

# Freeing Statistics from Statics Empowering Individuals

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# The Opportunity

- WWW access to robust and authentic evidence
- Open access to informed debate
- Democracies revitalised by informed citizens

# The Problem

- Misinformation - astroturfing etc
- Media 'tapestries' – weaves of
  - theory, opinion, information, misinformation
- Low levels of 'statistical literacy'

# Illustration – Theories implicit in data exploration

- Sex change or lower cholesterol?
  - Are Satins better than Statins?

# Research Question

- What do naïve users DO when faced with media opinion and authentic data?

# The Study

- Students aged 13-15 years
- 250 students in 90 groups from 9 classes in 4 schools across the attainment range
- [A mash-up](#)
  - Interactive, MV display of national survey data on alcohol consumption by 11-15 year olds
  - News articles e.g. *UK hit by Booze Girls' Crimewave*
- Task: create
  - A video; *or*
  - An article for a tabloid or a broadsheet

## Headline Feed

### BBC NEWS

1. Alcohol fight goes into schools
2. Underage drinking is a big problem
3. Officers swoop on young drinkers
4. Teen boozing 'stores up problems'

### DAILY MAIL

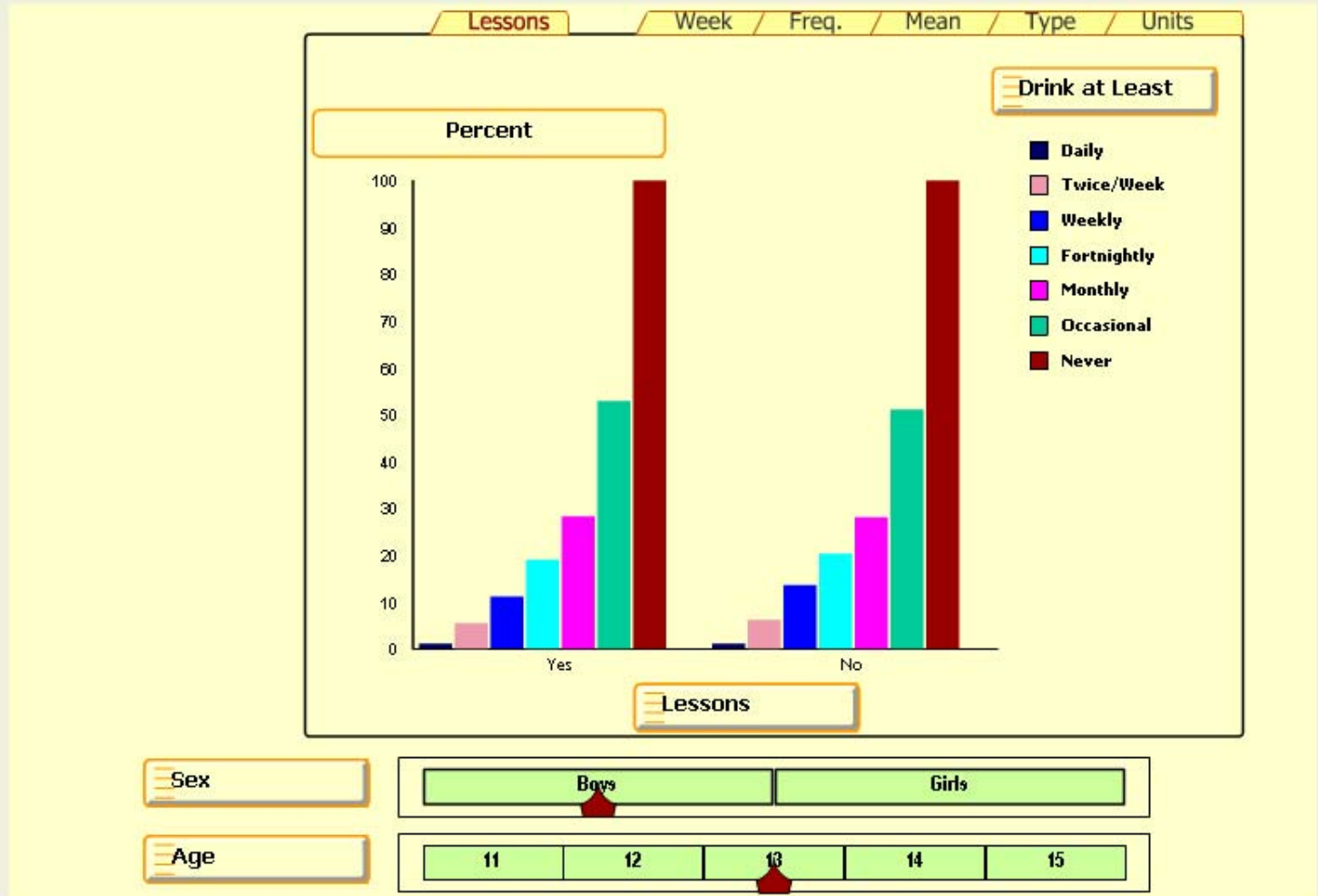
1. 'Young girls drink nearly twice as much alcohol as they did 7 years ago'
2. Pocket-money alcohol prices 'encourage the young to binge drink'

### THE OBSERVER

1. Booze ban sobering for town's teenagers

### THE SUN

1. UK hit by booze girls crimewave



# Analysing Students' Work

- 13/90 - discussed 2 way interactions
- 19/90 described trends clearly and accurately
- 54/90 – accurate use of data to critique media accounts
- 83/90 made use of data
- 19/90 introduced NEW information



# So What?

## Optimism!

- Spontaneous use of 'hard' statistical ideas
- Critique of media errors
- Spontaneous access to other sources

## Actions

- Media - embrace multivariate interactive displays!
- Governments – create interactive documents!
- Educators – reform the curriculum!

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