Knowledge Inference and Social Class Common Ground

true
Affiliation

as is expensive and burning it is bad for environmental health. How do I choose a car to optimize my gas mileage? We examine a few potential variables to help answer this question.

HW (15) Analysis Plan

1. Independent variable Vignettes (two explanation levels X two social classes)

- 3 higher-class topic vignettes + 3 lower-class topic vignettes
- Each vignette has basic (detailed explanation) and neutral version (no explanation)

2. Dependent variable

- Listener's knowledge rating (7-point Likert)
- Listener's social class rating (10-point Likert)
- Participant's social class + knowledge of various topics

3. Analysis

A. Relationship between participant social class and knowledge - Analysis: Correlation analysis for manipulation check for selecting topics for future study - Plot: Scatter plot + fitted line visualizing the relationship - Table: Correlation matrix with correlation coefficients, significance levels

B. Compare knowledge and social class ratings between conditions - Analysis: ANOVA (among four groups) or Independent samples t-test (between two explanation conditions) to compare (1) average knowledge ratings (2) social class ratings - Plots: (1) Histograms visualizing the data distribution (2) Bar graph showing the distribution of ratings for each condition - Tables: (1) Descriptive statistics of means & standard deviations (2) Summary of ANOVA / t-test results

Result 1. Correlation analyses

```
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(ggplot2)
library(readxl)
library(writexl)
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ------------------
## v forcats   1.0.0     v stringr   1.5.1
## v lubridate 1.9.3     v tibble    3.2.1
## v purrr     1.0.2     v tidyr     1.3.1
## v readr     2.1.5
```

```
## -- Conflicts ------------------------------------------
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib
```

```
library(citr)
library(papaja)
```

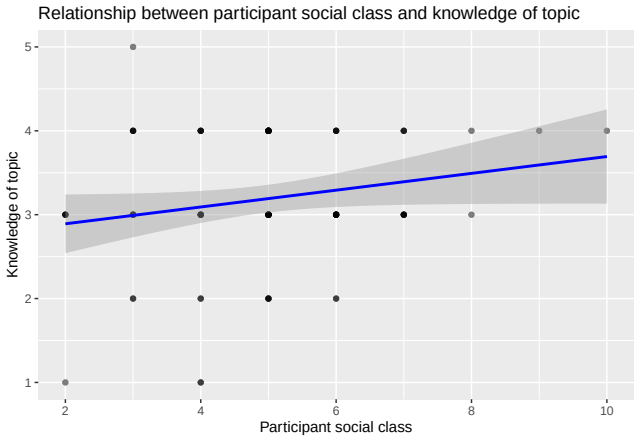
```
## Loading required package: tinylabels
```

```
dataset <- read_xlsx("dataset.xlsx")

dataset %>%
  summarise(
    avg_participant_social_class = mean(participant_socia
    sd_participant_social_class = sd(participant_social_c
    sd_knowledge = sd(knowledge, na.rm = TRUE),
    avg_social_class = mean(social_class, na.rm = TRUE),
    sd_social_class = sd(social_class, na.rm = TRUE))
```

```
## # A tibble: 1 x 5
##   avg_participant_social_~1 sd_participant_soci
##                       <dbl>                <d
## 1                      4.92                 1
## # i abbreviated names: 1: avg_participant_socia
## #   2: sd_participant_social_class
## # i 1 more variable: sd_social_class <dbl>
```

Result 2. Scatter plot and Correlation matrix




```
library(psych)
```

```
##
## Attaching package: 'psych'
```

```
## The following objects are masked from 'package:ggplot2':
##
##     %+%, alpha
```

```
cor.test(dataset$participant_social_class, dataset$topic_knowledge)
```

```
##
##  Pearson's product-moment correlation
##
## data:  dataset$participant_social_class and dataset$topic_knowledge
## t = 1.8869, df = 85, p-value = 0.06258
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  -0.01058652  0.39449491
## sample estimates:
##       cor
## 0.2005089
```

```
ggplot(dataset, aes(x = participant_social_class, y = topic_knowledge)) +
  geom_point(alpha = 0.5) +
  geom_smooth(method = "lm", color = "blue") +
  labs(title = "Relationship between participant social class and knowledge of topic",
       x = "Participant social class",
       y = "Knowledge of topic")
```

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

```
cor_matrix <- cor(dataset[c("participant_social_class", "
print(cor_matrix)
```

```
##                          participant_social_class topi
## participant_social_class                1.0000000
## topic_knowledge                         0.2005089
```

Results

The first port of this analysis explored the relationship between participants' social class and their knowledge of various conversation topics. The social class of r nrow(data) individuals was measured on a 10-point likert scale (MacArthur Subjective SES ladder), and their knowledge across different topics (that are typically well-known by either higher or lower social class group) was assessed on a 7-point likert scale.

The analyses reveals an average participant social class of r mean(dataset$participant_social_class, na.rm = TRUE), with a standard deviation of r sd(dataset$participant_social_c na.rm = TRUE). Knowledge on the topics shows an average score of r mean(dataset$topic_knowledge, na.rm = TRUE), and a standard deviation of r sd(dataset$topic_knowledge, na.rm = TRUE).

The correlation test indicates a significant relationship between social class and knowledge, with a correlation coefficient of r cor_test_result$estimate and a p-value of r cor_test_result$p.value. This suggests that as participants' social class increases, their knowledge on higher-class common ground topics will also tend to increase, and vice versa.

A scatter plot visualizes this relationship with a fitted line indicating the direction and strength of the relationships. The correlation matrix additionally reveals a coefficient of r cor_matrix["participant_social_class", "topic_knowledge"].

The findings ultimately suggest that socioeconomic factors indeed play a role in shaping individuals' cultivated knowledge of specific experiences or fields.

Discussion

As Fiske & Markus (2012) note, social class profoundly impacts social identity, as it often dictates the social circles one interacts with and the societal norms one adheres to. The distinct life circumstances and standards build rigorous common ground within social class groups. Each norm, experience, and cultural reference builds unique knowledge bases (Lareau, 2014) and physical, psychological, and behavioral propensities (Kraus et al., 2012; Manstead, 2018; Piff et al., 2017).

Notably, in settings where diverse social identities interact, bridging these common grounds will be necessary for productive conversation. This would involve being aware of each other's social class background, predicting gaps in perspectives and knowledge, and explaining concepts as occasion demands (Allen, 2020). It is well known that speakers' language production reveals much about their awareness of the listener's knowledge. This study takes an additional step by illustrating how the very act of establishing new common ground also reveals the listener's social class. Considering that people from different social classes have access to different information, the listener design will enable inferences about social class.

By probing whether the speaker's words hint at the social class background of the listener, this study introduces one subtle and intricate way in which class information circulates during social interactions. This study also points out the broader societal consequences of status perception. Cuddy and colleagues (2008) showed that subtle social status cues can respectively predict impressions—for example, warmth and competence (i.e., Stereotype Content Model (SCM); (Durante et al., 2017)—which could influence interpersonal relationships and selection processes (Kraus et al., 2017; Rivera & Tilcsik, 2016; Stangor, 2016). In a large sense, unraveling the dynamics of social class signaling can yield meaningful insight into the barriers that may account for socioeconomic mobility.

References

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