



IT'S IN OUR HANDS

Local Employment Dynamics

All About Jobs

Free Data Online 24/7

- Quarterly Workforce Indicators (QWI Online)
- OnTheMap_
- Industry Focus
- Older Worker Profiles

To Inform

- Workforce Development
- Emergency Preparedness
- Transportation Planning
- Business Location Decisions

USCENSUSBUREAU
Helping You Make Informed Decisions

www.census.gov

Data Visualization: Like High Definition TV, It's Here to Stay!

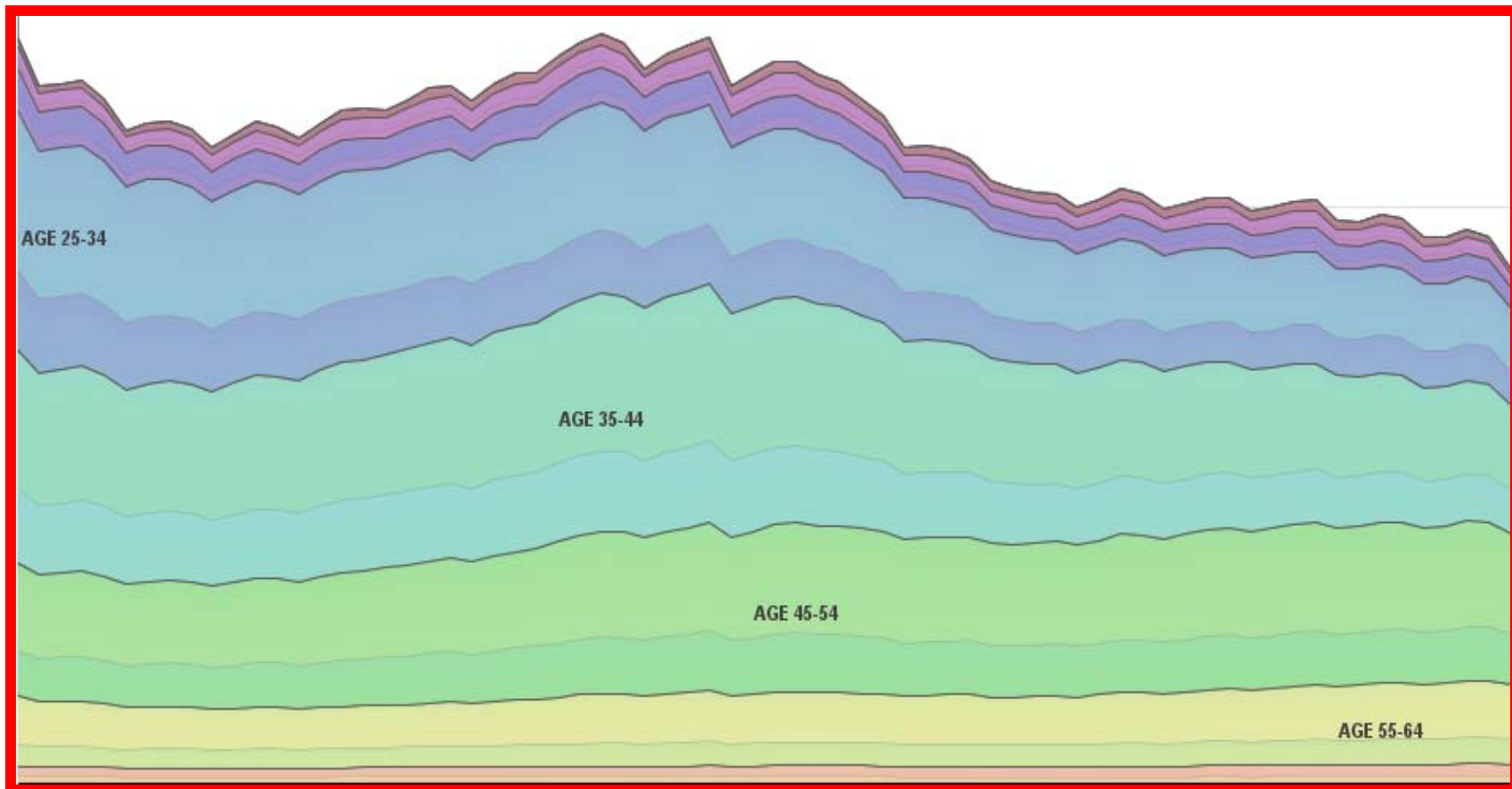
Colleen D. Flannery
11th Annual LED Partnership Workshop
March 12, 2010

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Visualizing Employment Data



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“...data visualization schematically abstracts information to bring about a deeper understanding of the data, wrapping it in an element of awe.”

Bloomberg Business Week, Eye on Design, Aug 12 2009

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A Picture = 1,000 Words

A Picture = 100,00 Data Cells

This storm has is still far out in the Atlantic, but it has already achieved Category 4 strength. Hurricane Ike has a **sustained wind speed** of 145 miles per hour. There is still a lot of warm deep water in **Hurricane Ike's projected path** before it approaches the United States. Hurricane paths can be tricky to predict 5-7 days in advance, but right now it looks as it Hurricane Ike's projected path will take it right over the Bahamas. Unlike **Haiti** or **Cuba**, the islands of the Bahamas are too small to cause considerable weakening of Hurricane Ike as it continues on its **track** toward the east coast.

09/03	18 GMT	21.1	51.9	85	979	Category 1 Hurricane
09/04	00 GMT	21.8	53.5	120	956	Category 3 Hurricane
09/04	06 GMT	22.4	55.0	145	935	Category 4 Hurricane
09/04	12 GMT	23.0	56.4	140	937	Category 4 Hurricane
09/04	18 GMT	23.4	57.7	135	940	Category 4 Hurricane
09/05	00 GMT	23.6	59.0	135	944	Category 4 Hurricane
09/05	06 GMT	23.6	60.4	135	949	Category 4 Hurricane
09/05	12 GMT	23.5	61.9	120	954	Category 3 Hurricane
09/05	18 GMT	23.2	63.4	115	959	Category 3 Hurricane
09/06	00 GMT	22.8	64.9	115	962	Category 3 Hurricane



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“It's about telling the story locked in the data differently, more engagingly, in a way that draws us in, makes our eyes open a little wider and our jaw drop ever so slightly.”

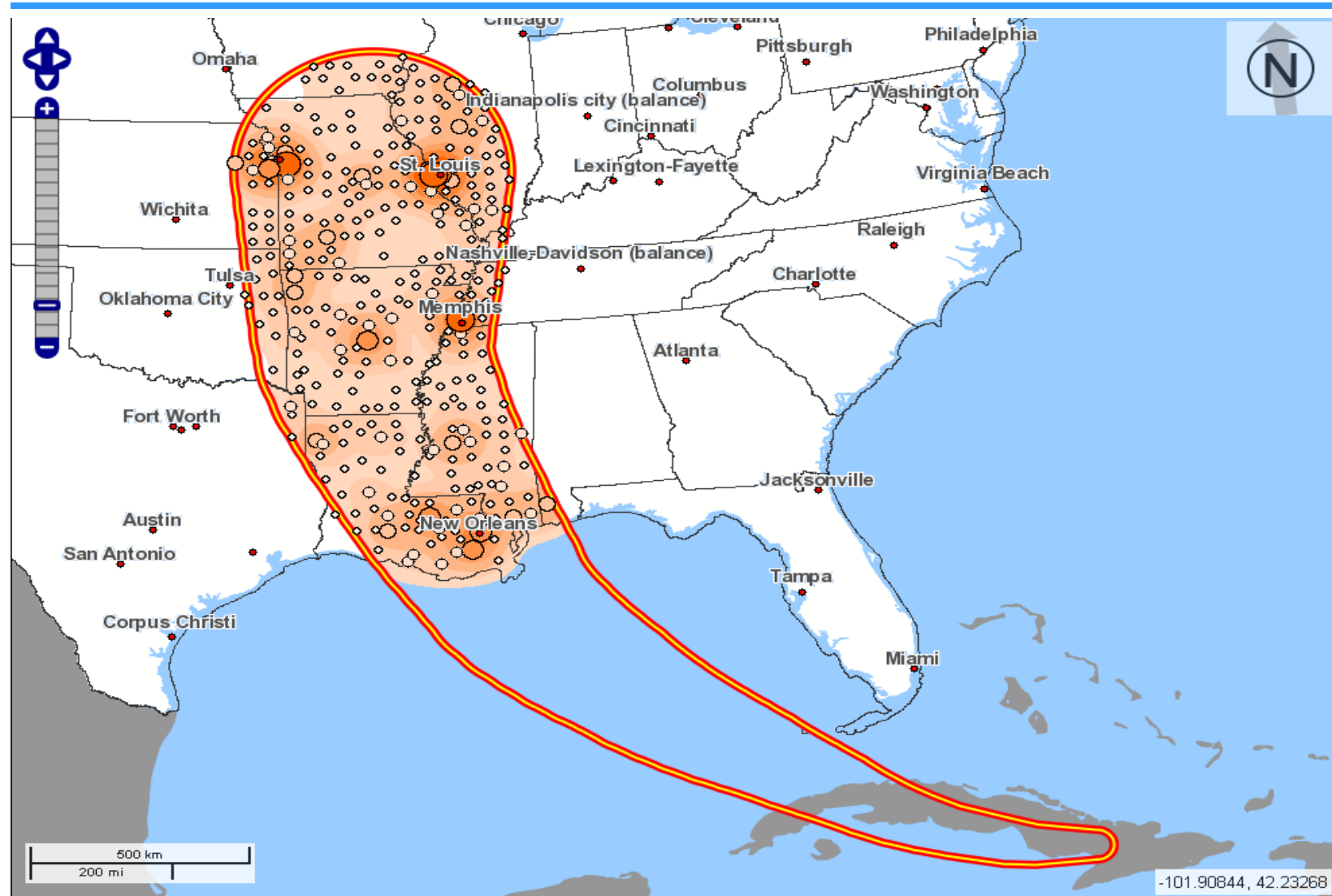
Bloomberg Business Week, Eye on Design, Aug 12 2009

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Data Visualization Tells a Story

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Put Another Way....

Large, Complex Dataset on the
Origin-Destination Patterns and
Socioeconomic Characteristics of
the U.S. Workforce at Detailed
Geography

~~OnTheMap~~ ✓ Made Easy

*Presentation to the Joint OECD, IMF, US Census Bureau Data
Visualization Conference*

July 2009

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Potential Product: OnTheMap for Congress

U.S. Census Bureau *LED OnTheMap for Congress*

OnTheMap for Congress provides detailed maps showing where people work and workers live with companion reports on worker ages, earnings, industry distribution, and local workforce indicators. Simply select from the available settings to jump directly to the OnTheMap analysis of your choice.

Find a Congressional District

Click on a state to view the available Congressional Districts and reporting options.

Alabama	Massachusetts	
Alaska	Michigan	
Arizona	Minnesota	
Arkansas	Mississippi	
California	Missouri	South Dakota
Colorado	Montana	Tennessee
Connecticut	Nebraska	Texas
Delaware	Nevada	Utah
District of Columbia	New Hampshire	Vermont
Florida	New Jersey	Virgin Islands
Georgia	New Mexico	of the United
Hawaii	New York	States
Idaho	North Carolina	Virginia
Illinois	North Dakota	Washington
Indiana	Ohio	West Virginia
Iowa	Oklahoma	Wisconsin
Kansas	Oregon	Wyoming
Kentucky	Pennsylvania	
Louisiana	Puerto Rico	
Maine	Rhode Island	
Maryland	South Carolina	

Selected State: *Virginia*

Year: 2008

Job Type: *Primary Jobs*

Live or Work: Workplace Area

Labor Market Segment: All Workers

Analysis Type: Area Profile Analysis

Congressional District:

VA-01
VA-02
VA-03
VA-04
VA-05
VA-06
VA-07
VA-08
VA-09
VA-10

Generate Map Overlay/Report

All Workers

Age - 30 or Younger

Age - 31 to 54

Age - 55 or Older

Earnings - \$1,200/mo or Less

Earnings - \$1,201/mo to \$3,400/mo

Earnings - Greater Than \$3,400/mo

Industry Class - Goods Producing

Industry Class - Trade, Transportation, and Utilities

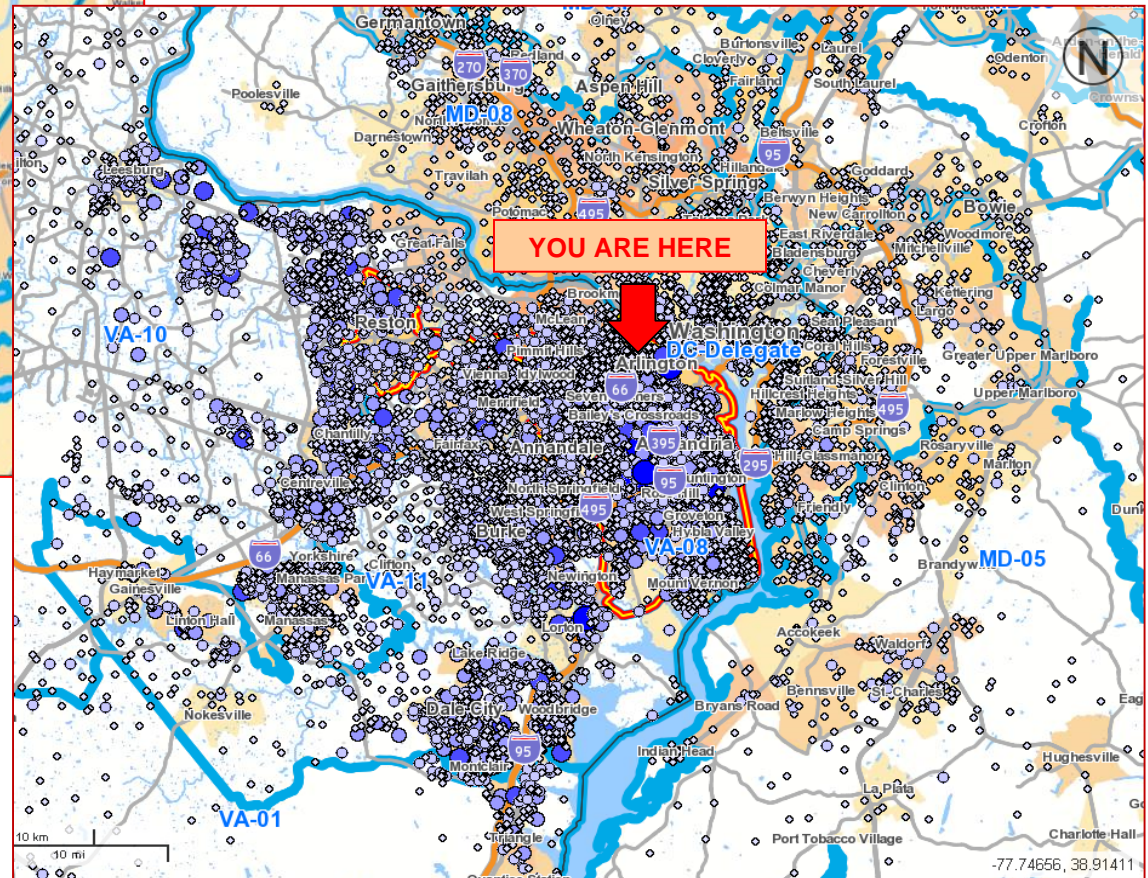
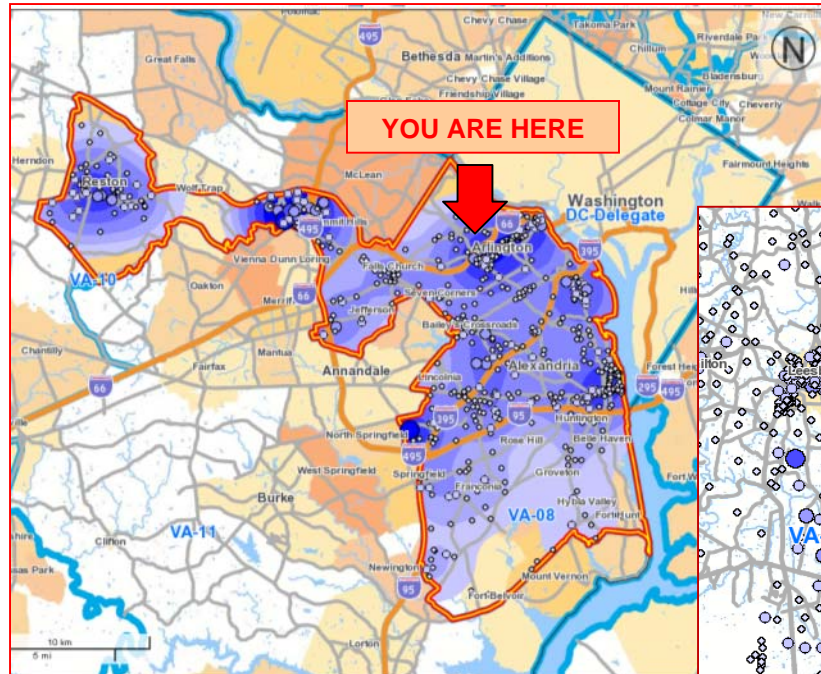
Industry Class - All Other Services

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Two Stories, Same Data and Geography





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Recession hitting manufacturing workers in particular

Thu, 16 Jul 2009

Recession hits male workers more

Men are getting laid off at a higher rate than women. One reason may be that male-dominated sectors such as construction, manufacturing and financial services have been hardest hit.

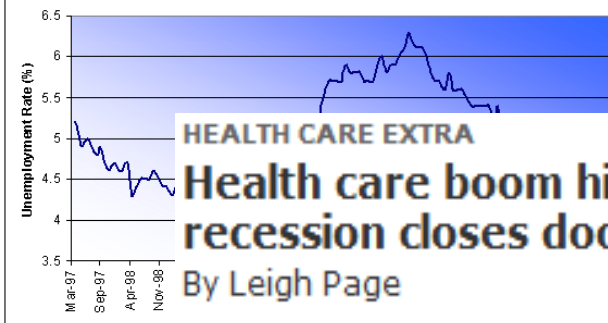
"The bloodletting has been in parts of the economy where men work," Grundvig said.

"People losing jobs are increasingly male and increasingly older."

Related Content

• <http://tinyurl.com/ntsyp3>

US Unemployment Rate Total in Labor Force
(seasonally-adjusted)



HEALTH CARE EXTRA

Health care boom hits a bump: Training programs flood as recession closes doors

By Leigh Page

MCCLATCHY NEWSPAPERS

WASHINGTON -- Americans have been losing their jobs in droves, yet one group has gained ground in employment during this recession: workers 55 and older.

Rated Not yet rated

Thousands of high skilled laid-off workers and flooding Detroit-area

Pushed by recession, millions make dramatic job changes

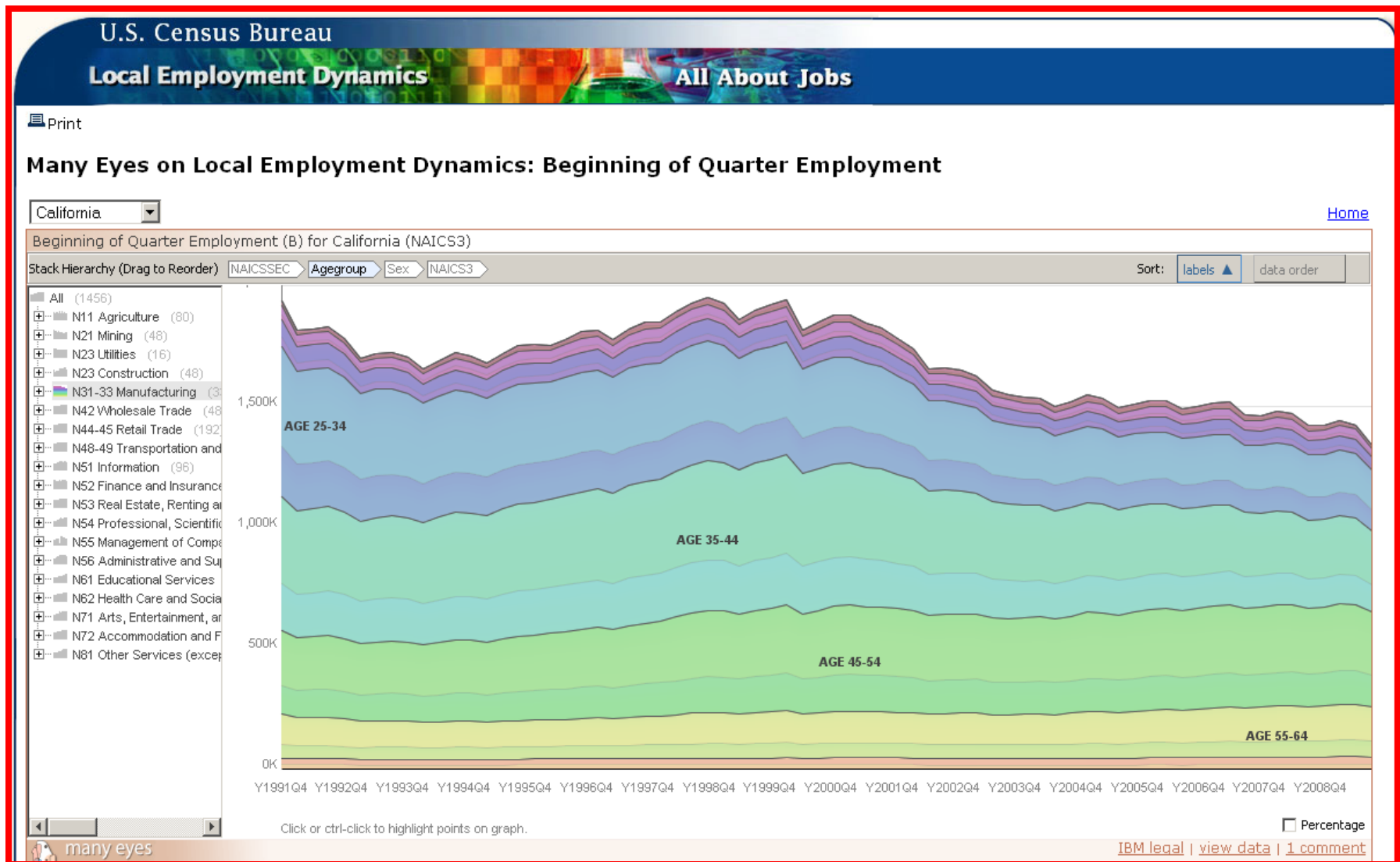
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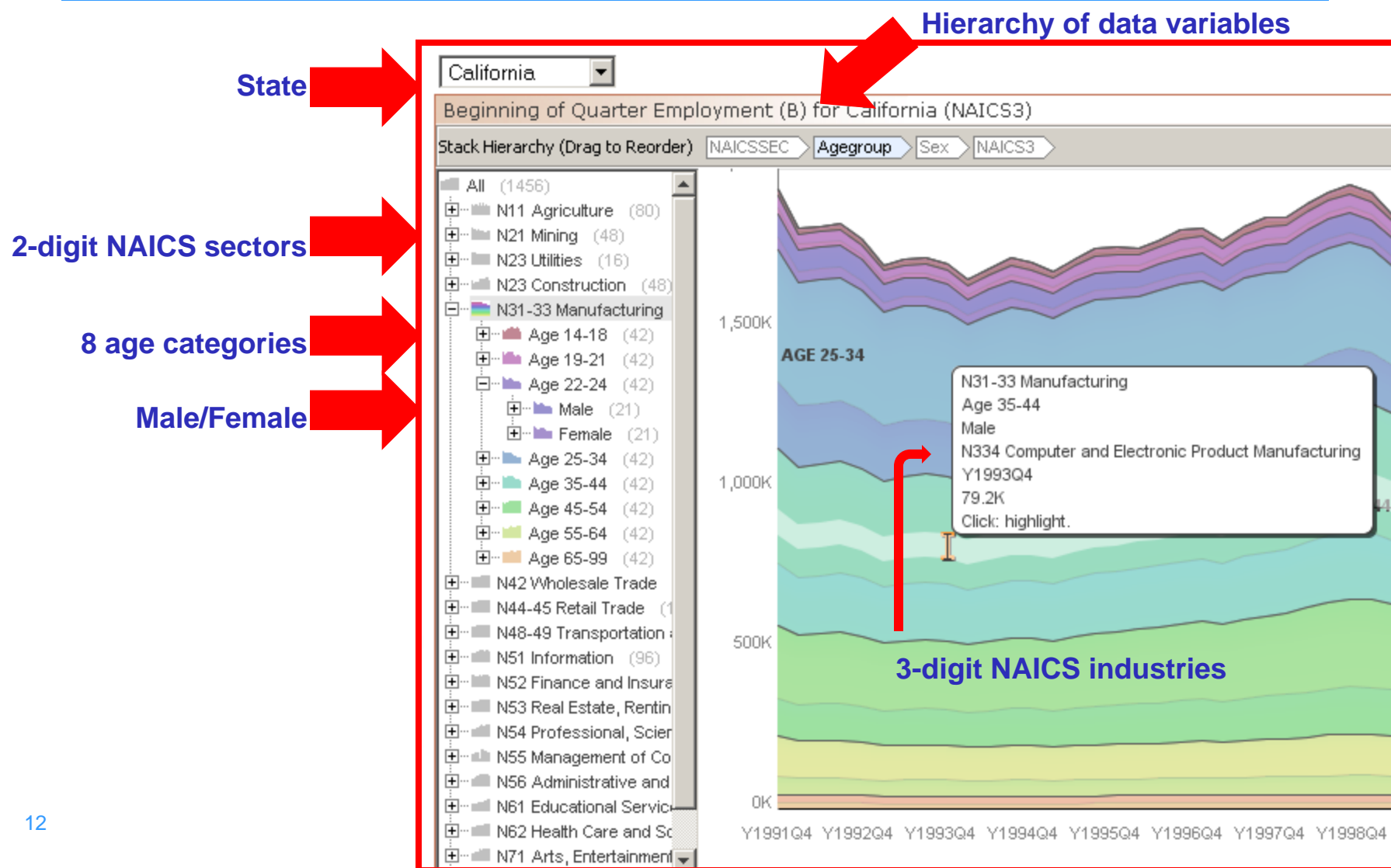
Employment for Manufacturing in California by Age and Gender





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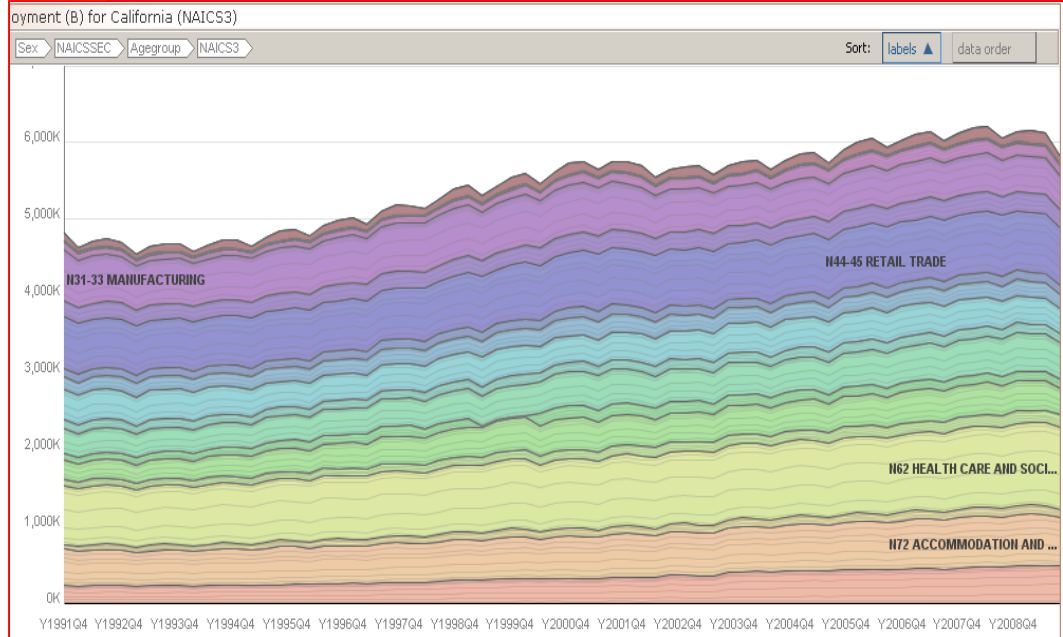
How Does it Work?





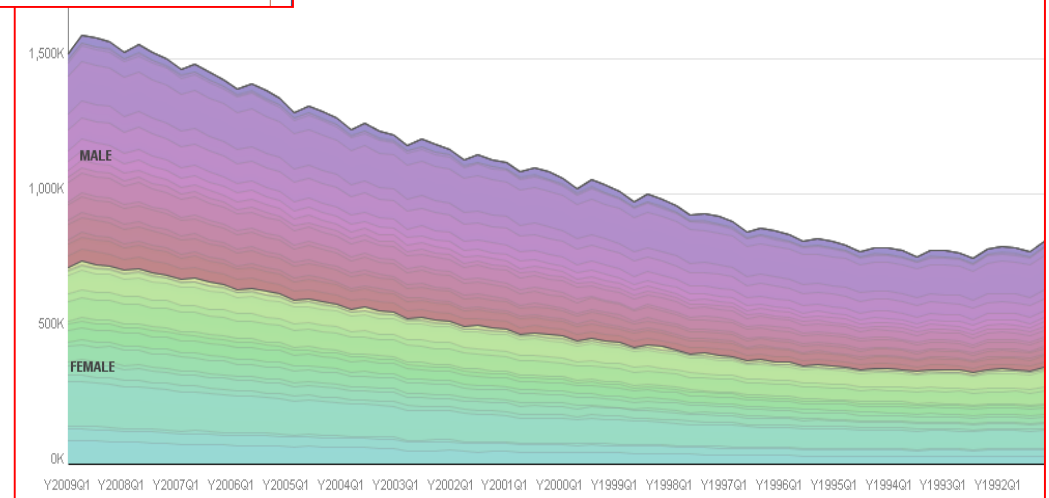
Same Data, Different Views

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Sex by Sector by Age,
California Female Workers,
1991 to 2008

Age by Sex by Sector,
California 55-64 Year Old
Workers, 1991 to 2008





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“It's impossible to make good decisions without good data, which makes the ability to visualize data crucial...visual data is the most meaningful to decision-makers and the public.”

*Dr. John Holdren, director of the White House
Office of Science and Technology Policy*

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New Product: Job Gains/Losses

Net Job Gains and Losses/Net Job Growth Rates

Data Source: [QWI Online](#), Local Employment Dynamics

Indicator: Beginning of Quarter Employment by State, Private Industries Only

[Methodology](#) (PDF, 32KB)

2008Q1-2009Q1 2007Q4-2008Q4

2008Q1-2009Q1

Scope: 46 states; CT, DC, MA, NC, and NH not present

Net Job Gains and Losses Net Job Growth Rates

Private Sector Only	Total Workers*	Female Workers	Male Workers
All Industries	-4,216,691	-1,461,846	-2,754,845
Agriculture	-8,045	-556	-7,489
Mining	21,900	3,635	18,249
Utilities	23,150	6,091	17,058
Construction	-821,460	-155,216	-666,241
Manufacturing	-1,062,984	-337,287	-725,694
Wholesale Trade	-267,455	-85,739	-181,712
Age 14-18	-558,517	-279,979	-278,538
Age 19-21	-441,281	-179,977	-261,308
Age 22-24	-400,089	-148,945	-251,142
Age 25-34	-887,717	-273,122	-614,603
Age 35-44	-1,399,053	-526,707	-872,352
Age 35-54	-640,595	-198,635	-441,964
Age 55-64	92,024	115,995	-23,975
Age 65-99	18,548	29,515	-10,968

* Total may not agree due to rounding

Job Gains/Losses Data File Download

	All industries by Worker Gender	Industry Sector by Worker Gender	Age Group by Worker Gender
2008Q1-2009Q1	CSV , Excel (XLS, 84KB)	CSV , Excel (XLS, 1.47MB)	CSV , Excel (XLS, 496KB)
2007Q4-2008Q4	CSV , Excel (XLS, 84KB)	CSV , Excel (XLS, 1.47MB)	CSV , Excel (XLS, 692KB)

QUICK LINKS

Tools

[Release Schedule](#)

[OnTheMap Version 4 \(Help\)](#)

[QWI Online \(Help\)](#)

[Job Gains/Losses](#)

[Industry Focus](#)

[Older Worker Profiles](#)

[CED HotReport](#)

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State Data by Sector or by Age

BY SECTOR

Net Job Gains/Losses and Job Growth Rate in Private Industry

Local Employment Dynamics All About Jobs

46 States, NAICS 62 Health Care, All Workers, Beginning of 2008Q1 to Beginning of 2009Q1

state_46	B_2008Q1	B_2009Q1	Net Job Gain	Net Job Growth (%)
AK	34,995	36,213	1,218	3.4%
AL	187,319	185,320	-1,999	-1.1%
AR	141,379	145,365	3,986	2.8%
AZ	268,347	283,423	15,076	5.5%
CA	1,393,297	1,423,875	30,578	2.2%
CO	209,239	223,745	14,506	6.7%
DE	50,811	55,448	4,637	8.7%
FL	914,092	907,552	-6,540	-0.7%
GA	365,008	369,824	4,816	1.3%
HI	57,638	58,533	895	1.5%
IA	169,520	173,102	3,582	2.1%
ID	67,319	69,761	2,442	3.6%

BY AGE

Net Job Gains/Losses and Job Growth Rate in Private Industry

Local Employment Dynamics All About Jobs

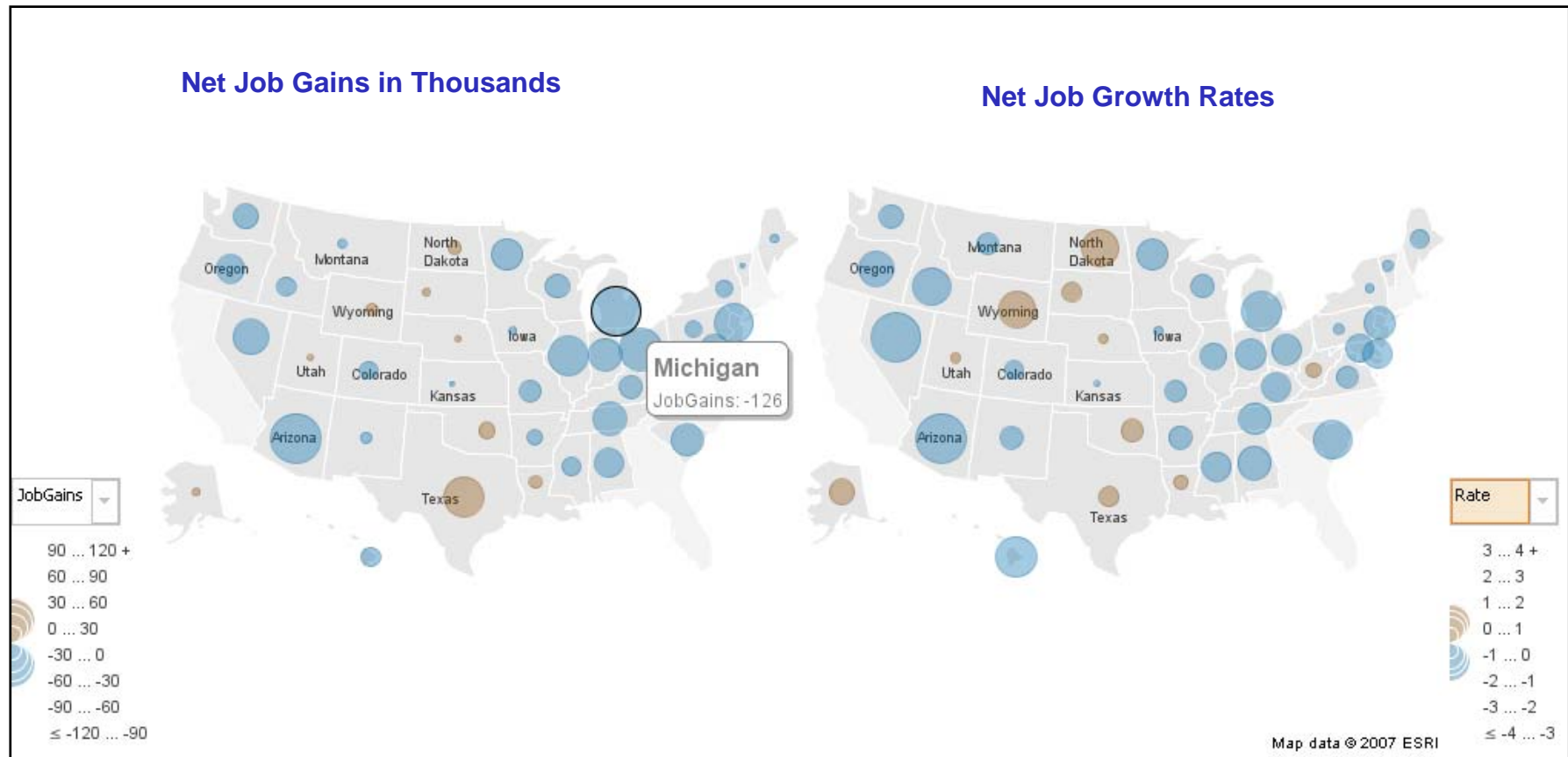
46 States, Age 22-24, All Workers, Beginning of 2008Q1 to Beginning of 2009Q1

state_46	B_2008Q1	B_2009Q1	Net Job Gain	Net Job Growth (%)
AK	16,696	16,713	17	0.1%
AL	108,173	99,242	-8,931	-8.6%
AR	66,845	63,366	-3,479	-5.3%
AZ	163,243	148,734	-14,509	-9.3%
CA	919,367	852,338	-67,029	-7.6%
CO	136,110	129,442	-6,668	-5.0%
DE	23,158	21,452	-1,706	-7.6%
FL	435,068	398,323	-36,745	-8.8%
GA	216,623	198,574	-18,049	-8.7%
HI	34,201	30,964	-3,237	-9.9%
IA	85,296	80,687	-4,609	-5.6%
ID	40,817	37,102	-3,715	-9.5%



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Many Eyes Mapping: Job Gains/Losses



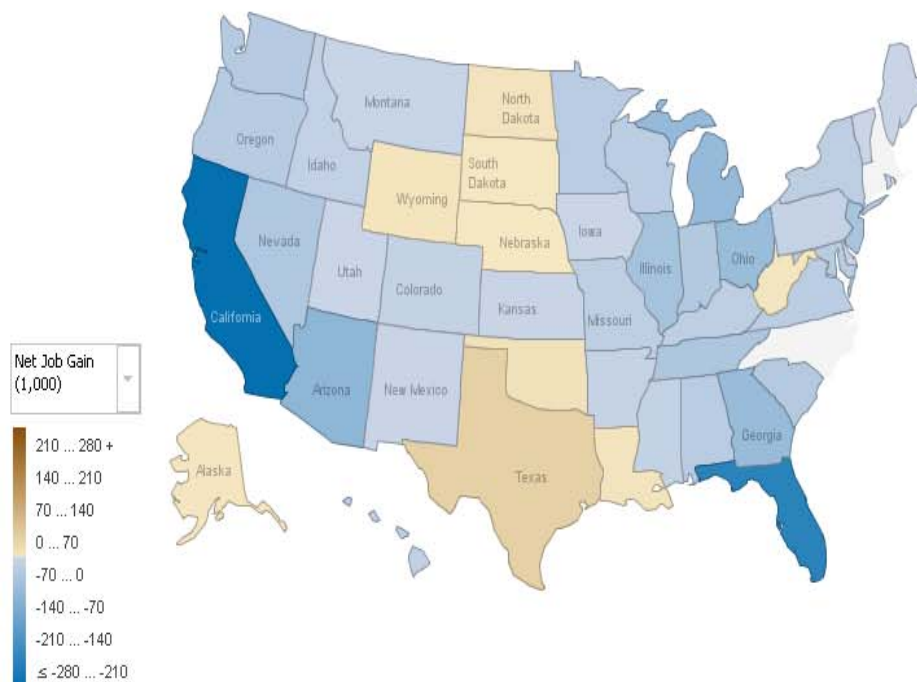
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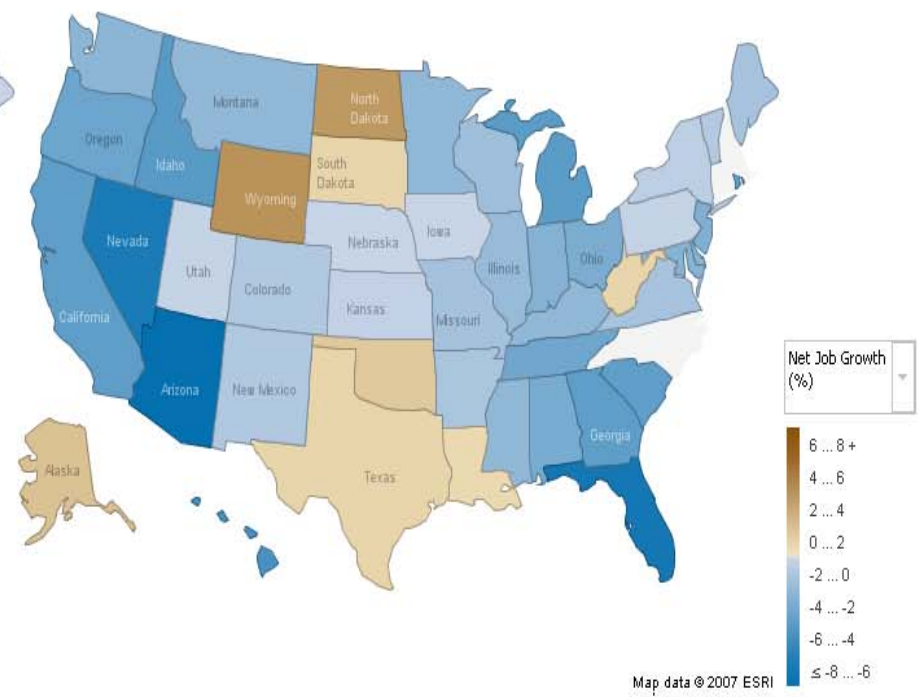
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Same Data, Different Presentation

Net Job Gains in Thousands



Net Job Growth Rates

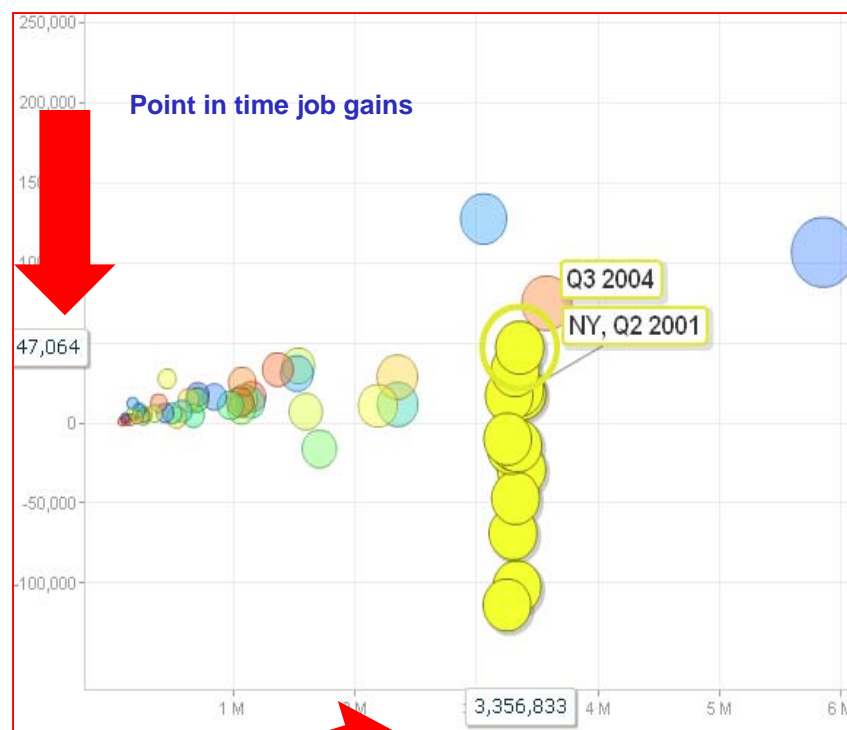
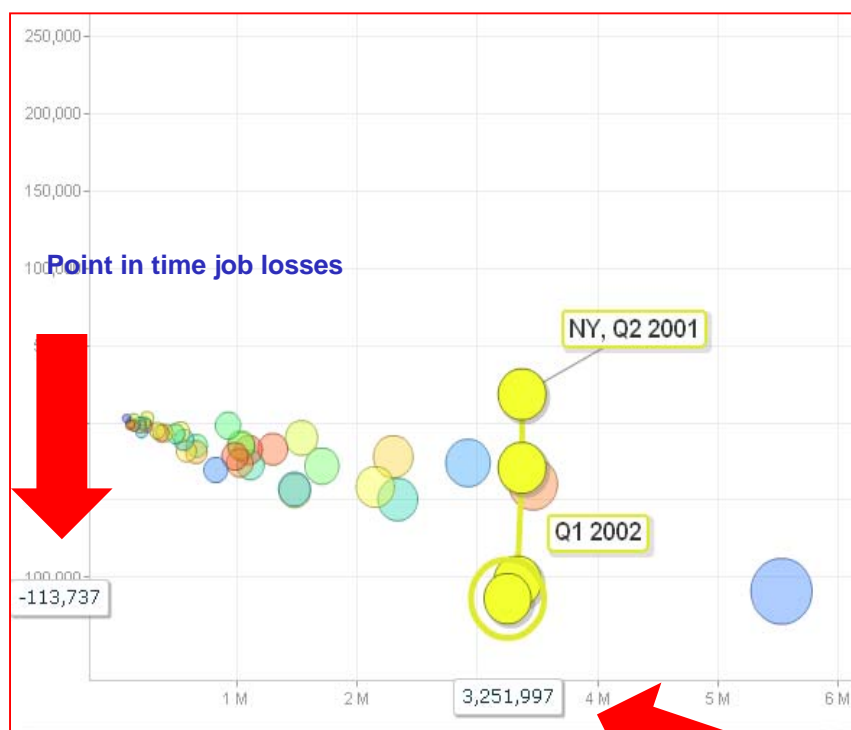




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Data in Motion

Tracking Changes in Quarterly Job Flows for Female Workers in New York State, 2001-2008



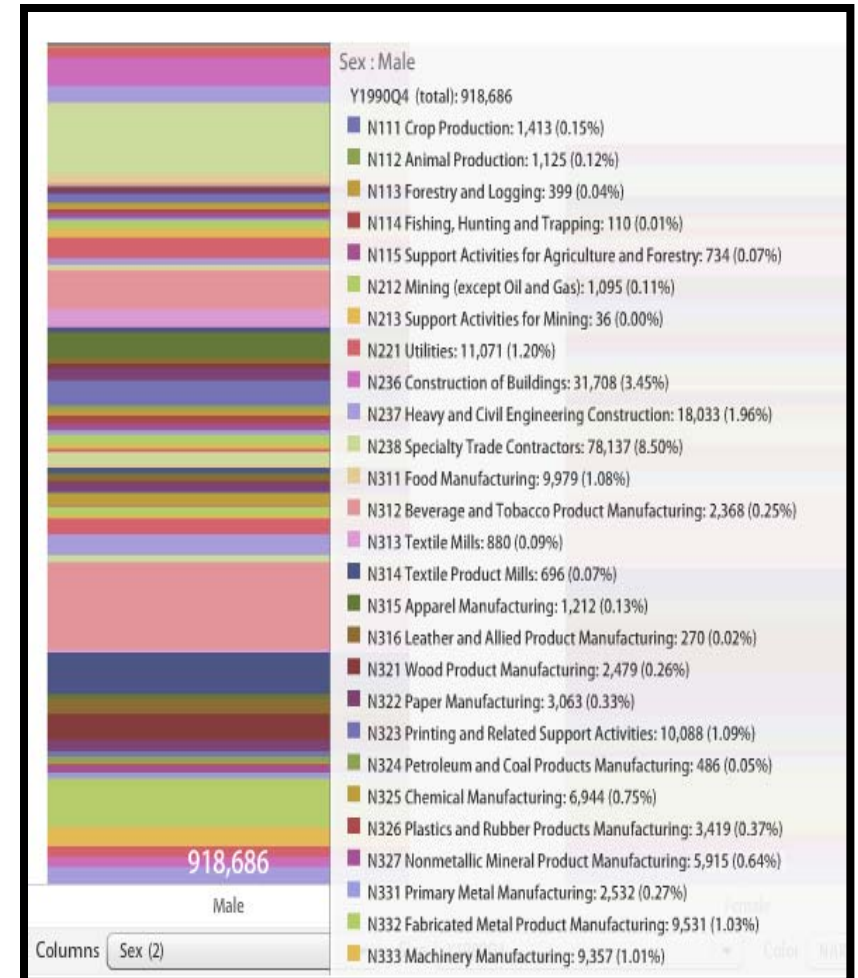
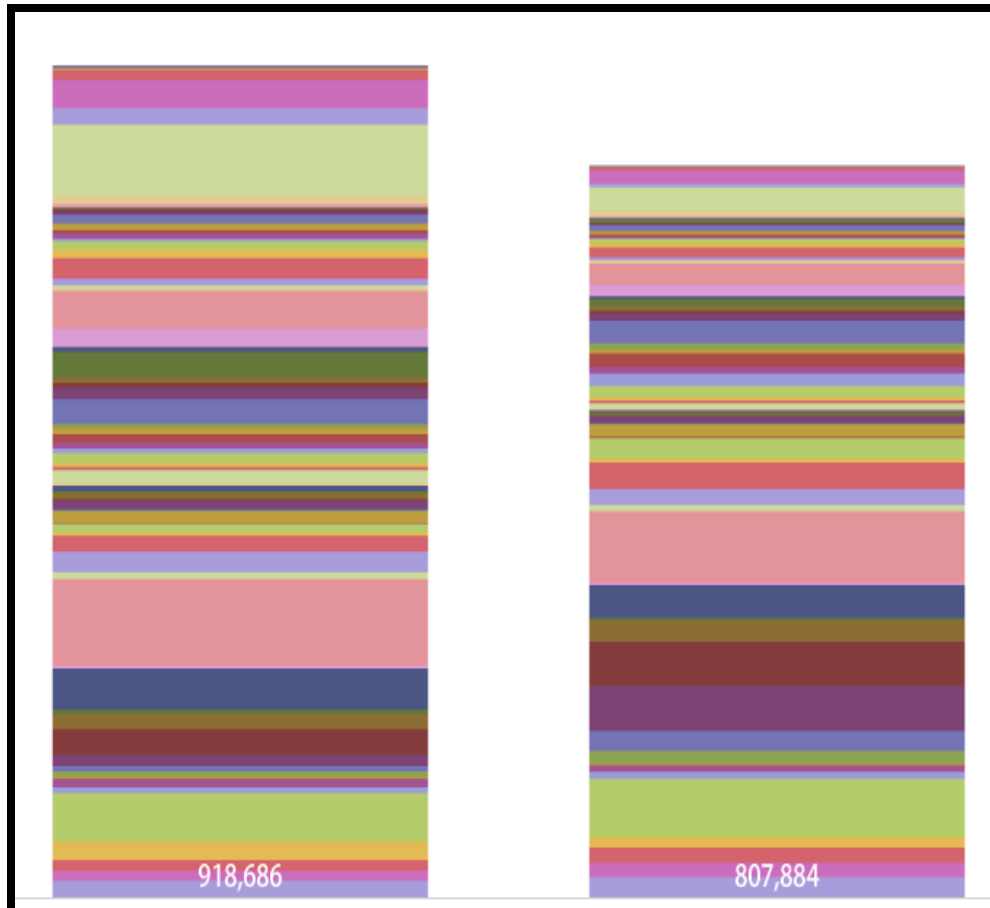
Point in time measure, total jobs

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Pitfalls of Visualization

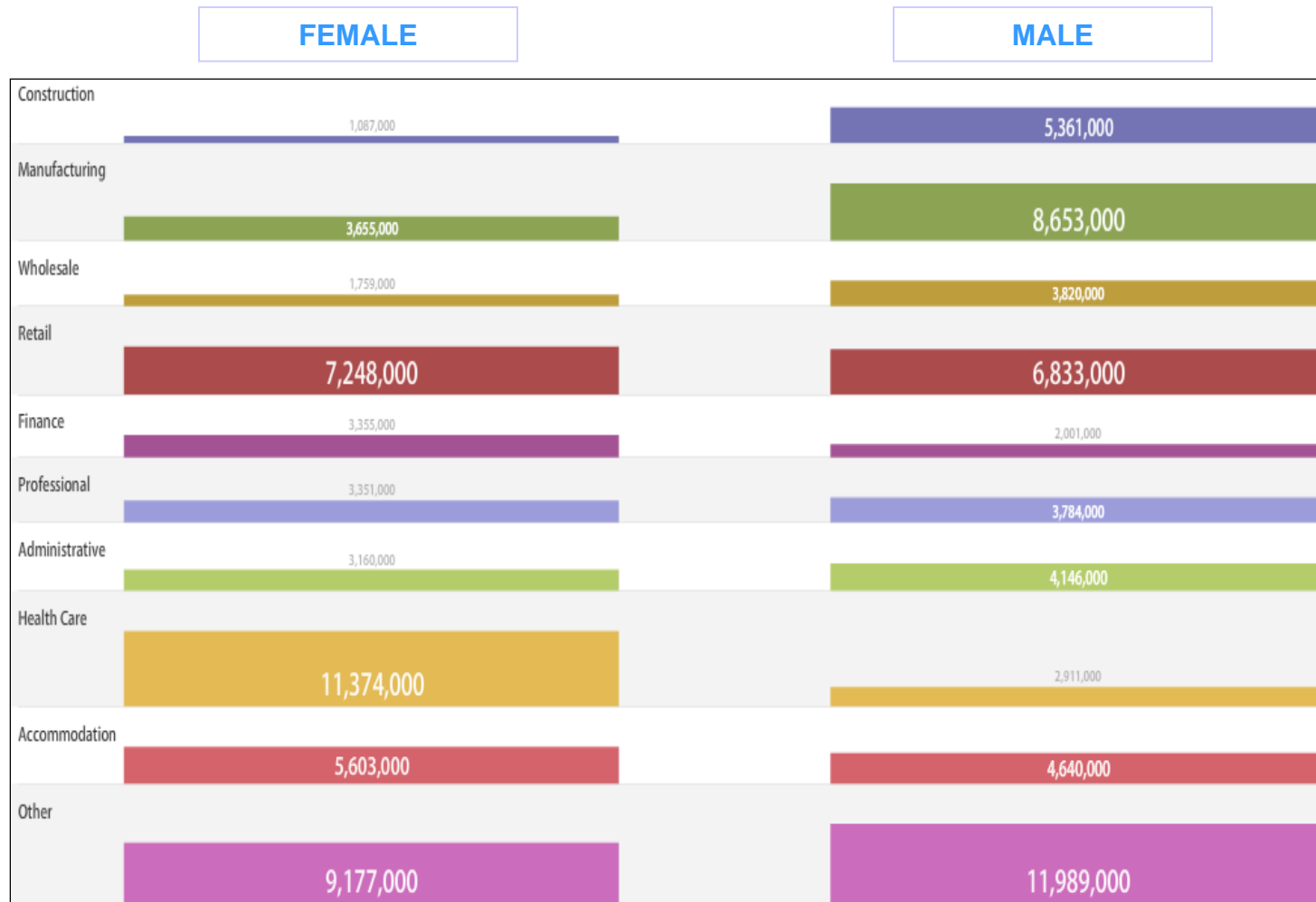


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Many Eyes Matrix: Workers by Gender/Industry:



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Any Guesses?

