The tidyverse family of packages

tidyverse[1] is a collection of packages[2] that collectively work to make processing and transforming data a lot easier. These are all included in our hanoverbase package.

This online book[3] is a great resource for learning more about this suite of packages.

Here is a brief listing of these packages and what they enable us to do:

- **ggplot2**[4] offers support for graphs. The ggformula package we have seen uses it behind the scenes.
- **dplyr**[5] offers functionality for manipulating a dataset: changing variables, creating new variables from existing ones, aggregating, etc.
- **tidyr**[6] helps us bring a dataset into a more standardized form: reshaping between "long format" and "wide format", breaking a column into two or more columns based on the values, etc. It is often the first step after importing a new dataset from Excel or some similar source.
- **readr**[7] is a set of utilities for reading in datasets of various file formats.
- **tibble**[8] is an alternative representation of datasets, that is used under the hood by all the other libraries.
- **stringr**[9] provides tools for breaking a string into pieces, and is helpful when different pieces of information have been encoded in variable names.
- **forcats**[10] provides utilities that work with factor (categorical) variables.

Some other packages are:

- readxl[11] and haven[12], used to read Excel documents and SAS/SPSS/Stata documents respectively.
- googledrive[13] can be used to connect to files in Google Drive.
- There are also other more specialized packages[14] for web scraping, connecting to web APIs, databases, reading XML or JSON files, and more.

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[1] https://www.tidyverse.org/
[2] packagesAsToolboxes.html
[3] http://r4ds.had.co.nz/
[4] https://ggplot2.tidyverse.org/
[5] https://dplyr.tidyverse.org/
[6] https://tidyr.tidyverse.org/
[7] https://readr.tidyverse.org/
[8] https://tibble.tidyverse.org/
[9] https://stringr.tidyverse.org/
[10] https://forcats.tidyverse.org/
[11] https://readxl.tidyverse.org/
[12] https://haven.tidyverse.org/
[13] https://googledrive.tidyverse.org/
[14] https://www.tidyverse.org/packages/