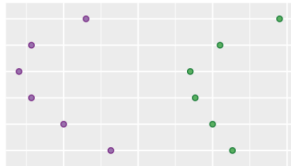# Data stories: Expanding your graphical repertoire
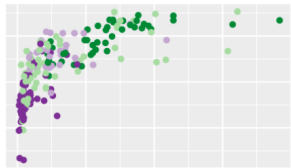
Richard Layton

Session 2, 2022–02–21
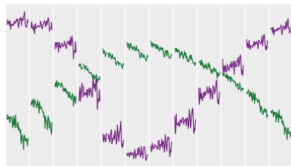
Expanding your graphical repertoire: Four main topics
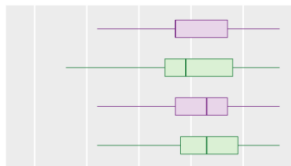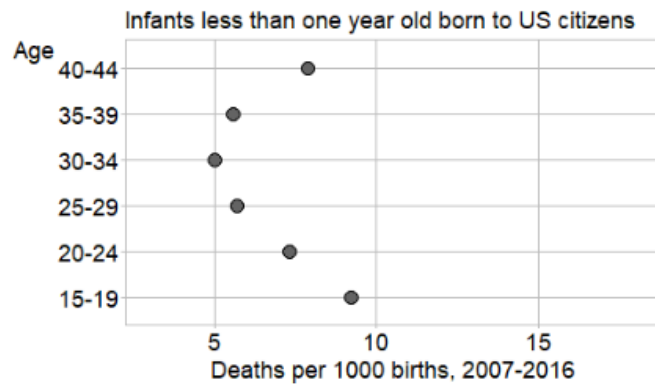
I suggest you have a printed copy of this handout to write in during the workshop. We have a number of think-write-share activities that for many people work best when thoughts are written down.

Comparing data

Revealing correlations

Showing evolution

Displaying distributions

Notes

§ Comparing data

Dot plot

Infants less than one year old born to US citizens
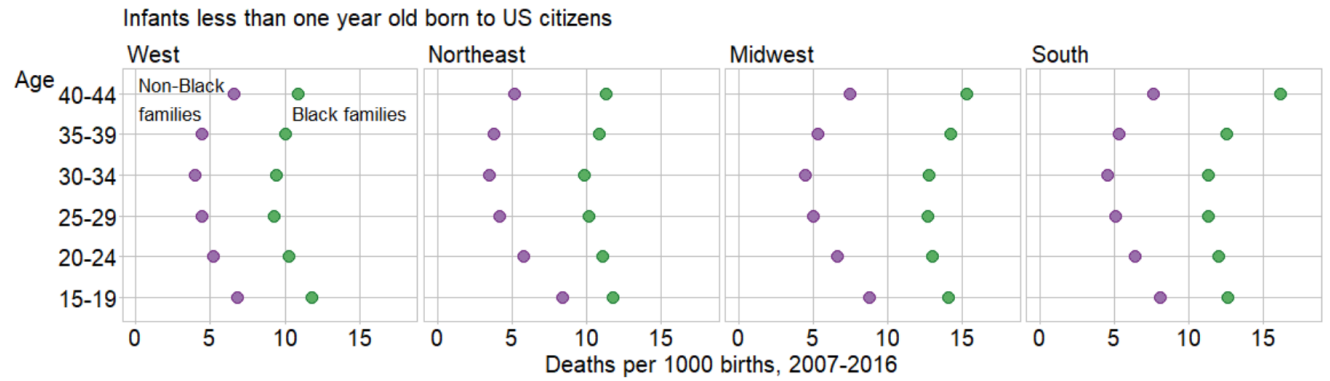

Variables + Argument → Design

Variables: (1) quamtity, (1) category

Argument: Comparison

- Describe the main idea(s) this chart conveys to you.

- What questions does the chart raise?

Multiway dot chart, superposed

Infants less than one year old born to US citizens

Deaths per 1000 births, 2007-2016

- Describe the main idea(s) this chart conveys to you.
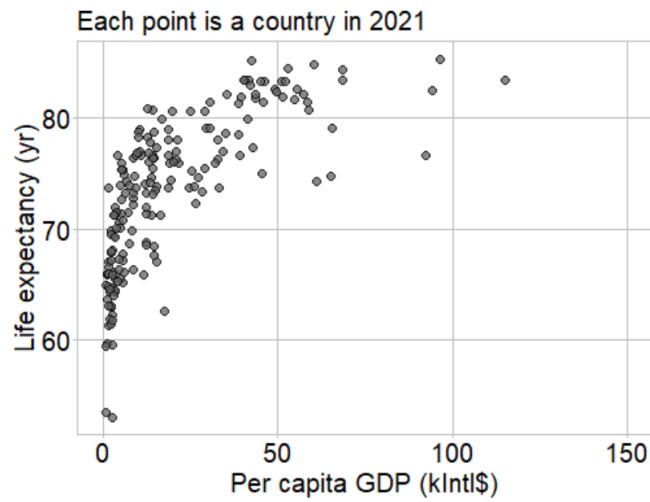
Variables + Argument → Design

Variables: (1) quamtity, (3) categories

Argument: Comparison

- What questions does the chart raise?

§ Revealing correlations

Scatterplot

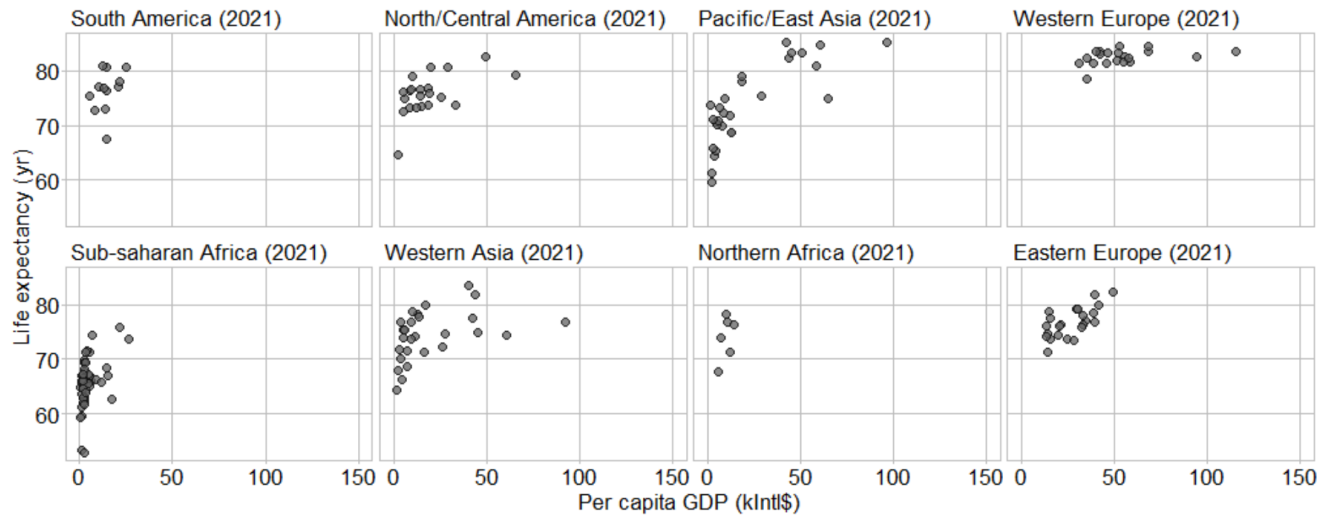**Each point is a country in 2021**

Variables + Argument → Design

Variables: (2) quamtities

Argument: Correlation

- Describe the main idea(s) this chart conveys to you.

- What questions does the chart raise?

Scatterplot, faceted

- Describe the main idea(s) this chart conveys to you.
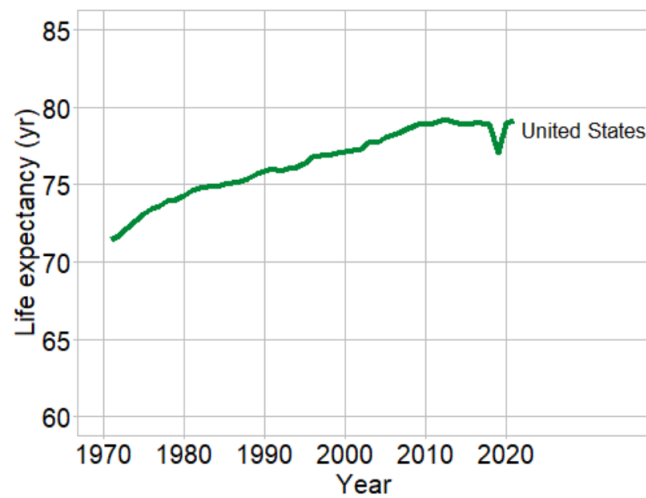
Variables + Argument → Design

Variables: (2) quamtities, (1) category

Argument: Correlation & comparison

- What questions does the chart raise?

§ Showing evolution

Time series

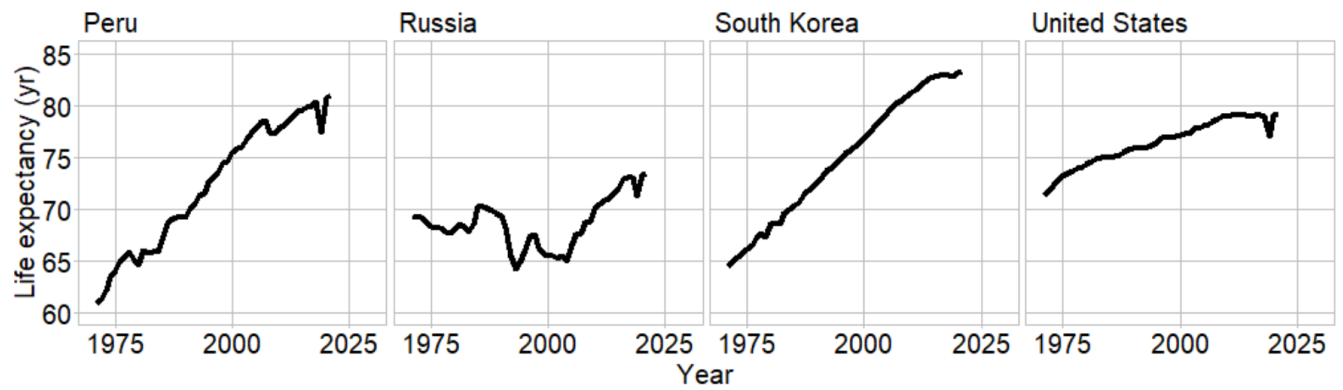*Variables + Argument → Design*

Variables: Discrete time, (1) quantity

Argument: Evolution

- Describe the main idea(s) this chart conveys to you.

- What questions does the chart raise?

Time series, faceted

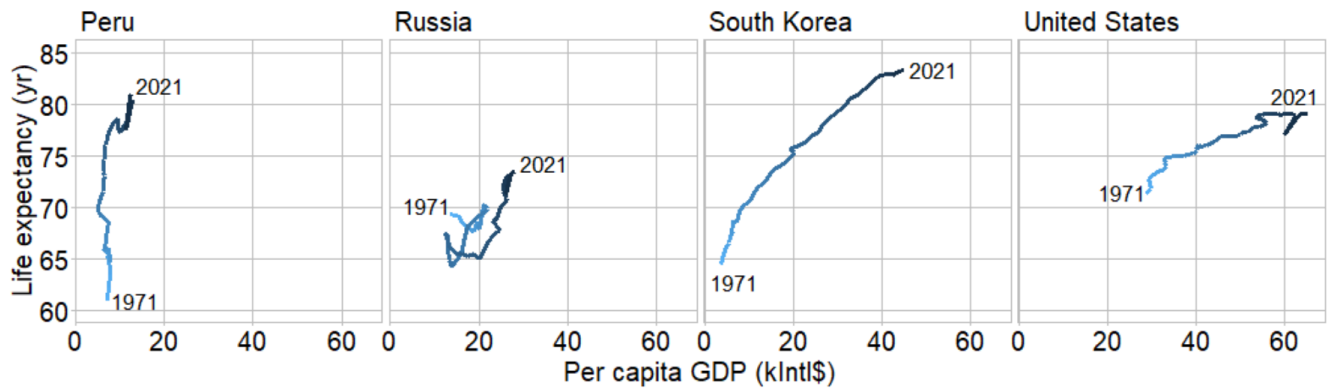- Describe the main idea(s) this chart conveys to you.

Variables + Argument → Design

Variables: Discrete time, (1) quantity, (1) category

Argument: Evolution & comparison

- What questions does the chart raise?

Connected scatterplot, faceted

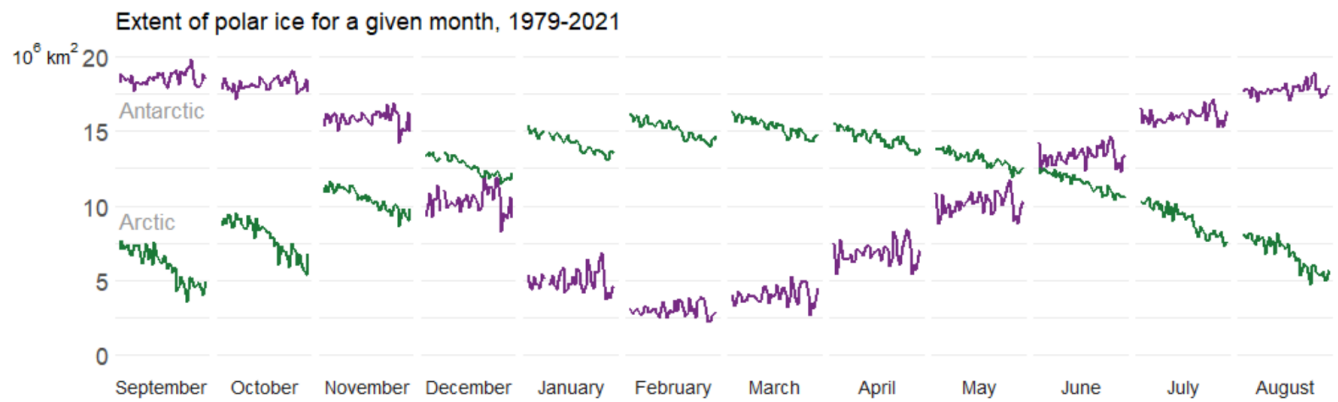- Describe the main idea(s) this chart conveys to you.

Variables + Argument → Design

Variables: Discrete time,
(2) quantities, (1) category

Argument: Evolution, correlation,
& comparison

- What questions does the chart raise?

Cyclic time series, superposed

Extent of polar ice for a given month, 1979-2021

- Describe the main idea(s) this chart conveys to you.
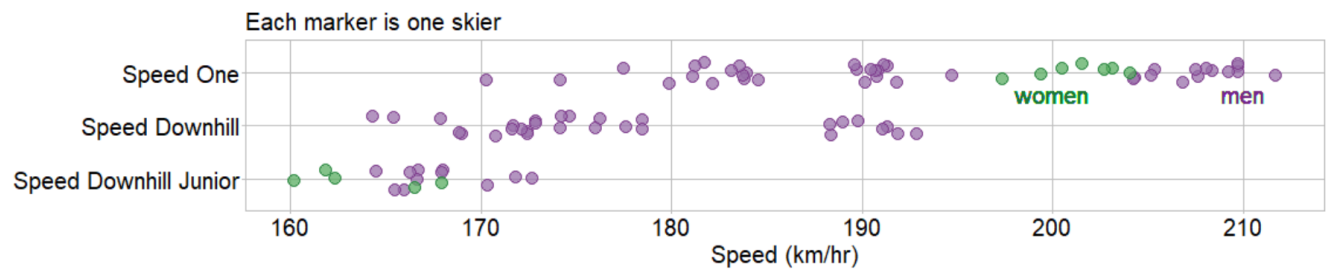
Variables + Argument → Design

Variables: Discrete time,
(1) quantity, (2) categories

Argument: Evolution & comparison

- What questions does the chart raise?
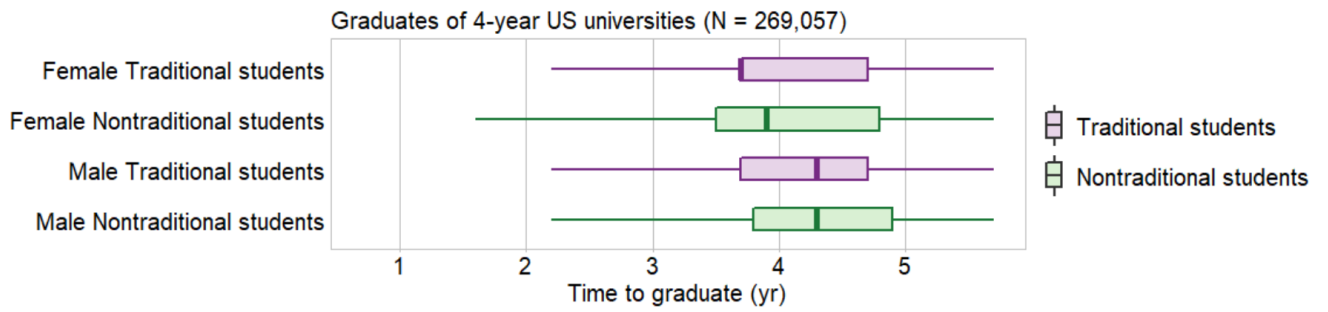
§ Displaying distributions

Strip chart, superposed

Each marker is one skier

- Describe the main idea(s) this chart conveys to you.

  Variables + Argument → Design

  Variables: (1) quantity, (2) categories

  Argument: Distribution & comparison

- What questions does the chart raise?

Box and whisker chart

Graduates of 4-year US universities (N = 269,057)

- Describe the main idea(s) this chart conveys to you.

Variables + Argument → Design

Variables: (1) quantity, (2) categories

Argument: Distribution & comparison

- What questions does the chart raise?