Data Types

Strategic and Competitive Intelligence

Filippo Chiarello

filippochiarello.90@gmail.com

Data: definition

Data

Data, n.
Latin *datum*

"(Thing) given"

Data

Data, n.
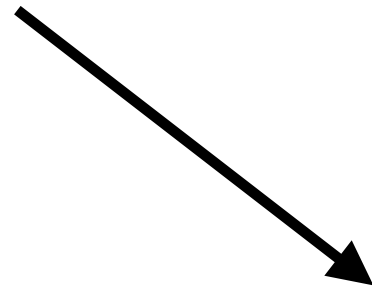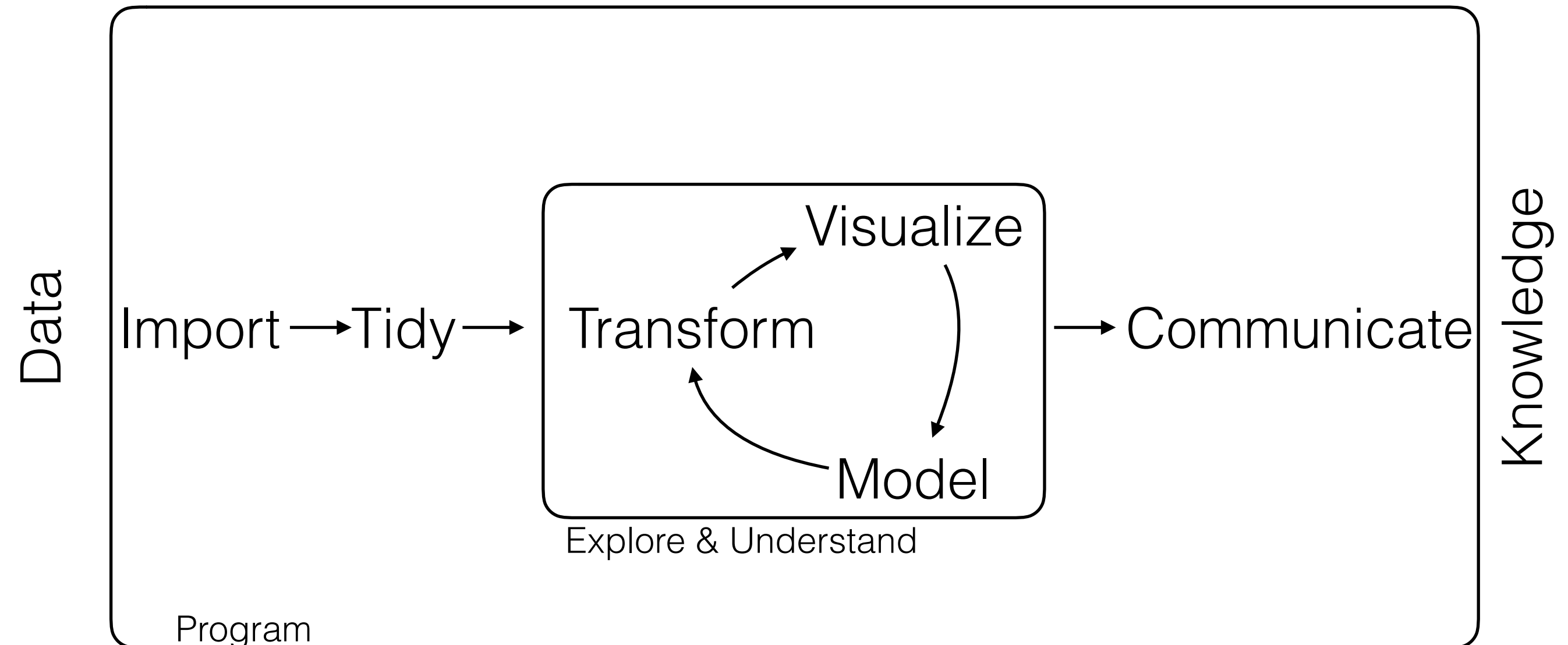Latin *datum*
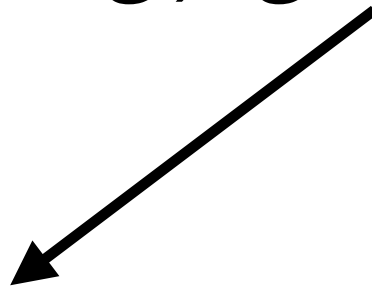
"(Thing) given"

By?   *To?*

Information?

Data

Knowledge

Import → Tidy → Transform

Visualize

Model

Explore & Understand

Program

Communicate

Explore & Understand

Knowledge

Information

Data

Explore & Understand

- **Data** is collected and analyzed.

- Data only becomes **information** suitable for making decisions once it has been analyzed in some fashion.

- **Knowledge** is derived from extensive amounts of experience dealing with information on a subject.

https://en.wikipedia.org/wiki/Data

Explore & Understand

Knowledge
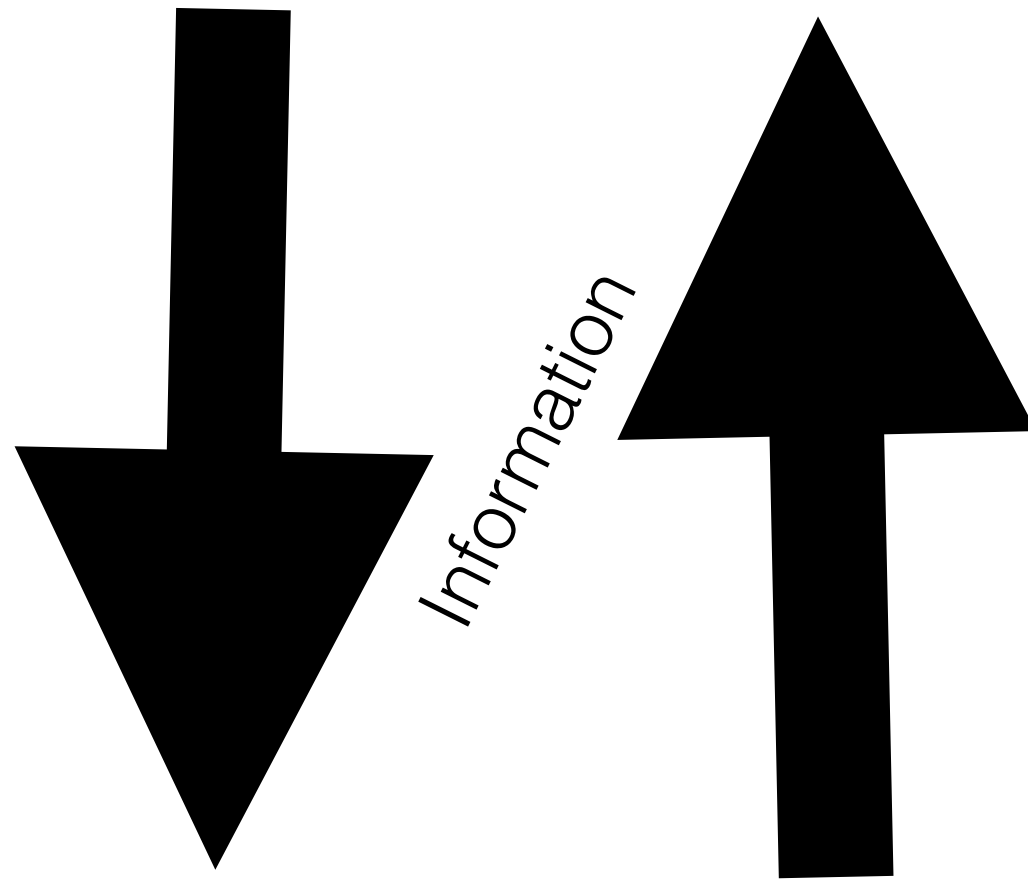
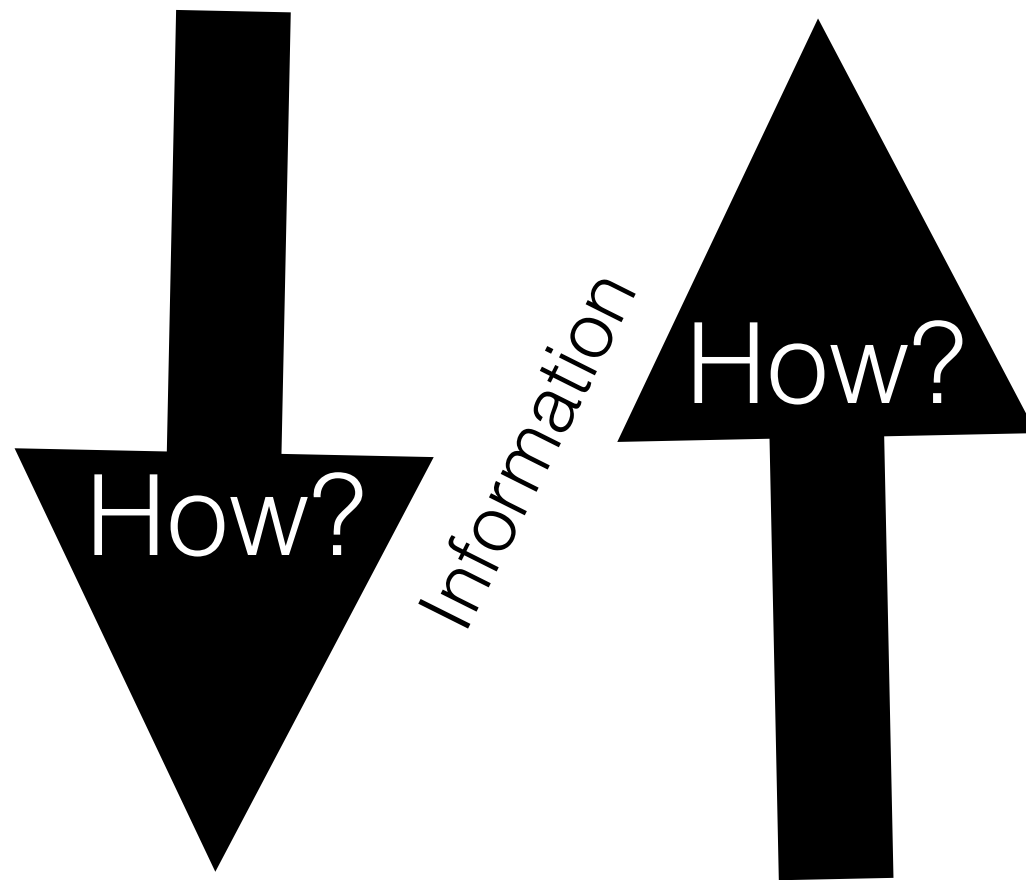Information

Data

Explore & Understand

Knowledge

Information

Data

Explore & Understand

Knowledge

Data

Explore & Understand

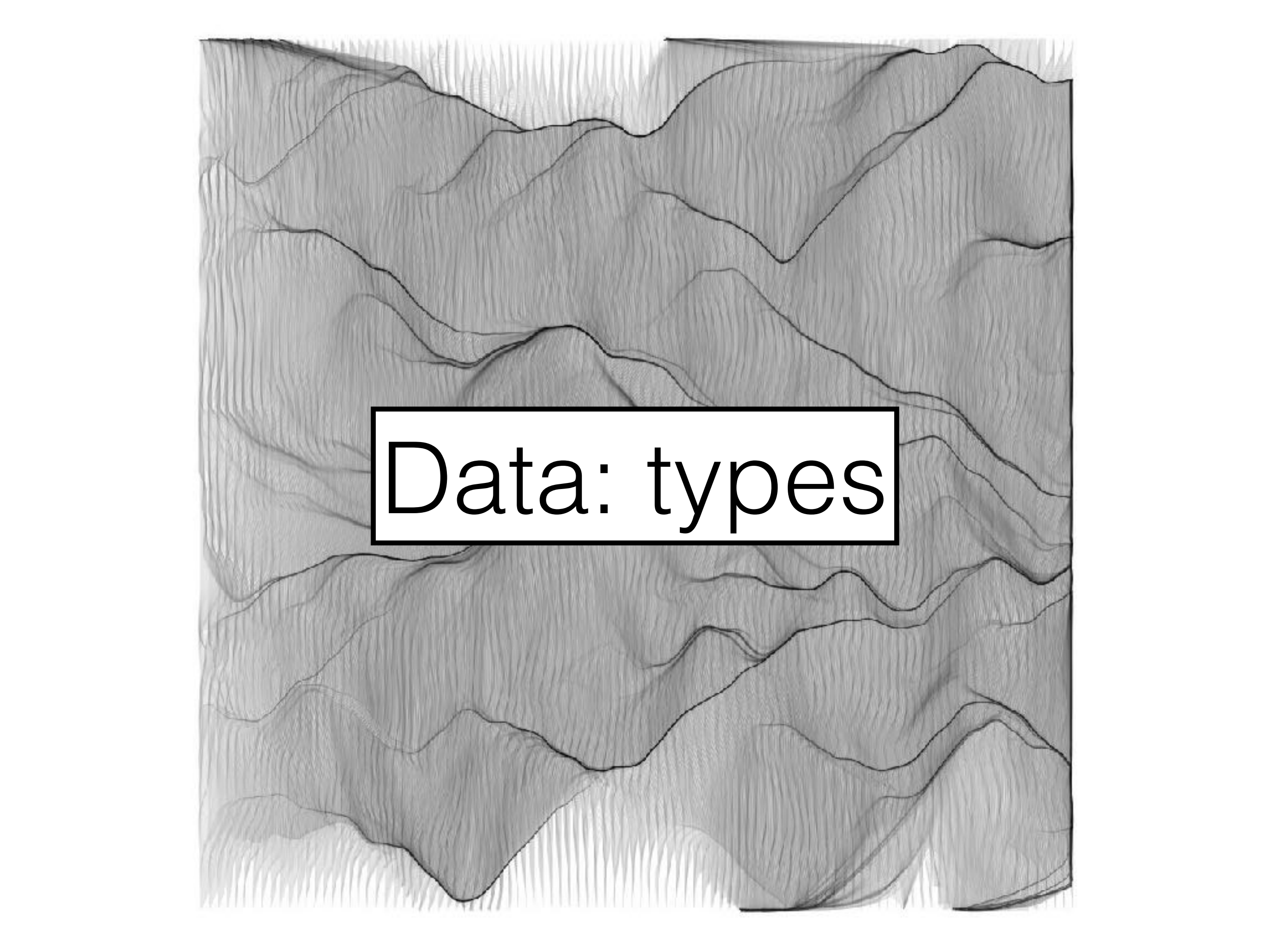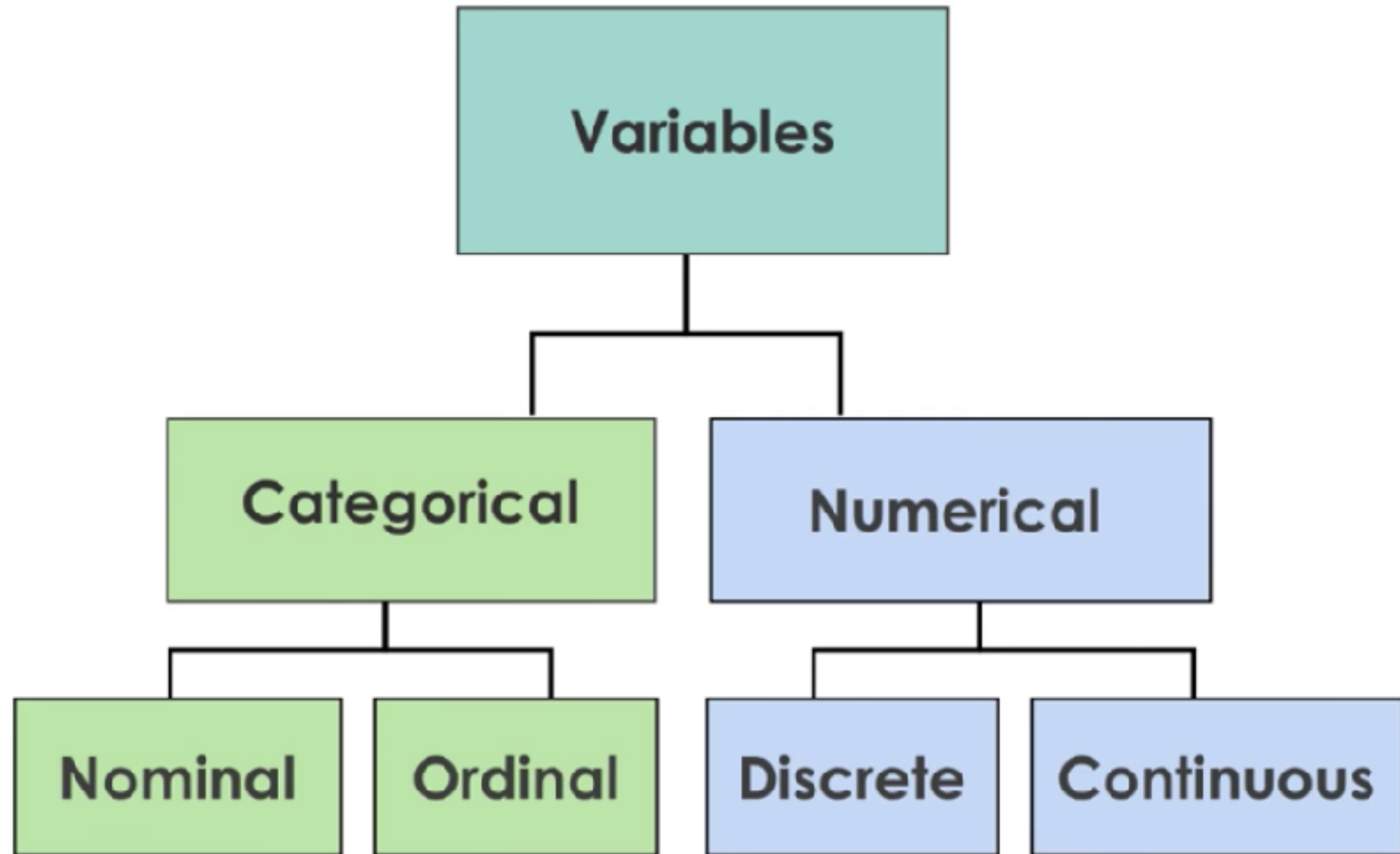Knowledge

Top-Down Approach

Hypothesis confirmation

Analysis

Information

Creativity

Hypothesis Generation

Bottom-Up Approach
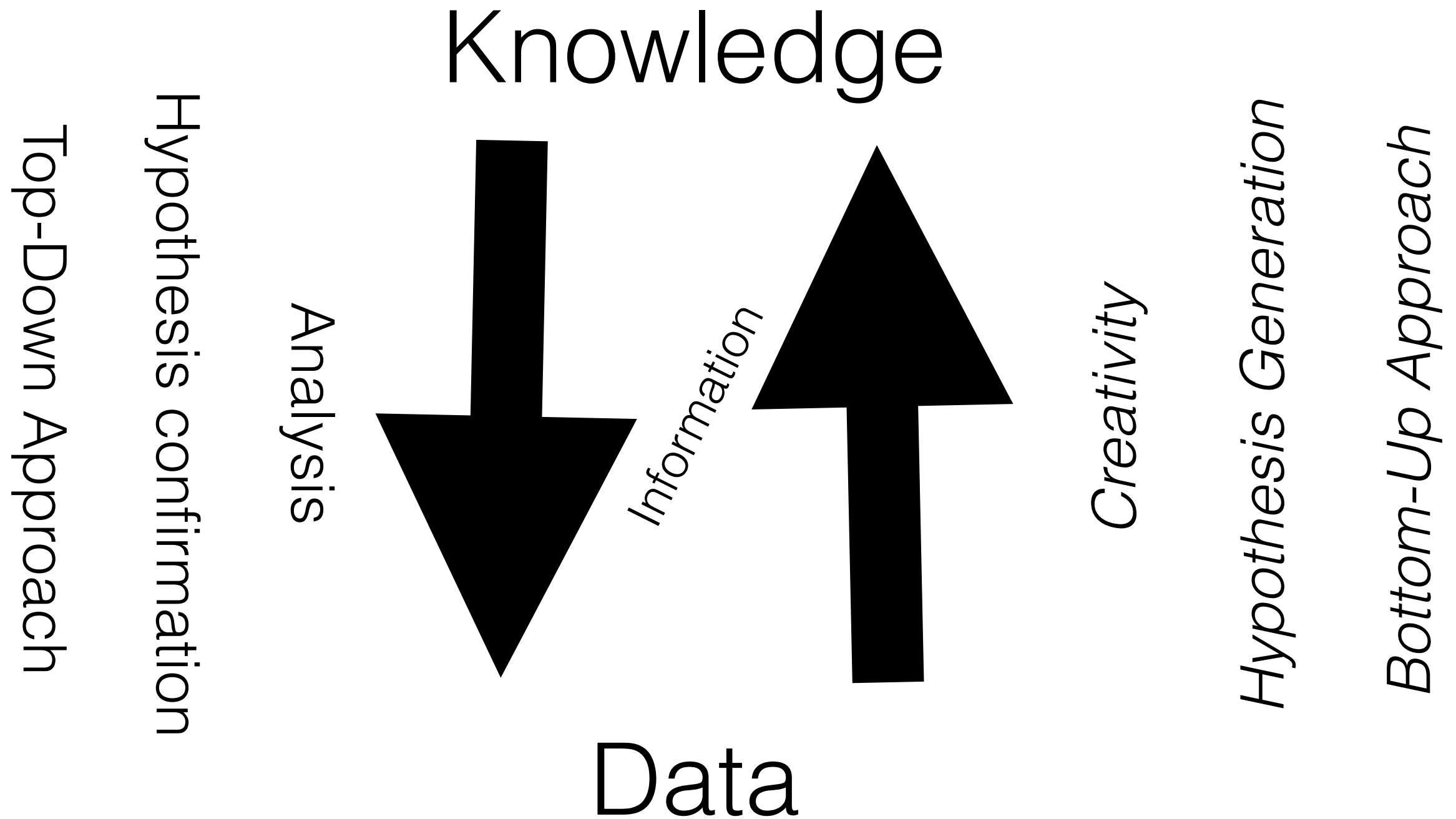
Data

Data: types

Data Types

Data classes in R

Integer	Numeric	Character	Boolean
1	1.2	"Apple"	TRUE
3	1.0	"Pssp"	FALSE
134	3.3333	"a"	T

Quantitative
Qualitative

Quantitative vs Qualitative

- Quantitative information is based on quantities obtained using a quantifiable measurement process.

- In contrast, qualitative information records qualities that are descriptive, subjective or difficult to measure.

Exercise

DataTypes.R

Exercise

1- What's the mean of consumption of the data set?

2- What's the standard deviation of the weight?

3- What's the median of the weight?

4- What's the difference between mean and median?

5- Count the total number of carburetors in all the cars and divide it for the number of cars

6- How many cars has an automatic transmission?

7- How may cars has 8 cylinders?

8- What's the mean of consumption for cars having an automatic transmission?

9- Create your own question

10- Answer to a question make by a colleague