Reproducing the analysis of Schroeder and Epley (2015)

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Abstract

A reproduction of the analysis for Experiment 4 from Schroeder and Epley (2015).

Keywords: Voice, Intellect

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Introduction

This report reproduces the analysis of Experiment 4 reported in Schroeder and Epley (2015). The citation for the article is:

Schroeder, J., & Epley, N. (2015). The sound of intellect: Speech reveals a thoughtful mind, increasing a job candidate's appeal. Psychological science, 26(6), 877-891.

The data were downloaded from https://raw.githubusercontent.com/CrumpLab/statisticsLab/master/data/SchroederEpley2015data.csv

Schroeder and Epley (2015) investigated perception of intellect inferred from speech involved in the hiring process. In Experiment 4, professional recruiters rated hypothetical candidates' intellect, impression, and hiring likeliness based on pitches delivered via either audio or written transcript. This report replicates the authors' analysis of the effects of two conditions (audio vs. transcript) on the impression and hire rating scores using independent samples t tests.

Methods

Participants

There were 39 professional recruiters from Fortune 500 companies.

Material

The authors used three randomly selected candidate pitches from Experiment 1. The pitches were presented to recruiters in the form of either a voice recording or a written transcript.

Procedure

The recruiters entered their ratings of candidates' pitches on the basis of intellect, impression, and likely to hire rating. Data for impression and likely to hire ratings were analyzed.

Results

For each dimension (impression and hire), mean rating scores for each condition (transcript and voice) were submitted to independent samples t tests. A descriptive summary of Impression ratings are displayed in Table 1 and Figure 1. A descriptive summary of Hire ratings are displayed in Table 2 and Figure 2.

Figure 1. Impression Ratings

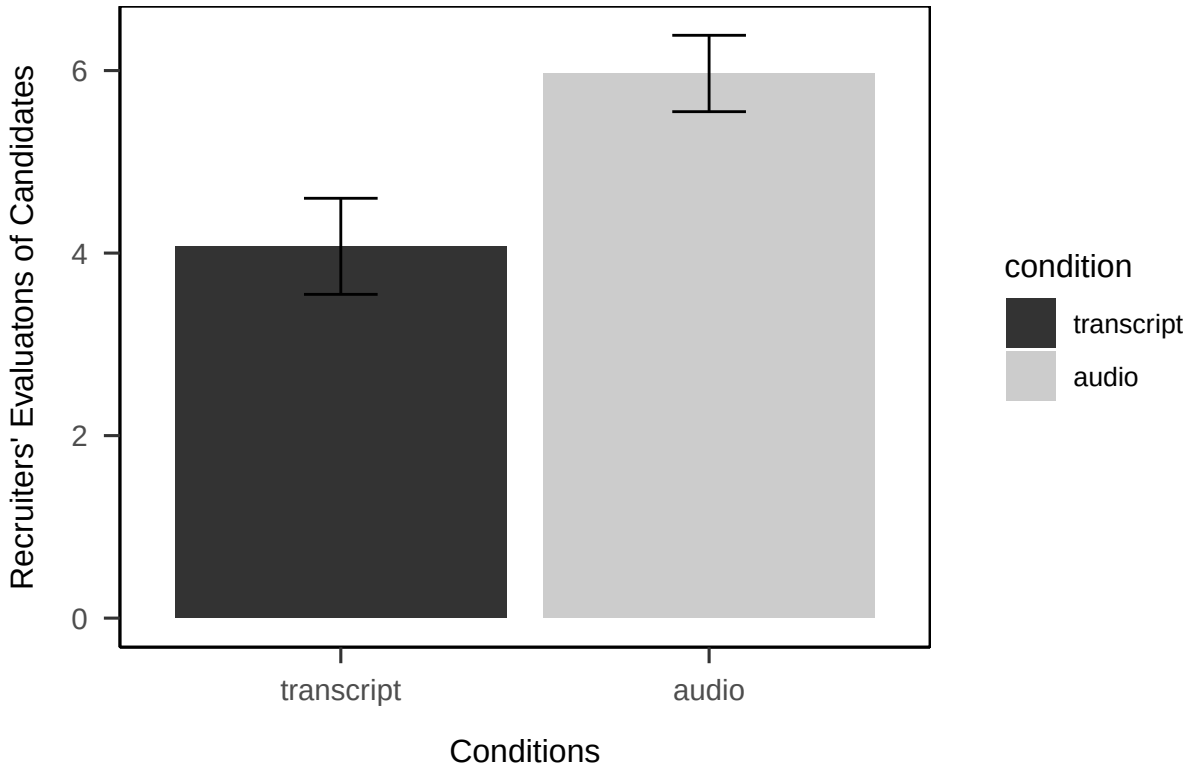
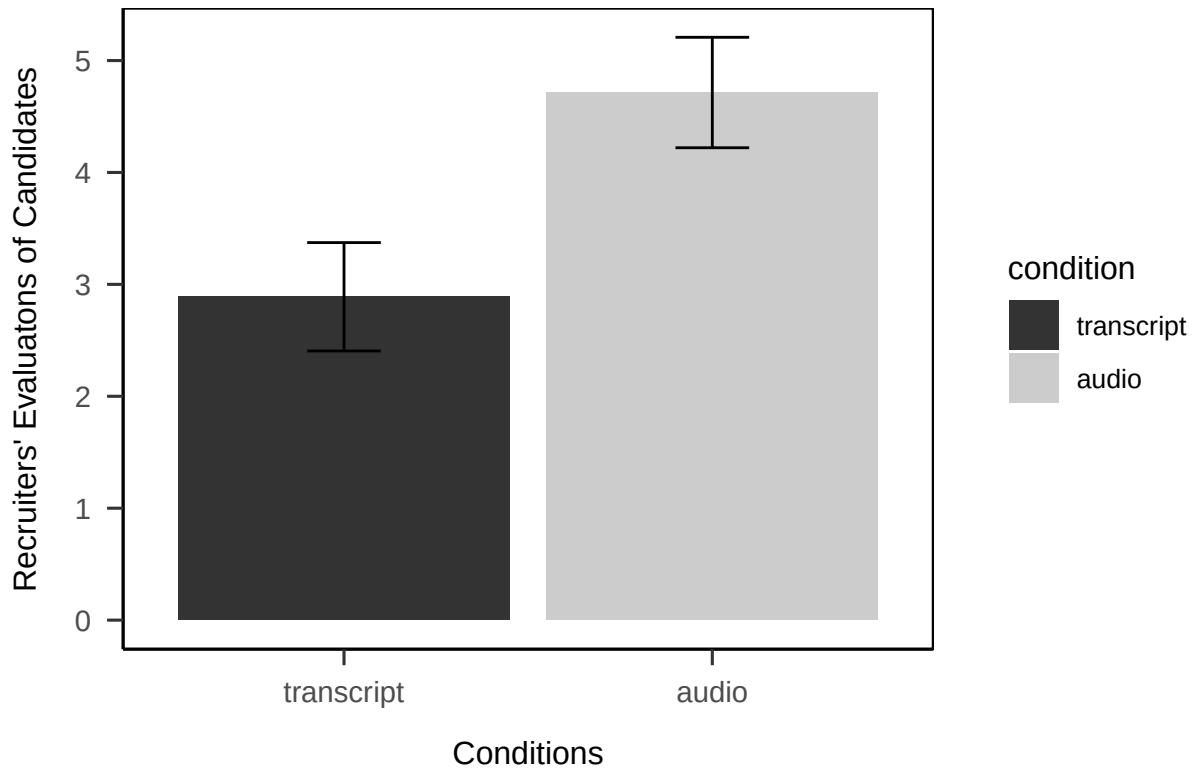


Figure 2. Hire Ratings



By hand reporting

The professional recruiters formed more positive impressions from listening to candidates' pitches(M=5.97,SD=1.92) versus reading them in a script(M=4.07,SD=2.23),t(37)=2.85, p=.007, mean difference=1.89, 95% CI [0.55,3.24]. Similarly, recruiters were more likely to hire a candidate when recruiters listened to pitches (M=4.71,SD=2.26), rather than reading them in script (M=2.89,SD=2.06),t(37)=2.62,p=.013, mean difference=1.83, 95%CI [0.41,3.24].

Papaja reporting

The professional recruiters formed more positive impressions from listening to candidates' pitches(M=5.97,SD=1.92) versus reading them in a script(M=4.07,SD=2.23),$t(37) = 2.85$, $p = .007$, $\Delta M = 1.89$, 95% CI [0.55, 3.24]. Similarly,

recruiters were more likely to hire a candidate when recruiters listened to pitches (M=4.71,SD=2.26), rather than reading them in script (M=2.89,SD=2.06),$t(37) = 2.62$, $p = .013$, $\Delta M = 1.83$, 95% CI [0.41, 3.24].

Discussion

The re-analysis successfully reproduced the analysis reported by Schroeder and Epley (2015), with a minor difference from the original analysis. For p-value report in Hire rating, Schroeder and Epley (2015) reported p<.01. The exact p-value obtained in this re-analysis was p=.013.

In the following section, a simulation-based power analysis was performed.

Simulation-based power analysis

The design of Experiment 4 was a single-factor, two-level independent measures design with 39 subjects. In each dimension (Impression or Hire rating), mean difference would reveal which of two conditions (voice or transcript) scored higher in their respective rating.

Schroeder and Epley (2015) reported d=0.94 in the Impression rating analysis, and d=0.86 in the Hire rating analysis. The power-curve analyses revealed that approximately 0.63 (Figure 3) and 0.50 (Figure 4) of power were needed to detect the effect sizes Schroeder and Epley (2015) reported for Impression and Hire rating, respectively.

Figure 3. Impression Rating Power−curve

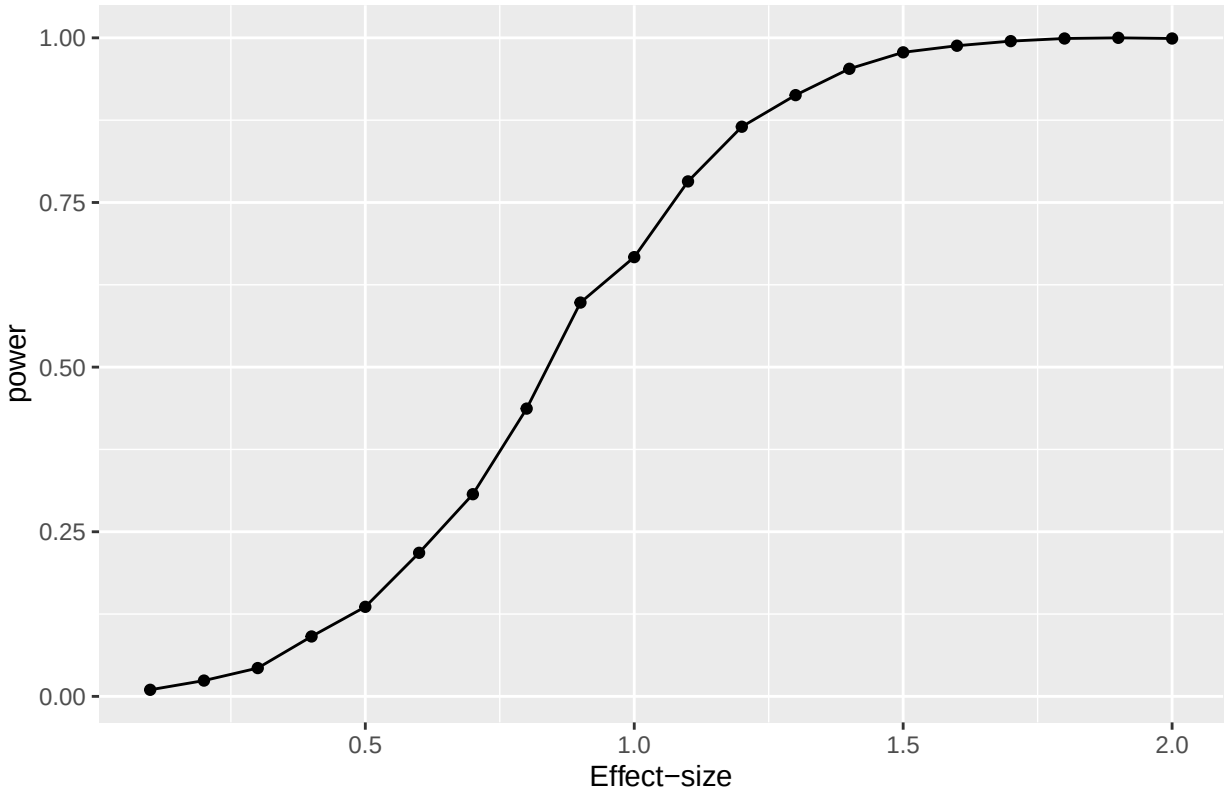


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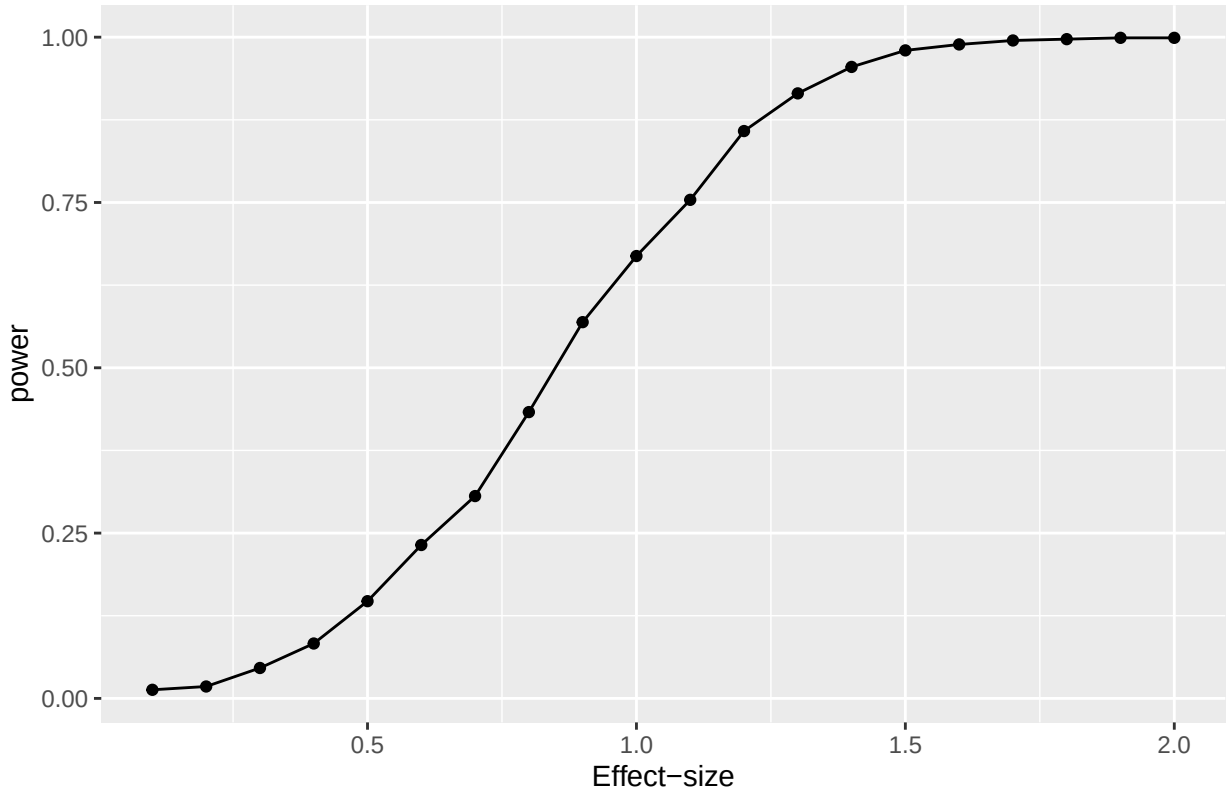
Figure 4. Likely to Hire Raing Power−curve



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References

Schroeder, J., & Epley, N. (2015). The sound of intellect: Speech reveals a thoughtful mind, increasing a job candidate's appeal. *Psychological Science*, *26*(6), 877–891. https://doi.org/10.1177/0956797615572906

Table 1

Impression Rating

samples.

condition	Mean	SD
transcript	4.07	2.23
audio	5.97	1.92

Table 2

Likely to Hire Rating

samples.

condition	Mean	SD
transcript	2.89	2.05
audio	4.71	2.26