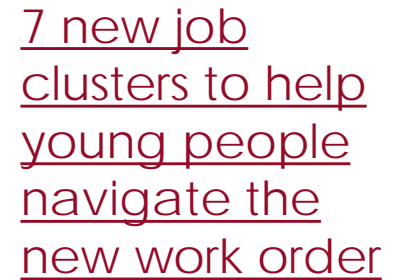
Susan Nelson

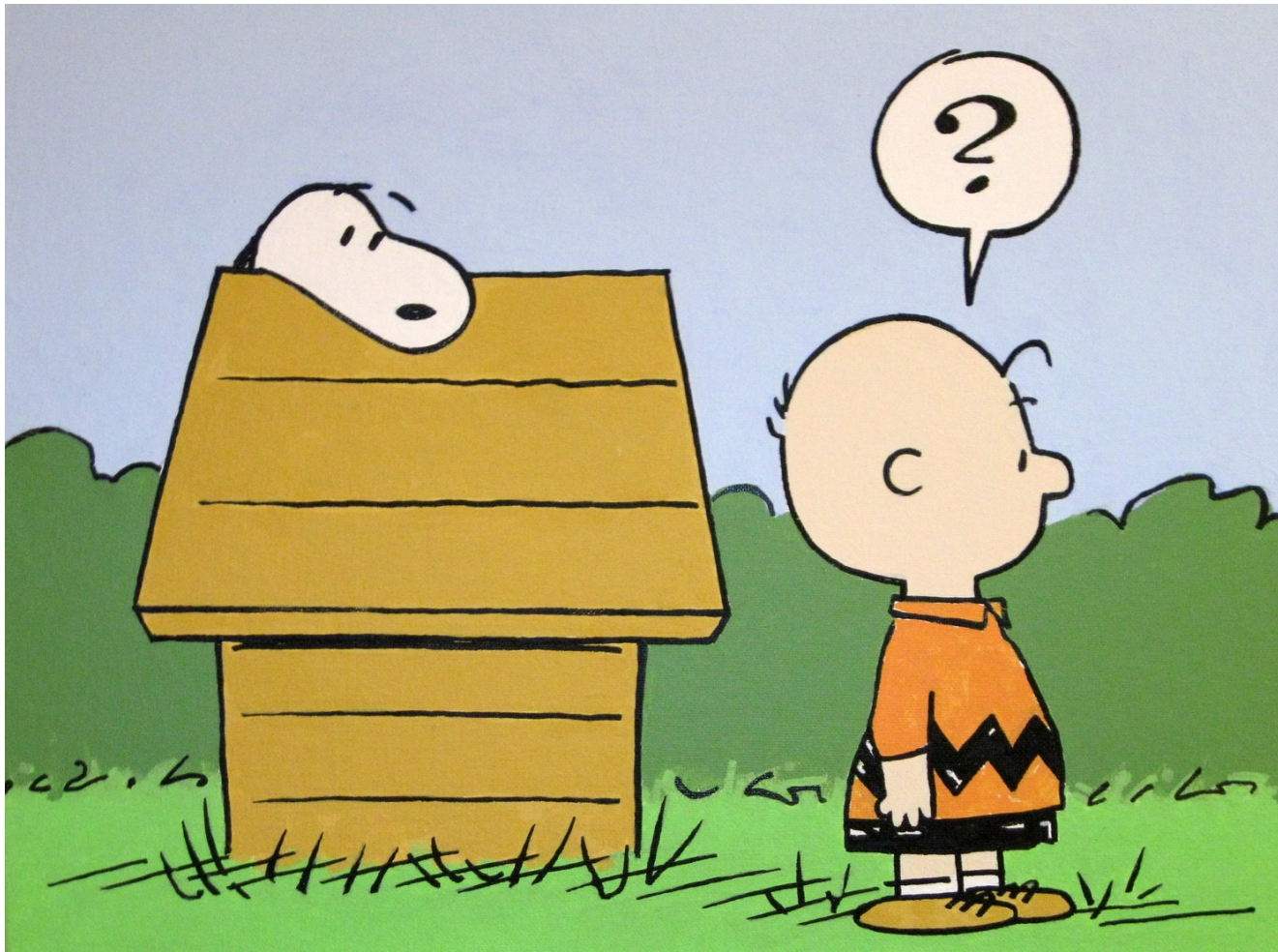


Work: where you went to learn

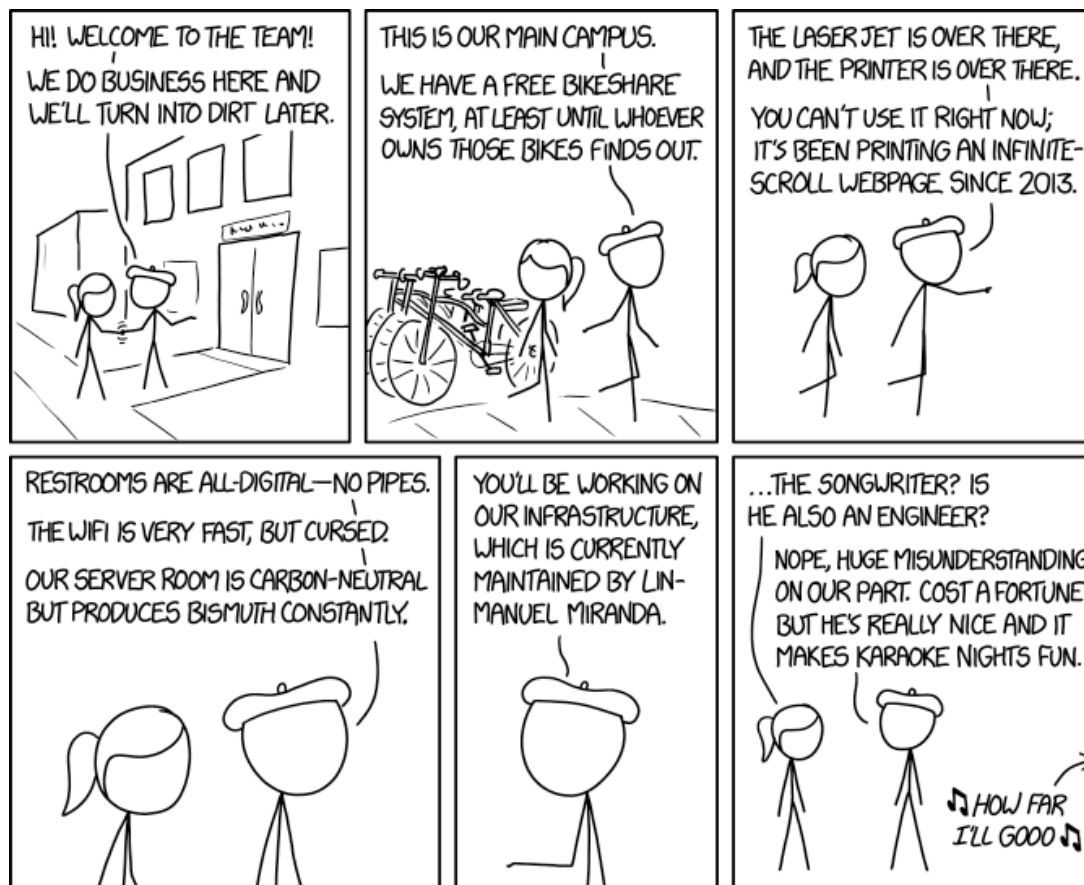


Example of skills that are transferable across jobs:  
The portability of Environmental Research Scientist





# Questions?



# Next class: how business is responding