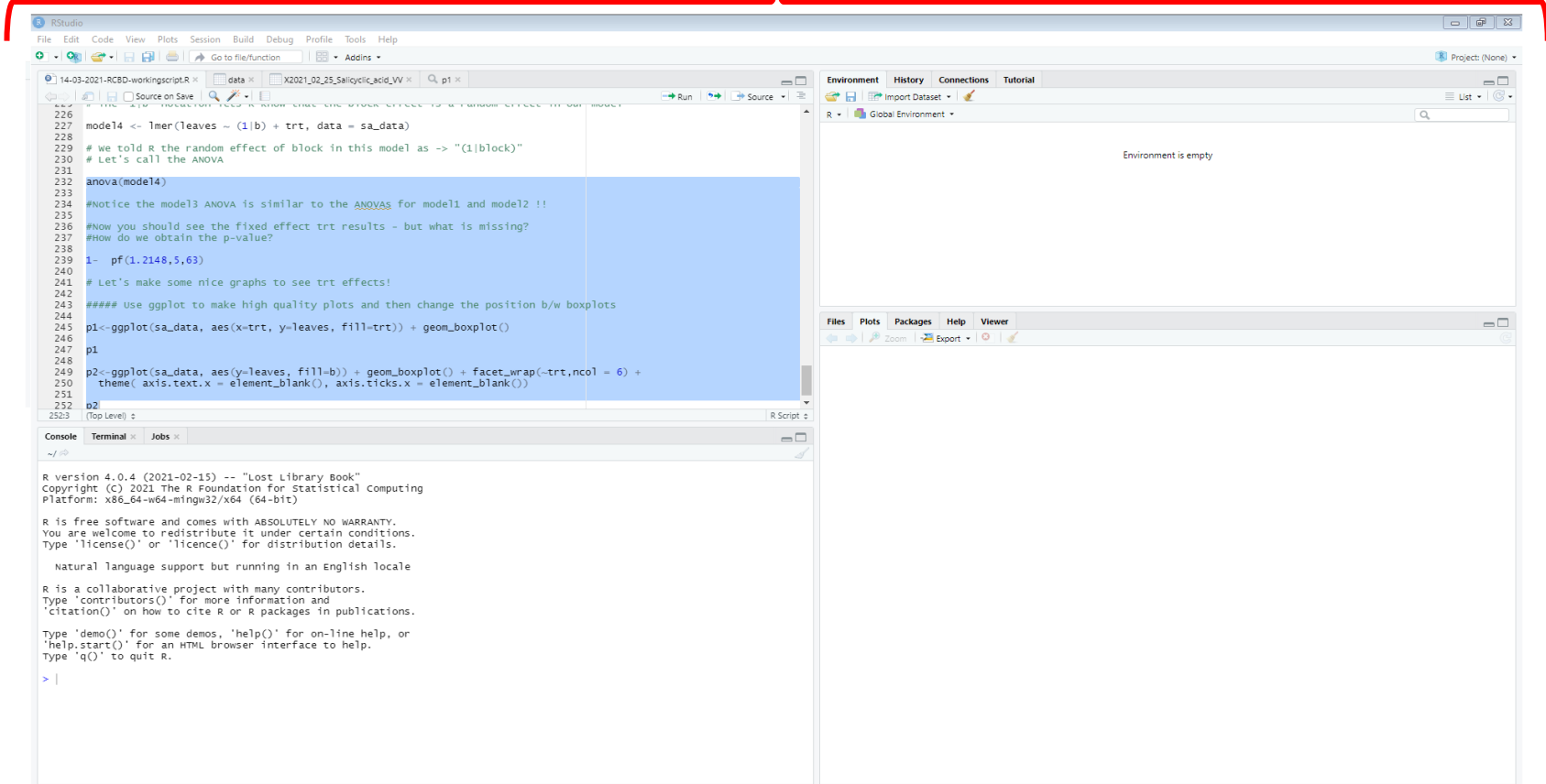


My screen on WebEx meeting



Tiled apps on one screen: press windows key +right or left arrows; or grab the top of the app window and drag to snap to the side and repeat

My screen on Webex video

Your Rstudio

The screenshot shows a Cisco Webex Meetings window. At the top, there's a meeting info bar with 'Connected' status. Below it, a toolbar includes 'File', 'Edit', 'Share', 'View', 'Audio & Video', 'Participant', 'Meeting', 'Breakout Sessions', and 'Help'. A video grid shows two participants: 'vv Host, me' and 'taurai Cohort'. A small window titled 'Viewing taurai's screen' is overlaid on the grid, displaying a tiled RStudio window. The RStudio window has a menu bar (File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, Help) and a toolbar. The main editor shows an R script with email headers and R console output. The console text includes: 'R version 4.0.4 (2021-02-15) -- "Lost Library Book"', 'Copyright (C) 2021 The R Foundation for Statistical Computing', 'Platform: x86_64-w64-mingw32/x64 (64-bit)', 'R is free software and comes with ABSOLUTELY NO WARRANTY. You are welcome to redistribute it under certain conditions. Type 'license()' or 'licence()' for distribution details.', 'Natural language support but running in an english locale', 'R is a collaborative project with many contributors. Type 'contributors()' for more information and 'citation()' on how to cite R or R packages in publications.', 'Type 'demo()' for some demos, 'help()' for on-line help, or 'help.start()' for an HTML browser interface to help. Type 'q()' to quit R.', '> |'

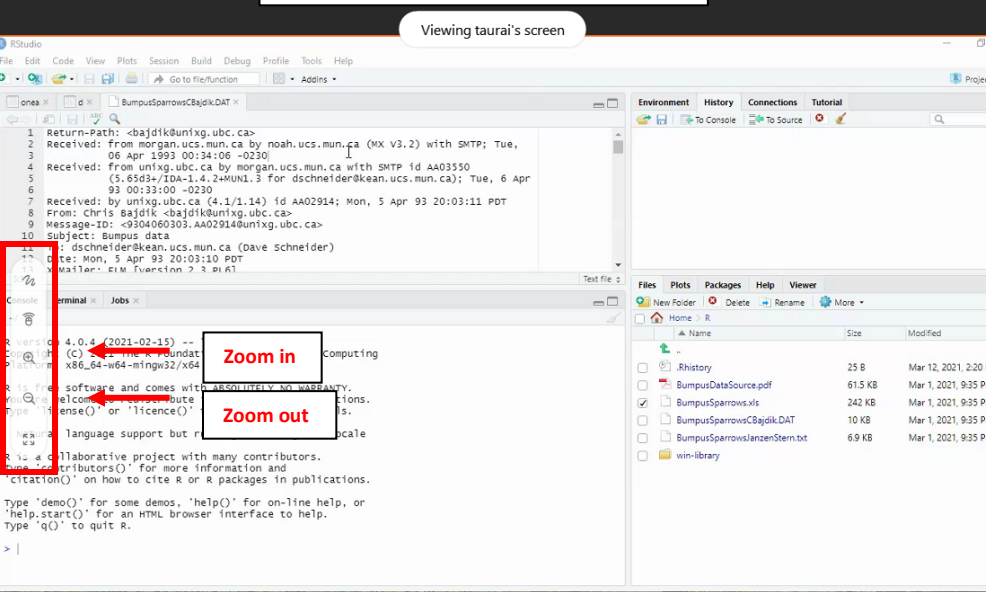
The screenshot shows an RStudio window with a menu bar (File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, Help) and a toolbar. The main editor shows R code for a linear model and ANOVA analysis. The console shows the R startup message and the execution of the code. The code in the editor includes: 'mode14 <- lmer(leaves ~ (1|b) + trt, data = sa_data)', '# We told R the random effect of block is b', '# Let's call the ANOVA', 'anova(mode14)', '#Notice the model3 ANOVA is similar to the model14 ANOVA', '#Now you should see the fixed effect trt', '#How do we obtain the p-value?', '1- pf(1.2148, 5, 63)', '# Let's make some nice graphs to see trt', '#### Use ggplot to make high quality plots', 'p1 <- ggplot(sa_data, aes(x=trt, y=leaves, fill=block)) +', 'geom_bar()', 'p2 <- ggplot(sa_data, aes(y=leaves, fill=block)) +', 'geom_bar()', 'theme(axis.text.x = element_blank(), axis.text.y = element_blank(), axis.title.x = element_blank(), axis.title.y = element_blank())', 'p1', 'p2', 'p1', 'p2'. The console output shows: 'Copyright (C) 2021 The R Foundation for Statistical Computing', 'Platform: x86_64-w64-mingw32/x64 (64-bit)', 'R is free software and comes with ABSOLUTELY NO WARRANTY. You are welcome to redistribute it under certain conditions. Type 'license()' or 'licence()' for distribution details.', 'Natural language support but running in an english locale', 'R is a collaborative project with many contributors. Type 'contributors()' for more information and 'citation()' on how to cite R or R packages in publications.', 'Type 'demo()' for some demos, 'help()' for on-line help, or 'help.start()' for an HTML browser interface to help. Type 'q()' to quit R.', '> |'

Cisco Webex Meetings | Meeting Info | Hide Menu Bar ^ Connected

File Edit Share View Audio & Video Participant Meeting Breakout Sessions Help

Difficult to see, let's zoom in using the webex controls

Viewing taurai's screen



```
1 Return-Path: <bajdik@unixg.ubc.ca>
2 Received: from morgan.ucs.mun.ca by noah.ucs.mun.ca (MX V3.2) with SMTP; Tue,
3 06 Apr 1993 00:34:06 -0230
4 Received: from unixg.ubc.ca by morgan.ucs.mun.ca with SMTP id AA03550
5 (5.65d3+/IDA-1.4.2+MUN1.3 for dschneider@kean.ucs.mun.ca); Tue, 6 Apr
6 93 00:33:00 -0230
7 Received: by unixg.ubc.ca (4.1/1.14) id AA02914; Mon, 5 Apr 93 20:03:11 PDT
8 From: Chris Bajdik <bajdik@unixg.ubc.ca>
9 Message-ID: <9304060303.AA02914@unixg.ubc.ca>
10 Subject: Bumpus data
11
12 To: dschneider@kean.ucs.mun.ca (Dave Schneider)
13 Date: Mon, 5 Apr 93 20:03:10 PDT
14 Mailer: Elm Version 2.3.16.1
```

Zoom in

Zoom out

Photo by Giulio Rosso Chiosso

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

Environment History Connections Tutorial

```
mode14 <- lmer(leaves ~ (1|b) + trt, dat
# We told R the random effect of block i
# Let's call the ANOVA
anova(mode14)
#Notice the mode13 ANOVA is similar to t
#Now you should see the fixed effect trt
#How do we obtain the p-value?
1- pf(1.2148,5,63)
# Let's make some nice graphs to see trt
#### use ggplot to make high quality pl
p1<-ggplot(sa_data, aes(x=trt, y=leaves,
p1
p2<-ggplot(sa_data, aes(y=leaves, fill=b
theme(axis.text.x = element_blank(),
```

Environment is empty

Files Plots Packages Help Viewer

Zoom Export

Console Terminal Jobs

```
Copyright (c) 2021 The R Foundation for statist
ical computing
Platform: x86_64-w64-mingw32/x64 (64-bit)
R is free software and comes with ABSOLUTELY NO
WARRANTY.
You are welcome to redistribute it under certai
n conditions.
Type 'license()' or 'licence()' for distributio
n details.
Natural language support but running in an En
glish locale
R is a collaborative project with many contribu
tors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in
publications.
Type 'demo()' for some demos, 'help()' for on-l
ine help, or
'help.start()' for an HTML browser interface to
help.
Type 'q()' to quit R.
> |
```

Cisco Webex Meetings | Meeting Info | Hide Menu Bar ^ Connected

File Edit Share View Audio & Video Participant Meeting Breakout Sessions Help

WE can see now!

Viewing taurai's screen

```
1 Return-Path: <bajdik@unixg.ubc.ca>
2 Received: from morgan.ucs.mun.ca by noah.ucs.mun.ca (MX V3.2) with SMTP; Tue,
3 06 Apr 1993 00:34:06 -0230
4 Received: from unixg.ubc.ca by morgan.ucs.mun.ca with SMTP id AA03550
5 (5.65d3+IDA-1.4.2+MUN1.3 for dschneider@kean.ucs.mun.ca); Tue, 6 Apr
6 93 00:33:00 -0230
7 Received: by unixg.ubc.ca (4.1/1.14) id AA02914; Mon, 5 Apr 93 20:03:11 PDT
8 From: Chris Bajdik <bajdik@unixg.ubc.ca>
9 Message-ID: <9304060303.AA02914@unixg.ubc.ca>
10 Subject: Bumpus data
11 To: dschneider@kean.ucs.mun.ca (Dave Schneider)
12 Date: Mon, 5 Apr 93 20:03:10 PDT
X-Mailer: ELM [version 2.3.16.1]
```

Terminal

```
~$ cat /etc/issue
R 4.0.4 (2021-05-18) "Lost Library Book"
Copyright (c) 2021 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
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Natural language support but running in an English locale

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> |
```

Zoom in

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

```
14-03-2021-RCBD-workingscript.R | data | X20 |
226
227 model14 <- lmer(Leaves ~ (1|b) + trt, dat
228
229 # We told R the random effect of block i
230 # Let's call the ANOVA
231
232 anova(model14)
233
234 #Notice the model3 ANOVA is similar to t
235
236 #Now you should see the fixed effect trt
237 #HOW do we obtain the p-value?
238
239 1- pf(1.2148,5,63)
240
241 # Let's make some nice graphs to see trt
242
243 ##### use ggplot to make high quality pl
244
245 p1<-ggplot(sa_data, aes(x=trt, y=leaves,
246
247 p1
248
249 p2<-ggplot(sa_data, aes(y=leaves, fill=b
250 theme(axis.text.x = element_blank(),
251
252 |
253:3 (Top Level) | R Script |
```

Environment

Environment is empty

Files Plots Packages Help Viewer

Console

```
~/code
Copyright (c) 2021 The R Foundation for Statist
ical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO
WARRANTY.
You are welcome to redistribute it under certai
n conditions.
Type 'license()' or 'licence()' for distributio
n details.

Natural language support but running in an Eng
lish locale

R is a collaborative project with many contrib
utors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in
publications.

Type 'demo()' for some demos, 'help()' for on-l
ine help, or
'help.start()' for an HTML browser interface to
help.
Type 'q()' to quit R.

> |
```

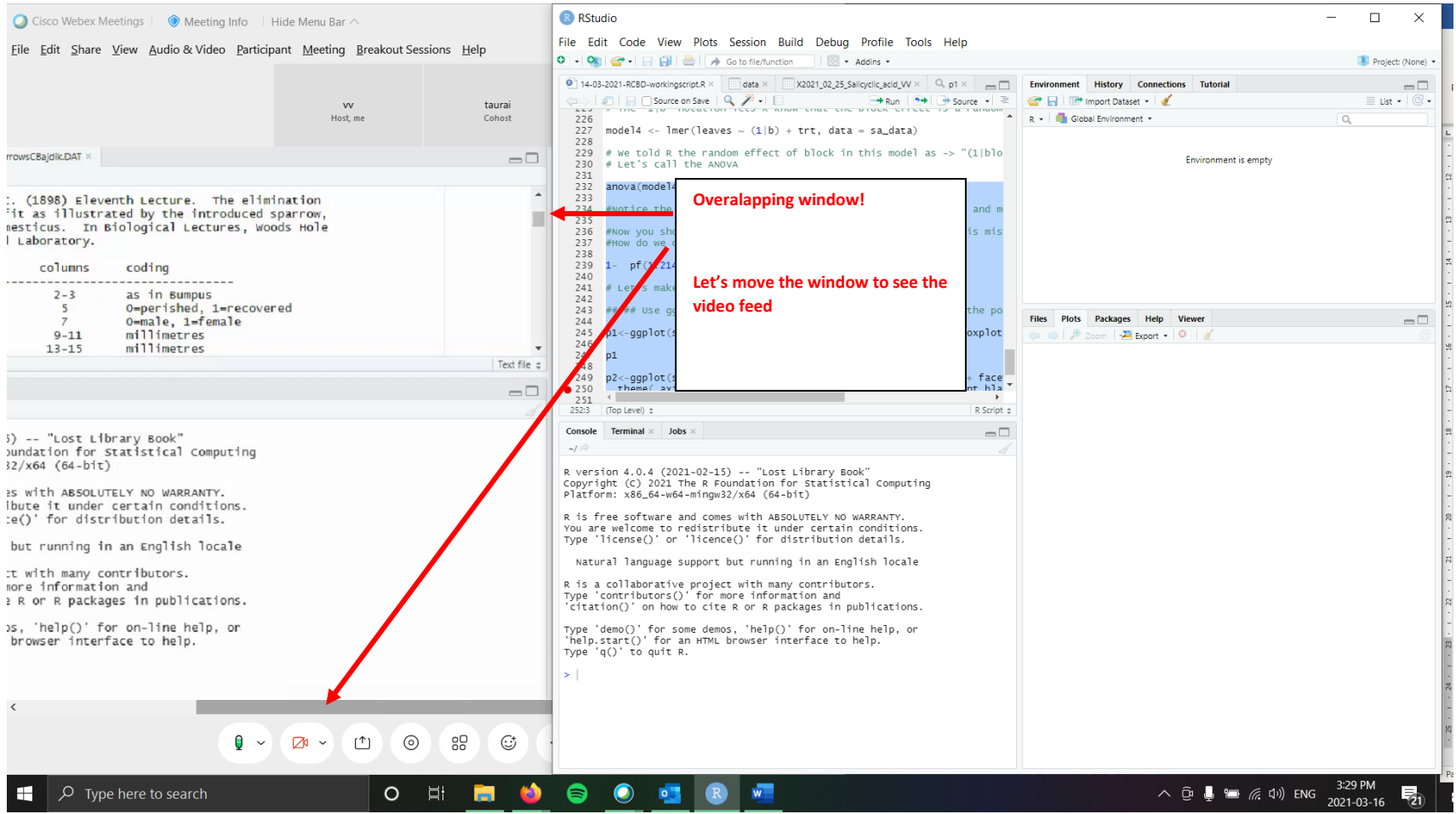
Let's overlap and extend our Rstudio!

The image shows a Windows desktop with two windows: Cisco Webex Meetings and RStudio. The Webex window is on the left, and the RStudio window is on the right, partially overlapping the Webex window. Three red arrows point to specific actions:

- Step 1:** Grab and drag Rstudio to the right a bit!
- Step 2:** Should have a bit of a gap, like
- Step 3:** Can use the scroll bar to adjust the position of my screen

The RStudio window displays R code in the console, including:

```
model4 <- lmer(leaves ~ (1|b) + trt, data=sa_data)
anova(model4)
p1 <- ggplot(sa_data, aes(x=trt, y=leaves, fill=block))
p2 <- ggplot(sa_data, aes(y=leaves, fill=block))
```



Cisco Webex Meetings Meeting Info Hide Menu Bar

File Edit Share View Audio & Video Participant Meeting Breakout Sessions Help

vv Host, me taurai Cohost

rowsCBajdlc.DAT

```
.(1898) Eleventh Lecture. The elimination  
it as illustrated by the introduced sparrow,  
nesticus. In Biological Lectures, woods Hole  
Laboratory.
```

columns	coding
2-3	as in Bumpus
5	0=perished, 1=recovered
7	0=male, 1=female
9-11	millimetres
13-15	millimetres

Text file

```
i) -- "Lost Library Book"  
undation for statistical computing  
32/x64 (64-bit)
```

```
s with ABSOLUTELY NO WARRANTY.  
lbut it under certain conditions.  
e()' for distribution details.
```

but running in an English locale

```
t with many contributors.  
ore information and  
R or R packages in publications.
```

```
s, 'help()' for on-line help, or  
browser interface to help.
```

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

14-03-2021-ACBD-workingscript.R data X2021_02_25_Sallycyclic_acid_VW p1

```
226  
227 model14 <- lmer(leaves ~ (1|b) + trt, data = sa_data)  
228  
229 # We told R the random effect of block in this model as -> "(1|blo  
230 # Let's call the ANOVA  
231  
232 anova(model14  
233  
234 #notice the  
235  
236 #Now you sh  
237 #How do we  
238  
239 1- pf(t, 214  
240  
241 # Let's mak  
242  
243 ## Use gg  
244  
245 p1<-ggplot(s  
246  
247 p1  
248  
249 p2<-ggplot(s  
250  
251  
252 (Top Level)
```

Environment History Connections Tutorial

R Global Environment

Environment is empty

Files Plots Packages Help Viewer

Zoom Export

Console Terminal Jobs

```
~/R  
R version 4.0.4 (2021-02-15) -- "Lost Library Book"  
Copyright (C) 2021 The R Foundation for Statistical Computing  
Platform: x86_64-w64-mingw32/x64 (64-bit)
```

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Natural language support but running in an English locale

R is a collaborative project with many contributors.
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'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

```
> |
```

Overlapping window!
Let's move the window to see the video feed

Perfect. That works better!

The image shows a Zoom meeting window on the left and an RStudio window on the right. A red bracket connects the Zoom window to the RStudio window, with a text box above it saying "Perfect. That works better!".

Zoom Meeting Window:

- Meeting Info: Meeting Info, Hide Menu Bar
- Participants: vv (Host, me), **taurai Cohost** (highlighted)
- Files: onesa, d, BumpusSparrowsCBajdlk.DAT
- Text file content:

```
15 Data from Bumpus H.C. (1898) Eleventh Lecture. The elimination
16 of the unfit as illustrated by the introduced sparrow,
17 Passer domesticus. In Biological Lectures, Woods Hole
18 Biological Laboratory.
19
20 variable          columns      coding
21 -----
22 id                 2-3         as in Bumpus
23 fitness            5          0=perished, 1=recovered
24 gender             7          0=male, 1=female
25 length            9-11       millimetres
26 alar extent       13-15      millimetres
```
- Console: R version 4.0.4 (2021-02-15) -- "Lost Library Book"
 Copyright (c) 2021 The R Foundation for Statistical Computing
 Platform: x86_64-w64-mingw32/x64 (64-bit)
 R is free software and comes with ABSOLUTELY NO WARRANTY.
 You are welcome to redistribute it under certain conditions.
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 Natural language support but running in an English locale
 R is a collaborative project with many contributors.
 Type 'contributors()' for more information and
 'citation()' on how to cite R or R packages in publications.
 Type 'demo()' for some demos, 'help()' for on-line help, or
 'help.start()' for an HTML browser interface to help.
 Type 'q()' to quit R.
 > |

RStudio Window:

- Code Editor:


```
227 model14 <- lmer(leaves ~ (1|b) + trt, data = sa_d
228
229 # We told R the random effect of block in this m
230 # Let's call the ANOVA
231
232 anova(model14)
233
234 #Notice the model3 ANOVA is similar to the ANOVA
235
236 #Now you should see the fixed effect trt results
237 #How do we obtain the p-value?
238
239 1- pf(1.2148, 5, 63)
240
241 # Let's make some nice graphs to see trt effects
242
243 #### Use ggplot to make high quality plots and
244
245 p1 <- ggplot(sa_data, aes(x=trt, y=leaves, fill=tr
246
247 p1
248
249 p2 <- ggplot(sa_data, aes(y=leaves, fill=b)) + geom
250 # theme(avis_text_v = element_blank(), avis_tr[
251
252 (Top Level) >
```
- Environment: Environment is empty
- Console: R version 4.0.4 (2021-02-15) -- "Lost Library Book"
 Copyright (c) 2021 The R Foundation for Statistical Computing
 Platform: x86_64-w64-mingw32/x64 (64-bit)
 R is free software and comes with ABSOLUTELY NO WARRANTY.
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 Natural language support but running in an English locale
 R is a collaborative project with many contributors.
 Type 'contributors()' for more information and
 'citation()' on how to cite R or R packages in publications.
 Type 'demo()' for some demos, 'help()' for on-line help,
 or
 'help.start()' for an HTML browser interface to help.
 Type 'q()' to quit R.
 > |

