

# TIME

MPA 635: Data Visualization

October 30, 2018

# PLAN FOR TODAY

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Axis issues

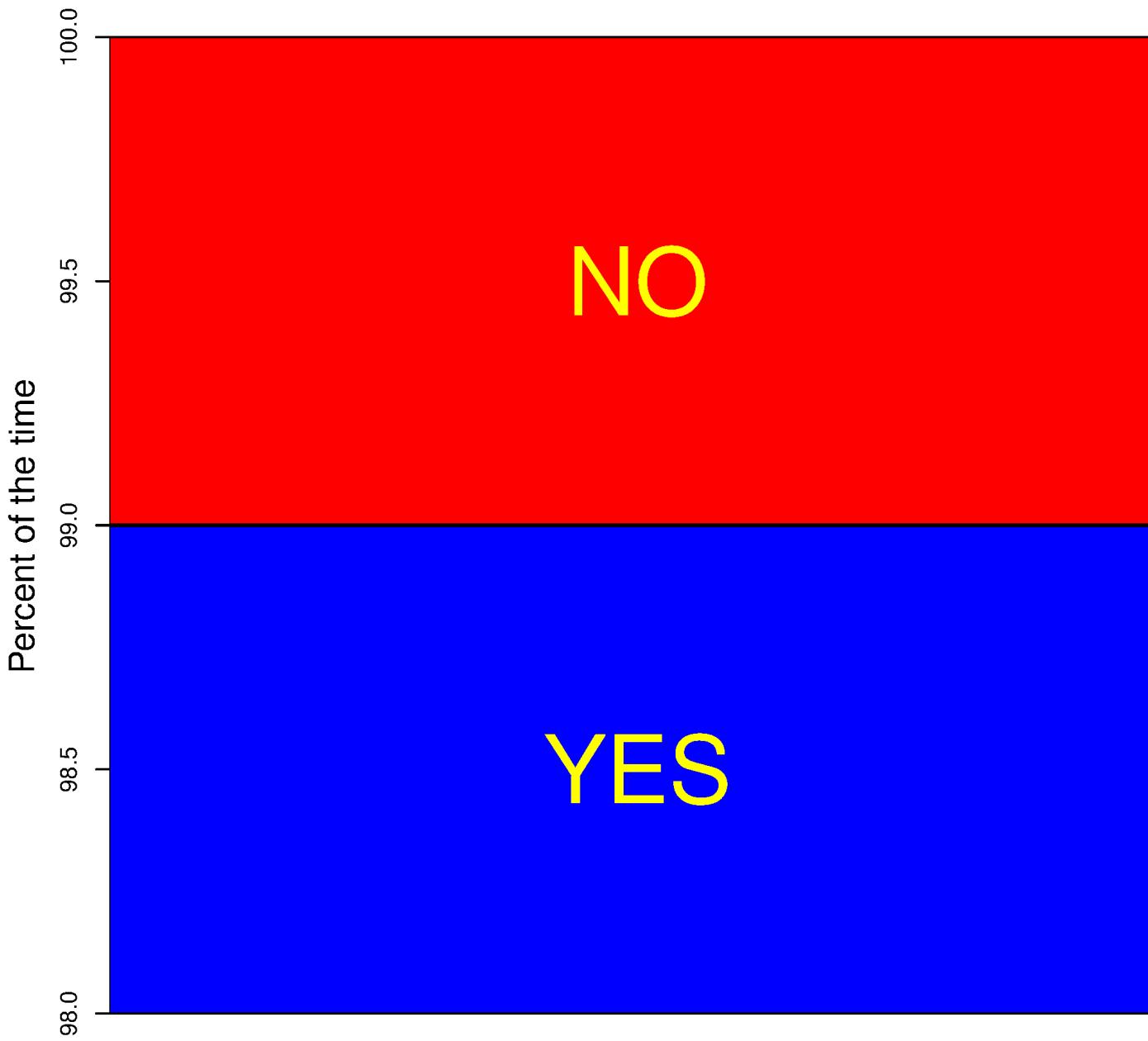
R tips and tricks

Enhancing graphics outside of R

Decomposing and forecasting

# AXIS ISSUES

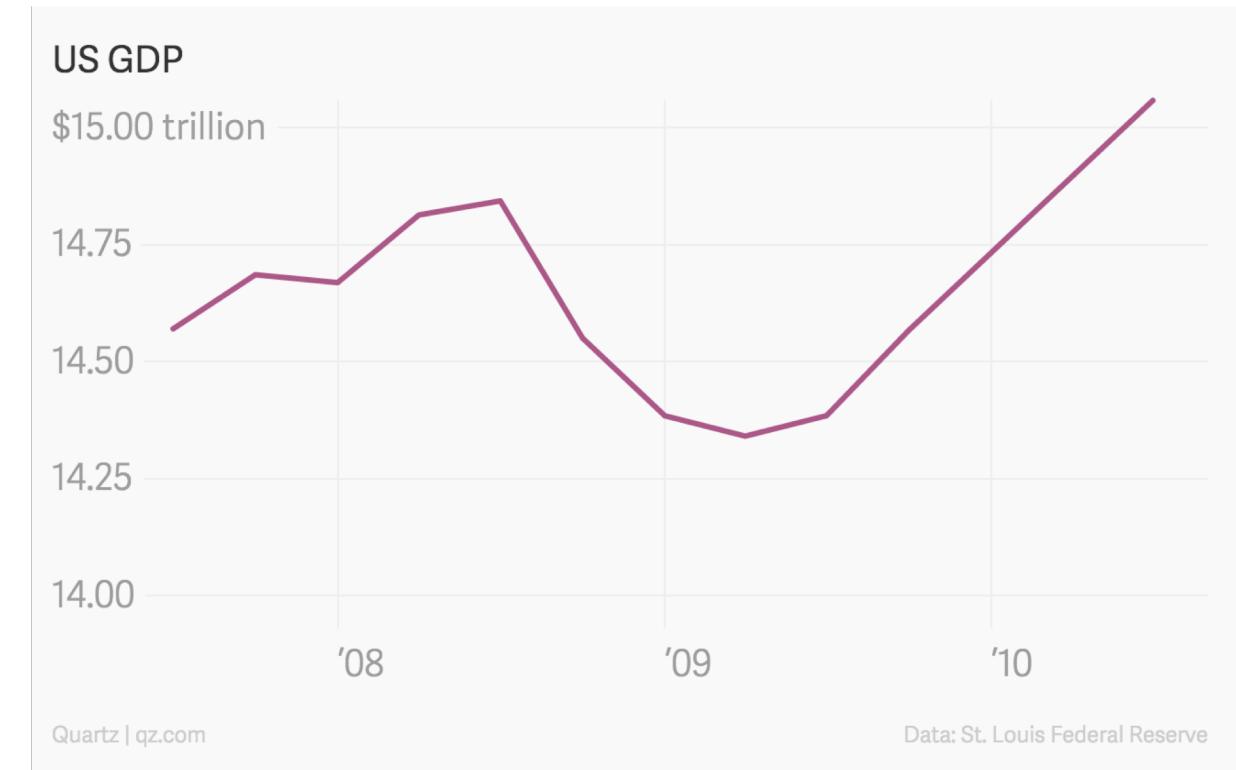
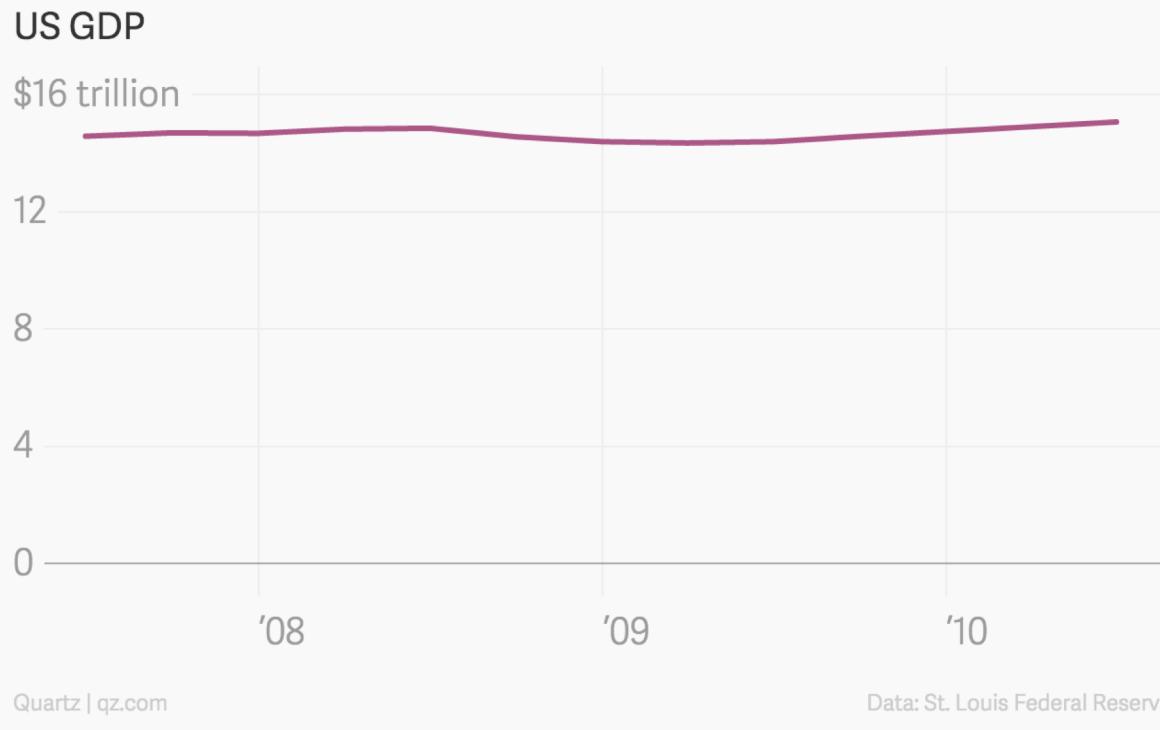
# Is truncating the Y-axis misleading?



# WHEN IS IT OKAY TO TRUNCATE?

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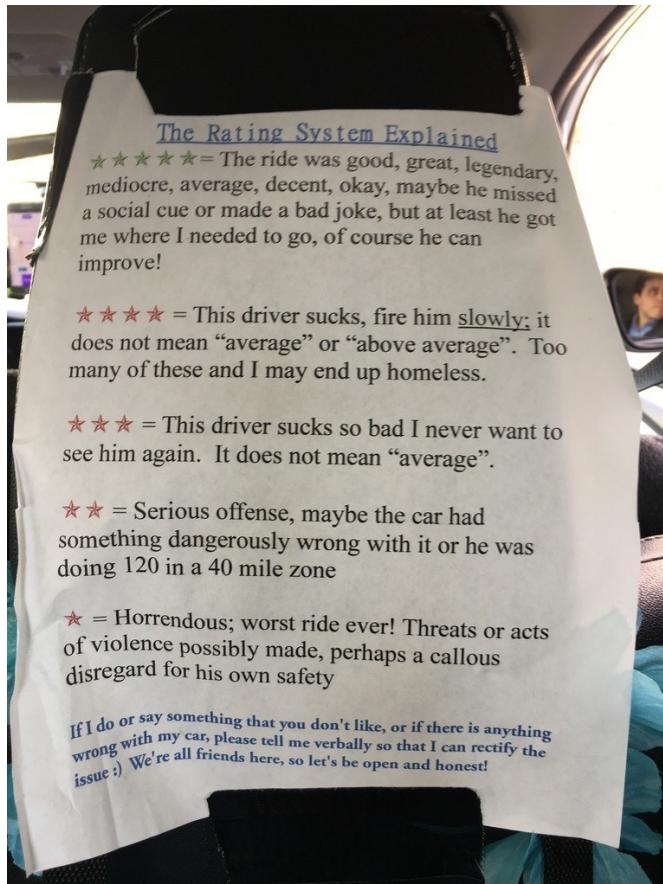
When small movements matter



# WHEN IS IT OKAY TO TRUNCATE?

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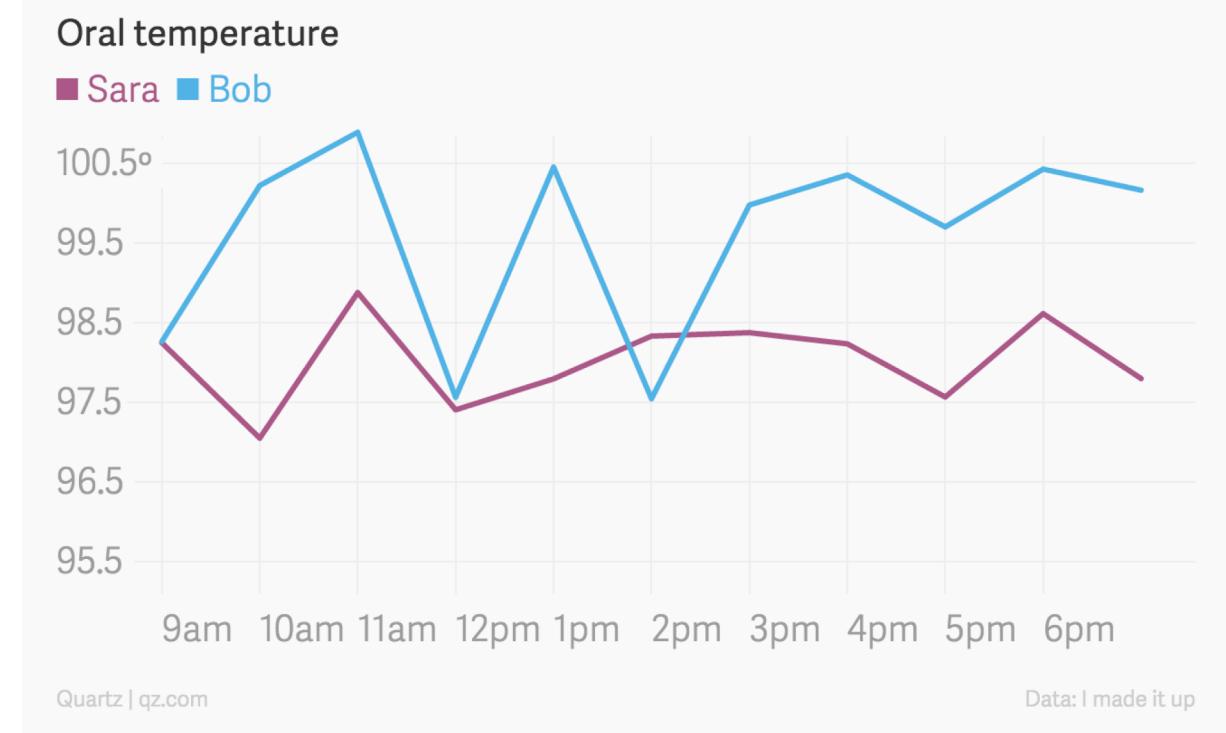
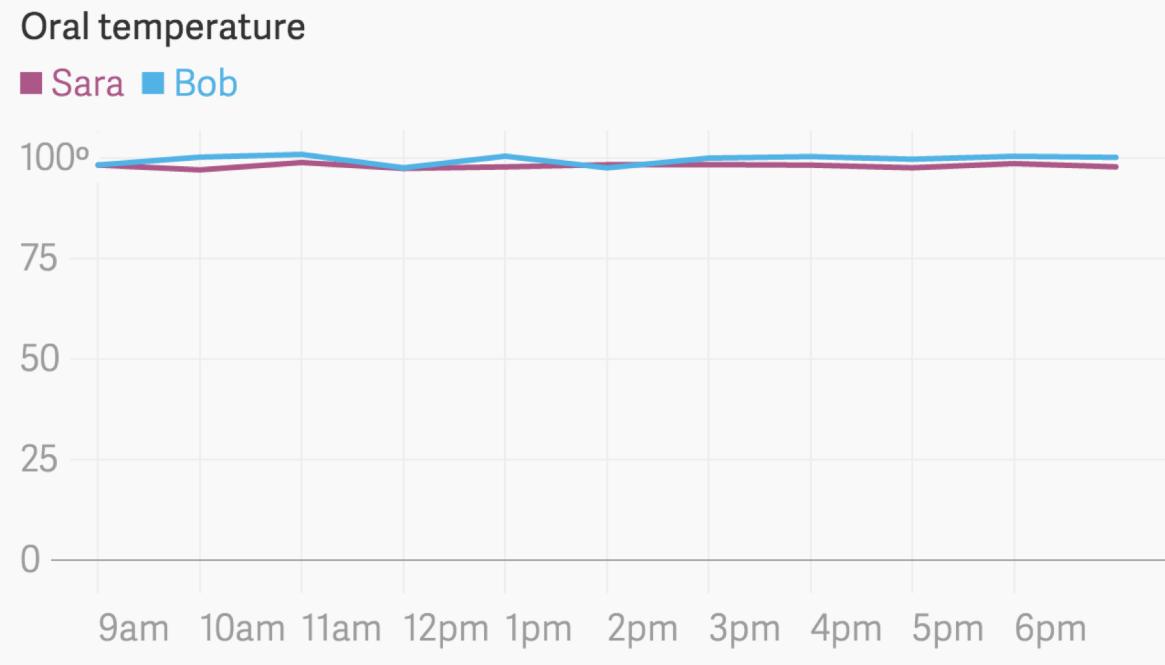
## Scale distortion



# WHEN IS IT OKAY TO TRUNCATE?

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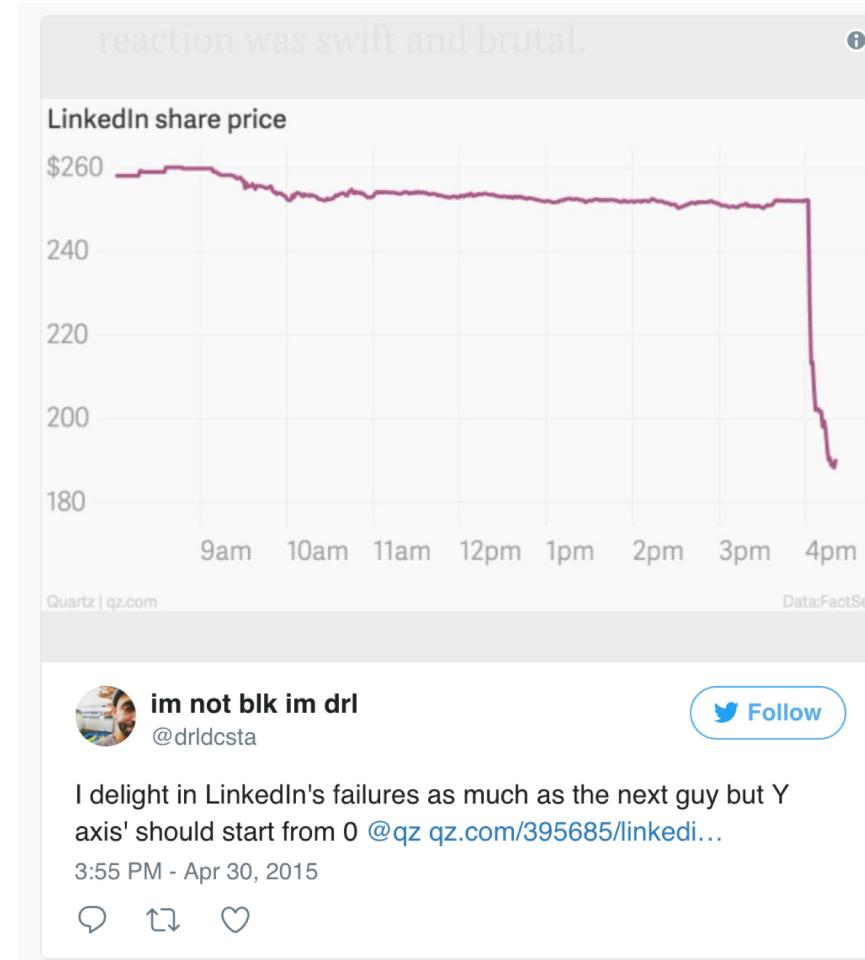
When zero values are impossible



# WHEN IS IT OKAY TO TRUNCATE?

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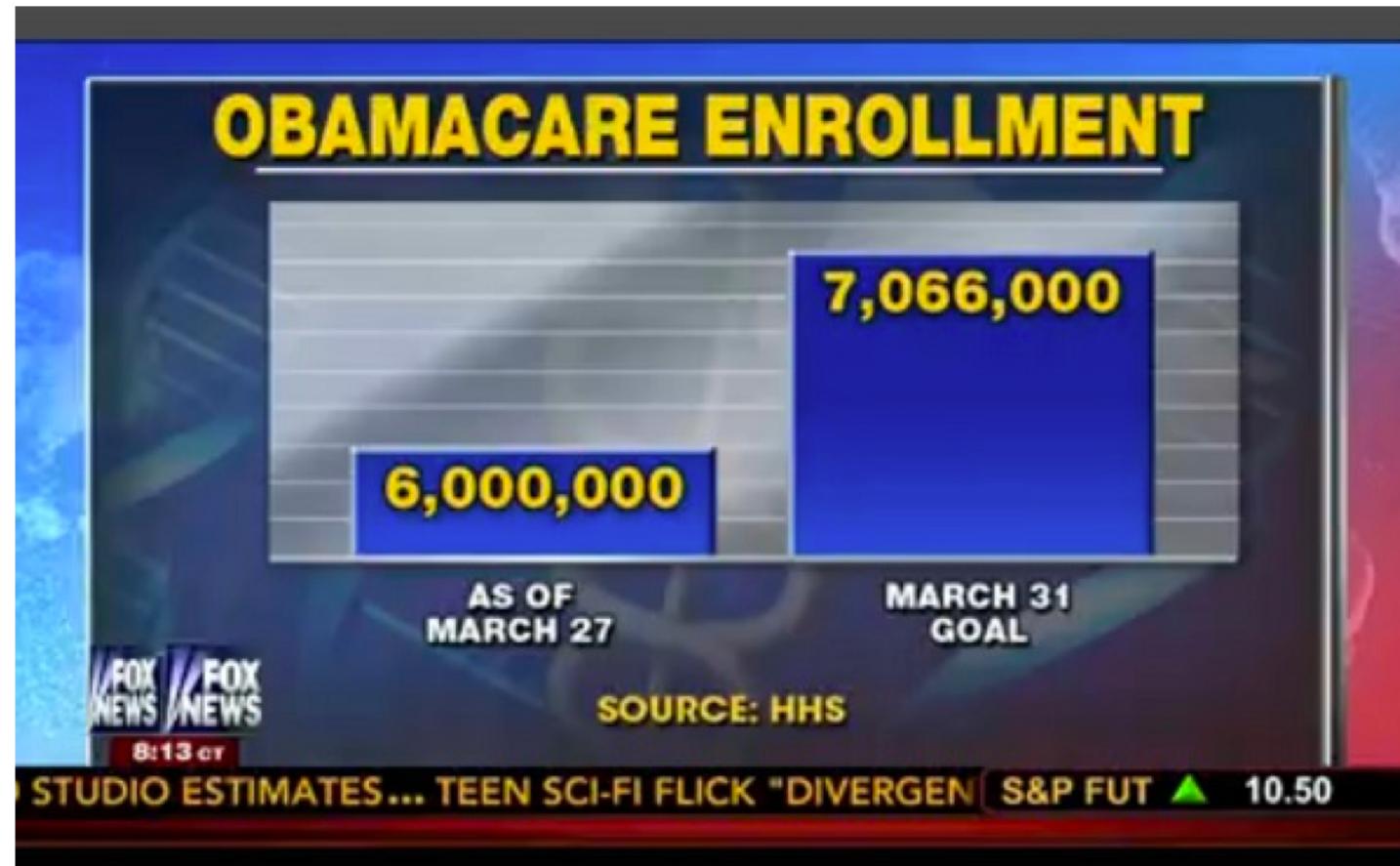
When it's normal



# WHEN IS IT OKAY TO TRUNCATE?

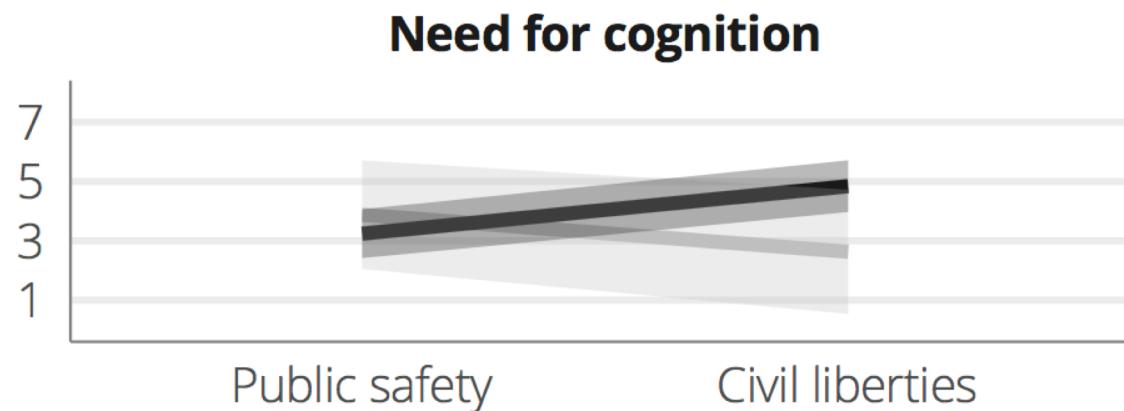
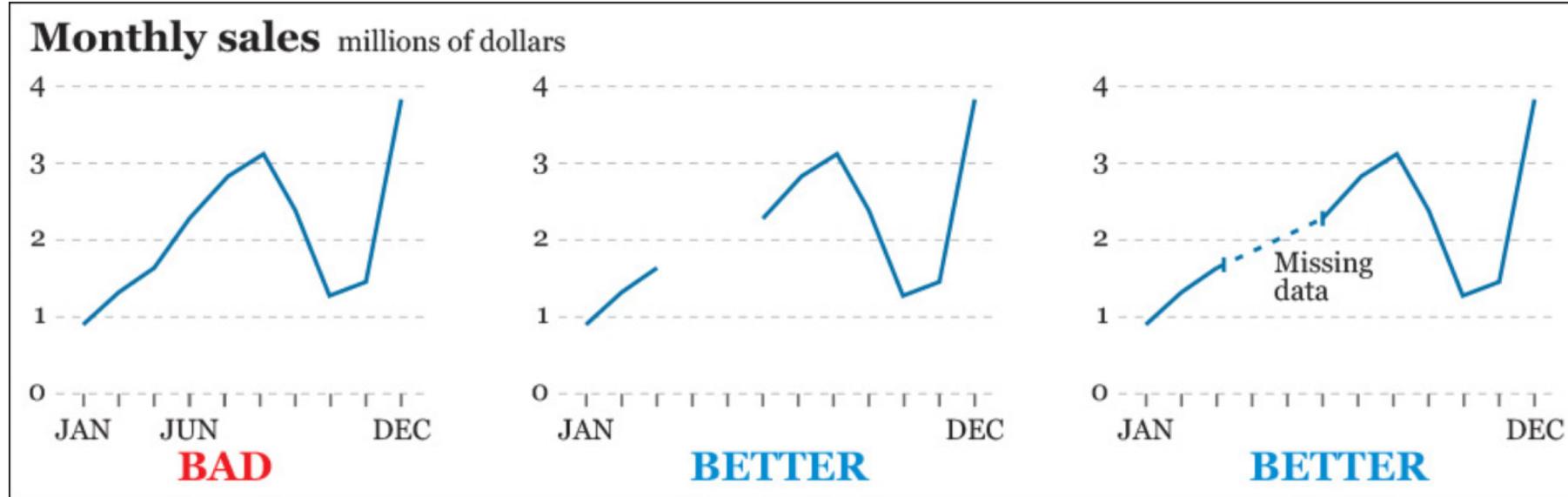
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Never on bar charts

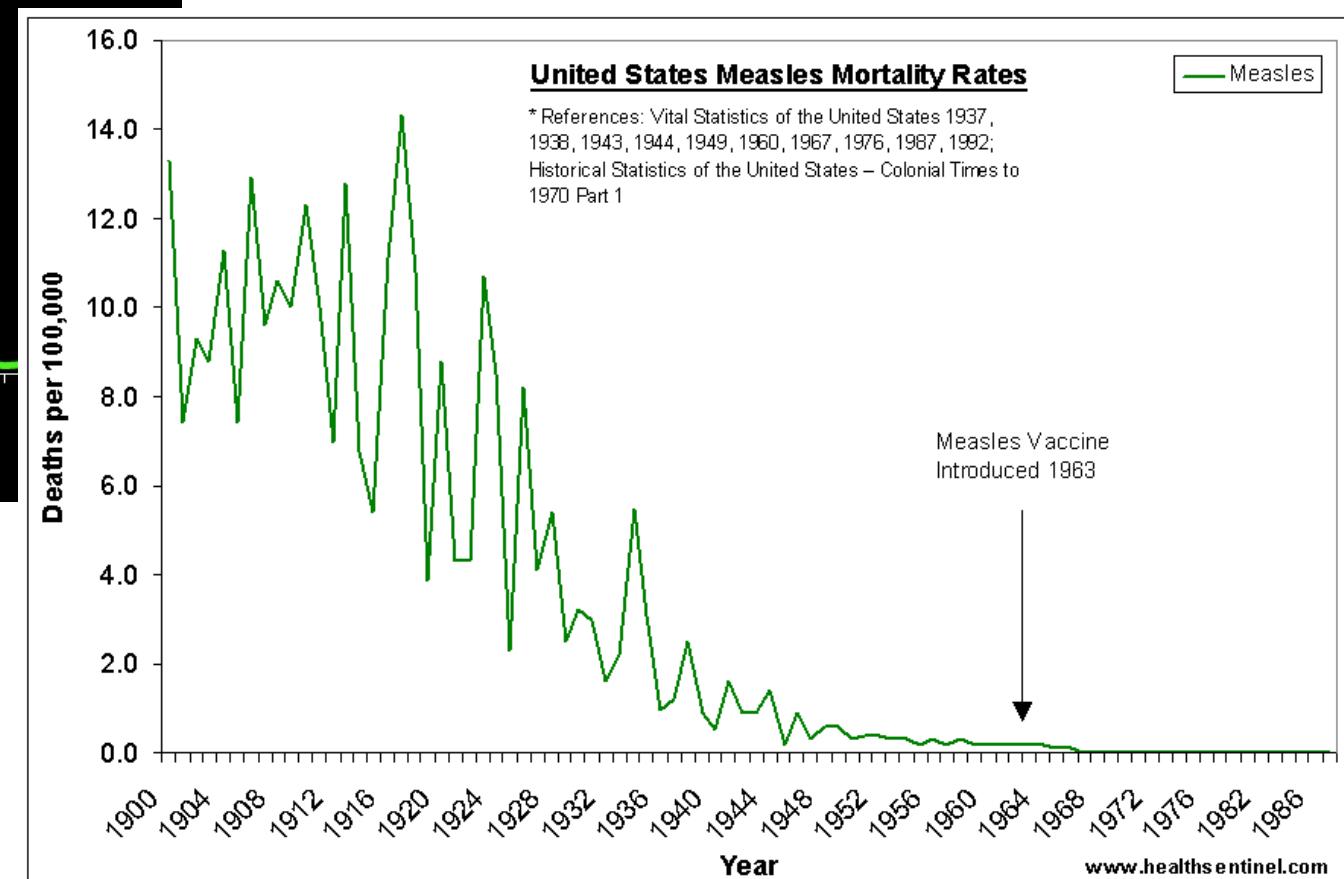
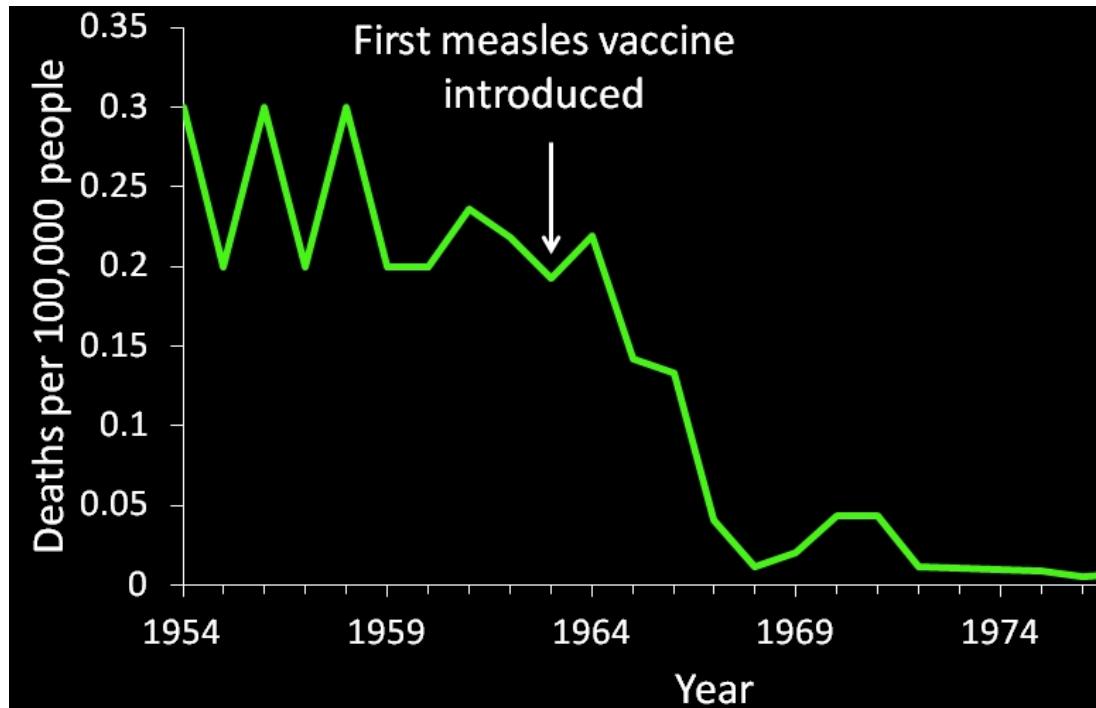


# X-AXIS TRUNCATION

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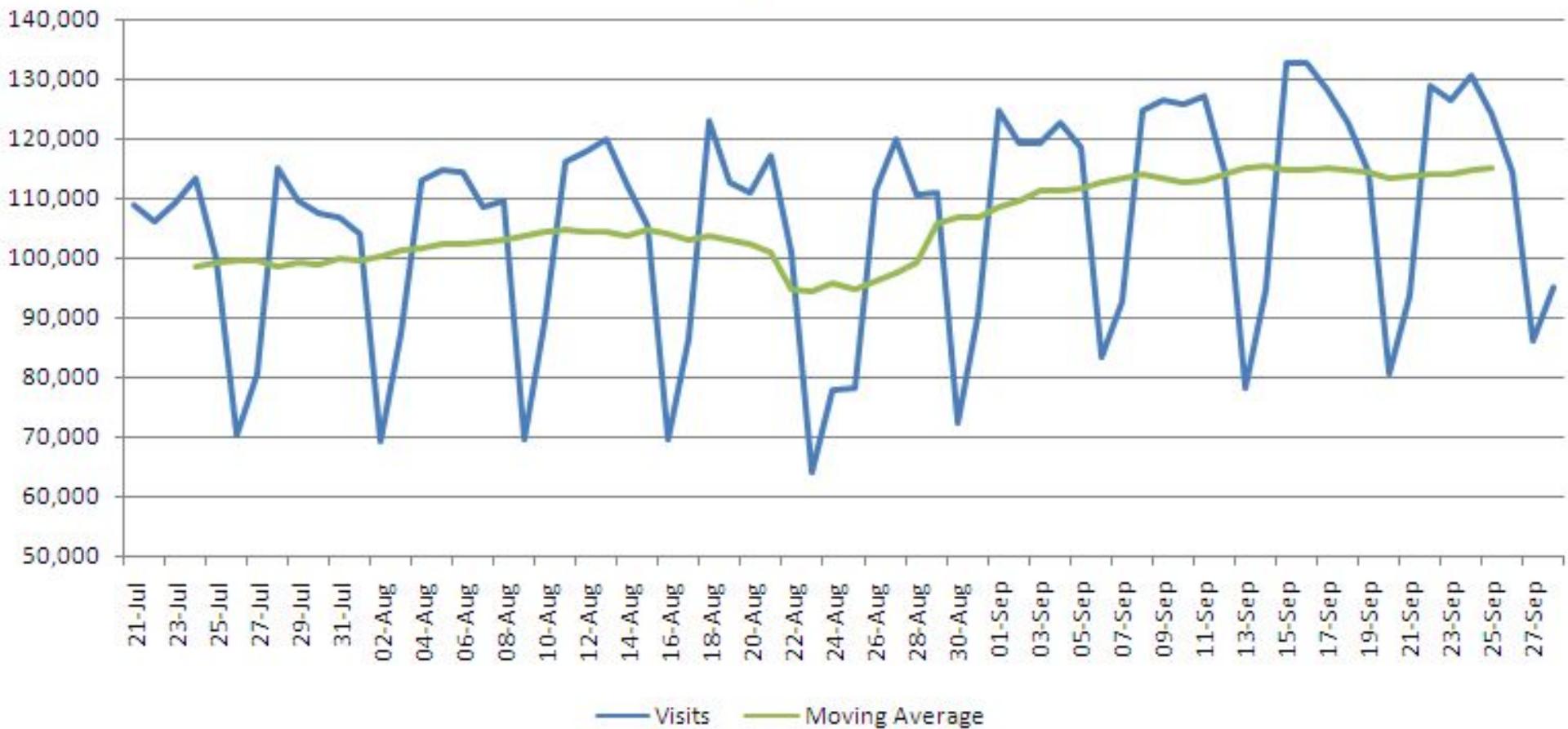
# X-AXIS TRUNCATION



# SEASONALITY

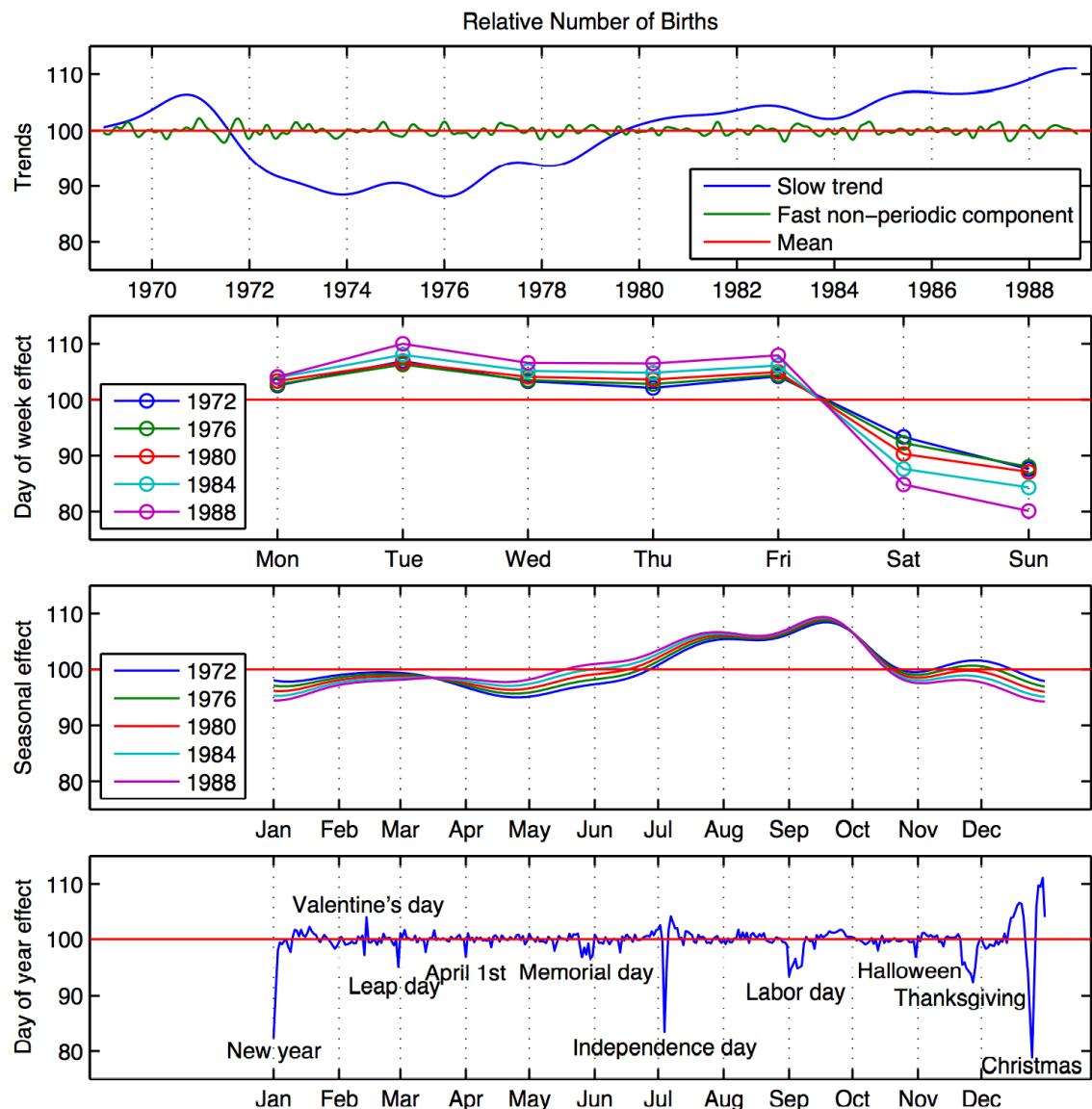
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Daily Visits



# DECOMPOSITION

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# R TRICKS AND TIPS

# CAKE

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Help! My cake broke!

Help! I followed these 6 steps and my cake broke!

Same principle applies to code



# REPREXES

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## Reproducible examples

Something anyone can run on their computer  
to reproduce the problem you're facing

Links on class page

# DEBUGGING AND REPREXES

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**Simplify your code down to something very basic**

**Add additional things until stuff breaks**

**Use a tiny subset of your data or invent fake data**

**Make sure your example runs in a new session**

**Ask the internet for help using your toy example**

**Or, 75% of the time, you'll find what's wrong as you make the reprex**

# STYLE

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**Not crucial** (code will still run), **but important**

[style.tidyverse.org](https://style.tidyverse.org)

## 2.1 Object names

“There are only two hard things in Computer Science: cache invalidation and naming things.”

— Phil Karlton

Variable and function names should use only lowercase letters, numbers, and `_`. Use underscores (`_`) (so called snake case) to separate words within a name.

```
# Good
day_one
day_1
```

```
# Bad
DayOne
dayone
```

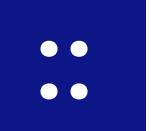
# OTHER STUFF

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Themes

Seeds

paste() and paste0()



Interactivity

# ENHANCING GRAPHICS OUTSIDE OF R

# DECOMPOSING AND FORECASTING