

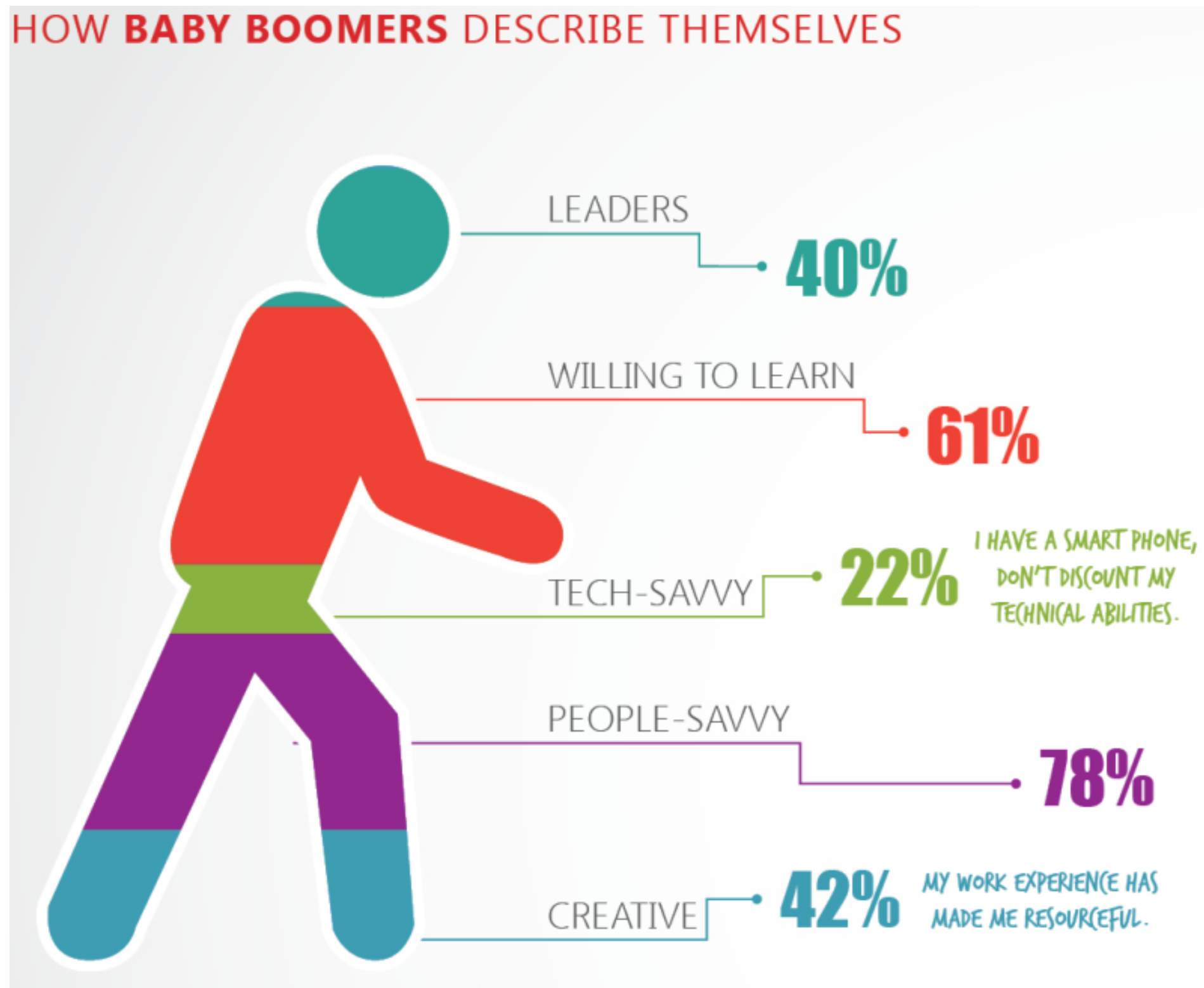


Data (mis)visualization

From Data to Insight

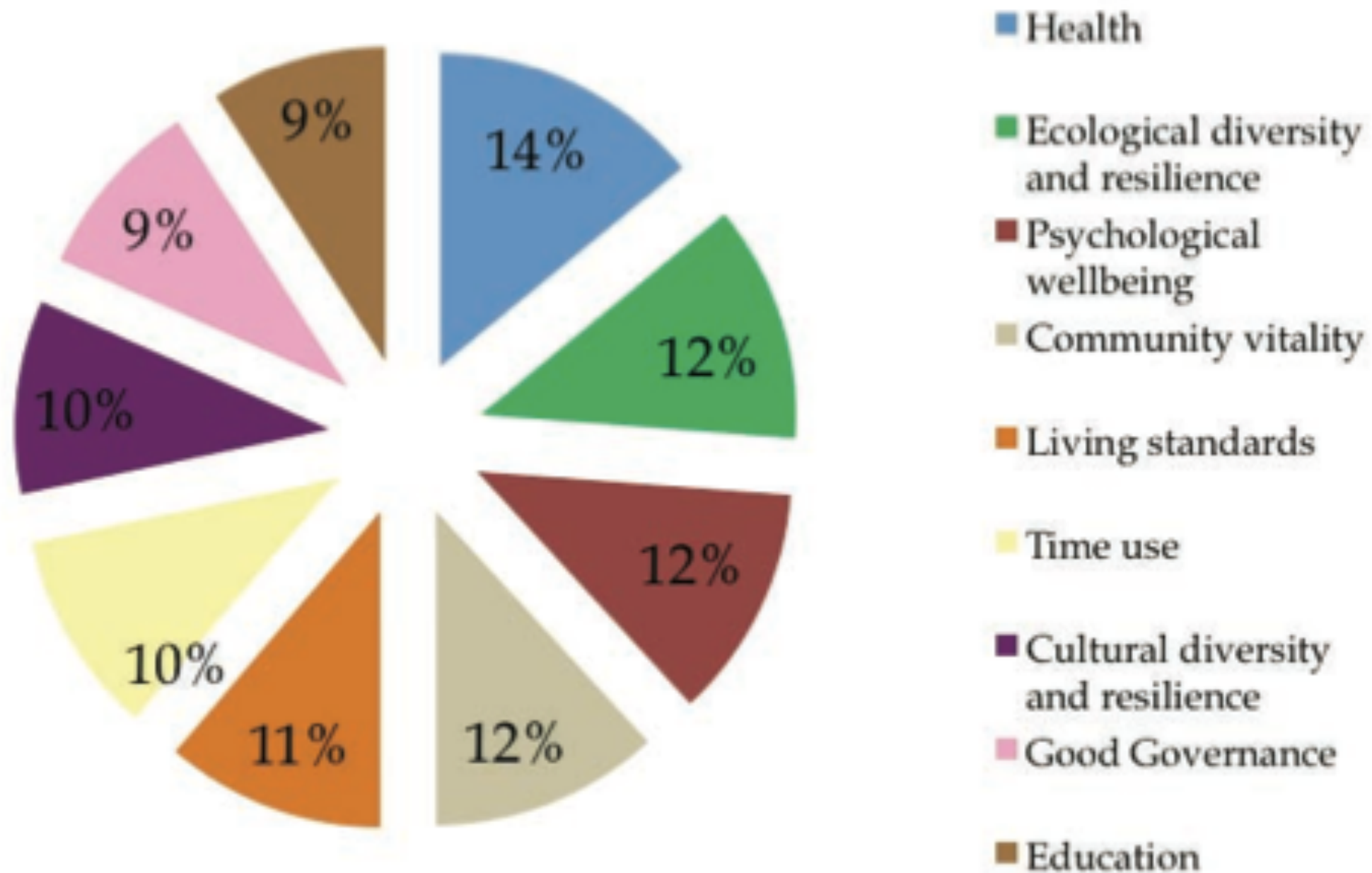
Dr. Çetinkaya-Rundel
July 5, 2016

What is wrong with this visualization?



What is wrong with this visualization?

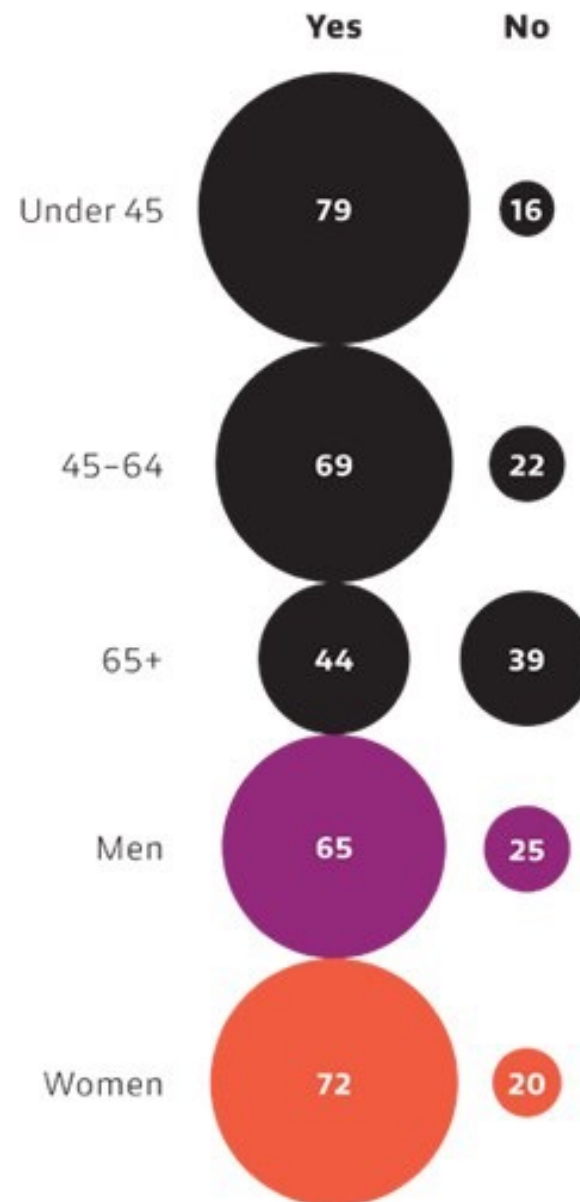
Figure 4: In which domains do happy people enjoy sufficiency?



What is wrong with this visualization?

MRS. PRESIDENT

Percentage of respondents who say it is likely that a woman will be president in their lifetime.

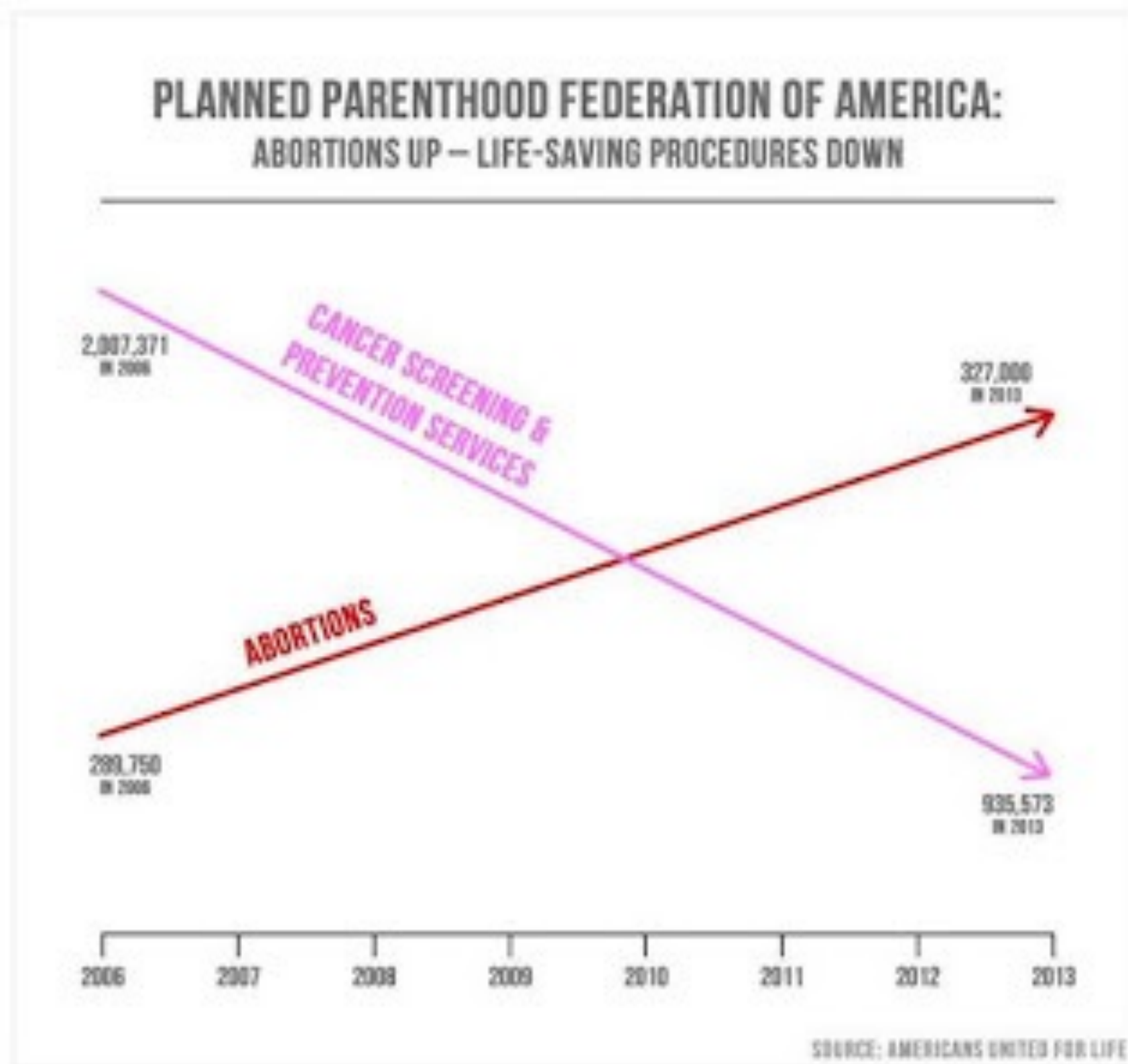


Source: CBS News, June 2008

What is wrong with this visualization?

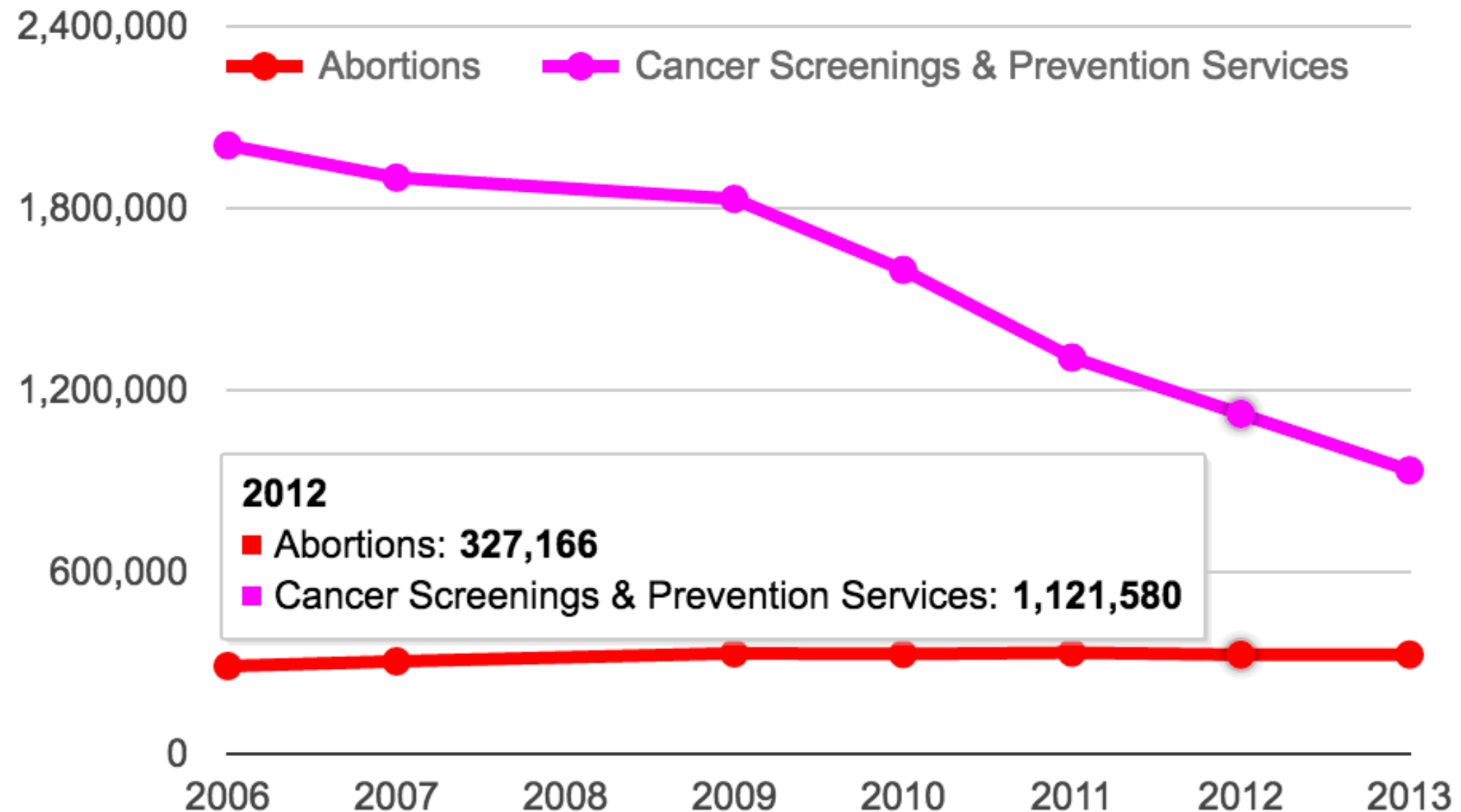


What is wrong with this visualization?

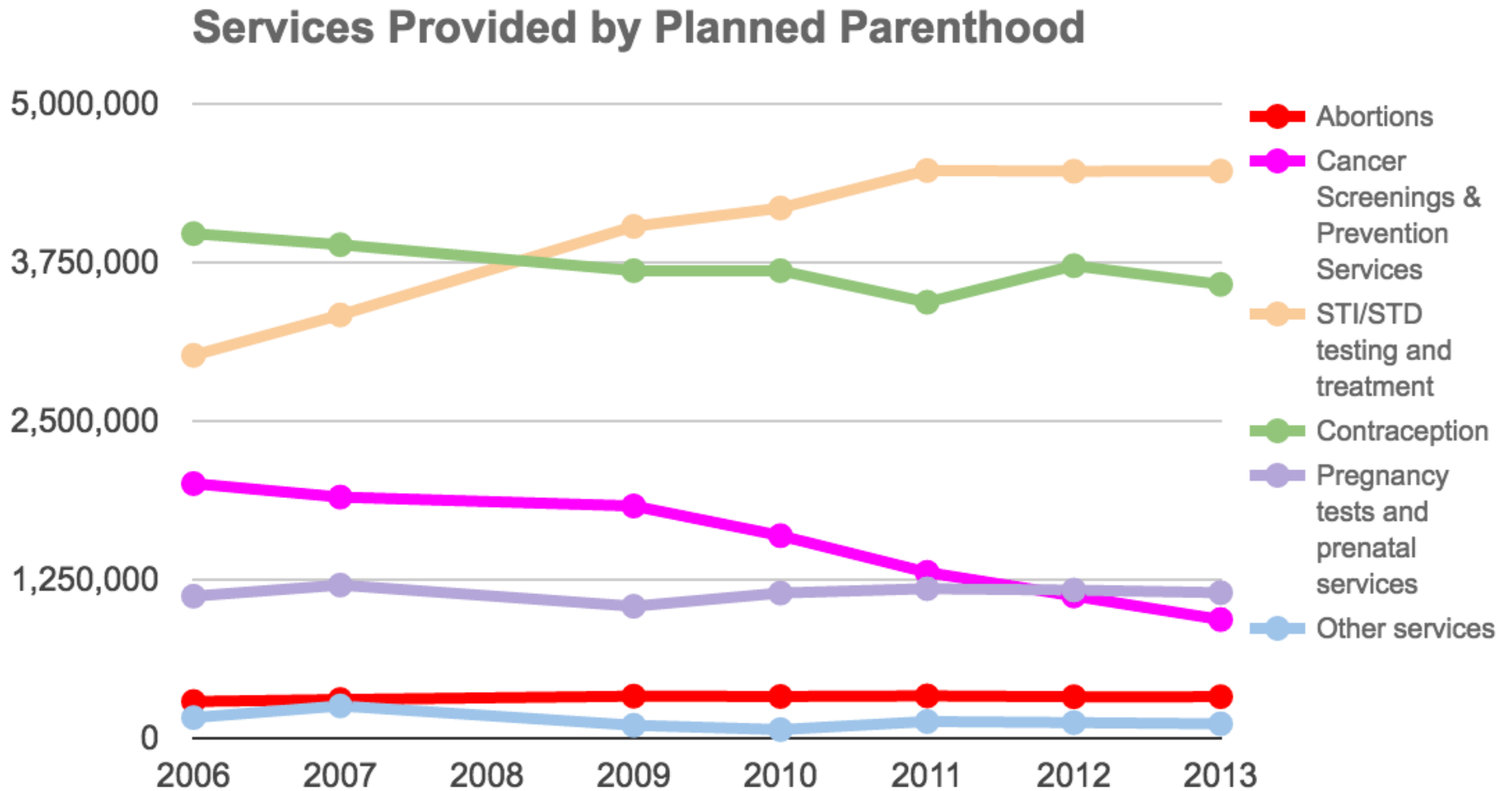


Redo

Planned Parenthood Federation of America: Abortions vs. Cancer and Prevention Services



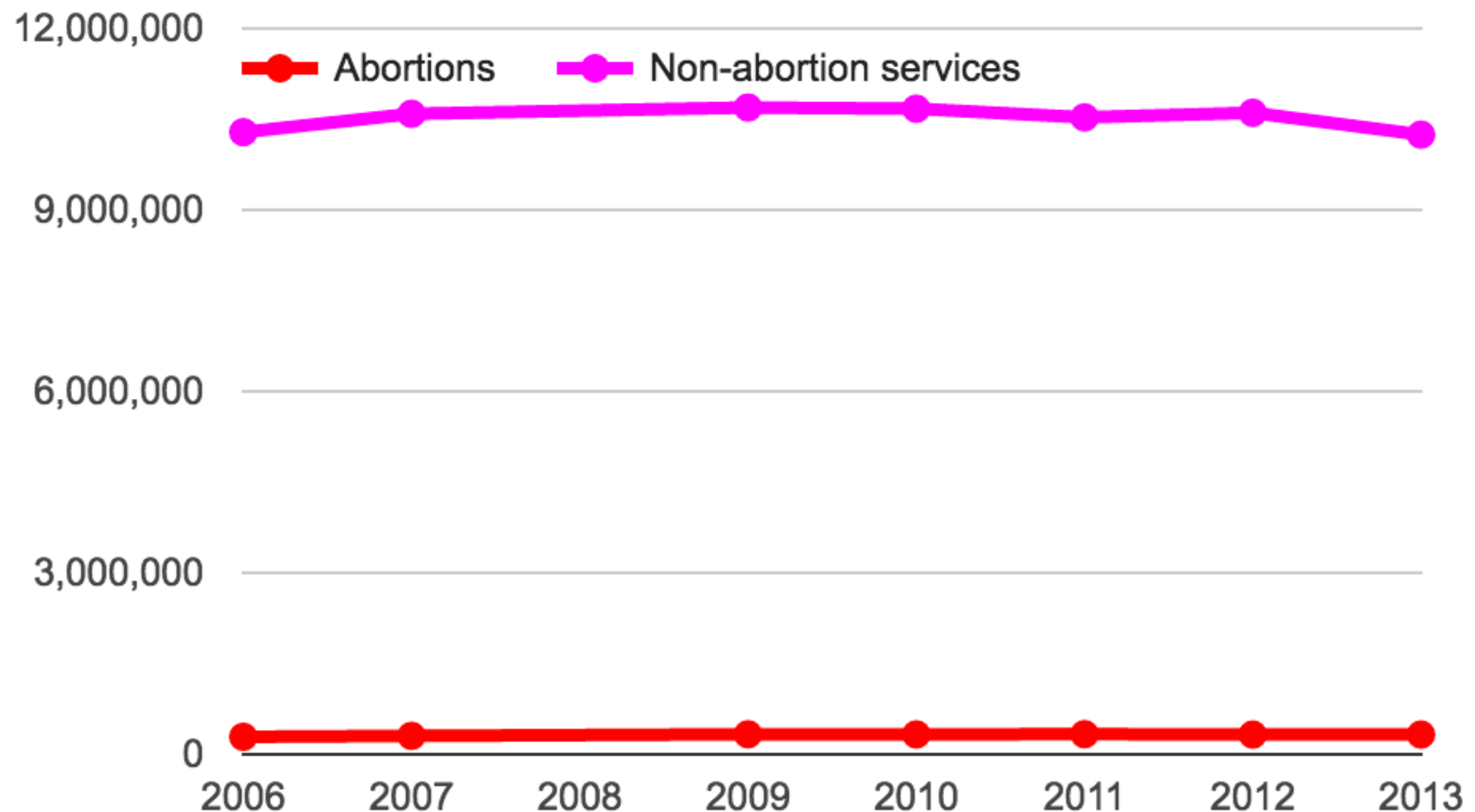
Redo further



Source: <http://www.politifact.com/truth-o-meter/statements/2015/oct/01/jason-chaffetz/chart-shown-planned-parenthood-hearing-misleading-/>

One last look

Planned Parenthood Federation of America: Abortions vs. Non-Abortion Services



Source: <http://www.politifact.com/truth-o-meter/statements/2015/oct/01/jason-chaffetz/chart-shown-planned-parenthood-hearing-misleading-/>

Scale matters!

Gallup Poll shows a *minor* increase in percentage of Americans without health insurance coverage.

Percentage of Americans Without Health Insurance Coverage

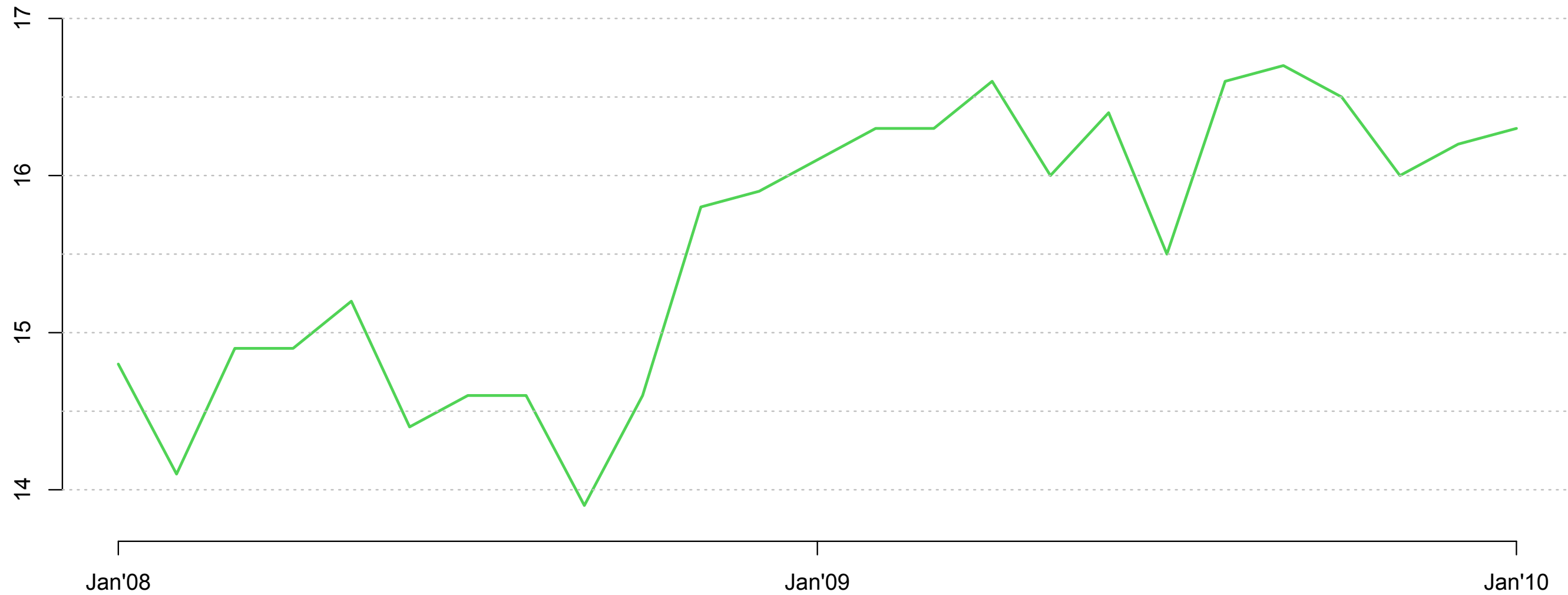
Among adults aged 18 and older



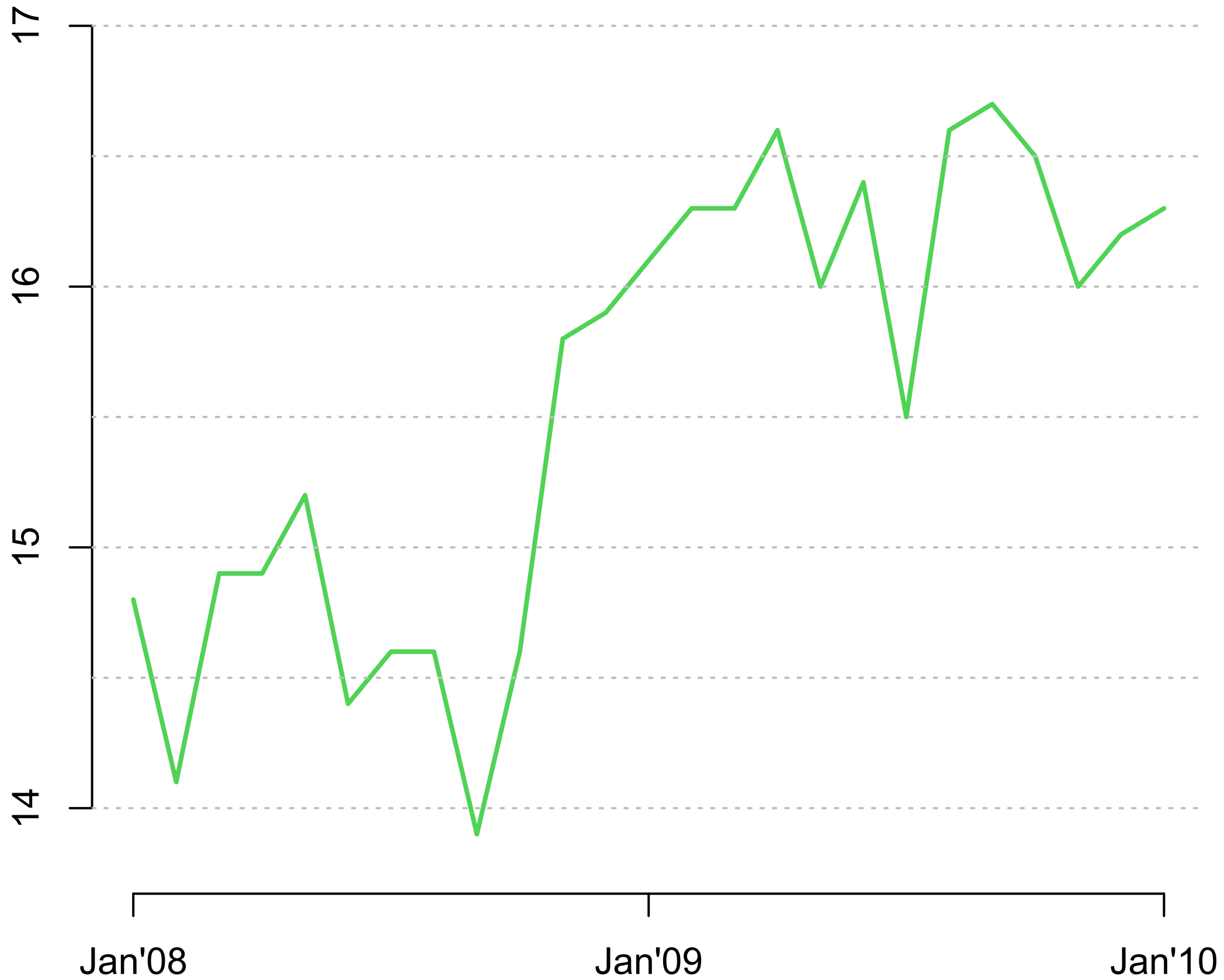
Gallup-Healthways Well-Being Index

GALLUP

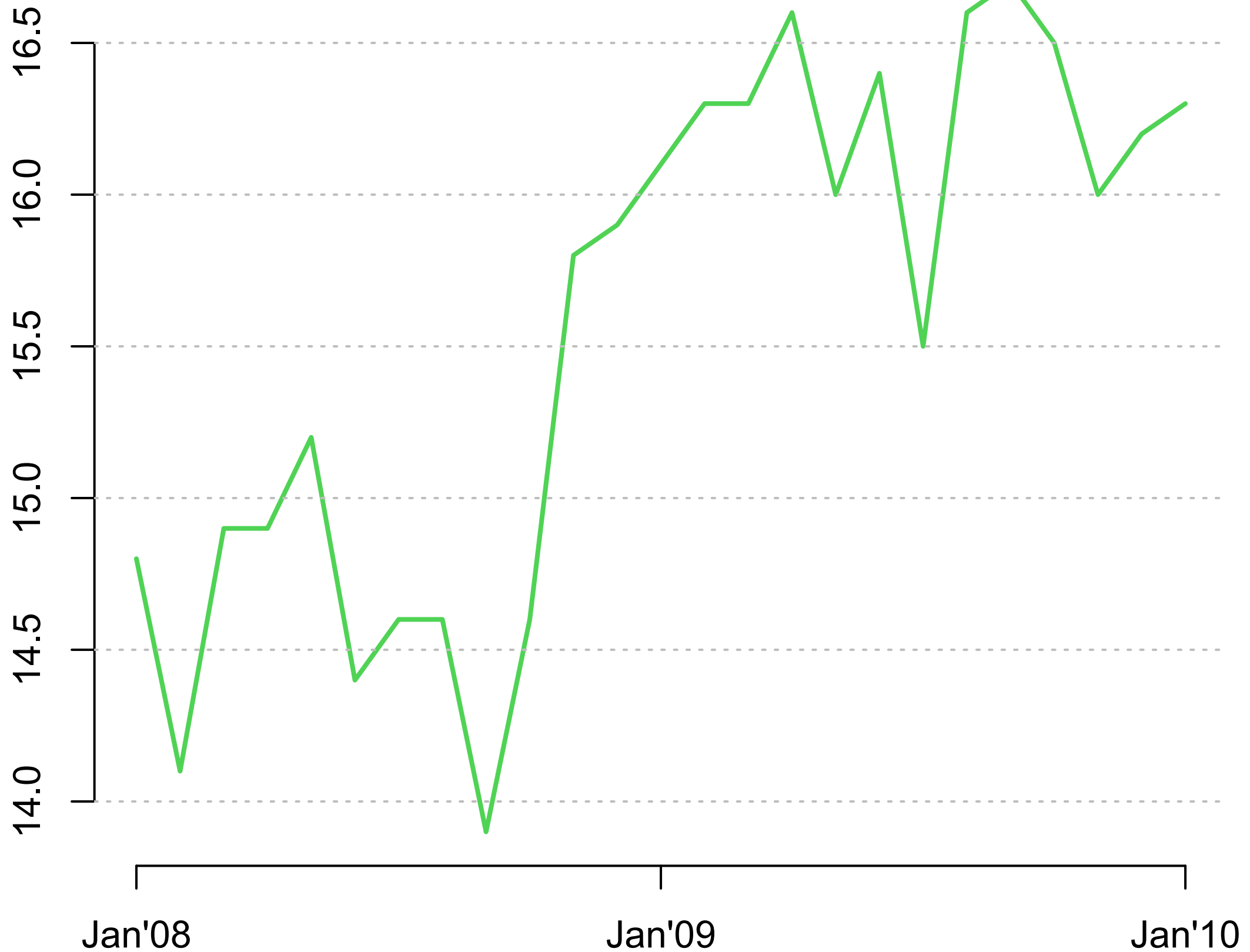
Percentage of Americans Without Health Insurance Coverage



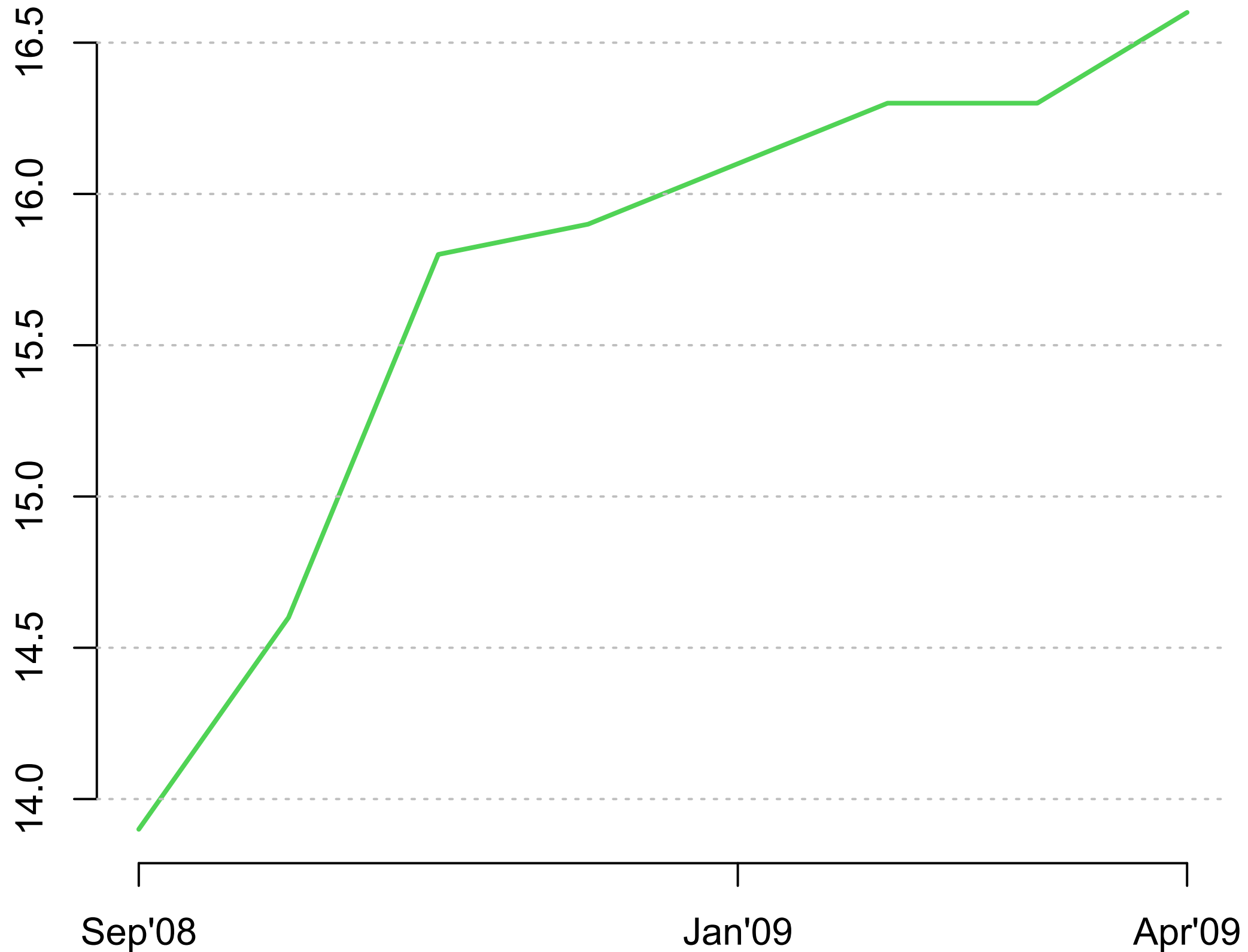
Percentage of Americans Without Health Insurance Coverage



Percentage of Americans Without Health Insurance Coverage

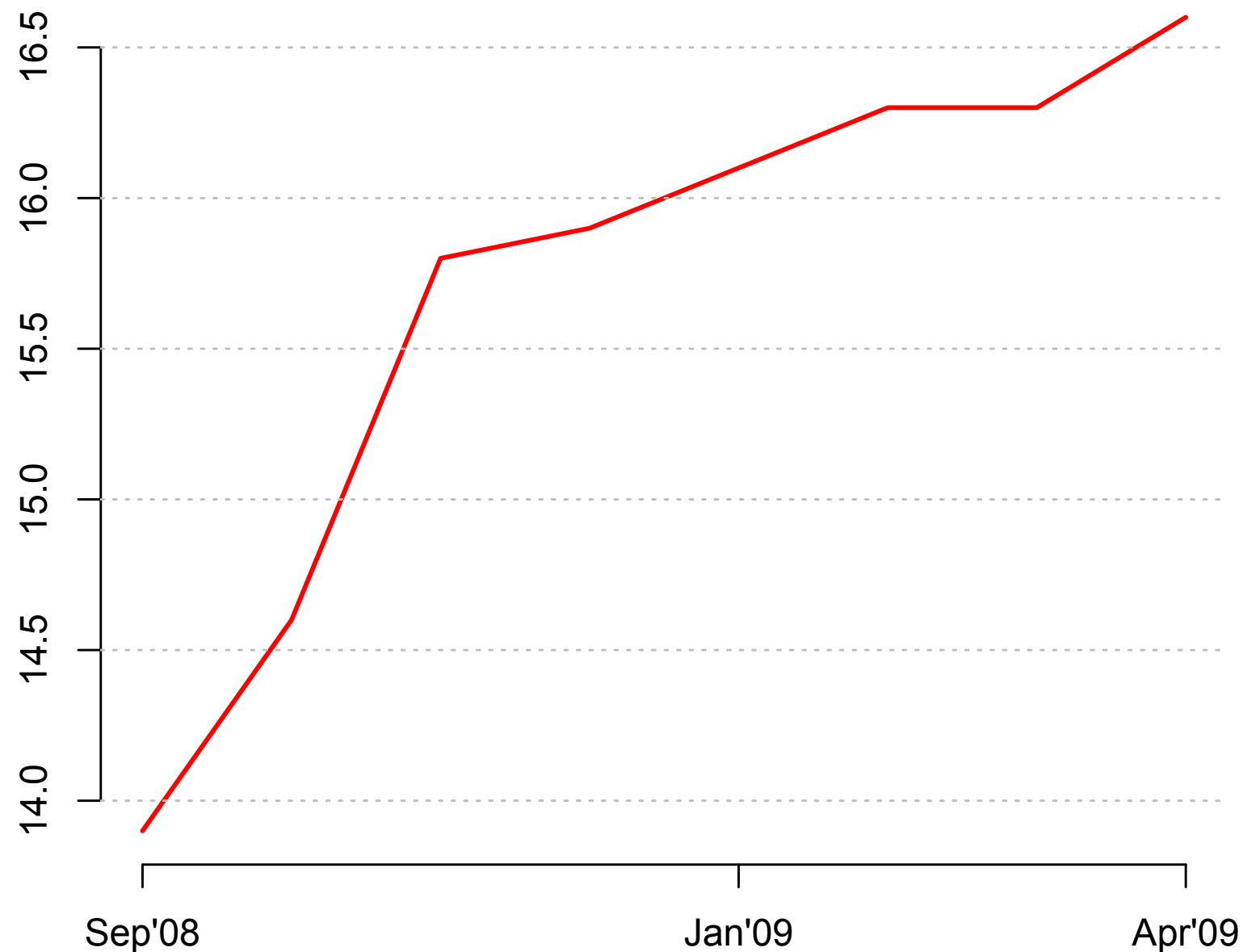


Percentage of Americans Without Health Insurance Coverage

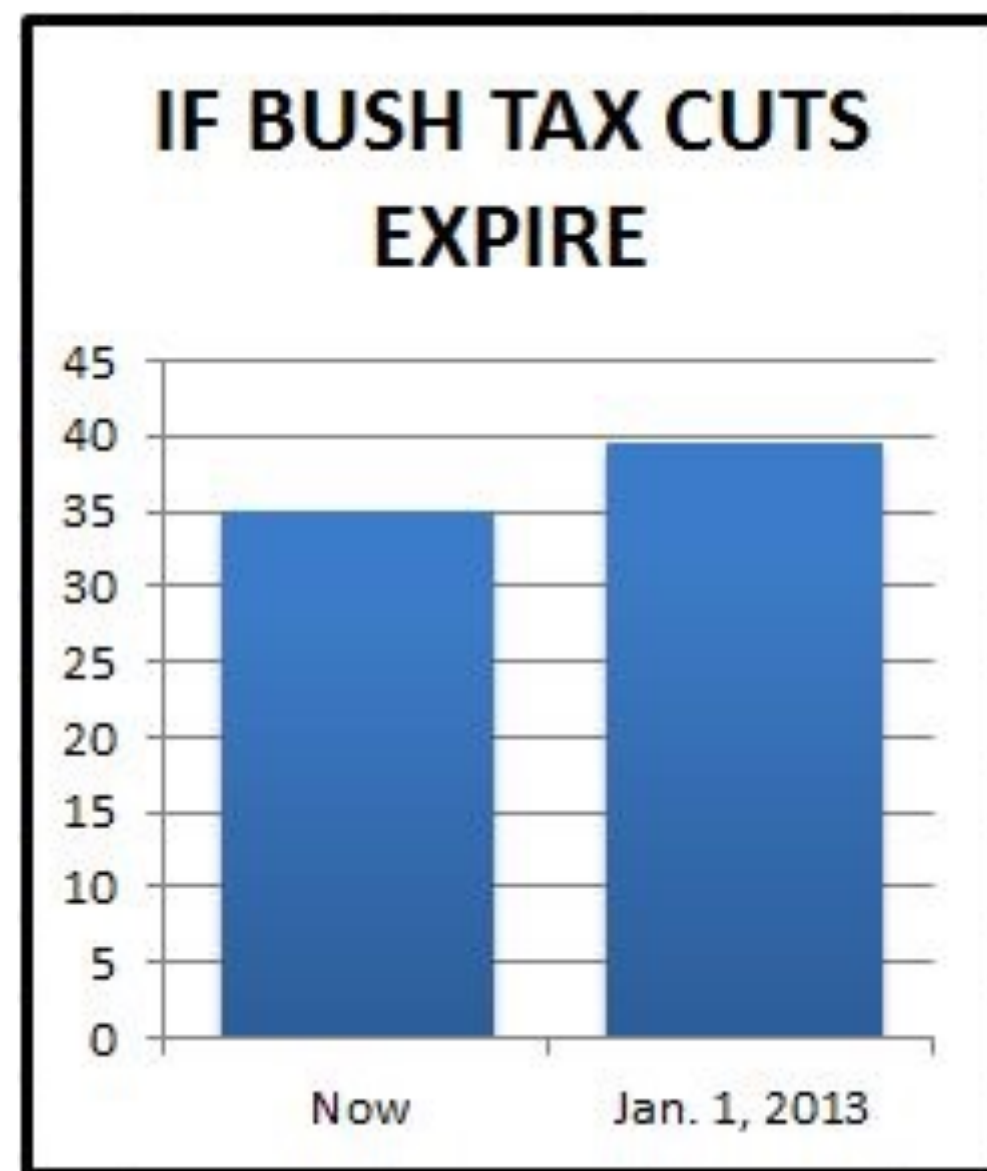
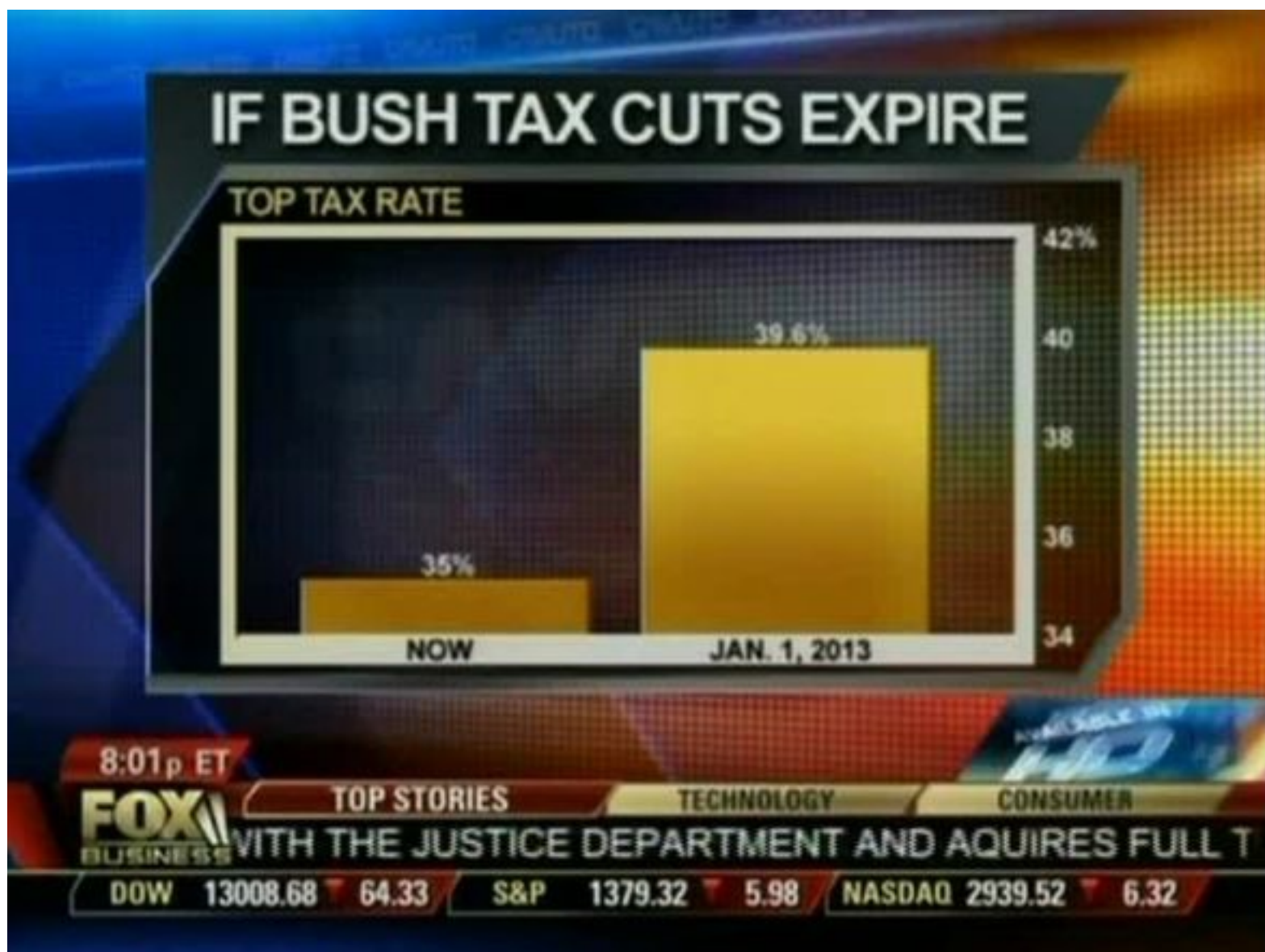


Gallup Poll shows a *substantial* increase in percentage of Americans without health insurance coverage.

Percentage of Americans Without Health Insurance Coverage

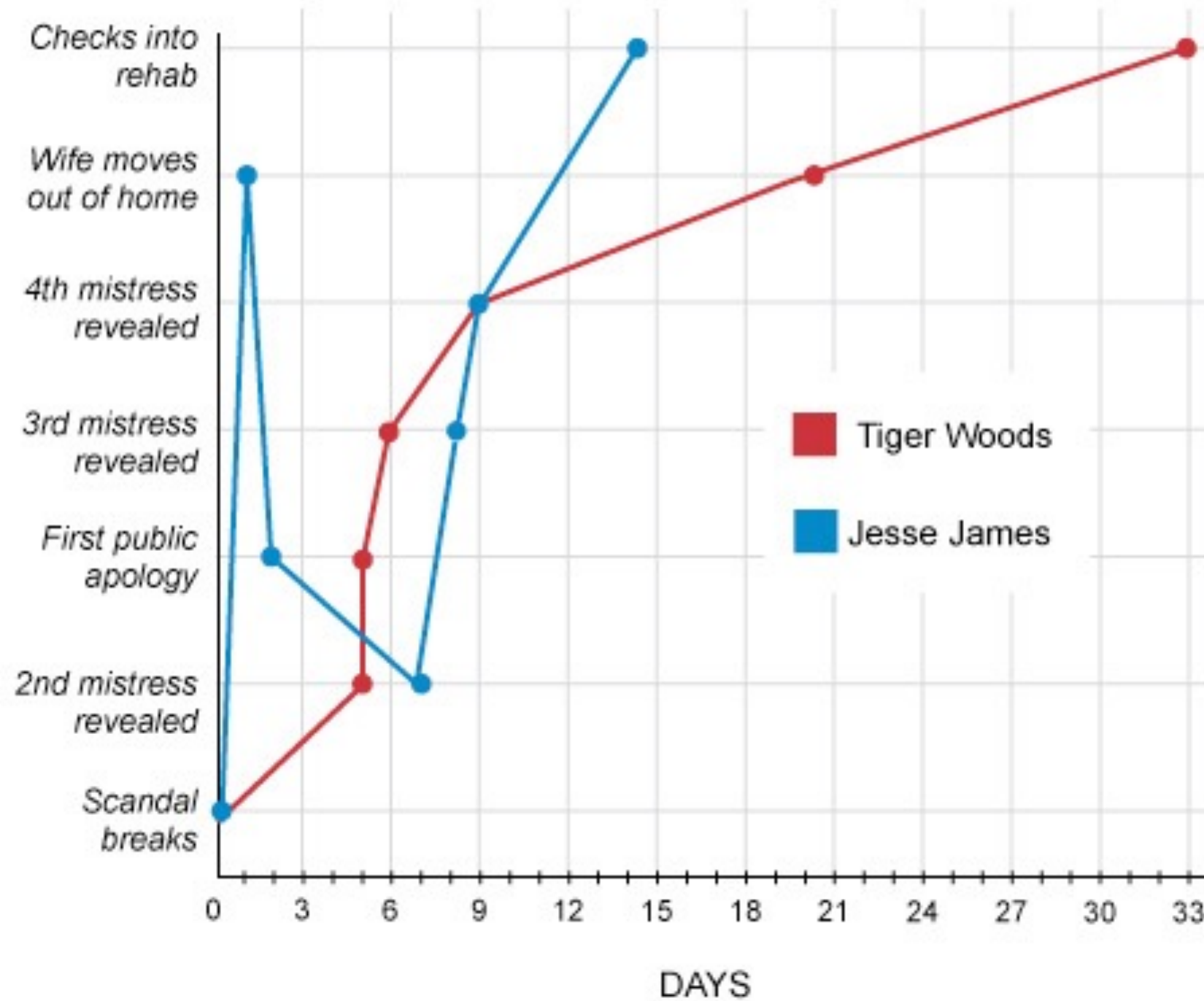


How substantial is the increase?

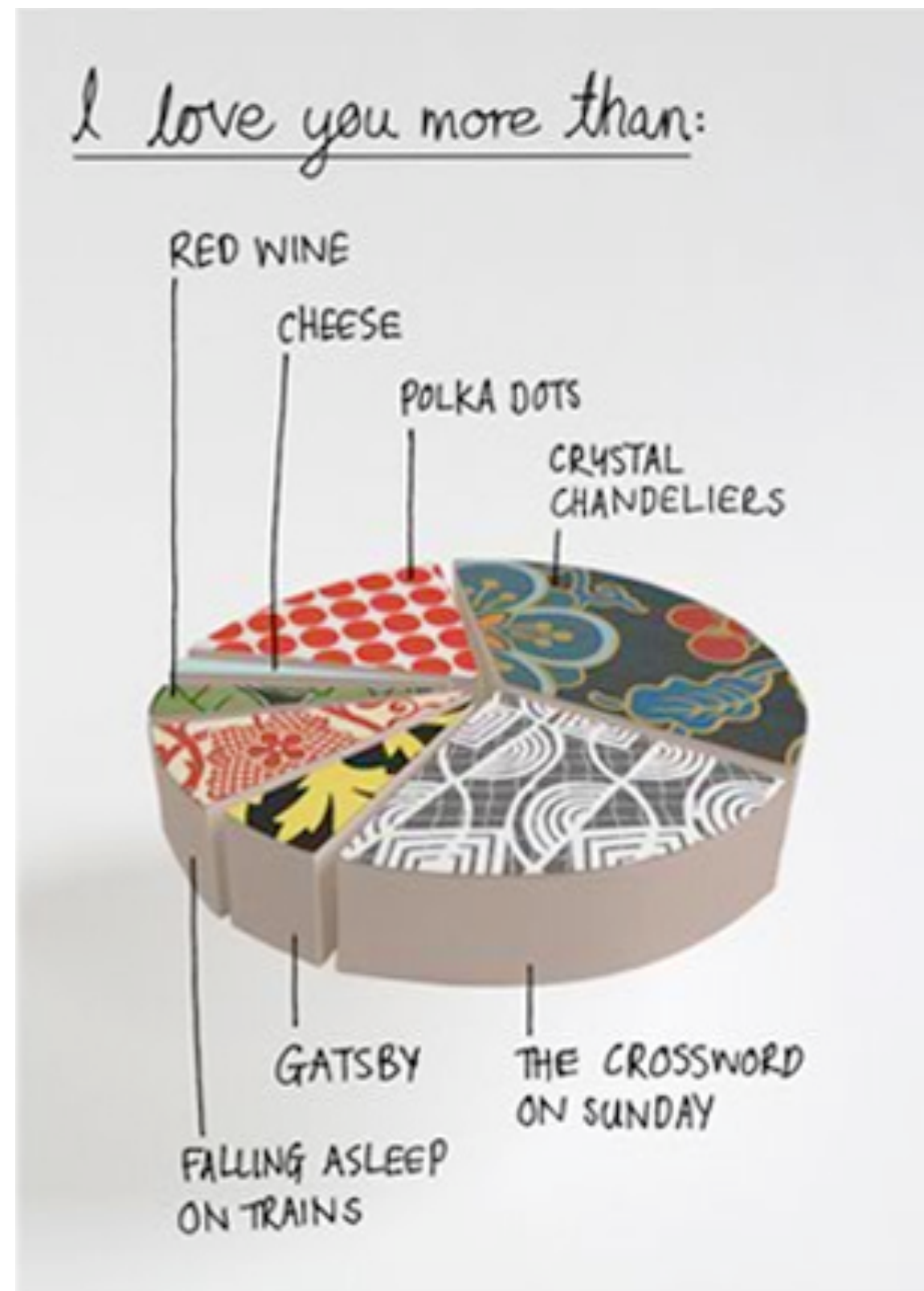


Does your visualization
tell a story, or complicate
a story?

What story does this visualization tell?



What story does this visualization tell?



Use a visualization
when you can

Birth control options: Statistics

March 18, 2011



An estimated 62 million U.S. women are in their childbearing years. Of those, 62% use some kind of contraception.

Among those who don't, 31% are pregnant, trying to get pregnant, postpartum, sterile or not sexually active. The other 7% take their chances. Among those using contraceptives, here's what they use:

The pill 28%

Sterilization 27.1%

Condom 16.1%

Vasectomy 9.9%

IUD 5.5%

Withdrawal 5.2%

Injectable Depo-Provera 3.2%

Vaginal ring 2.4

Rhythm 0.9

Other: 0.6

Statistics from the National Center for Health Statistics and the Guttmacher Institute.

In summary...

Tufte's principles for graphical excellence

1. Above all else show the data.
2. Maximize the data-ink ratio.
3. Erase non-data ink.
4. Erase redundant data ink.
5. Revise and edit