Statistics for Linguists (R language)

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Overview

- Doing math in R and saving R scripts
- Atomic vectors, doubles, integers, characters, logicals, attributes/names, factors
- vector, matrix, array
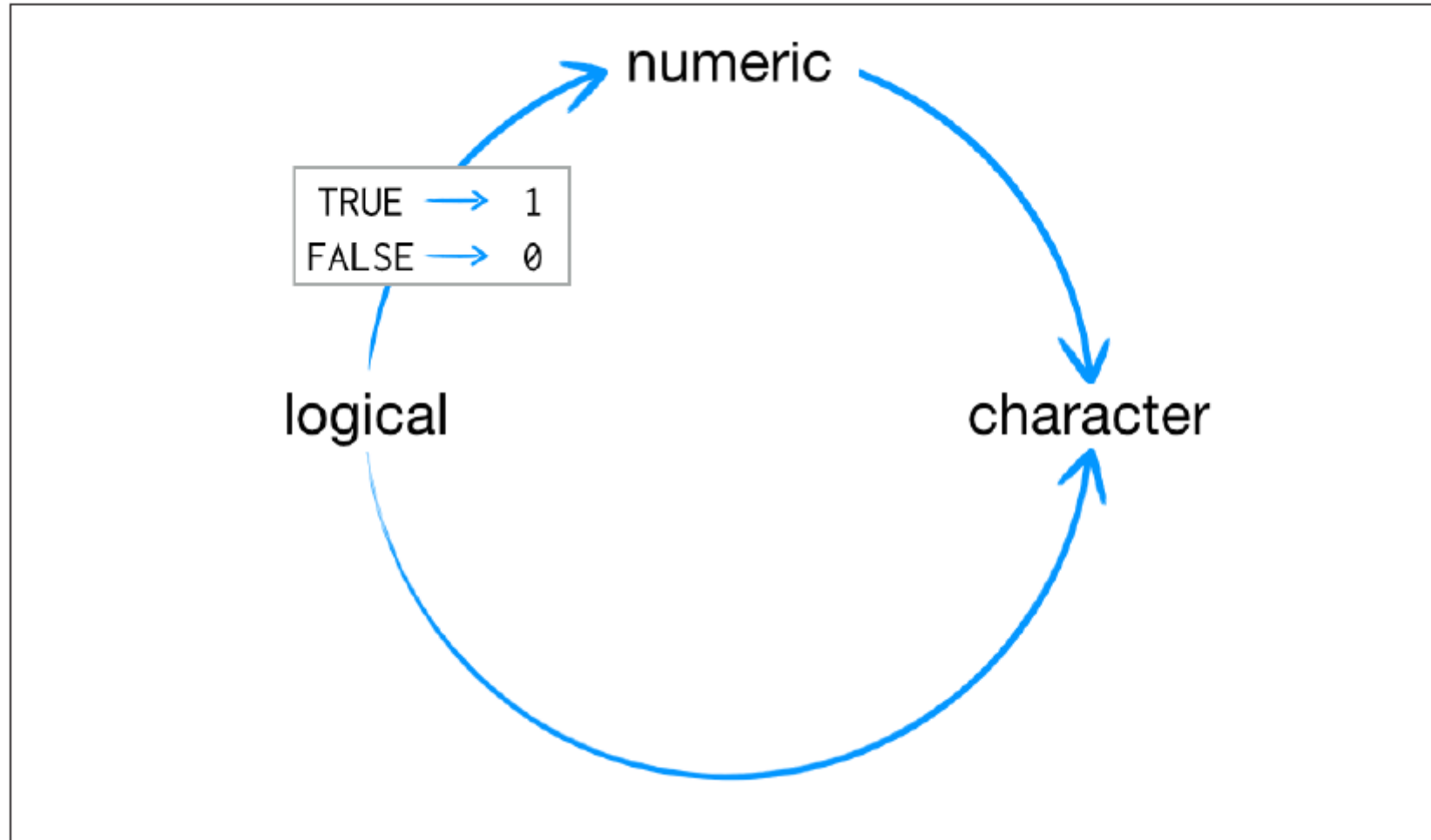- lists, dataframe
- saving and loading data

Vector concepts

- **Atomic vector**: a set of single elements

- **Doubles**: A double vector stories regular numbers (can have decimal points)

- **Integers:** Numbers that can be written with no decimal

- **Character**: A piece of text

- **Logical:** TRUE or FALSE

Related concepts

- Floating point errors
- Indices for positions in a vector
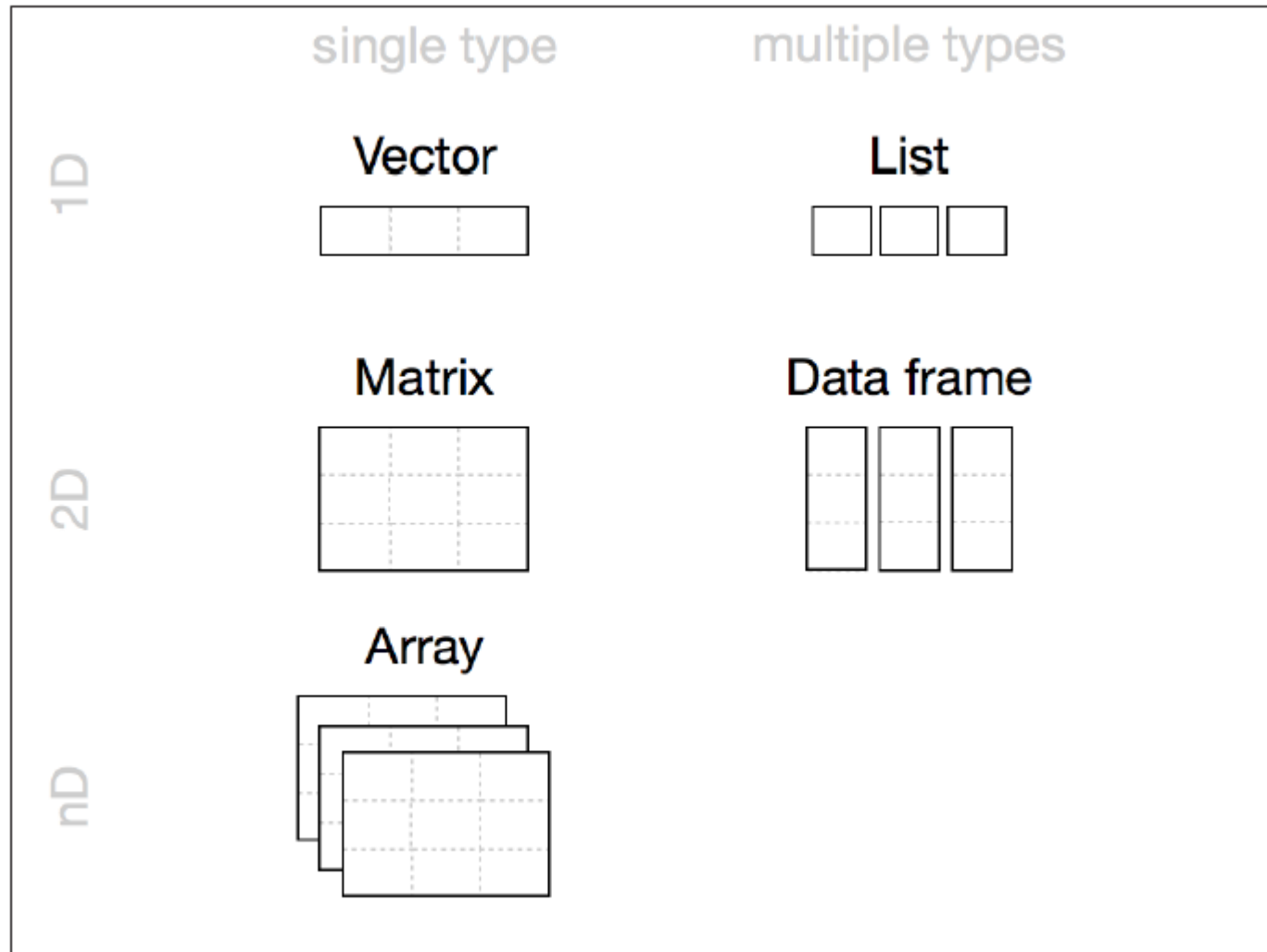- reassignment of values

Coercion

More concepts

- **Matrix**: values stored in two dimensional array

- **Array**: a bunch of matrices

- Special cases of vectors which are not atomic

Data structures

- **List:** Just a list of elements, but the elements can vectors. One-dimensional (like atomic vectors), but they group together **objects** rather than individual values.

- **Dataframe**: stacked vectors from left to right. Two-dimensional version of a list.

Data structures

Saving and loading data

- You can load in data in R.

- The most common data storage format is csv (comma separated values) or tsv (tab separated values)

- The function read.csv() or read.table() allows you to read a dataframe into R into one of these formats, the function write.csv etc. allows you to save them.

- Before we practice one more thing…

Directories

- Say you have more than one datasheet and you are going to use both. You might want to call on files from the same directory. You can make it so that you don't have to spell out the whole directory with

setwd()

Okay, let's practice.

Exercises

- Let's make a dataframe and load it in

- Let's read a dataframe in https://osf.io/ptq7u