

Proportions

- Interleaf: Correlation does not automatically imply causation
 - **Confounding variables**, an unmeasured (hidden) variable that changes in tandem with one or more of the measured variables, may underlie the false perception of a relationship
 - Limitation of observational studies -- you need experimental studies to disentangle the confounding variables

Proportions

Fig. 1
IS FACEBOOK DRIVING
THE GREEK DEBT CRISIS?

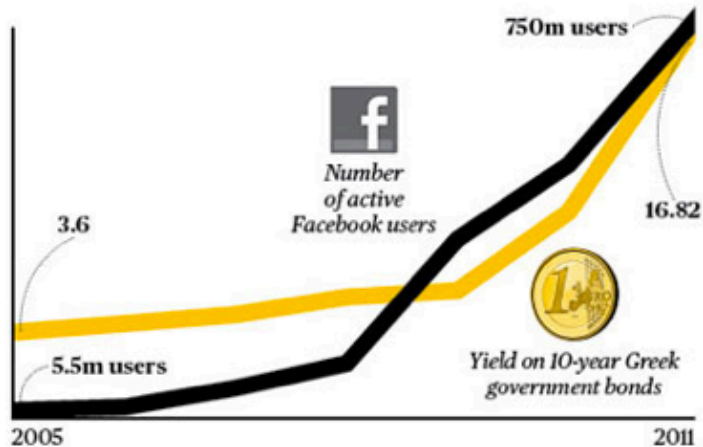


Fig. 2
IS GLOBAL WARMING A HOAX
PROPAGATED BY SCIENTISTS?

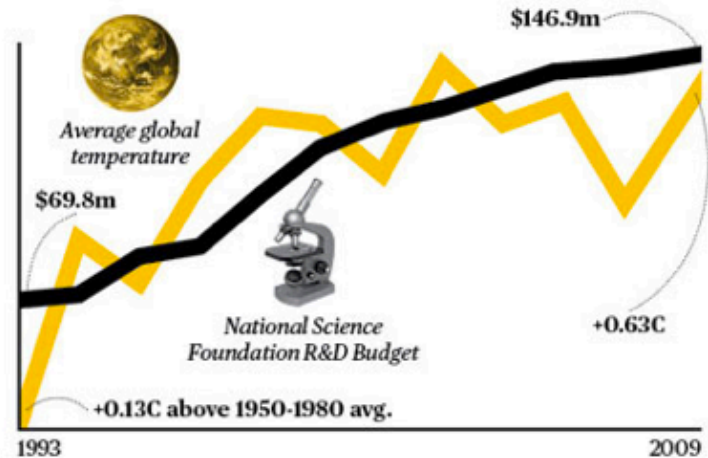


Fig. 3
DID AVAS CAUSE
THE U.S. HOUSING BUBBLE?

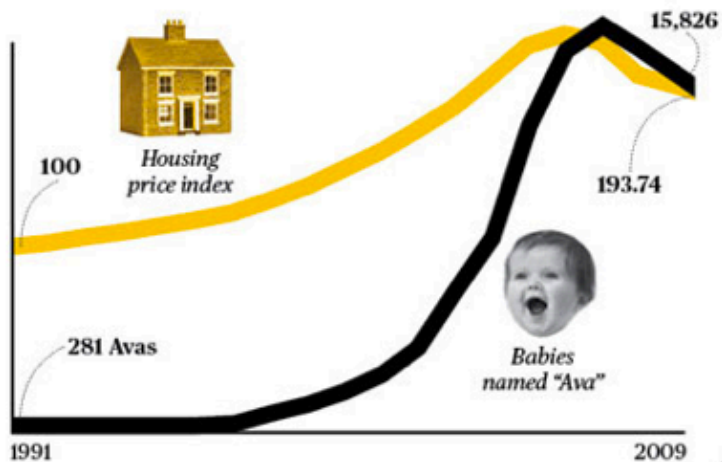
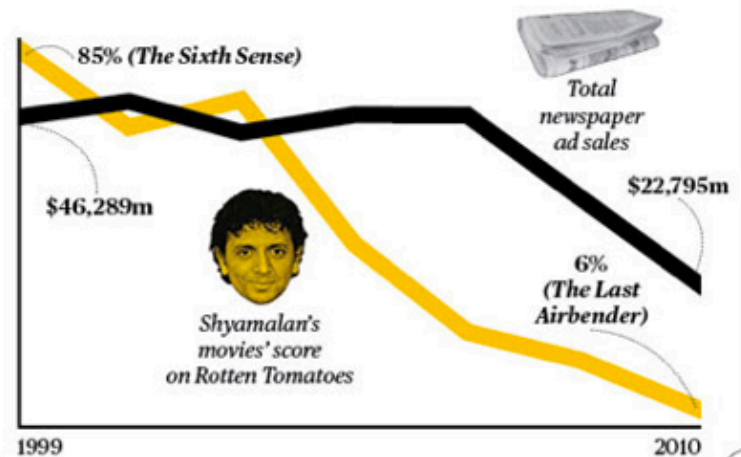
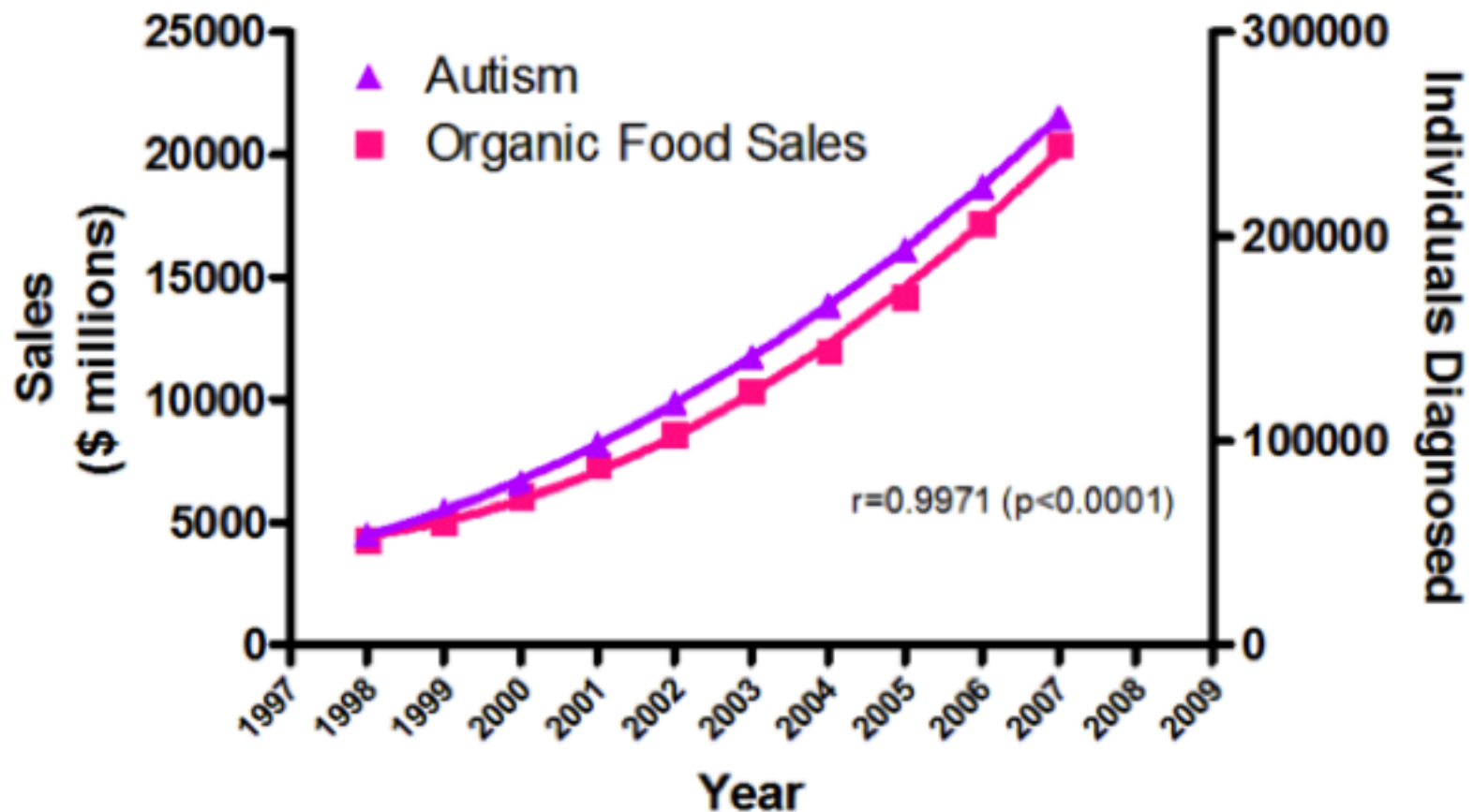


Fig. 4
WOULD M. NIGHT SHYAMALAN START MAKING GOOD MOVIES
AGAIN IF PEOPLE BOUGHT MORE NEWSPAPERS?



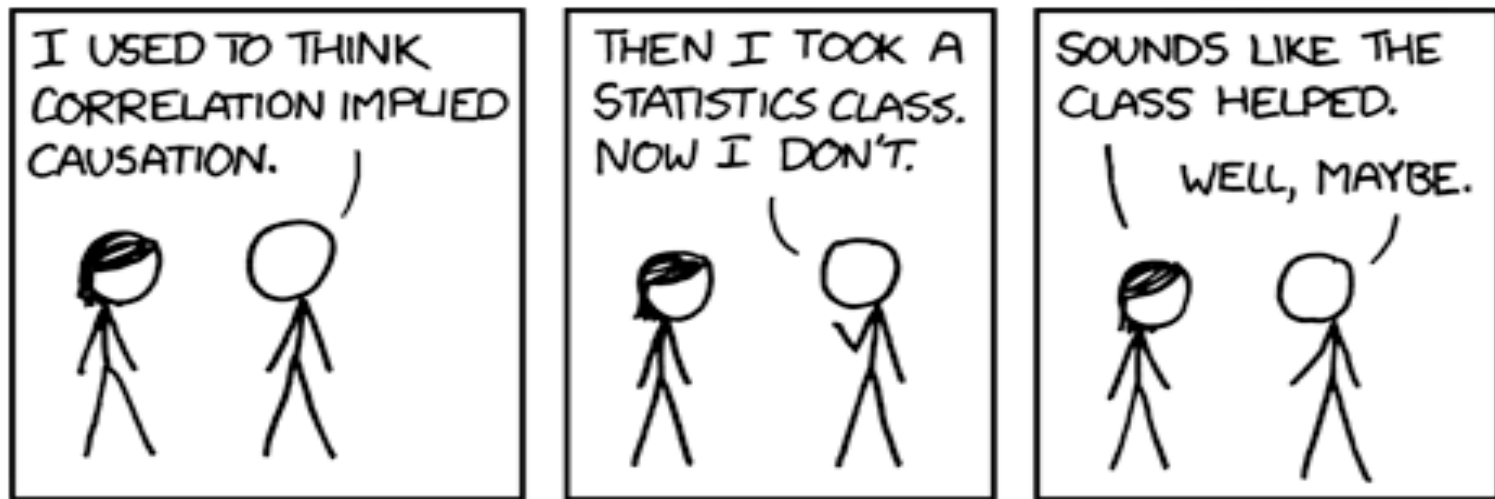
Proportions

The real cause of increasing autism prevalence?



Sources: Organic Trade Association, 2011 Organic Industry Survey; U.S. Department of Education, Office of Special Education Programs, Data Analysis System (DANS), OMB# 1820-0043: "Children with Disabilities Receiving Special Education Under Part B of the Individuals with Disabilities Education Act"

<http://www.tylervigen.com/spurious-correlations>



<http://xkcd.com/552/>