

THOMAS PETERSON '57 GALLERY



M150 EXHIBITION

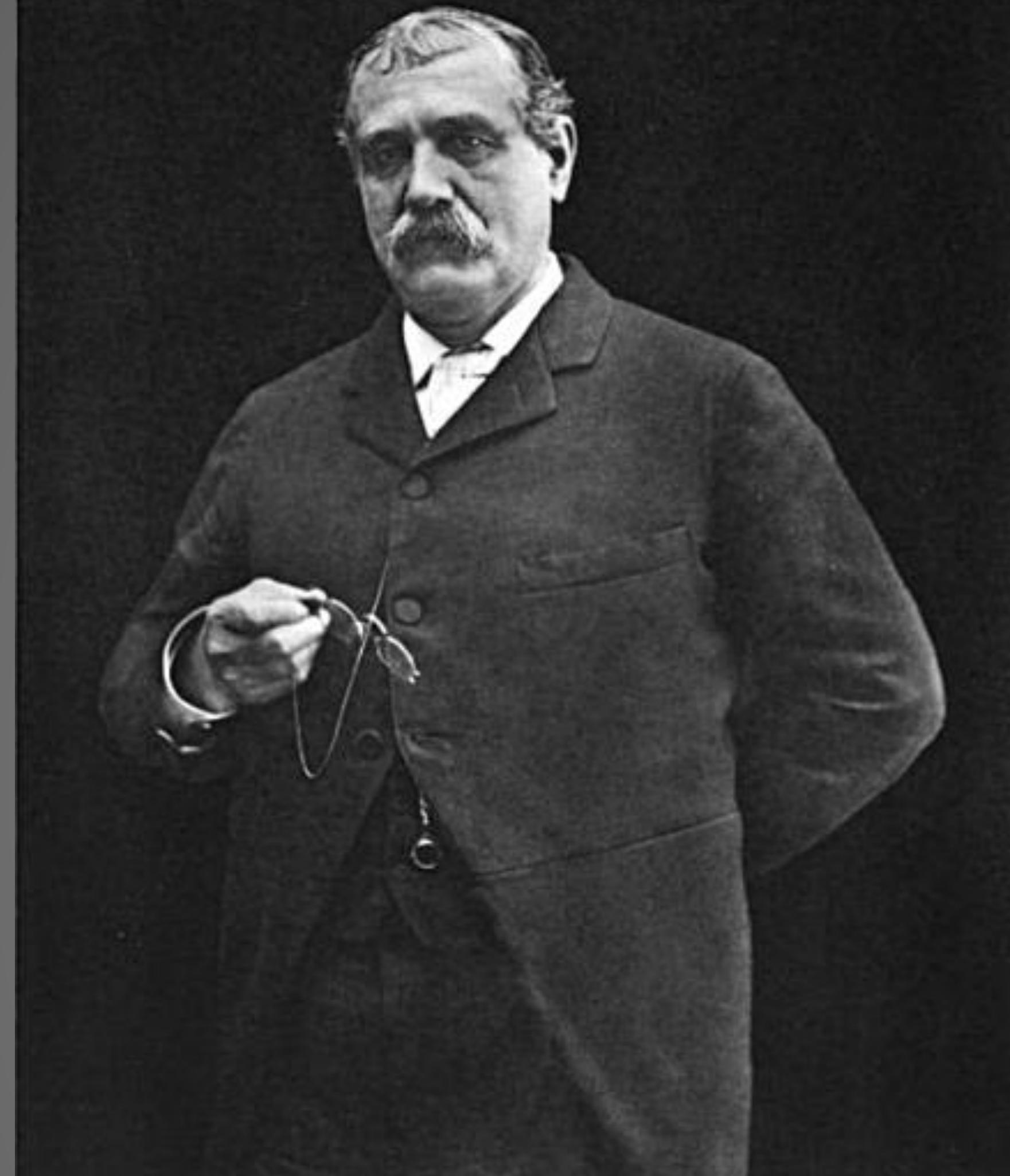
...these countless connecting threads, woven into one

indissoluble texture, form that ever-enlarging web

*In celebration of MIT's sesquicentennial,
which is the blended product of the world's scientific
and industrial activity.*

William Barton Rogers, 1861
MIT's founder and first president

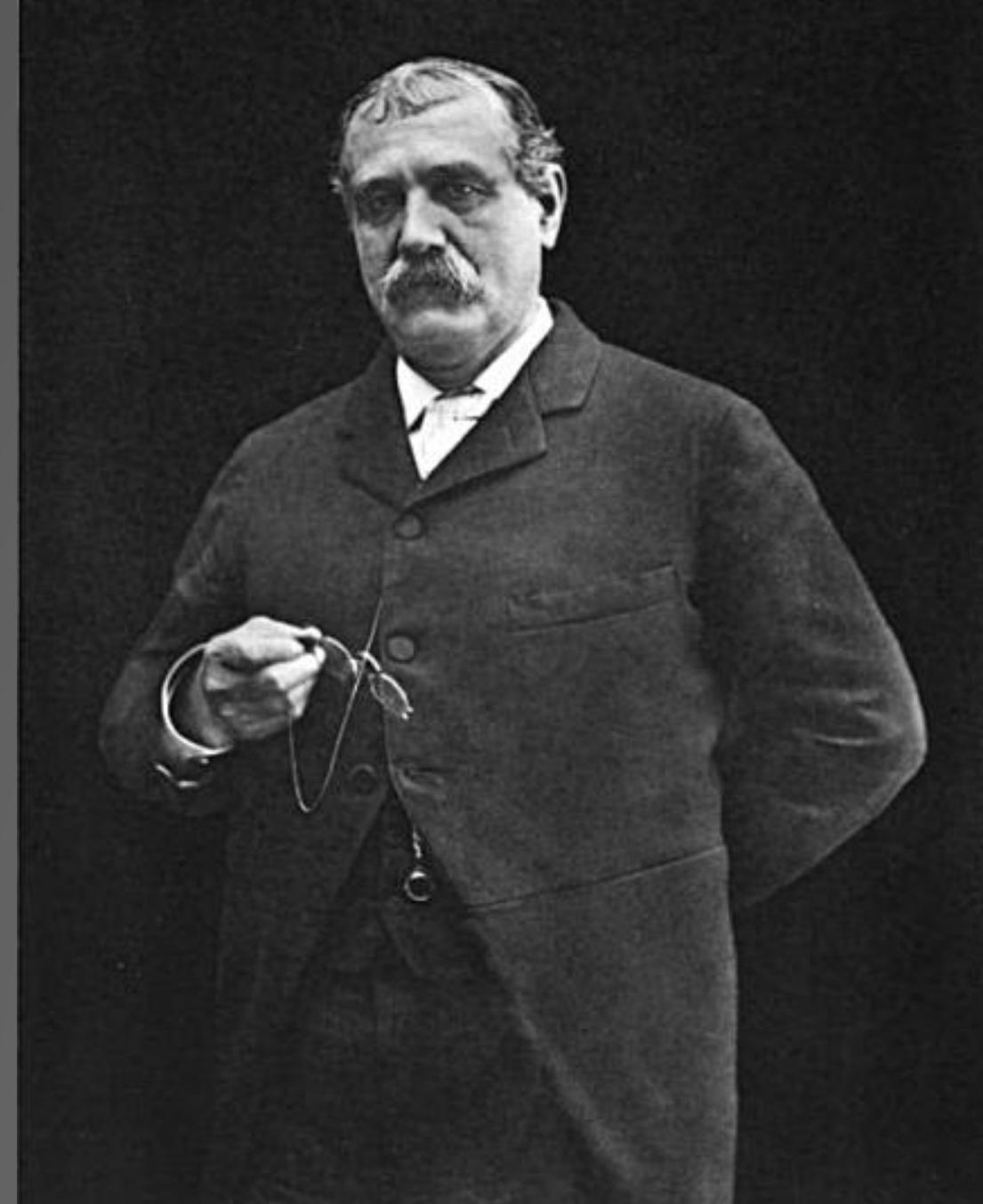
*the Museum presents 150 objects reflecting
the ideal of an ever-enlarging web and the
continual advancement of knowledge in
service to the nation and the world*



Francis Amasa Walker
Adjujnt General of the Union Army
Superintendent of the U.S. Census in 1870 and 1880
3rd President of the Massachusetts Institute of Technology



Julia Comstock
Assistant to 10 MIT Presidents, 1892-1952



* An item of some interest is included in the Instruction Committee Records (Vol. I), p. 190, for Jan. 19, 1881, as follows:

"The action of the President in authorising the introduction of telephones into the Institute Building at an expense of about \$150.00 was approved."

This was only five years after Alexander Graham Bell patented his telephone in 1876. A point of additional interest is that although President Walker authorised purchase of telephones, he didn't use them according to Prescott, who comments in his When M.I.T. was Boston Tech about Walker's personal office assistant, Miss Julia Comstock, as follows (p. 116):

"One of her duties was using the telephone--there was only one in the Institute--which the president absolutely refused to touch."

Intelligence and education don't guarantee truth

.





Carl Howe
Director of Education
carl@rstudio.com
[@cdhowe](https://twitter.com/cdhowe)





RStudio's Mission:



Equip everyone, regardless of means,
to participate in a global economy that
rewards data literacy



RStudio Education's mission:



Train the next million R users

#NextMillionRUsers

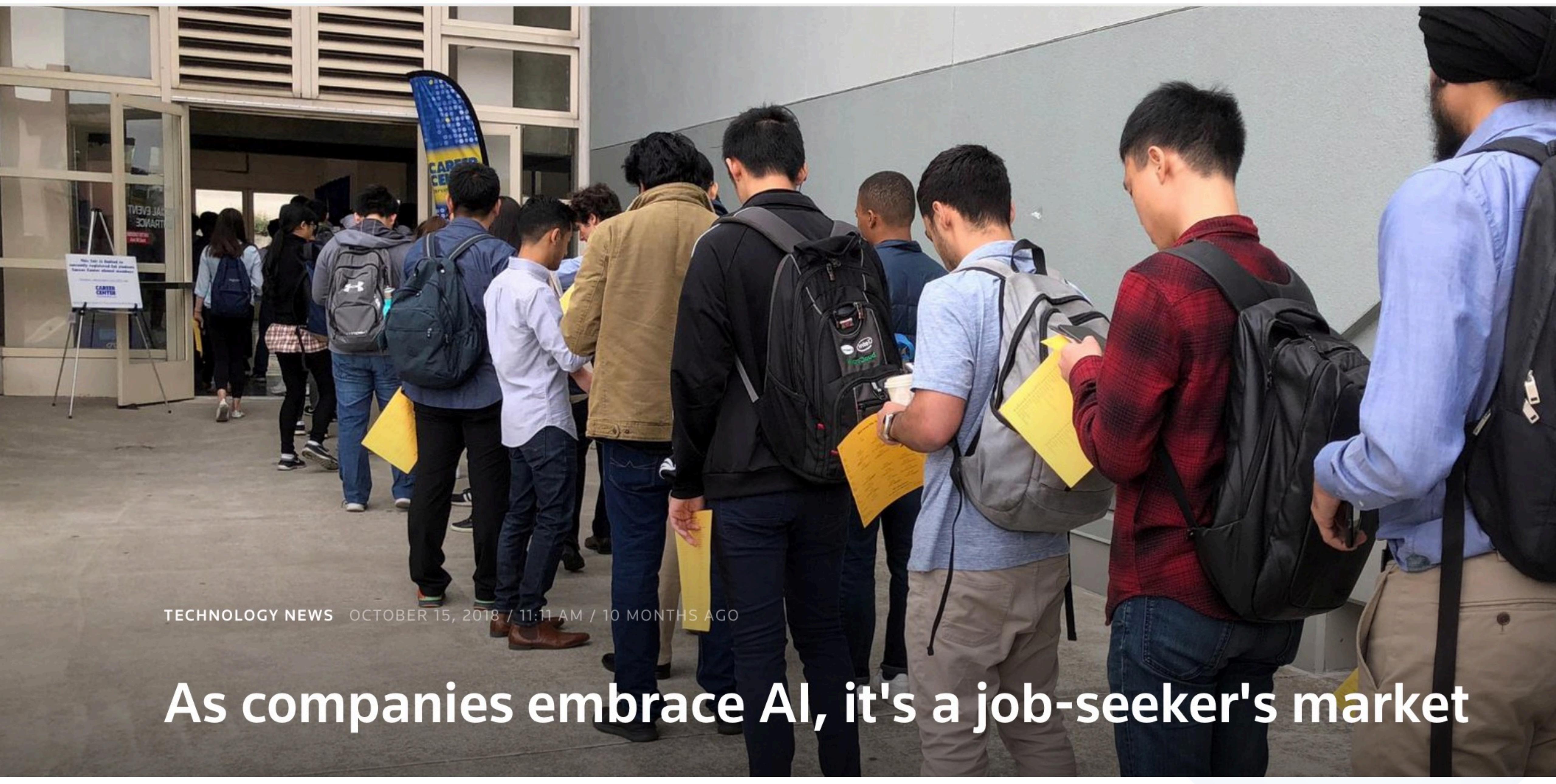


The Surprising Data Science Killer App: R Markdown



*“The future's so bright, I
gotta wear shades!”*

Timbuk 3



TECHNOLOGY NEWS OCTOBER 15, 2018 / 11:11 AM / 10 MONTHS AGO

As companies embrace AI, it's a job-seeker's market

32 AI UNICORNS

The increasingly crowded
\$1B+ AI club

TANIUM
INISIDESALES
BENEVOLENTAI
AVANT

ICARBONX
ZOOX

2015

2016

FACE++
INDIGO AGRICULTURE
CAMBRICON
SENSETIME
CROWDSTRIKE
AFINITI
BYTEDANCE

C3
UPTAKE

4PARADIGM
GRAPHCORE
MOMENTA
CLOUDWALK
ZIPRECRUITER
UNISOUND
BUTTERFLY NETWORK
PONY.AI

AUTOMATION ANYWERE
DATAMINR

PREFERRED NETWORKS
DARKTRACE

SOUNDHOUND
TEMPUS LABS

YITU
UIPATH

ORCAM

2017

2018

*includes startups offering AI-SaaS or using machine learning as a core differentiator for their main product offering; excludes AR/VR and hardware-focused robotics startups



Most highly valued company, at \$75B. It is also the most highly-funded unicorn on the list with \$3.1B in total equity funding



Fastest to unicorn, reaching a \$1B valuation with its 1st ever equity round of \$154M



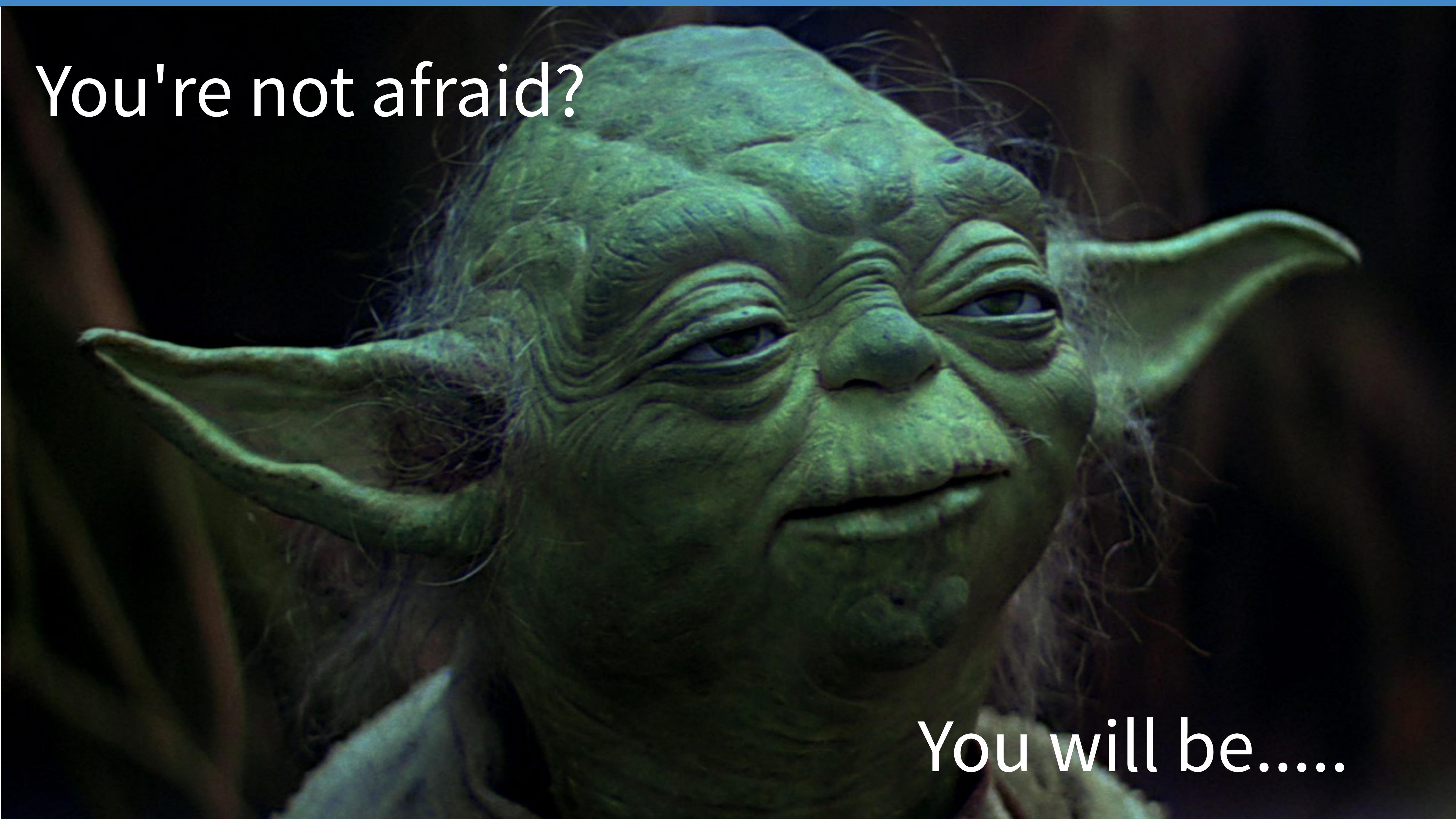
Unicorns with least amount of disclosed funding: Momenta's funding, excluding an undisclosed Series C, is \$62M; Orcam raised \$77.4M

- > Big Data with R Workshop
 - > Modern Geospatial Data Analysis with R Workshop
- > Deep Learning with Keras and TensorFlow in R Workflow
 - > Text Mining with Tidy Data Principles Workshop

Yet, in the middle of this optimism,
we face a knowledge crisis



The very foundations of science are crumbling



You're not afraid?

You will be.....

1. Data pollution
2. Unreproducible results
3. Weaponized data



1. Data Pollution: We're drowning in data



"90% of the data in the world
was created in the last 2 years"

IBM Marketing Cloud, "10 Key Marketing Trends For 2017





2015



2017



2019

Enter the start and stop dates for the tweets you wish to examine.

Date range

2016-10-01 - 2016-10-31

Filter by account name text (case insensitive, blank uses all troll accounts)

news

Group by account category

Tweet text to search for (case-insensitive, blank returns all tweets)

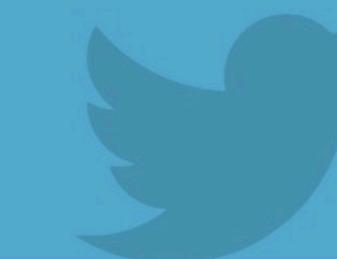
election

Number of tweets to show:

0 100

PLOT TWEETS

152,115



Tweets

18,722



Highest Tweet Count Shown

None



Tweet Search String

None



Account Search String

Russian Internet Research Agency Tweet Calendar

2016-10-01 to 2016-10-31



Wikileaks Releases Thousands of Clinton Emails
Internet Research Agency releases almost 19,000 tweets within 24 hours of the Wikileaks release

Political Events

Date	Source	Event
2016-10-07	ABC News	WikiLeaks Release Thousands of Clinton Campaign Chair's Emails

Sample Tweets

Date	Author	Tweet
10/7/2016 7:02	NOVOSTIOMSKA	"Голубой огонёк" не вернётся домой: буквы со здания по адресу проспект Карла Маркса, 29а прогнили и признаны опасными для прохожих #Омск https://t.co/r5yejqXWBG

2. Unreproducible results:
We can't trust recent science



Amgen 2012: could reproduce
only **6** of **53** landmark results

75% – 90%

of preclinical results cannot
be reproduced (estimate)

Begley CG, Ioannidis JP (2015) Reproducibility in Science: improving
the standard for basic and preclinical research.
Circ Res 116: 116–126. pmid:25552691

\$28

billion

£ 22B € 24B

Costs to biomedical
industry per year, US



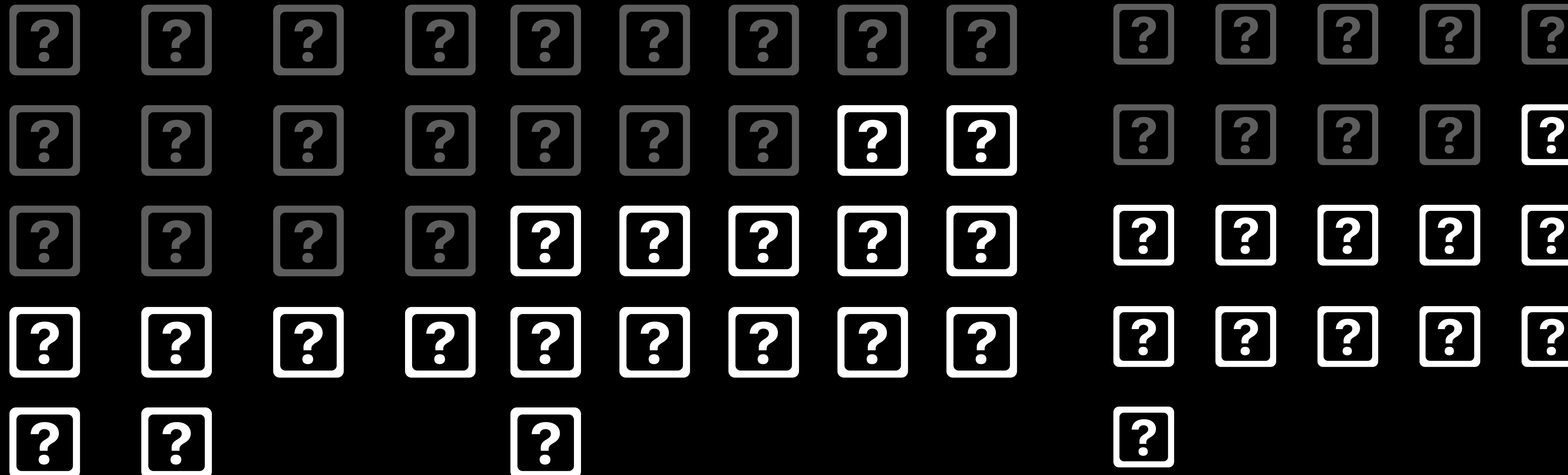
Freedman LP, Cockburn IM, Simcoe TS (2015) The Economics of Reproducibility in Preclinical Research. PLoS Biol 13(6): e1002165.
<https://doi.org/10.1371/journal.pbio.1002165>



Economics

Nature & Science

Coin Tosses that were heads



6 of 18

13 of 21

12 of 21

THE ROGOFF-REINHART MODEL

Two Harvard Professors publish a paper that says "When a country owes more than 90 percent of its GDP, it slides into recession."

American Economic Review: Papers & Proceedings 100 (May 2010): 573–578
<http://www.aeaweb.org/articles.php?doi=10.1257/aer.100.2.573>

Growth in a Time of Debt

By CARMEN M. REINHART AND KENNETH S. ROGOFF*

In this paper, we exploit a new multi-country historical dataset on public (government) debt to search for a systemic relationship between high public debt levels, growth and inflation.¹ Our main result is that whereas the link between growth and debt seems relatively weak at “normal” debt levels, median growth rates for countries with public debt over roughly 90 percent of GDP are about one percent lower than other-

especially against the backdrop of graying populations and rising social insurance costs? Are sharply elevated public debts ultimately a manageable policy challenge?

Our approach here is decidedly empirical, taking advantage of a broad new historical dataset on public debt (in particular, central government debt) first presented in Carmen M. Reinhart and Kenneth S. Rogoff (2008, 2009b).

THOMAS HERNDON DISCOVERED A SMALL PROBLEM....



	B	C	I	J	K	L	M
2			Real GDP growth Debt/GDP				
3							
4	Country	Coverage	30 or less	30 to 60	60 to 90	90 or above	30 or less
26			3.7	3.0	3.5	1.7	5.5
27	Minimum		1.6	0.3	1.3	-1.8	0.8
28	Maximum		5.4	4.9	10.2	3.6	13.3
29							
30	US	1946-2009	n.a.	3.4	3.3	-2.0	n.a.
31	UK	1946-2009	n.a.	2.4	2.5	2.4	n.a.
32	Sweden	1946-2009	3.6	2.9	2.7	n.a.	6.3
33	Spain	1946-2009	1.5	3.4	4.2	n.a.	9.9
34	Portugal	1952-2009	4.8	2.5	0.3	n.a.	7.9
35	New Zealand	1948-2009	2.5	2.9	3.9	-7.9	2.6
36	Netherlands	1956-2009	4.1	2.7	1.1	n.a.	6.4
37	Norway	1947-2009	3.4	5.1	n.a.	n.a.	5.4
38	Japan	1946-2009	7.0	4.0	1.0	0.7	7.0
39	Italy	1951-2009	5.4	2.1	1.8	1.0	5.6
40	Ireland	1948-2009	4.4	4.5	4.0	2.4	2.9
41	Greece	1970-2009	4.0	0.3	2.7	2.9	13.3
42	Germany	1946-2009	3.9	0.9	n.a.	n.a.	3.2
43	France	1949-2009	4.9	2.7	3.0	n.a.	5.2
44	Finland	1946-2009	3.8	2.4	5.5	n.a.	7.0
45	Denmark	1950-2009	3.5	1.7	2.4	n.a.	5.6
46	Canada	1951-2009	1.9	3.6	4.1	n.a.	2.2
47	Belgium	1947-2009	n.a.	4.2	3.6	2.6	n.a.
48	Austria	1948-2009	5.2	3.3	-3.1	n.a.	5.7
49	Australia	1951-2009	3.2	4.9	4.1	n.a.	5.9
50							
51			4.1	2.8	2.8	=AVERAGE(L30:L44)	



ROGOFF AND REINHART'S
RESULTS WEREN'T
REPRODUCIBLE, YET THEY
LED TO THIS....



**AUSTERITY
KILLS!**

HOPELESS

3. Weaponized data:
falsehoods are now weapons

£350 million for the NHS: How the bus pledge is coming true

Vote Leave's success has turned the Conservatives into big spenders

James Forsyth and Fraser Nelson

 INDEPENDENT

NEWS POLITICS VOICES FINAL SAY SPORT CULTURE VIDEO **INDY/LIFE** HAPPY LIST INDYBEST LONG READS INC

Environment

Hundreds of climate sceptics mount international campaign against net-zero targets being made law

Exclusive: The signatories are part of a network pushing for environmental deregulation after Brexit – and some have links with Boris Johnson's cabinet

Meet the New York couple donating millions to the anti-vax movement



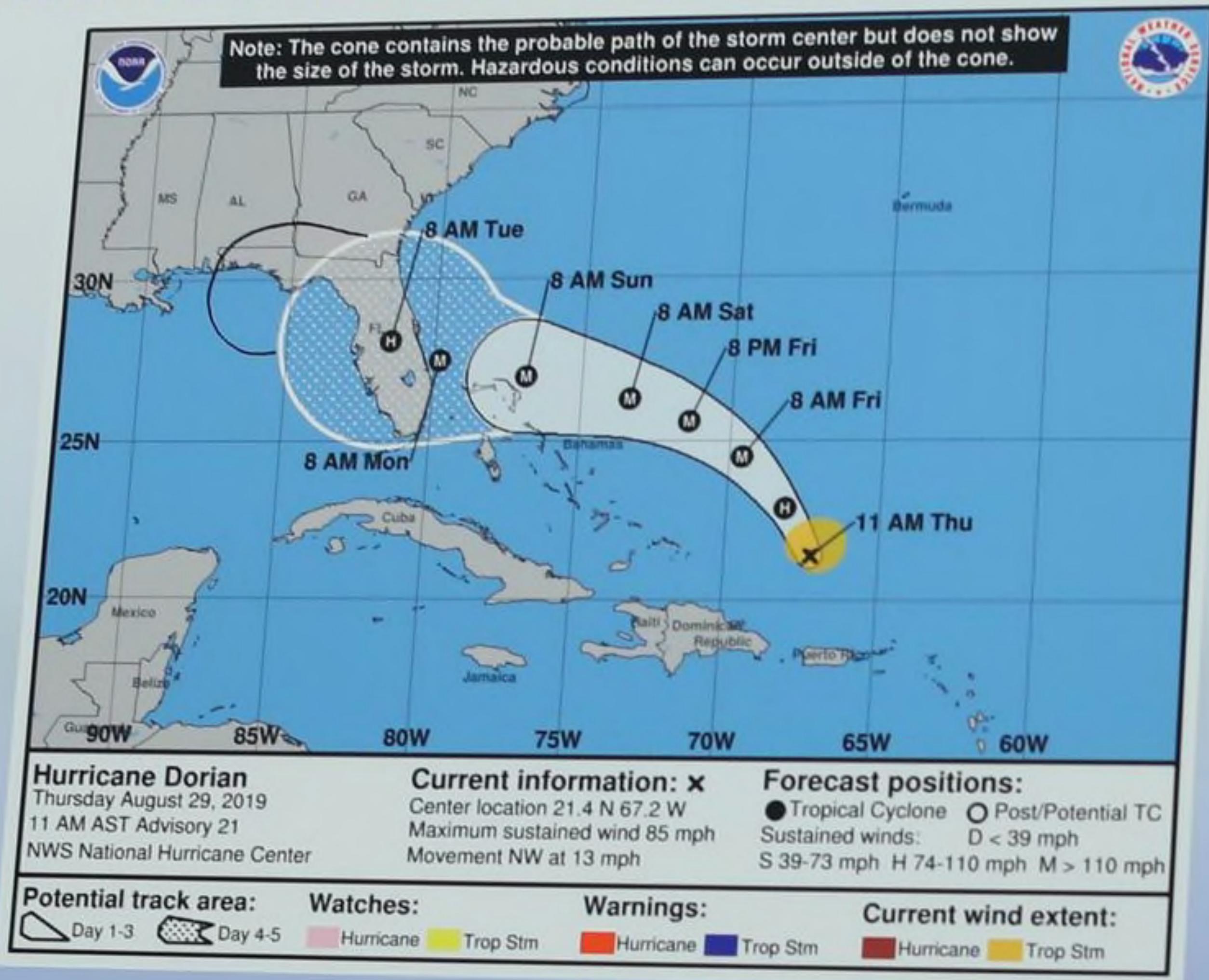
"They should be allowed to have the measles if they want the measles," Del Bigtree told reporters outside an anti-vaccine forum in Brooklyn earlier this month geared to the ultra-Orthodox Jewish community.
(Yana Paskova/For The Washington Post)

When people are overwhelmed or stressed,
they stop listening

Instead they turn to their trusted sources....



Hurricane Dorian Forecast Track and Intensity



Jonathan Ernst/Reuters

And when those don't tell them what they want to hear, they trust their friends via....



ROYAL SOCIETY OPEN SCIENCE

 Open Access

 Check for updates

 View PDF

 Tools

 Share

Cite this article ▾

Section

Abstract

Perspective

Fake science and the knowledge crisis: ignorance can be fatal

Henning Hopf, Alain Krief, Goverdhan Mehta and Stephen A. Matlin

Published: 01 May 2019 | <https://doi.org/10.1098/rsos.190161>

Abstract

Computers, the Internet and social media enable every individual to be a publisher, communicating true or false information instantly and globally. In the ‘post-truth’ era, deception is commonplace at all levels of contemporary life. Fakery affects science and social information and the two have become highly interactive globally, undermining



“The real danger is if we hear enough lies,
then we no longer recognize the truth at
all”

– Chernobyl (2019)

We could be entering a
new dark ages of science



Episode IV

A NEW HOPE

We have professionals who study and
train to preserve human knowledge

Librarians
(aka information
architects)



R Markdown can help us create a
renaissance in reproducible research

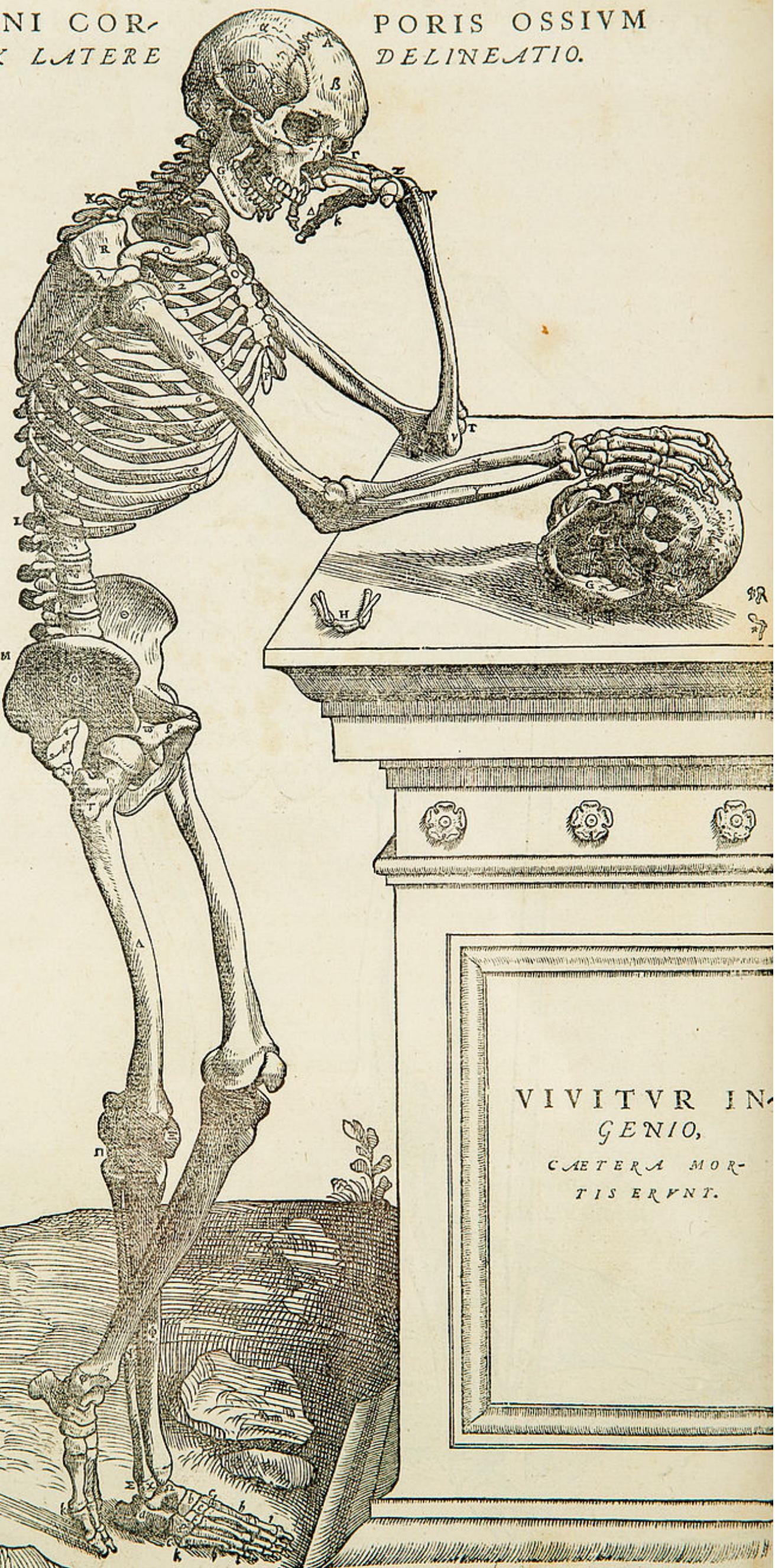
LIBRARIANS AND ARCHIVISTS HAVE RECOMMENDATIONS

- Stop throwing things away
- Preserve the original AND derived works
- Collect metadata
- Maintain an audit trail or provenance



R Markdown is a language for creating *computational* *documents**

Donald Knuth's name for computational documents was *Literate Programming*, which he defined in a book of the same name. I prefer computation documents because it is more intuitively descriptive.



THE ANATOMY OF AN R MARKDOWN DOCUMENT



```
---
```

```
title: "UCL R Markdown Demonstration"
author: "Carl Howe, RStudio"
date: "9/12/2019"
output: html_document
---
```

```
```{r setup, include=FALSE}
library(ggplot2)
knitr::opts_chunk$set(echo = TRUE)
```

```

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
```{r cars}
summary(cars)
```

```

Including Plots

You can also embed plots, for example:

```
```{r pressure}
theme_set(theme_minimal())
ggplot(pressure, aes(x=temperature, y=pressure)) + geom_point() + geom_smooth()
```

```

UNLIKE A TYPICAL ACADEMIC PAPER, R MARKDOWN INCLUDES

- Explanations
- Code
- Data

All in a simple, human-readable form.

Instead of giving you just the results of computations that have been cut and pasted into the end document, R Markdown includes the calculations themselves.

We don't throw away or hide the formulas that give us the results.

LIBRARIANS AND ARCHIVISTS HAVE RECOMMENDATIONS

- **Stop throwing things away**
- Preserve the original AND derived works
- Collect metadata
- Maintain an audit trail or provenance



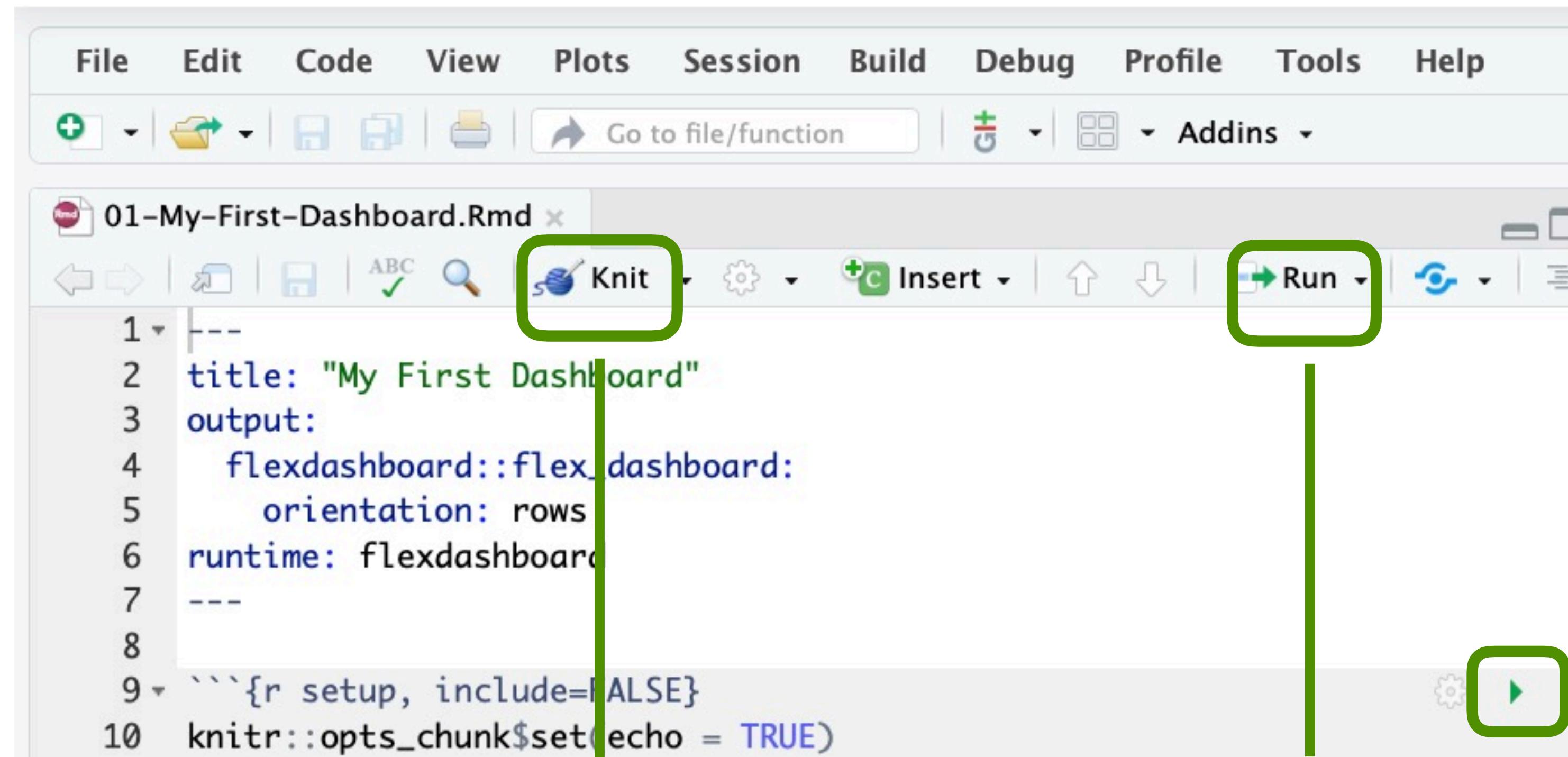
LIBRARIANS AND ARCHIVISTS HAVE RECOMMENDATIONS

- Stop throwing things away
- **Preserve the original AND derived works**
- Collect metadata
- Maintain an audit trail or provenance



IMPORTANT BUTTONS

R Markdown And Interactive Dashboards / 01-Introduction



Knit

Knits all your text and code
into a finished document

Run

Allows you to run a code
chunk or your whole
document



Run Chunk

Allows you to run a single code chunk

UCL R Markdown Demonstration

Carl Howe, RStudio

9/12/2019

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(cars)
```

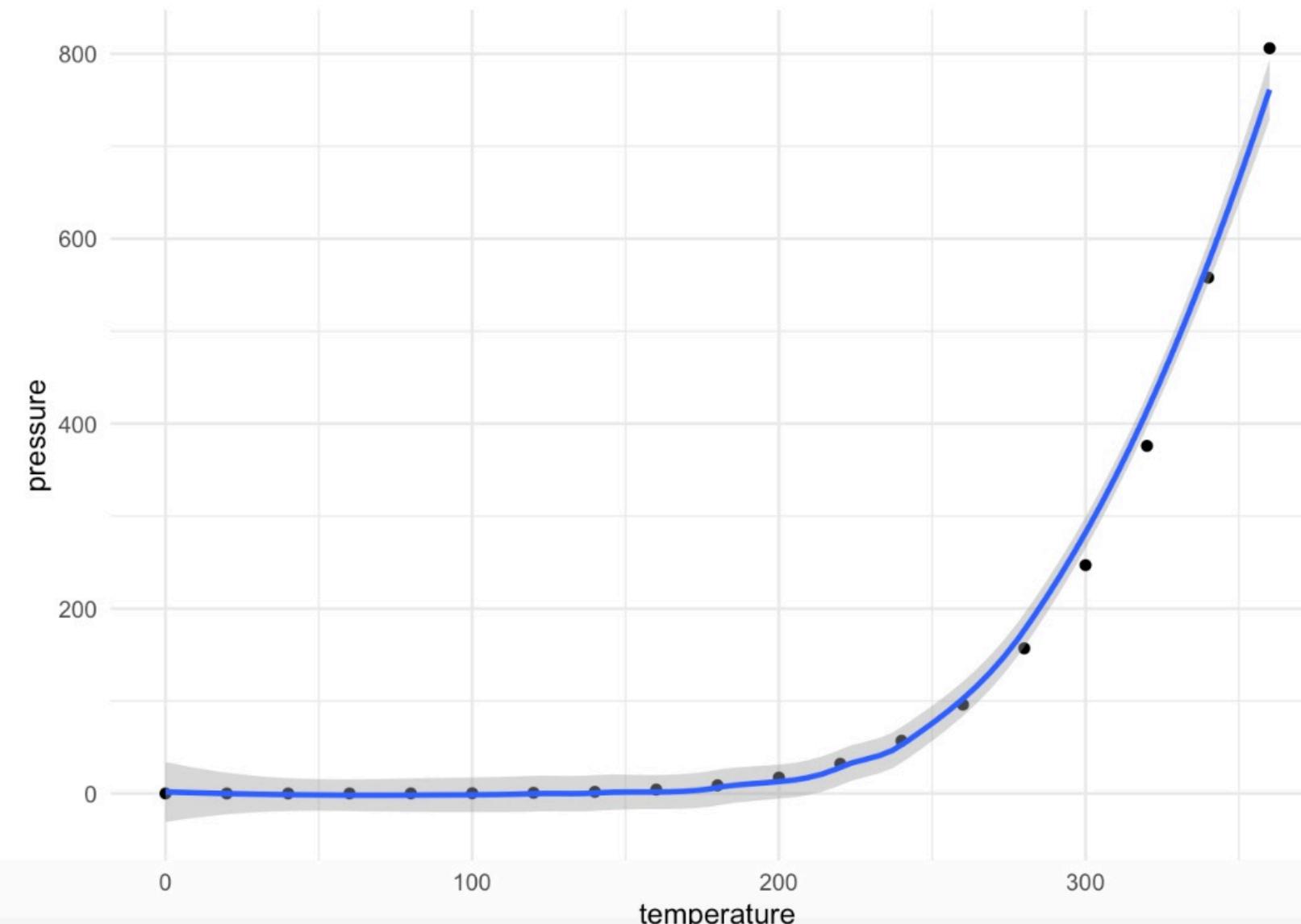
```
##      speed         dist
## Min.   : 4.0   Min.   :  2.00
## 1st Qu.:12.0   1st Qu.: 26.00
## Median :15.0   Median : 36.00
## Mean    :15.4   Mean    : 42.98
## 3rd Qu.:19.0   3rd Qu.: 56.00
## Max.   :25.0   Max.   :120.00
```

Including Plots

You can also embed plots, for example:

```
theme_set(theme_minimal())
ggplot(pressure, aes(x=temperature, y=pressure)) + geom_point() + geom_smooth()
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



LIBRARIANS AND ARCHIVISTS HAVE RECOMMENDATIONS

- Stop throwing things away
- Preserve the original AND derived works
- **Collect metadata**
- Maintain an audit trail or provenance



```
---
```

```
title: "UCL R Markdown Demonstration"
author: "Carl Howe, RStudio"
date: "9/12/2019"
output: html_document
---
```

```
```{r setup, include=FALSE}
library(ggplot2)
knitr::opts_chunk$set(echo = TRUE)
```

```

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
```{r cars}
summary(cars)
```

```

Including Plots

You can also embed plots, for example:

```
```{r pressure}
theme_set(theme_minimal())
ggplot(pressure, aes(x=temperature, y=pressure)) + geom_point() + geom_smooth()
```

```

YAML* Header Data About Your Document (Metadata)

*YAML: Yet Another Markup Language

Everything between --- and --- is read as key value pairs that can be used for categorization

If we change the metadata, we can
change the published document
without changing the code

```
---
```

```
title: "UCL R Markdown Demonstration"
author: "Carl Howe, RStudio"
date: "9/12/2019"
output:
  tufte::tufte_html: default
  tufte::tufte_handout:
    citation_package: natbib
    latex_engine: xelatex
  tufte::tufte_book:
    citation_package: natbib
    latex_engine: xelatex
bibliography: skeleton.bib
link-citations: yes
---
```

Changed YAML Metadata Creates A Different Document

Here, we've changed our output to be a Tufte formatted document

```
```{r setup, include=FALSE}
library(ggplot2)
library(tufte)
knitr::opts_chunk$set(echo = TRUE)
````
```

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <<http://rmarkdown.rstudio.com>>.

When you click the ****Knit**** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
```{r cars}
summary(cars)
```
```

```
---
```

```
title: "UCL R Markdown Demonstration"
author: "Carl Howe, RStudio"
date: "9/12/2019"
output:
  tufte::tufte_html: default
  tufte::tufte_handout:
    citation_package: natbib
    latex_engine: xelatex
  tufte::tufte_book:
    citation_package: natbib
    latex_engine: xelatex
bibliography: skeleton.bib
link-citations: yes
---
```

```
```{r setup, include=FALSE}
library(ggplot2)
library(tufte)
knitr::opts_chunk$set(echo = TRUE)
```

```

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <<http://rmarkdown.rstudio.com>>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
```{r cars}
summary(cars)
```

```

UCL R Markdown Demonstration

Carl Howe, RStudio
9/12/2019

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

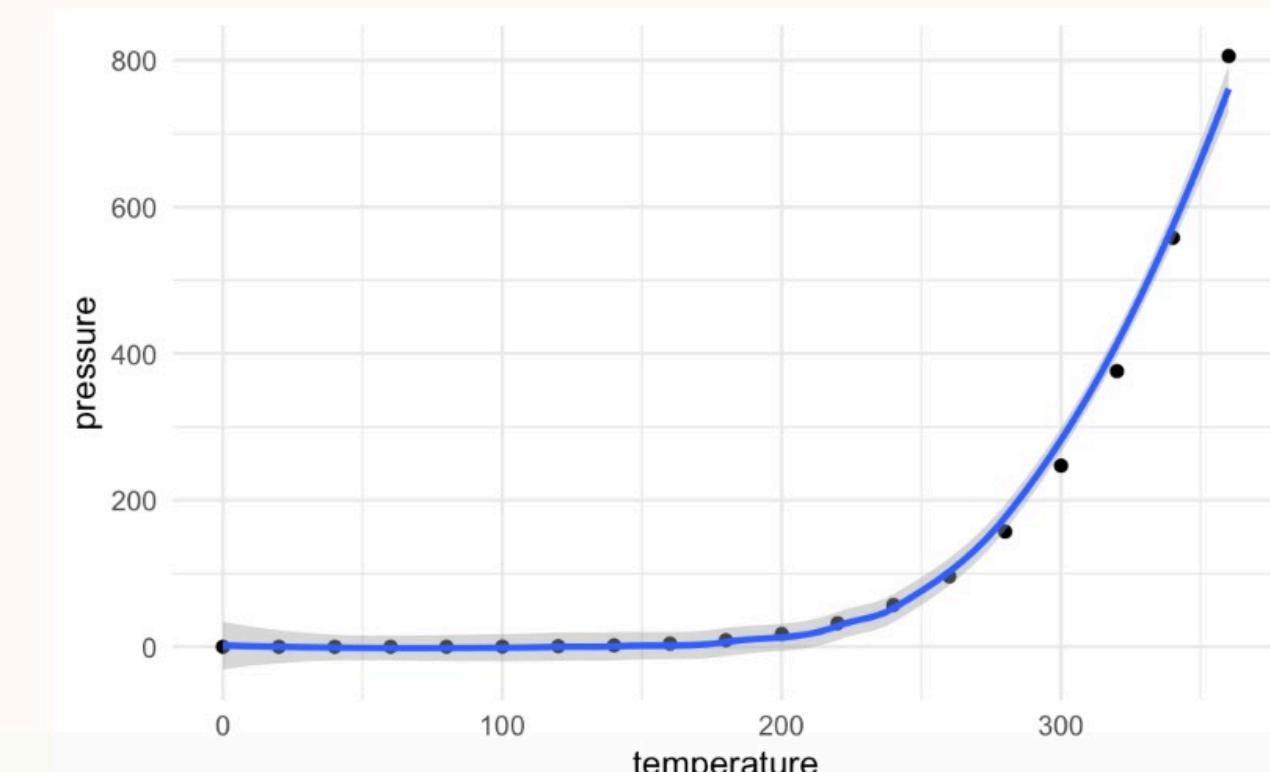
```
summary(cars)

##      speed          dist
##  Min.   : 4.0   Min.   :  2.00
##  1st Qu.:12.0   1st Qu.:26.00
##  Median :15.0   Median :36.00
##  Mean   :15.4   Mean   :42.98
##  3rd Qu.:19.0   3rd Qu.:56.00
##  Max.   :25.0   Max.   :120.00
```

Including a ggplot

You can also embed plots, for example:

```
theme_set(theme_minimal())
ggplot(pressure, aes(x=temperature, y=pressure)) + geom_point() + geom_smooth
```



```
---
```

```
title: "UCL R Markdown Demonstration"
author: "Carl Howe, RStudio"
date: "9/12/2019"
output:
  flexdashboard::flex_dashboard:
    orientation: rows
  runtime: flexdashboard
---
```

```
```{r setup, include=FALSE}
library(ggplot2)
library(tufte)
library(plotly)
library(DT)
knitr::opts_chunk$set(echo = TRUE)
```

```

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <<http://rmarkdown.rstudio.com>>.



When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
```{r pressure_table}
DT::datatable(pressure, options = list(pageLength = 10,
 rownames = FALSE))
```

```

Including a ggplot

You can also embed plots, for example:

```
```{r pressure_graph}
theme_set(theme_minimal())
g <- ggplot(pressure, aes(x=temperature, y=pressure)) + geom_point() + geom_smooth()
ggplotly(g, height=400)
```

```

A Few Other Changes Create A Dashboard

I changed the metadata and some display routines, and the same logic and content becomes interactive.

UCL-demo.html | Open in Browser | Find

~/Documents/RStudio/Presentations/UCL London/UCL-demo.html

UCL R Markdown Demonstration Carl Howe, RStudio — 9/12/2019

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
DT::datatable(pressure, options = list(pageLength = 10, rownames = FALSE))
```

| | temperature | pressure |
|----|-------------|----------|
| 1 | 0 | 0.0002 |
| 2 | 20 | 0.0012 |
| 3 | 40 | 0.006 |
| 4 | 60 | 0.03 |
| 5 | 80 | 0.09 |
| 6 | 100 | 0.27 |
| 7 | 120 | 0.75 |
| 8 | 140 | 1.85 |
| 9 | 160 | 4.2 |
| 10 | 180 | 8.8 |

Including a ggplot

You can also embed plots, for example:

```
theme_set(theme_minimal())
g <- ggplot(pressure, aes(x=temperature, y=pressure)) + geom_point()
ggplotly(g, height=400)
```

The plot shows a scatter of points and a fitted blue curve. A tooltip is displayed at the point corresponding to approximately (240, 57), with the text "temperature: 240" and "pressure: 57.0000".

LIBRARIANS AND ARCHIVISTS HAVE RECOMMENDATIONS

- Stop throwing things away
- Preserve the original AND derived works
- Collect metadata
- **Maintain an audit trail or provenance**



BECAUSE R MARKDOWN IS ASCII TEXT, WE CAN TRACK DIFFERENCES EASILY

RStudio: Review Changes

Changes History master ▾ (all commits) ▾ C Search Pull

| Subject | Author | Date | SHA |
|--|------------------------------|------------|----------|
| HEAD -> refs/heads/master origin/master origin/HEAD Changed Tufte markdown to make it Carl Howe <carl@rstudio.com> | Carl Howe <carl@rstudio.com> | 2019-09-12 | 88f545f5 |
| Made it into a Tufte document | Carl Howe <carl@rstudio.com> | 2019-09-12 | 59b07909 |
| Customized for UCL talk | Carl Howe <carl@rstudio.com> | 2019-09-12 | cd8a08d2 |
| First version of demo document | Carl Howe <carl@rstudio.com> | 2019-09-12 | 3098cd3e |
| Initial commit | Carl Howe <carl@rstudio.com> | 2019-09-12 | a9d86025 |

Commits 1–5 of 5

SHA 88f545f5
Author Carl Howe <carl@rstudio.com>
Date 2019-09-12 10:30
Subject **Changed Tufte markdown to make it into a dashboard and added Keynote preso.**
Parent 59b07909

 [UCL-demo.Rmd](#)

 [UCL-demo.Rmd](#) View file @ 88f545f5

BECAUSE R MARKDOWN IS ASCII TEXT, WE CAN TRACK DIFFERENCES EASILY

SHA 88f545f5
Author Carl Howe <carl@rstudio.com>
Date 2019-09-12 10:30
Subject Changed Tufte markdown to make it into a dashboard and added Keynote preso.
Parent 59b07909

 UCL-demo.Rmd

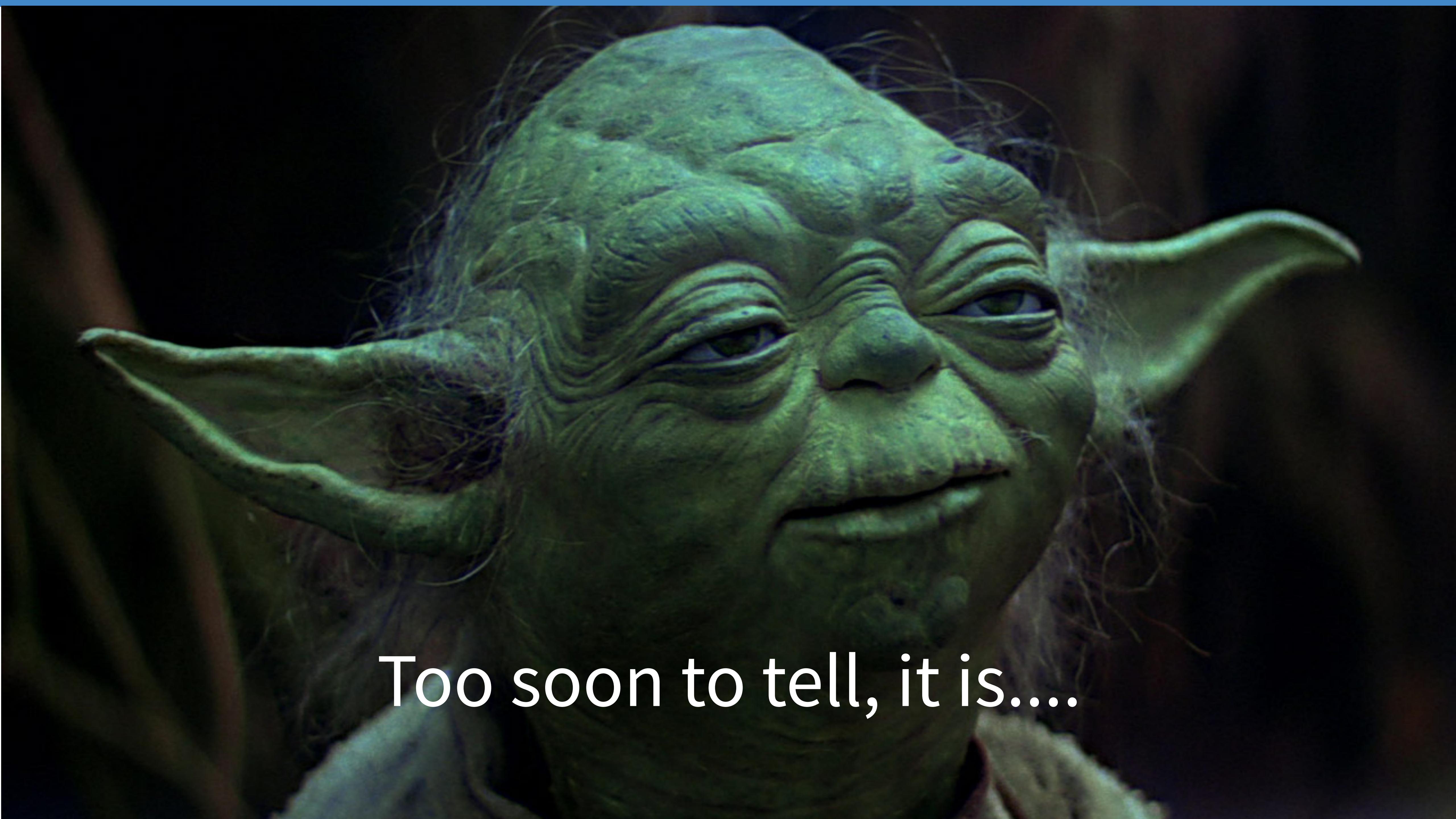
 **UCL-demo.Rmd** [View file @ 88f545f5](#)

| @@ -2,39 +2,37 @@ | | |
|-------------------|----|---|
| 2 | 2 | title: "UCL R Markdown Demonstration" |
| 3 | 3 | author: "Carl Howe, RStudio" |
| 4 | 4 | date: "9/12/2019" |
| 5 | | output:
tufte::tufte_html: default
tufte::tufte_handout:
citation_package: natbib
latex_engine: xelatex
tufte::tufte_book:
citation_package: natbib
latex_engine: xelatex
bibliography: skeleton.bib
link-citations: yes |
| | 5 | output:
flexdashboard::flex_dashboard:
orientation: rows
runtime: flexdashboard |
| 15 | 9 | --- |
| 16 | 10 | |
| 17 | 11 | ```{r setup, include=FALSE} |
| 18 | 12 | library(ggplot2) |
| 19 | 13 | library(tufte) |
| | 14 | library(plotly) |
| | 15 | library(DT) |
| 20 | 16 | knitr::opts_chunk\$set(echo = TRUE) |
| 21 | 17 | ``` |
| 22 | 18 | |

By using R Markdown, we can create computational documents that can be published, reproduced, and trusted.



But are our meager efforts enough
to avoid the dark ages of data?



Too soon to tell, it is....

However, RStudio just hired its
first information architect and
digital librarian.



Julia Comstock
Assistant to 10 MIT Presidents, 1892-1952



84 Cubic Feet

(244 manuscript boxes, 4 oversized folders)



MIT MUSEUM LDING

ONE WAY

ONE WAY

MIT
museum

Welcome!
Exhibitions
Programs
Collection

MIT
museum

265
Massachusetts Avenue

MIT Museum
Building NSI
10 am - 5 pm
daily



Visit +

Explore +

Engage +

Support +

Shop ↗

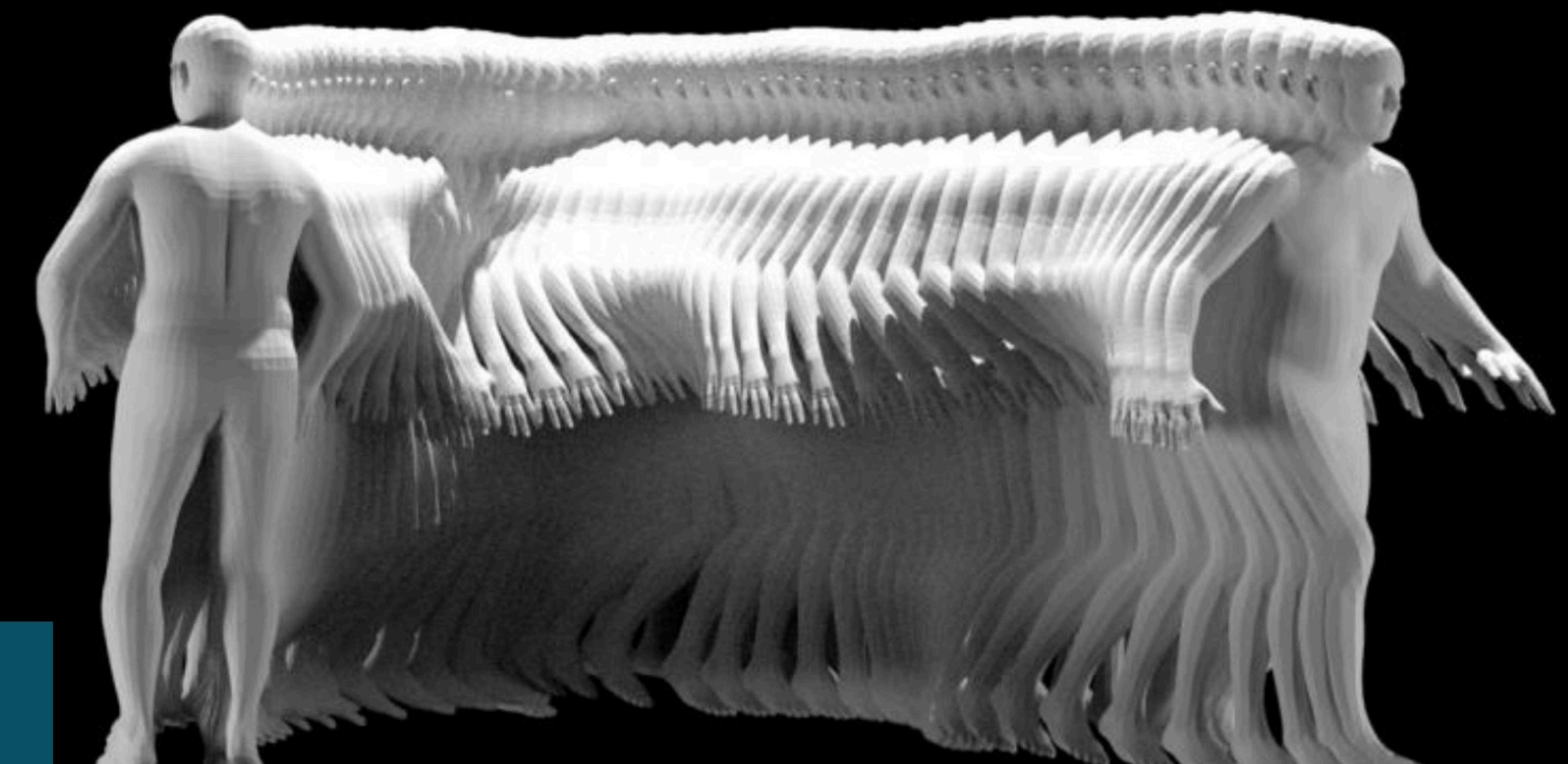
About +

Research Services +

MIT Community +

Contact

Search



In Motion



"This collection is essential to an understanding of the administrative history of the Institute from 1930 to 1958.... Although most of the material in this collection is dated between 1930 and 1958, the collection does include earlier and later material."



One curator can make a difference.

R Markdown can help us create a
renaissance in reproducible research

We hope each of you will be
one of the next million R
users

Help everyone, regardless of means,
participate in a global economy that
rewards data literacy

Questions?

Materials at:

<https://github.com/rstudio/UCL-RMarkdown-Talk>

#NextMillionRUsers

Carl Howe

carl@rstudio.com

@cdhowe

