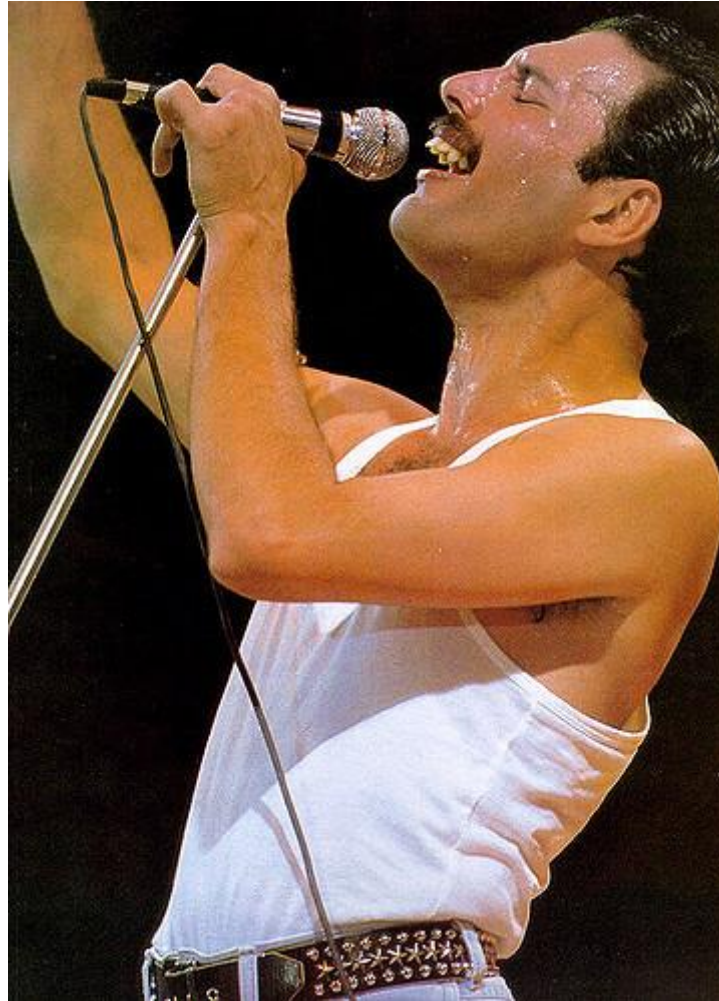


# RESEARCH REPORT: DON'T TRUST WHAT YOU HEAR

R&I conference 2017  
Dr Greg J Neil

# A MUSICAL INTERLUDE





NOW SOME GIBBERISH!







GIBBERISH..OR IS IT???





It's fun to smoke marijuana

Marijuana... get high!

It's fun to smoke marijuana

Marijuana! Marijuana!

It's fun to smoke marijuana

# AUDIO HINDSIGHT BIAS

- Now you are forever cursed with this knowledge!
- Two big problems:
  - When audio is poor, you are likely to believe subtitles or transcripts (Lange, Thomas, Dana & Dawes 2011)
  - People have difficulty discounting the influence that such knowledge has on their judgements - e.g. degraded audio can be judged as sounding clear. (Higham, Neil and Bernstein, 2017; Bernstein et al., 2012)
- This is called Audio Hindsight Bias



# EXPERIMENT





# EXPERIMENT AIMS

Does audio hindsight bias affect judgements of guilt?

Does audio hindsight bias result in inaccurate memory for the audio content of an interview?

# WHAT DID WE DO?

- Step one - watch a video
  - All had distorted audio
  - All had potentially ambiguous phrases

## Subtitle Condition

No subtitles

Accurate subtitles

Incriminating subtitles (that are lies)





# WHAT DID WE DO?

- Step two - questionnaire
  - Participants asked to ignore subtitles and answer questions about audio only
  - How incriminating did you find the video? 1-5 scale
  - Cued recall questions
    - E.g. When Sam got up from the grass, Fred was surprised how \_\_\_\_\_ Sam was

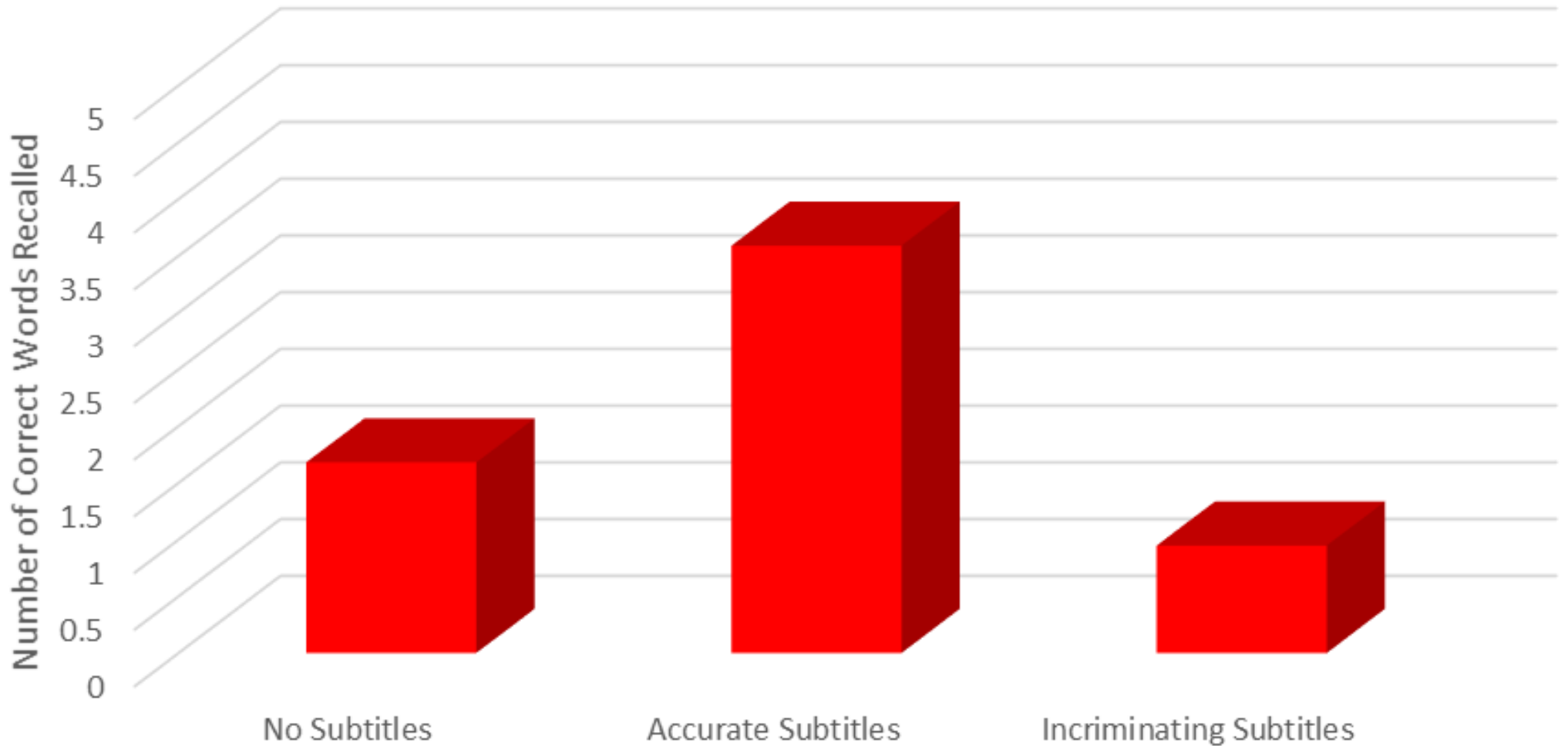


WHAT DID WE FIND?



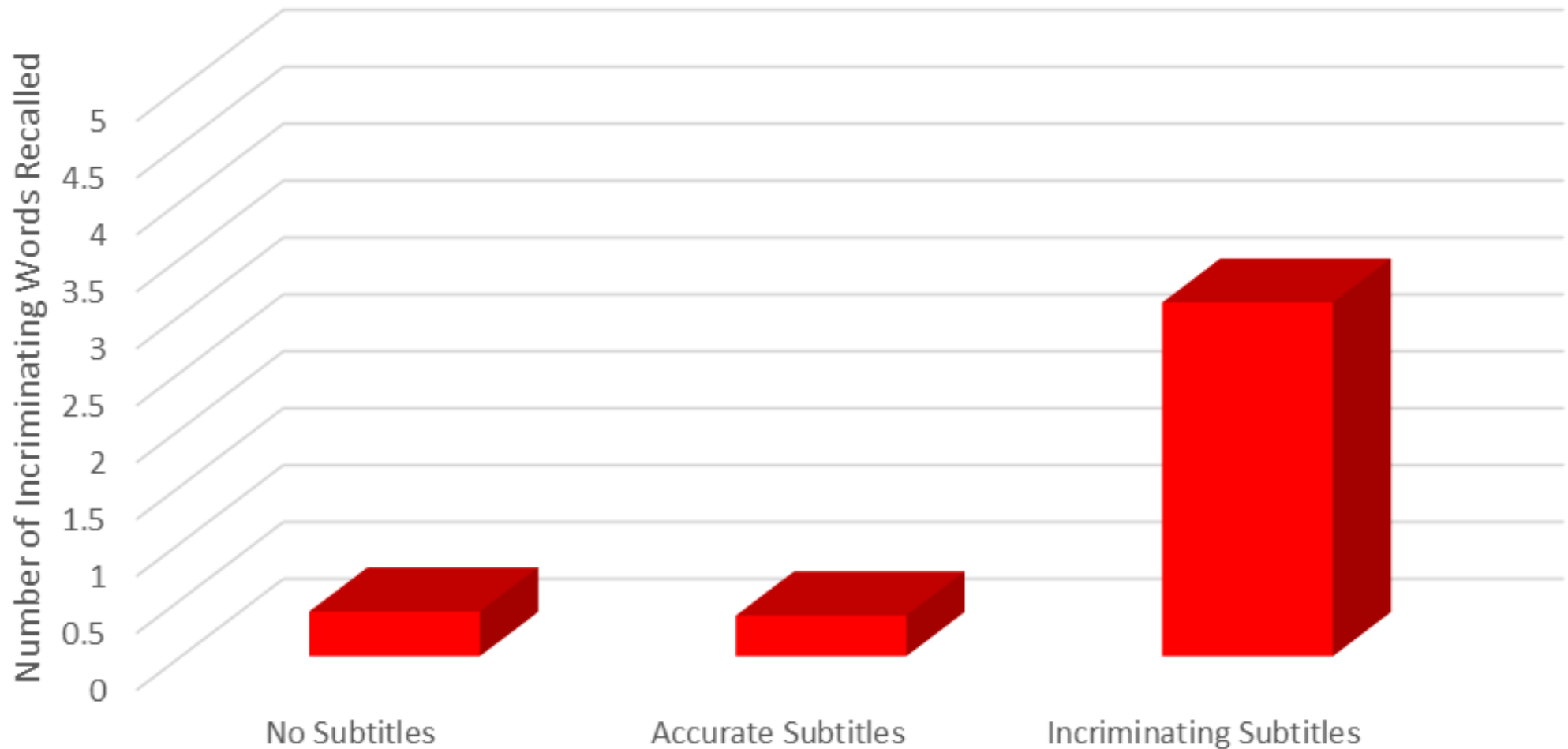
# FINDINGS

## CORRECT WORD RECALL



# FINDINGS

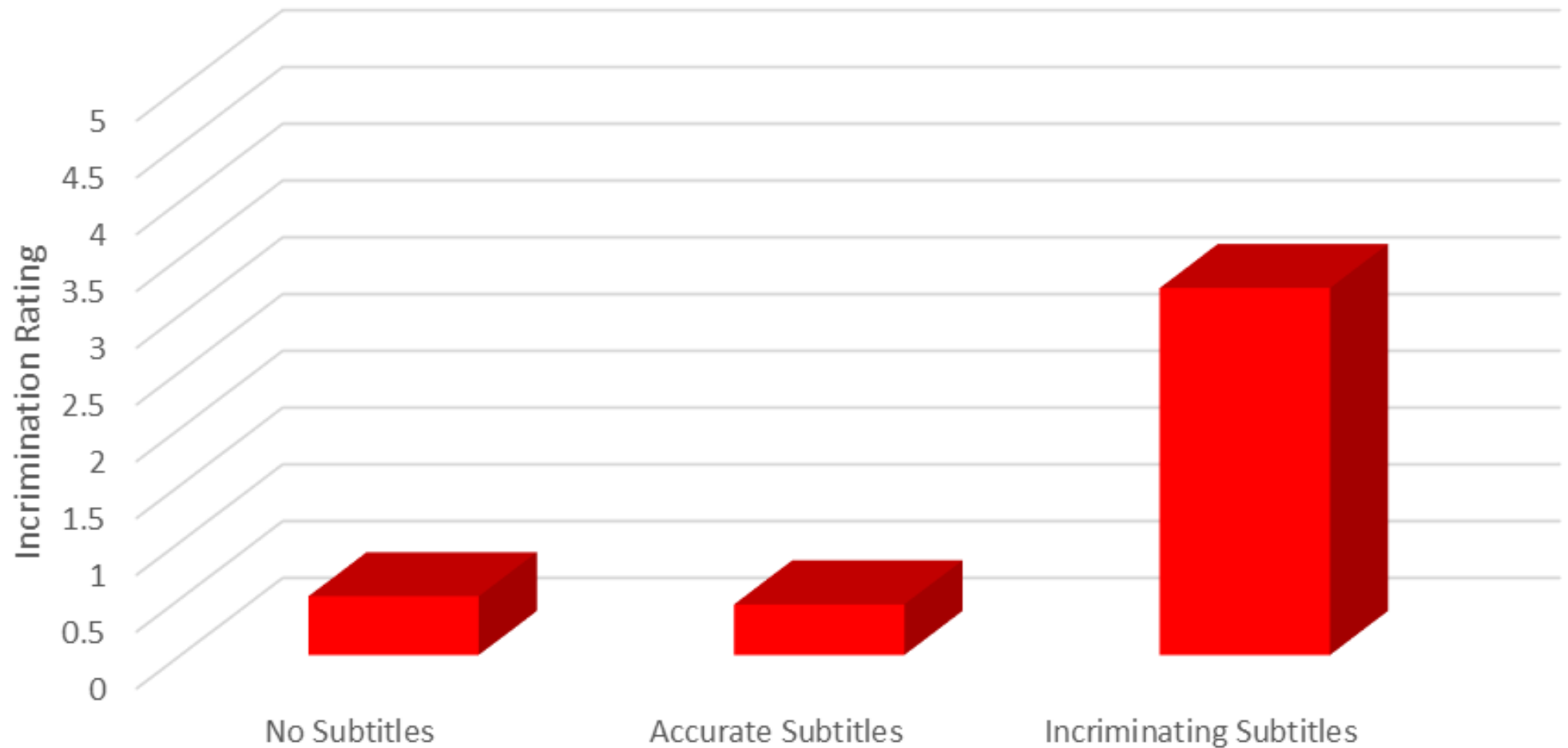
## INCRIMINATING WORDS RECALLED





# FINDINGS

## INCRIMINATION RATINGS





# CONCLUSIONS AND IMPLICATIONS



# CONCLUSIONS

When audio quality is poor, people will rely almost entirely on subtitles (and probably don't realise they can be misleading)

Audio hindsight bias leads people to judge videos as more incriminating than they really are (and probably don't realise they are doing this)

# IMPLICATIONS AND NEXT STEPS

This is bad in court-room settings!



But can we do anything about it?

- Warnings
- Competing transcripts
- Using no transcripts is an option, but transcripts can still play a role



# REFERENCES

Higham, Philip A., Greg J. Neil, and Daniel M. Bernstein. (2017). Auditory Hindsight Bias: Fluency Misattribution Versus Memory Reconstruction. *Journal of Experimental Psychology: Human Perception and Performance*, (in press).

Lange, N. D., Thomas, R. P., Dana, J., & Dawes, R. M. (2011). Contextual biases in the interpretation of auditory evidence. *Law and Human Behavior*, 35(3), 178-187.

Bernstein, D. M., Wilson, A. M., Pernat, N. L., & Meilleur, L. R. (2012). Auditory hindsight bias. *Psychonomic bulletin & review*, 19(4), 588-593.

