Elkind 1961

About

This page generates data visualizations related to the @Elkind1961-ns study. In the original paper, the data were presented in tabular form.

Setup

```
suppressPackageStartupMessages(library(ggplot2))
suppressPackageStartupMessages(library(dplyr))
```

Table 1

```
age_yrs <- c(5, 6, 7, 8, 9, 10, 11)
quantity_type <- c("mass", "weight", "volume")
age <- rep(age_yrs, length(quantity_type))
conservation_type <- rep(quantity_type, each = length(age_yrs))

pct <- c(19, 51, 70, 72, 86, 94, 92,
         21, 52, 51, 44, 73, 89, 78,
         0, 4, 0, 4, 4, 19, 25)

conservation <- data.frame(age = age, type = conservation_type, pct = pct)
```

```
conservation |>
  ggplot() +
  geom_point(aes(x = age, y = pct, color = type)) +
  geom_line(aes(x = age, y = pct, color = type, group = type)) +
  guides(color = guide_legend("Judgment type")) +
  ylim(0, 100)
```

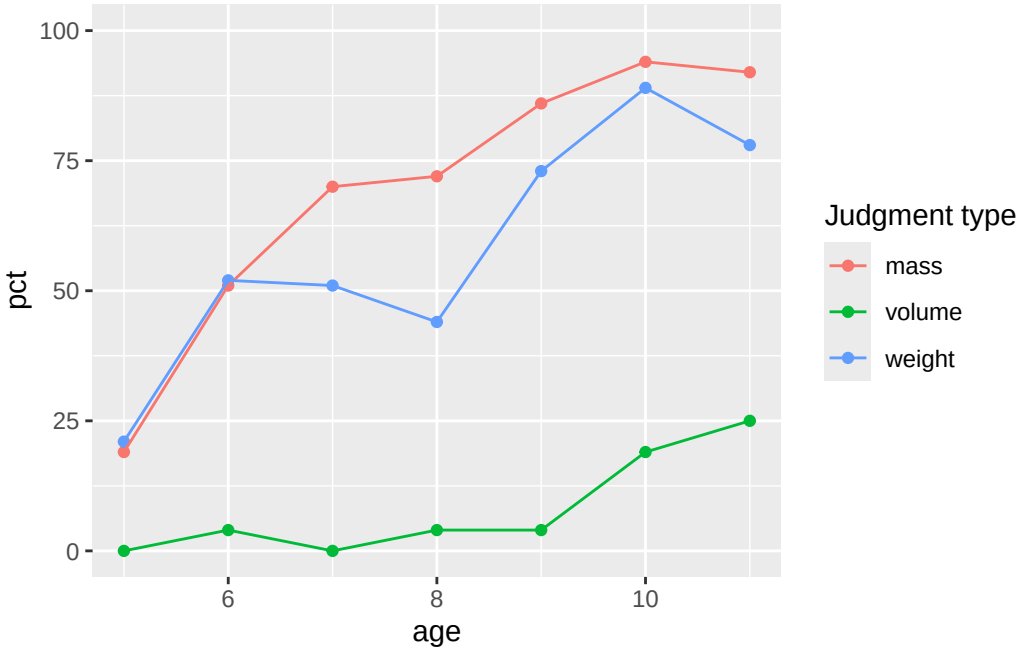

Figure 1: Data from @Elkind1961-ns Table 1 presented as a figure. The percentages indicated are the percent of n=25 children who met the criterion for showing conservation for the indicated property type.

Table 2

```
age_yrs <- c(5, 6, 7, 8, 9, 10, 11)
explanation_type <- c("romancing", "perceptual", "specific", "general")
age <- rep(age_yrs, length(explanation_type))
explanation <- rep(explanation_type, each = length(age_yrs))

pct <- c(4, 3, 7, 7, 0, 1, 1,
         85, 64, 53, 57, 36, 31, 33,
         11, 33, 40, 36, 60, 51, 49,
         0, 0, 0, 0, 4, 16, 18)

explanations <- data.frame(age = age, type = explanation, pct = pct)
```

```
explanations |>
  ggplot() +
```

```
  geom_point(aes(x = age, y = pct, color = type)) +
  geom_line(aes(x = age, y = pct, color = type, group = type)) +
  guides(color = guide_legend("Explanation type")) +
  ylim(0, 100)
```

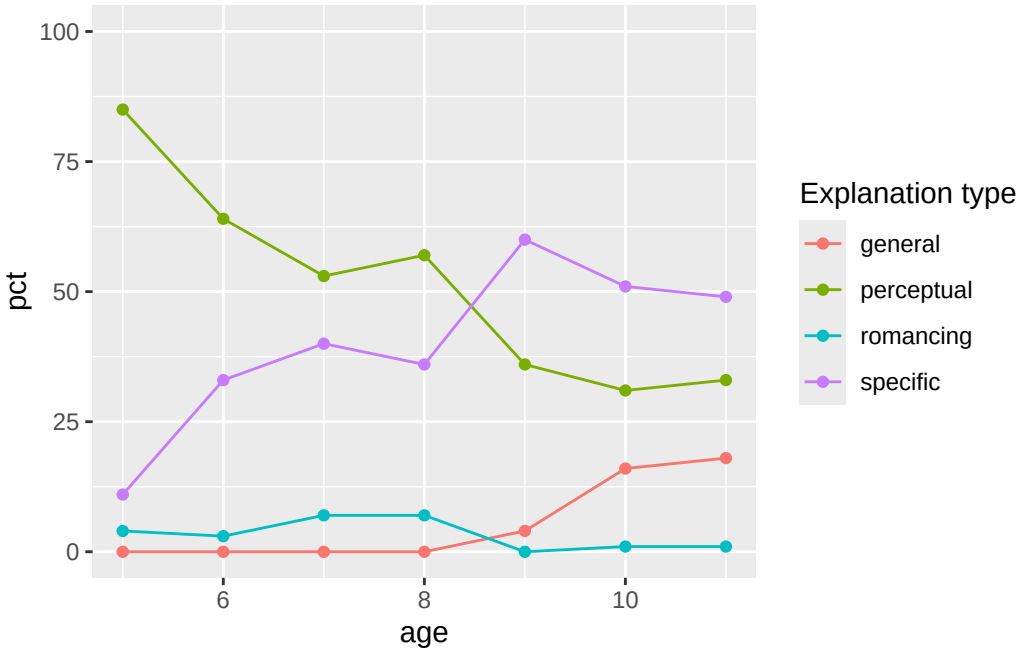

Figure 2: Data from @Elkind1961-ns Table 2 presented as a figure. The percentages indicated are the percent of n=25 children who provided explanations of the indicated type.