

# 13 Wrap-up

36-721 Statistical Graphics and Visualization

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10/15/15

# Last time

- ▶ Networks and trees

# Today

- ▶ A few graphs/topics that didn't fit anywhere else
- ▶ Wrap-up of the course

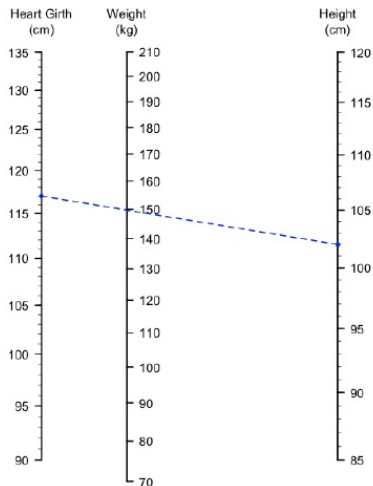
# Nomograms

Nomograms show 3+ variables, so that a straight line drawn between two variables tells you value of the third.

Example on next slide by **Jonathan Rougier**:  
in the field and without a calculator, quickly estimate the donkey's weight (hard to measure) using its height and girth (easy to measure).

# Nomograms

## Nomogram for our donkeys



Additive corrections:

BCS: 1.5, -11kg  
2, -6kg  
3.5, +10kg  
4, +16kg

Age: <2yo, -7kg  
5-10yo, +5kg  
>10yo, +7kg

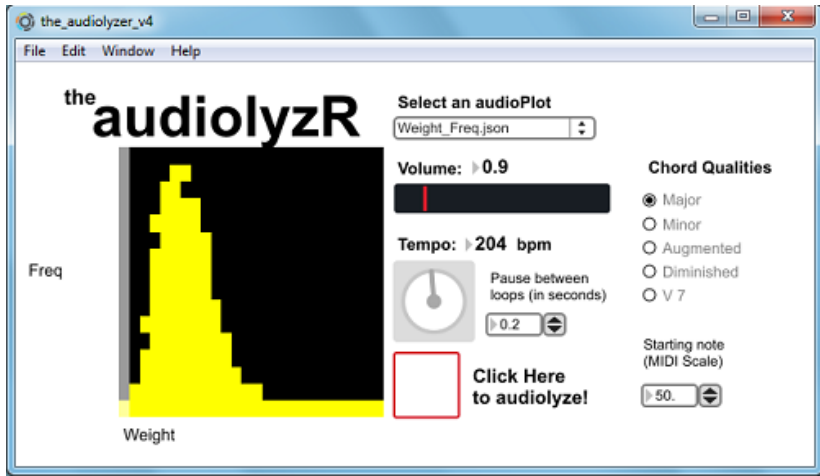
A healthy (BCS 2.5 or 3) 2-5yo donkey with a HeartGirth of 117cm and a Height of 102cm has a predicted weight of about 150kg.

## “Data sonification” and audiolyzR

Instead of mapping data to visual variables (position, color, shape...), why not use other senses?

Sound/music: time, pitch, volume, timbre... See [audiolyzR demo](#).

Food: flavors, texture, spiciness... :)



The screenshot shows a web browser window titled "the\_audiolyzer\_v4". The interface includes a menu bar (File, Edit, Window, Help) and a main content area. On the left, the text "the audiolyzR" is displayed above a histogram with a yellow bar chart on a black background. The y-axis is labeled "Freq" and the x-axis is labeled "Weight". To the right of the histogram, there are several controls: a "Select an audioPlot" dropdown menu set to "Weight\_Freq.json"; a "Volume: > 0.9" slider; a "Tempo: > 204 bpm" control with a clock icon and a "Pause between loops (in seconds)" input set to "0.2"; a red-bordered box with the text "Click Here to audiolyzR!"; and a "Chord Qualities" section with radio buttons for Major (selected), Minor, Augmented, Diminished, and V 7. Below this is a "Starting note (MIDI Scale)" dropdown menu set to "50".

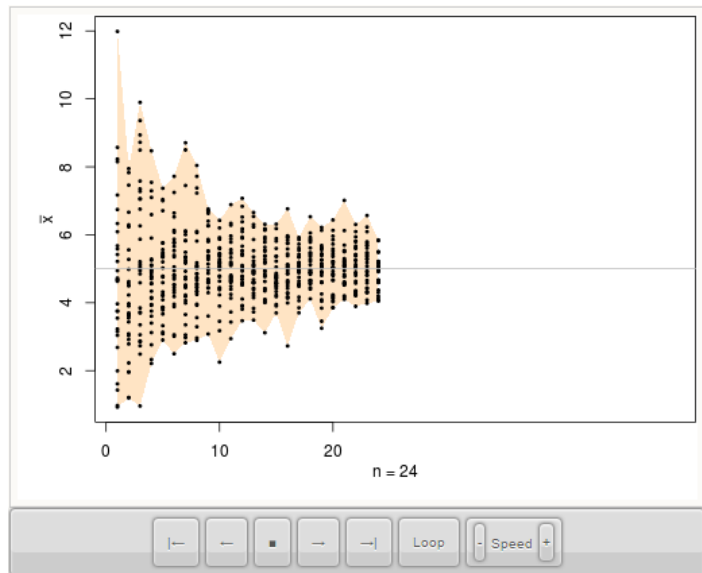
## Graffiti (graphiti?)

Dataviz doesn't need to be on paper or computer screens:  
see [adjustable pie-chart stencil](#)  
or create a dataviz in [sidewalk chalk](#)



## Animation package in R

Create animations as **HTML**, PDF / LaTeX documents, animated GIFs, etc.





## A few last R plots

Follow along in `13_Wrapup_code.R` and `13_Wrapup_code.html`

- ▶ `densityLegend`
- ▶ `smoothScatter`
- ▶ `hexbin`
- ▶ `kde2d`, `image`, `contour`
- ▶ `tableplot`
- ▶ `mosaicplot`

Equivalents in `ggplot2`:

- ▶ For `hexbin`, `image`, and `contour`, see [RStudio's cheatsheet](#)
- ▶ For `mosaicplot`, see [productplots package](#) and [paper](#)

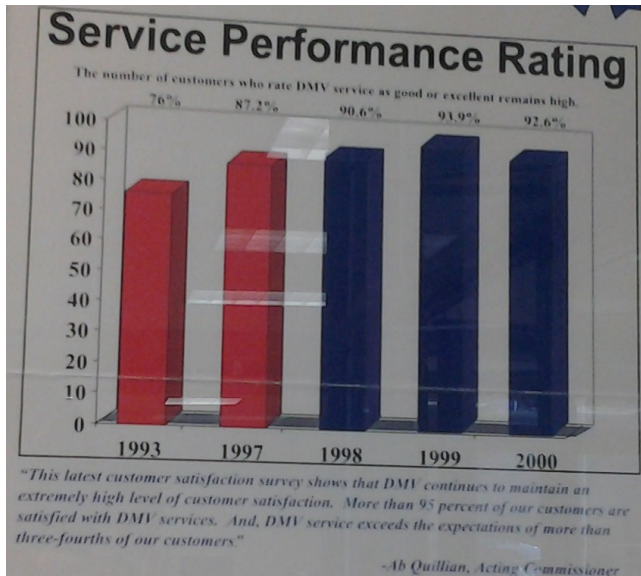
# Wrap-up of the course

I hope that you've learned to . . .

- ▶ understand and apply principles of perception, GoG, design, & interaction
- ▶ critique graphics you see around you
- ▶ create your own effective graphics
- ▶ follow new developments in visualization research

. . . and that you can add proudly your polished class projects to your portfolio or CV.

Remember, graphics like this are out there!



## Remaining dates

- ▶ Sat 10/17: Project 3 (Research) due 5pm
- ▶ Tues 10/20, Thurs 10/22: extra office hours during class time
- ▶ Sat 10/24: final resubmissions due 5pm