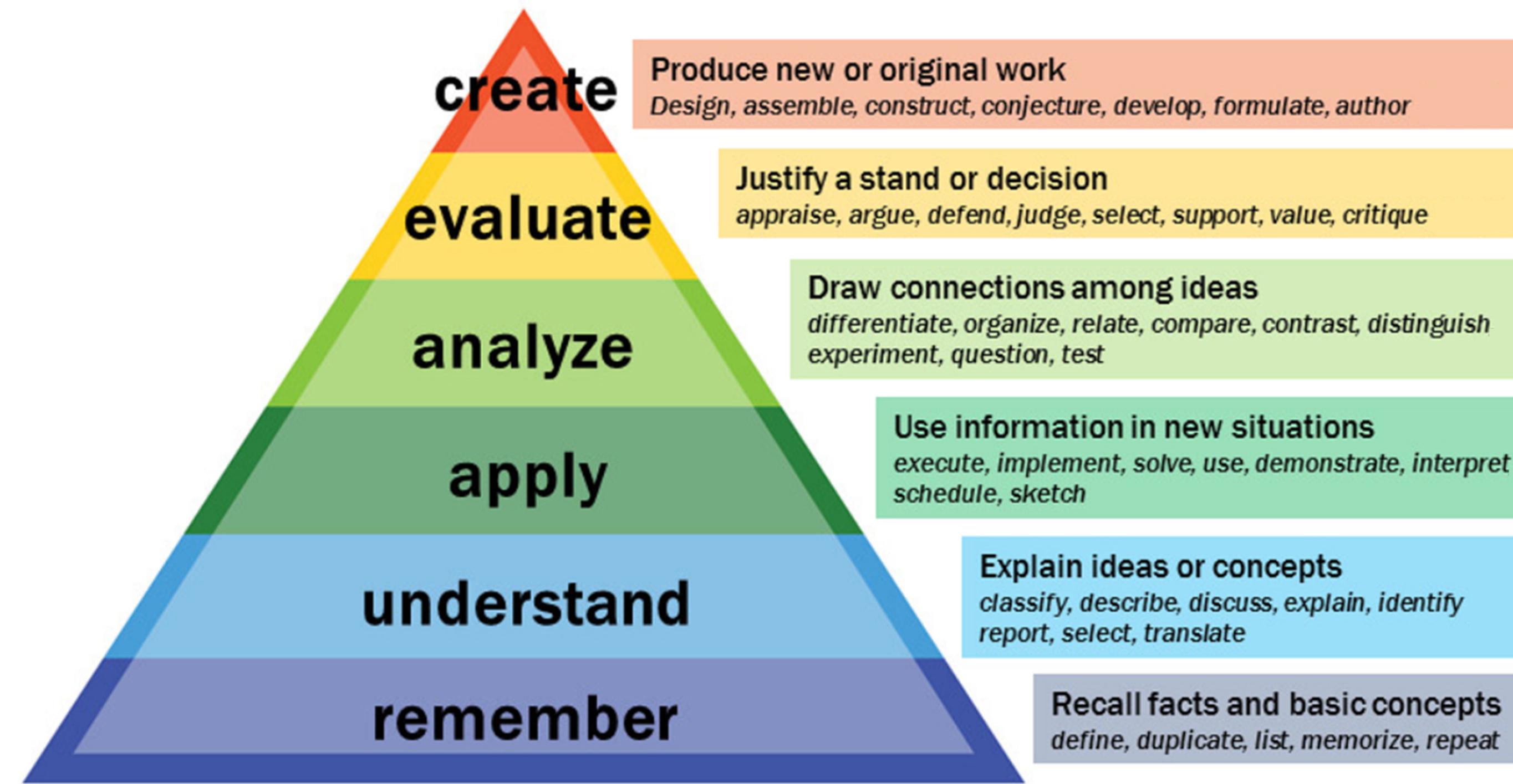


# What's next?

Ari Lamstein

# Bloom's Taxonomy



# Bloom's Taxonomy

What it means to "know something well".

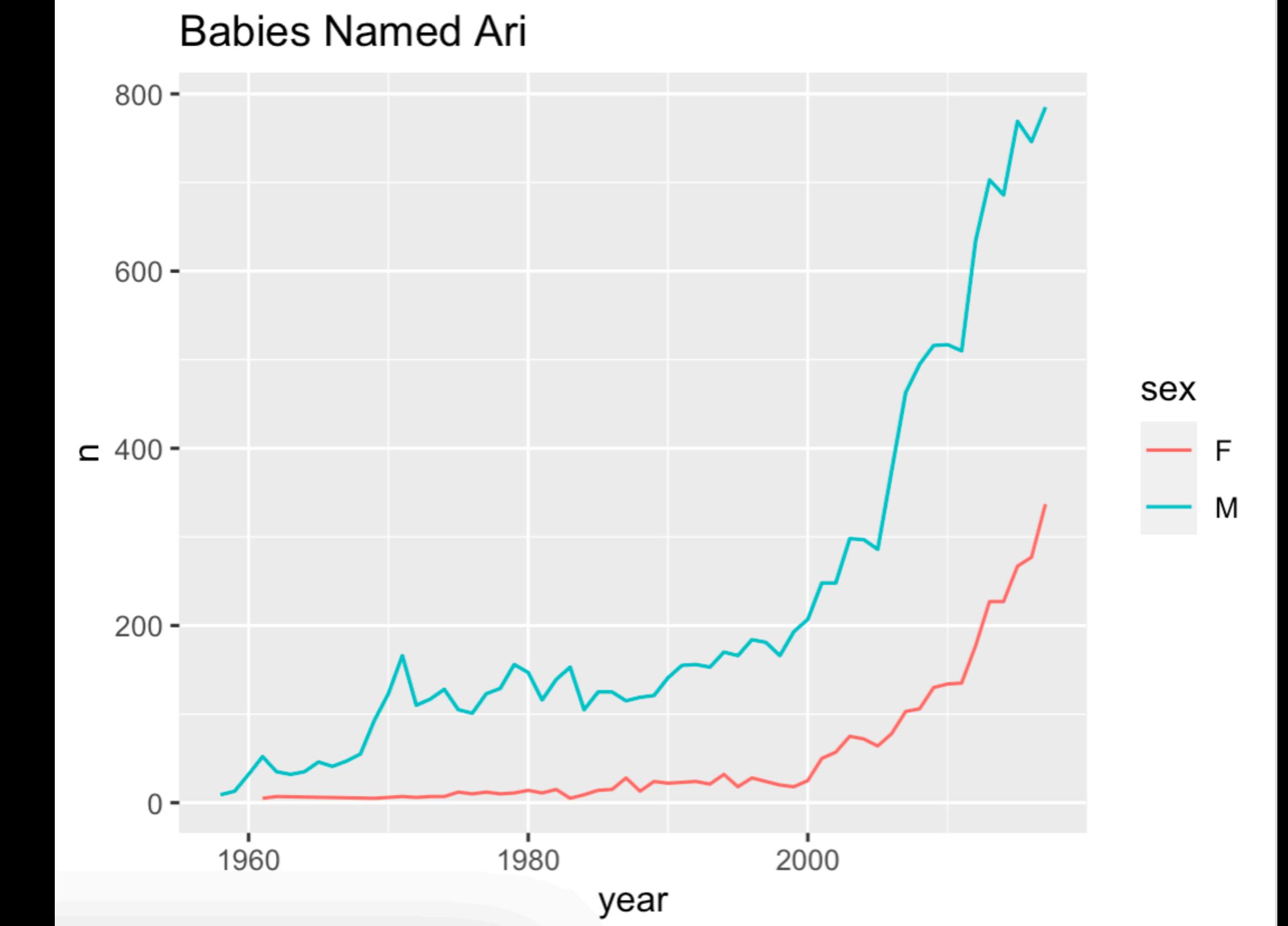
# 3 Levels of R Programming

1. A single analysis (scripts)
2. Programs to do multiple analysis (functions)
3. Sharing programs (packages, shiny)

# A Single Analysis (Scripts)

```
library(ggplot2)
library(babynames)

babynames %>%
  filter(name == "Ari") %>%
  ggplot(aes(year, n, color=sex)) +
  geom_line() +
  ggtitle("Babies Named Ari")
```



# 3 Levels of R Programming

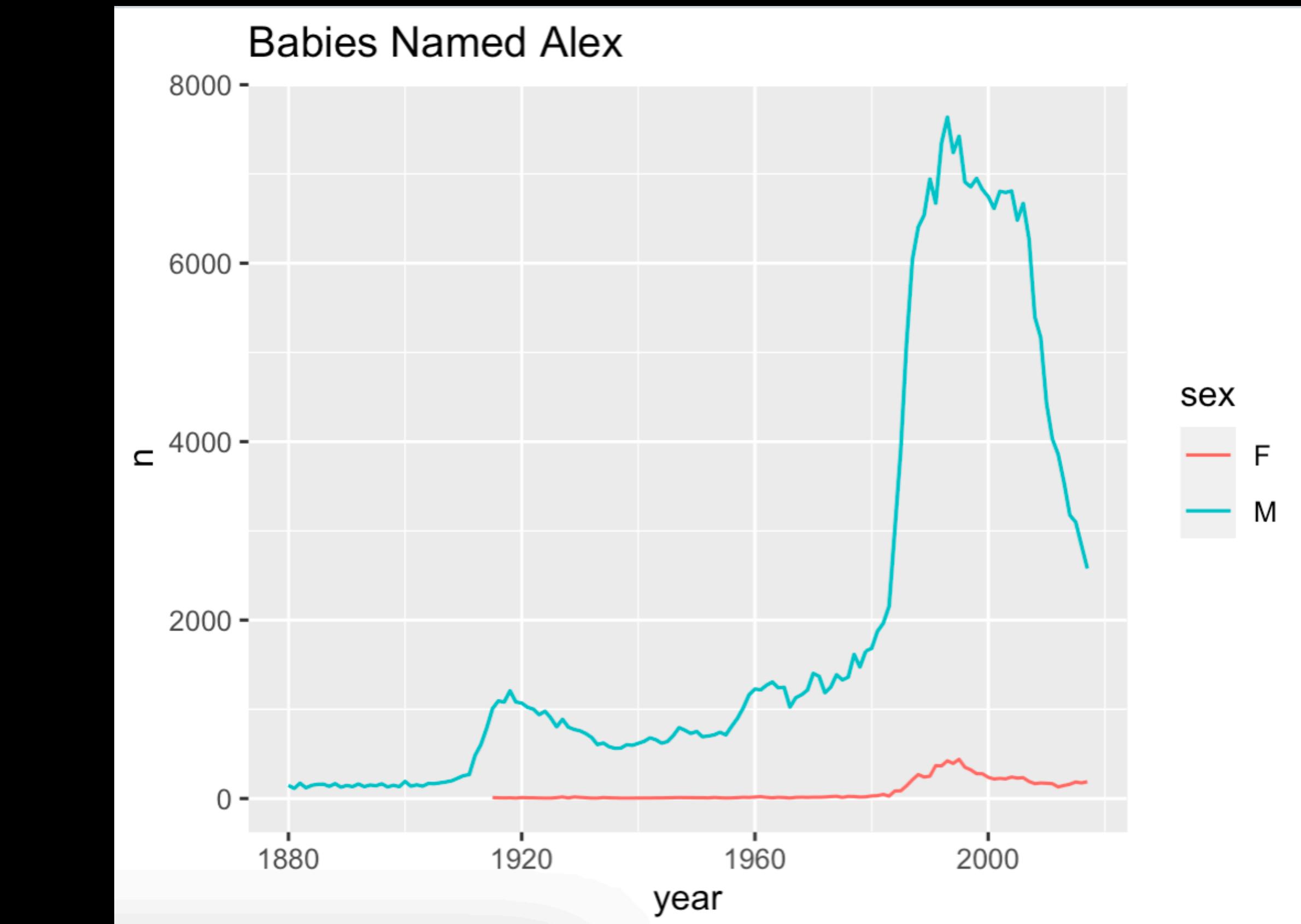
1. A single analysis (scripts)
2. Programs to do multiple analysis (functions)
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# Programs to do multiple analyses

```
library(ggplot2)
library(babynames)
library(glue)

baby_name_graph = function(baby_name) {
  babynames %>%
    filter(name == baby_name) %>%
    ggplot(aes(year, n, color=sex)) +
    geom_line() +
    ggttitle(glue("Babies Named {baby_name}"))
}

baby_name_graph("Alex")
```



# What does this do?

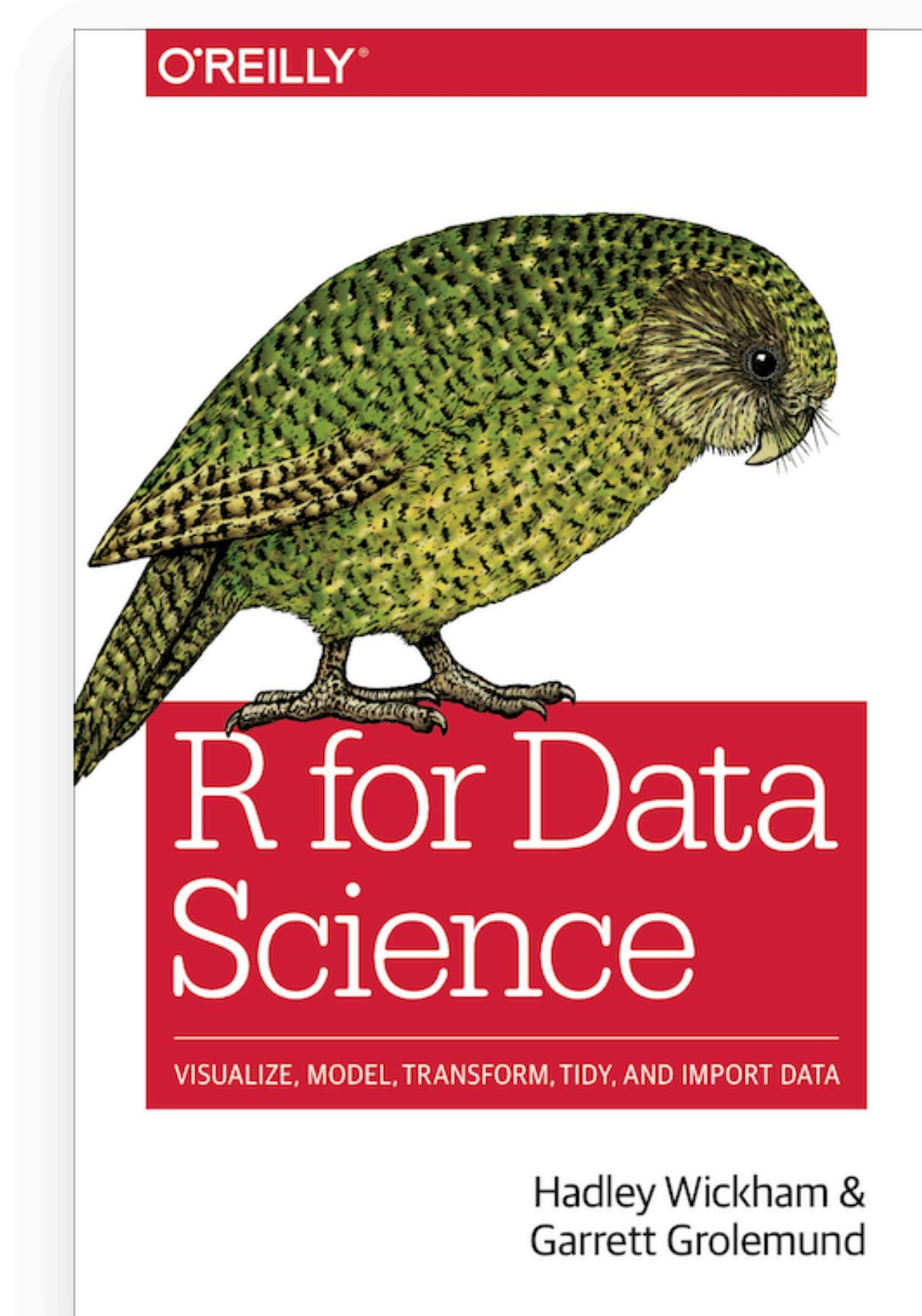
```
# Don't try this at home
all_names = unique(babynames$name)
for (one_name in all_names) {
  baby_name_graph(one_name)
}
```

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# Welcome

This is the website for **“R for Data Science”**.

This book will teach you how to do data science with R: You’ll learn how to get your data into R, get it into the most useful structure, transform it, visualise it and model it. In this book, you will find a practicum of skills for data science. Just as a chemist learns how to clean test tubes and stock a lab, you’ll learn how to clean data and draw plots—and many other things besides. These are the skills that allow data science to happen, and here you will find the best practices for doing each of these things with R. You’ll learn how to use the grammar of graphics, literate programming, and reproducible research to save time. You’ll also learn how to manage cognitive resources to facilitate discoveries when wrangling, visualising, and exploring data.



Hadley Wickham &  
Garrett Grolemund

R for Data Science Online Learr X +

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# 3 Levels of R Programming

1. A single analysis (scripts)
2. Programs to do multiple analysis (functions)
3. Sharing programs (packages, shiny)

# Packages

```
library(myPackage)  
baby_name_graph("Andy")
```

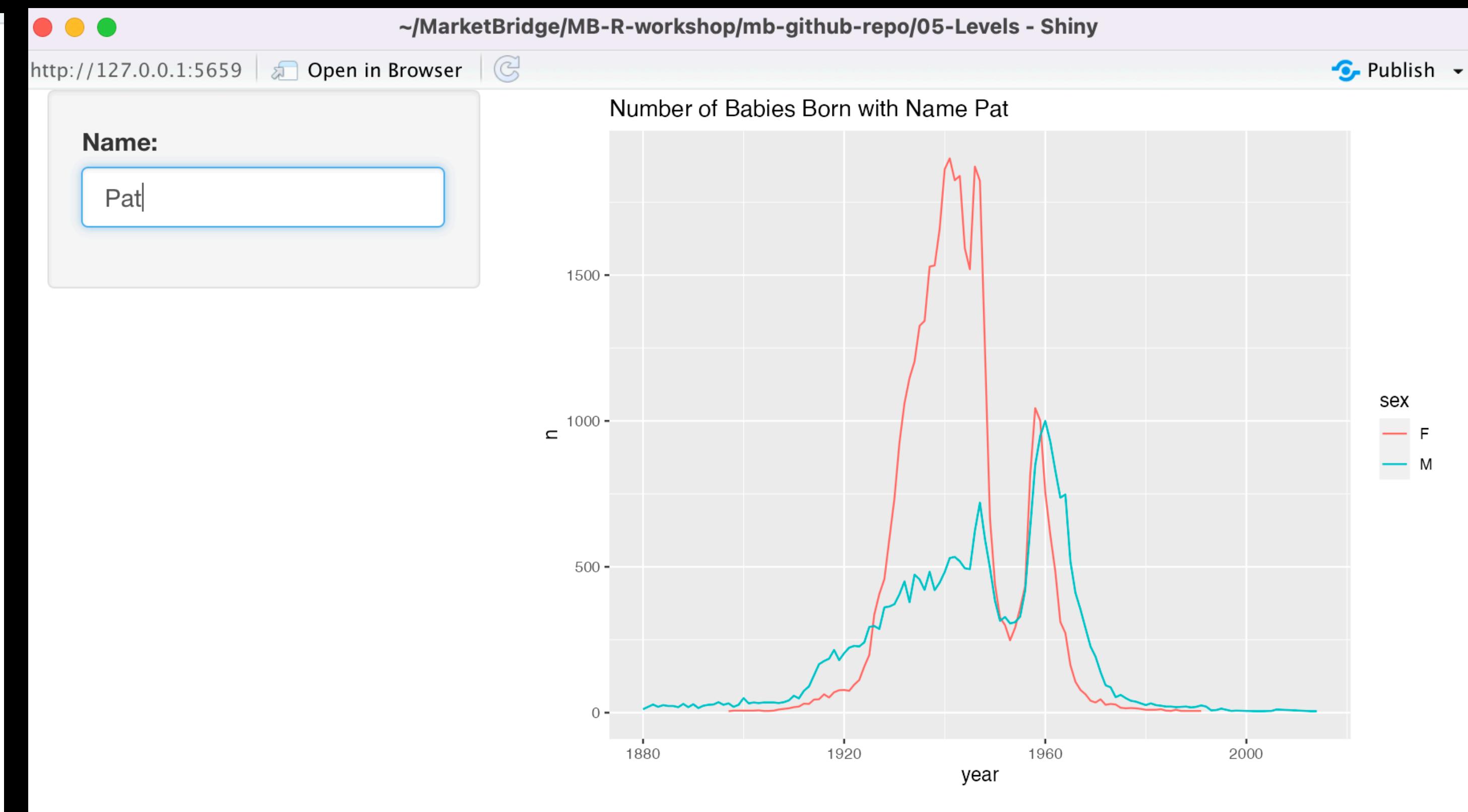
# Shiny - Interactive Web Application

```
library(shiny)
library(babynames)
library(tidyverse)
library(scales)

ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
     textInput("name", "Name:", value="Ari")
    ),
    mainPanel(
      plotOutput("namePlot")
    )
  )
)

server <- function(input, output) {
  output$namePlot <- renderPlot({
    title = paste0("Number of Babies Born with Name ", input$name)
    babynames %>%
      filter(name == input$name) %>%
      ggplot() +
      geom_line(aes(year,n, color=sex)) +
      ggtitle(title)
  })
}

# Run the application
shinyApp(ui = ui, server = server)
```



# Closing Thought

1. A single analysis (scripts)
2. Programs to do multiple analysis (functions)
3. Sharing programs (packages, shiny)

