Barkan etal (2012) data analysis - V1

Yvonne JIN

7/19 - 7/30/2022

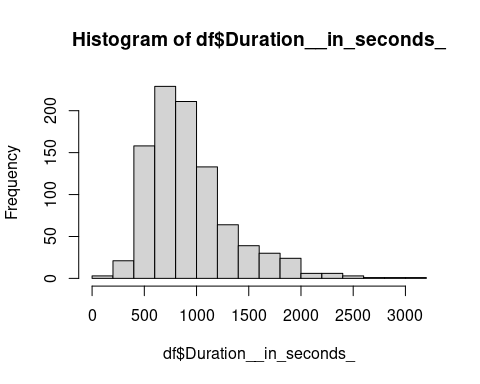
df <- read\_sav("RRR-Barkan-etal-2012-WITH-order.sav")  
#colnames(df)  
df\_recall <- df %>% dplyr::select("RecallComprDissoWri":"Recall\_Check2\_negati")

# Study response processing

## participant screening

Screen out those not met the pre-survey validation questions.

# screen out the participants flagged as likely to be bots or duplicates  
# criteria provided by Qualtrics: https://www.qualtrics.com/support/survey-platform/survey-module/survey-checker/fraud-detection/  
df <- df %>% filter(Q\_RecaptchaScore >= 0.5 & Q\_RelevantIDDuplicate != "true" & Q\_RelevantIDDuplicateScore < 75 & Q\_RelevantIDFraudScore <30)  
#1050 -> 986  
  
# screen out the participants not agreed to the validation questions before survey  
df <- df %>% filter(consentagree\_1 == 1 & outline1 == 1 & outline2 == 1 & englishnative == 1 & writing\_check == 1)  
# 986 -> 930  
  
# check distribution of survey duration  
hist(df$Duration\_\_in\_seconds\_)



summary(df$Duration\_\_in\_seconds\_)

## Min. 1st Qu. Median Mean 3rd Qu. Max.   
## 146 645 834 928 1104 3084

# will screen out the partcipants that fail to answer the validation question of recall manipulation in the "Condition marking" section below.

General measurements score calculation: Manipulation check and MASC uses averaged score of individual items.

## Manipulation Check - Self Esteem Scale

df$ManiCheck\_mean <- df %>% dplyr::select(starts\_with("ManiCheck") & !contains("DO")) %>% rowMeans()  
# get rid of order marking variables like "ManiCheck\_esteem\_DO\_1"  
  
# Add package name before function "select"   
# to prevent confusion with same name functions in other packages

## Study 3 MASC - Multi Aspect Scale of Cheating

df$MASC\_set1\_mean <- df %>% dplyr::select(starts\_with("MASC\_set1")) %>% rowMeans()  
df$MASC\_set2\_mean <- df %>% dplyr::select(starts\_with("MASC\_set2")) %>% rowMeans()  
df$MASC\_set3\_mean <- df %>% dplyr::select(starts\_with("MASC\_set3")) %>% rowMeans()

## Study 3 BIDR - The Balanced Inventory of Desirable Responding

Scoring: Respondents are asked to rate the 40-items on a 7 point scale according to their level of agreement with the item (stated as propositions). The scoring key is balanced. All even number statements of self-deceptive positivity (former 20 statements) are negatively keyed. All odd number statements of impression management (latter 20 statements) are negatively keyed. After reversing the negatively keyed items, one point is added for each extreme response (6 or 7). Total scores on the both constructs can range from 0 to 20. Thus, high scores are only attained by respondents who give exaggeratedly desirable responses. All 40 items may be summed to give an overall measure of social desirable responding.

#-------------------------------#  
### self deceptive positivity  
  
# positively keyed statements  
BIDR\_self\_deceptive\_odd <- df %>%   
 dplyr::select(starts\_with("BIDR\_Self\_deceptive") & !contains("DO")) %>%  
 dplyr::select(ends\_with("0") | ends\_with("2") | ends\_with("4") | ends\_with("6") | ends\_with("8"))   
# de-select order marking variables like"BIDR\_Self\_deceptive\_DO\_20"  
  
BIDR\_self\_deceptive\_odd\_recode <- as.data.frame(ifelse(BIDR\_self\_deceptive\_odd > 5, 1,0))  
  
# negatively keyed statements  
BIDR\_self\_deceptive\_even <- df %>%   
 dplyr::select(starts\_with("BIDR\_Self\_deceptive") & !contains("DO")) %>%  
 dplyr::select(ends\_with("1") | ends\_with("3") | ends\_with("5") | ends\_with("7") | ends\_with("9"))   
  
BIDR\_self\_deceptive\_even\_recode <- as.data.frame(ifelse(BIDR\_self\_deceptive\_even < 3, 1,0))  
  
#----------------------------#  
### impression management  
  
# positively keyed statements  
BIDR\_impre\_manage\_even <- df %>%   
 dplyr::select(starts\_with("BIDR\_Impre\_manage") & !contains("DO")) %>%  
 dplyr::select(ends\_with("0") | ends\_with("2") | ends\_with("4") | ends\_with("6") | ends\_with("8"))   
  
BIDR\_impre\_manage\_even\_recode <- as.data.frame(ifelse(BIDR\_impre\_manage\_even > 5, 1,0))  
  
# negatively keyed statements   
BIDR\_impre\_manage\_odd <- df %>%   
 dplyr::select(starts\_with("BIDR\_Impre\_manage") & !contains("DO")) %>%  
 dplyr::select(ends\_with("1") | ends\_with("3") | ends\_with("5") | ends\_with("7") | ends\_with("9"))   
  
BIDR\_impre\_manage\_odd\_recode <- as.data.frame(ifelse(BIDR\_impre\_manage\_odd < 3, 1,0))  
  
#------------------------------------------#  
# merge all recoded score into one dataframe  
  
recode\_BIDR\_self\_deceptive <- BIDR\_self\_deceptive\_odd\_recode %>%   
 cbind(BIDR\_self\_deceptive\_even\_recode)   
  
recode\_BIDR\_impre\_manage <- BIDR\_impre\_manage\_odd\_recode %>%  
 cbind(BIDR\_impre\_manage\_even\_recode)   
  
# add up recoded score to form an overall score, add to main dataframe  
df$BIDR\_self\_deceptive <- recode\_BIDR\_self\_deceptive %>% rowSums()  
df$BIDR\_impre\_manage <- recode\_BIDR\_impre\_manage %>% rowSums()

## Condition marking

Conditions allocated for each participants and the order of experiments presented are marked in Qualtrics by variables starting with “FL”.

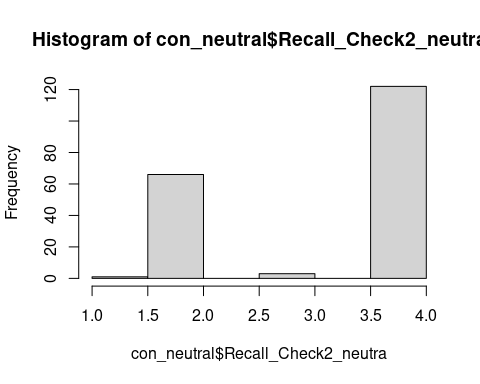
# find block order of conditions  
block\_order <- df %>% dplyr::select(starts\_with("FL"))  
colnames(block\_order)

## [1] "FL\_9\_DO\_RecallManipulation\_EthicalDissonancebyWriting\_UnethicalB"  
## [2] "FL\_9\_DO\_RecallManipulation\_EthicalDissonanceWithoutWriting"   
## [3] "FL\_9\_DO\_RecallManipulation\_WorthyConduct"   
## [4] "FL\_9\_DO\_RecallManipulation\_Neutral"   
## [5] "FL\_9\_DO\_RecallManipulation\_NegativeValence"   
## [6] "FL\_11\_DO\_Experiment1\_HiringDecisionasHR"   
## [7] "FL\_11\_DO\_FL\_25"   
## [8] "FL\_25\_DO\_Experiment2scenario1\_JobInterviewAdvice"   
## [9] "FL\_25\_DO\_FL\_27"   
## [10] "FL\_27\_DO\_Experiment2scenario2\_ExchangingProductAdvice\_Female"   
## [11] "FL\_27\_DO\_Experiment2scenario2\_ExchangingProductAdvice\_Male"   
## [12] "FL\_38\_DO\_MultiAspectScaleofCheatingMASC\_Set1"   
## [13] "FL\_38\_DO\_MultiAspectScaleofCheatingMASC\_Set2"   
## [14] "FL\_38\_DO\_MultiAspectScaleofCheatingMASC\_Set3"   
## [15] "FL\_38\_DO\_BalancedInventoryofDesirableRespondingBIDR\_SelfDeceptiv"  
## [16] "FL\_38\_DO\_BalancedInventoryofDesirableRespondingBIDR\_ImpressionMa"

# Mark study presentation order  
df$study\_order = ifelse(df$FL\_11\_DO\_Experiment1\_HiringDecisionasHR == 1,"Exp1First","Exp2First")

Slicing dataframe into five recall conditions.

## ethical dissonance & writing response   
ethi\_dis\_write <- df %>% filter(FL\_9\_DO\_RecallManipulation\_EthicalDissonancebyWriting\_UnethicalB == 1) %>%  
 dplyr::select(RecallComprDissoWri:RecallCheck2DissoWri, # recall manipulation and comprehension check  
 "study\_order",  
 starts\_with("ManiCheck"), # includes precalculated average and original items for calculating Cronbach's alpha  
 starts\_with("Exp1"),  
 starts\_with("Exp2"),  
 starts\_with("MASC"),   
 "BIDR\_self\_deceptive","BIDR\_impre\_manage",   
 age:CountryName, Duration\_\_in\_seconds\_) %>% #demographic data and condition marker  
 dplyr::select(!contains("DO")) %>% # screen out order marking variables  
 mutate(condition = "Dissonance\_write")  
  
# check comprehension of recall task  
ethi\_dis\_write <- ethi\_dis\_write %>% filter(RecallComprDissoWri == 1 & RecallCheck2DissoWri == 1)  
  
## ethical dissonance & writing response   
ethi\_dis\_nowrite <- df %>% filter(FL\_9\_DO\_RecallManipulation\_EthicalDissonanceWithoutWriting == 1) %>%  
 dplyr::select(RecallComprDissNWri:RecallCheck2DissNWri,  
 "study\_order",  
 starts\_with("ManiCheck"),  
 starts\_with("Exp1"),  
 starts\_with("Exp2"),  
 starts\_with("MASC"),   
 "BIDR\_self\_deceptive","BIDR\_impre\_manage",   
 age:CountryName, Duration\_\_in\_seconds\_) %>%   
 dplyr::select(!contains("DO")) %>%  
 mutate(condition = "Dissonance\_no\_write")  
  
ethi\_dis\_nowrite <- ethi\_dis\_nowrite %>% filter(RecallComprDissNWri == 1 & RecallCheck2DissNWri == 1)  
  
## control: worthy conduct  
con\_worthy <- df %>% filter(FL\_9\_DO\_RecallManipulation\_WorthyConduct == 1) %>%  
 dplyr::select(RecallComprehWorthy:Recall\_Check2\_Worthy,  
 "study\_order",  
 starts\_with("ManiCheck"),  
 starts\_with("Exp1"),  
 starts\_with("Exp2"),  
 starts\_with("MASC"),   
 "BIDR\_self\_deceptive","BIDR\_impre\_manage",  
 age:CountryName, Duration\_\_in\_seconds\_) %>%  
 dplyr::select(!contains("DO")) %>%  
 mutate(condition = "Worthy") # control condition: worthy conduct  
  
con\_worthy <- con\_worthy %>% filter(RecallComprehWorthy == 4 & Recall\_Check2\_Worthy == 2)  
  
## control: neutral event  
con\_neutral <- df %>% filter(FL\_9\_DO\_RecallManipulation\_Neutral == 1) %>%  
 dplyr::select(Recall\_Compr\_Neutral:Recall\_Check2\_neutra,  
 "study\_order",  
 starts\_with("ManiCheck"),  
 starts\_with("Exp1"),  
 starts\_with("Exp2"),  
 starts\_with("MASC"),   
 "BIDR\_self\_deceptive","BIDR\_impre\_manage",  
 age:CountryName, Duration\_\_in\_seconds\_) %>%   
 dplyr::select(!contains("DO")) %>%  
 mutate(condition = "Neutral") # control condition: Neutral behavior  
  
hist(con\_neutral$Recall\_Check2\_neutra)



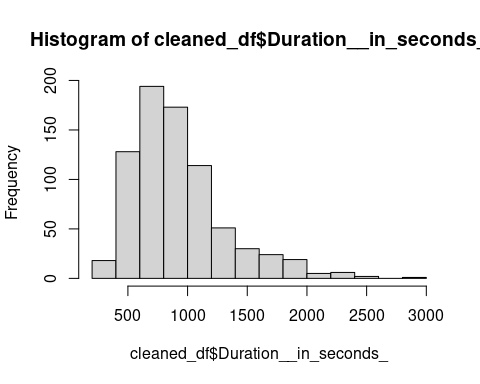
# more than 70 participants chose 2: Happy / Fulfilled / Wholesome instead of 4: Normal / Peaceful / As usual  
#con\_neutral <- con\_neutral %>% filter(Recall\_Compr\_Neutral == 2 & (Recall\_Check2\_neutra == 4 | Recall\_Check2\_neutra == 2) )  
  
con\_neutral <- con\_neutral %>% filter(Recall\_Compr\_Neutral == 2 & Recall\_Check2\_neutra == 4 )  
  
## control: negative event  
con\_nega <- df %>% filter(FL\_9\_DO\_RecallManipulation\_NegativeValence ==1) %>%  
 dplyr::select(Recall\_Compr\_negativ:Recall\_Check2\_negati,  
 "study\_order",  
 starts\_with("ManiCheck"),  
 starts\_with("Exp1"),  
 starts\_with("Exp2"),  
 starts\_with("MASC"),   
 "BIDR\_self\_deceptive","BIDR\_impre\_manage",  
 age:CountryName, Duration\_\_in\_seconds\_) %>%  
 dplyr::select(!contains("DO")) %>%  
 mutate(condition = "Negative") # control condition: negative valence  
  
con\_nega <- con\_nega %>% filter(Recall\_Compr\_negativ == 3 & Recall\_Check2\_negati == 3)  
# overlap between 1 (unethical) and 3 (negative emotions)?

Combine data segments with condition marking.

# consistently rename recall variables before combining dataframe  
colnames(ethi\_dis\_write)[1:4] <- c("Recall\_comprehension", "Recall\_writing", "Recall\_check1", "Recall\_check2")  
colnames(ethi\_dis\_nowrite)[1:4] <- c("Recall\_comprehension", "Recall\_writing", "Recall\_check1", "Recall\_check2")  
colnames(con\_worthy)[1:4] <- c("Recall\_comprehension", "Recall\_writing", "Recall\_check1", "Recall\_check2")  
colnames(con\_neutral)[1:4] <- c("Recall\_comprehension", "Recall\_writing", "Recall\_check1", "Recall\_check2")  
colnames(con\_nega)[1:4] <- c("Recall\_comprehension", "Recall\_writing", "Recall\_check1", "Recall\_check2")  
  
cleaned\_df <- ethi\_dis\_write %>%   
 rbind(ethi\_dis\_nowrite) %>%  
 rbind(con\_worthy) %>%  
 rbind(con\_neutral) %>%  
 rbind(con\_nega)   
# 930 -> 765  
colnames(cleaned\_df)

## [1] "Recall\_comprehension" "Recall\_writing" "Recall\_check1"   
## [4] "Recall\_check2" "study\_order" "ManiCheck\_esteem\_1"   
## [7] "ManiCheck\_esteem\_2" "ManiCheck\_esteem\_3" "ManiCheck\_mean"   
## [10] "Exp1\_check" "Exp1\_prob\_hiring" "Exp1\_loyalty"   
## [13] "Exp1\_honesty" "Exp2\_S1\_check" "Exp2\_S1\_seen\_wrong"   
## [16] "Exp2\_S1\_self\_action" "Exp2\_S1\_guide\_other" "Exp2\_S2F\_check"   
## [19] "Exp2\_S2F\_seen\_wrong" "Exp2\_S2F\_self\_action" "Exp2\_S2F\_guide\_other"   
## [22] "Exp2\_S2M\_check" "Exp2\_S2M\_seen\_wrong" "Exp2\_S2M\_self\_action"   
## [25] "Exp2\_S2M\_guide\_other" "MASC\_set1\_1" "MASC\_set1\_2"   
## [28] "MASC\_set1\_3" "MASC\_set1\_4" "MASC\_set1\_5"   
## [31] "MASC\_set1\_6" "MASC\_set1\_7" "MASC\_set1\_8"   
## [34] "MASC\_set2\_1" "MASC\_set2\_2" "MASC\_set2\_3"   
## [37] "MASC\_set2\_4" "MASC\_set2\_5" "MASC\_set2\_6"   
## [40] "MASC\_set3\_1" "MASC\_set3\_2" "MASC\_set1\_mean"   
## [43] "MASC\_set2\_mean" "MASC\_set3\_mean" "BIDR\_self\_deceptive"   
## [46] "BIDR\_impre\_manage" "age" "gender"   
## [49] "origcount" "residence" "soc\_class"   
## [52] "engunder" "funnel\_pay" "assignmentId"   
## [55] "hitId" "CountryCode" "CountryName"   
## [58] "Duration\_\_in\_seconds\_" "condition"

# check distribution of survey duration in the cleaned dataset   
hist(cleaned\_df$Duration\_\_in\_seconds\_)



summary(cleaned\_df$Duration\_\_in\_seconds\_)

## Min. 1st Qu. Median Mean 3rd Qu. Max.   
## 253 649 833 923 1098 2942

# Response formatting for study 1 and study 2 DVs

Change the data type of DVs to numeric, so the ANOVA test and ggstatsplot works properly.

DVs <- c("Exp1\_prob\_hiring", "Exp1\_loyalty","Exp1\_honesty", "Exp2\_S1\_seen\_wrong", "Exp2\_S1\_self\_action", "Exp2\_S1\_guide\_other", "Exp2\_S2F\_seen\_wrong", "Exp2\_S2F\_self\_action", "Exp2\_S2F\_guide\_other", "Exp2\_S2M\_seen\_wrong", "Exp2\_S2M\_self\_action","Exp2\_S2M\_guide\_other")  
cleaned\_df[DVs] <- sapply(cleaned\_df[DVs],as.numeric)

Merge study 2 scenario 2, female and male case together.

cleaned\_df$Exp2\_S2\_seen\_wrong\_T2 = coalesce(cleaned\_df$Exp2\_S2F\_seen\_wrong,cleaned\_df$Exp2\_S2M\_seen\_wrong)  
cleaned\_df$Exp2\_S2\_self\_action\_T2 = coalesce(cleaned\_df$Exp2\_S2F\_self\_action,cleaned\_df$Exp2\_S2M\_self\_action)  
cleaned\_df$Exp2\_S2\_guide\_other\_T2 = coalesce(cleaned\_df$Exp2\_S2F\_guide\_other,cleaned\_df$Exp2\_S2M\_guide\_other)

# output cleaned data  
write.csv(cleaned\_df, "cleaned\_data\_0722\_screened.csv",fileEncoding = "UTF-8")

# Descriptive data

# Manipulation Check  
## overall  
jmv::descriptives(data = cleaned\_df, vars = vars(ManiCheck\_mean))

##   
## DESCRIPTIVES  
##   
## Descriptives   
## ────────────────────────────────────────   
## ManiCheck\_mean   
## ────────────────────────────────────────   
## N 765   
## Missing 0   
## Mean 4.8610   
## Median 5.0000   
## Standard deviation 1.5597   
## Minimum 1.0000   
## Maximum 7.0000   
## ────────────────────────────────────────

## by condition  
jmv::descriptives(  
 formula = ManiCheck\_mean ~ condition,  
 data = cleaned\_df,  
 missing = FALSE,  
 median = FALSE,  
 variance = TRUE,  
 min = FALSE,  
 max = FALSE,  
 ci = TRUE)

## Descriptives   
## ────────────────────────────────────────────────────────────────────   
## condition ManiCheck\_mean   
## ────────────────────────────────────────────────────────────────────   
## N Dissonance\_no\_write 156   
## Dissonance\_write 152   
## Negative 157   
## Neutral 122   
## Worthy 178   
## Mean Dissonance\_no\_write 4.0406   
## Dissonance\_write 4.4320   
## Negative 4.9130   
## Neutral 5.3525   
## Worthy 5.5637   
## 95% CI mean lower bound Dissonance\_no\_write 3.7745   
## Dissonance\_write 4.1899   
## Negative 4.6705   
## Neutral 5.1349   
## Worthy 5.3873   
## 95% CI mean upper bound Dissonance\_no\_write 4.3067   
## Dissonance\_write 4.6741   
## Negative 5.1554   
## Neutral 5.5700   
## Worthy 5.7400   
## Standard deviation Dissonance\_no\_write 1.6960   
## Dissonance\_write 1.5229   
## Negative 1.5498   
## Neutral 1.2259   
## Worthy 1.2005   
## Variance Dissonance\_no\_write 2.8765   
## Dissonance\_write 2.3191   
## Negative 2.4019   
## Neutral 1.5028   
## Worthy 1.4413   
## ────────────────────────────────────────────────────────────────────

# Study 1  
## total  
jmv::descriptives(data = cleaned\_df, vars = vars(Exp1\_prob\_hiring, Exp1\_loyalty, Exp1\_honesty))

## Descriptives   
## ──────────────────────────────────────────────────────────────────────────   
## Exp1\_prob\_hiring Exp1\_loyalty Exp1\_honesty   
## ──────────────────────────────────────────────────────────────────────────   
## N 765 765 765   
## Missing 0 0 0   
## Mean 2.1869 2.2340 2.3922   
## Median 1.0000 2.0000 2.0000   
## Standard deviation 1.7132 1.5940 1.6901   
## Minimum 1.0000 1.0000 1.0000   
## Maximum 9.0000 9.0000 9.0000   
## ──────────────────────────────────────────────────────────────────────────

## by condition  
jmv::descriptives(  
 formula = Exp1\_prob\_hiring + Exp1\_loyalty + Exp1\_honesty ~ condition,  
 data = cleaned\_df,  
 missing = FALSE, median = FALSE)

## Descriptives   
## ─────────────────────────────────────────────────────────────────────────────────────────────────   
## condition Exp1\_prob\_hiring Exp1\_loyalty Exp1\_honesty   
## ─────────────────────────────────────────────────────────────────────────────────────────────────   
## N Dissonance\_no\_write 156 156 156   
## Dissonance\_write 152 152 152   
## Negative 157 157 157   
## Neutral 122 122 122   
## Worthy 178 178 178   
## Mean Dissonance\_no\_write 2.2692 2.2564 2.4487   
## Dissonance\_write 2.1908 2.2303 2.2895   
## Negative 2.1911 2.3185 2.3567   
## Neutral 2.0082 2.0246 2.4426   
## Worthy 2.2303 2.2865 2.4270   
## Standard deviation Dissonance\_no\_write 1.5754 1.5319 1.6512   
## Dissonance\_write 1.7444 1.5546 1.5638   
## Negative 1.8506 1.7396 1.6641   
## Neutral 1.4965 1.4458 1.8766   
## Worthy 1.8220 1.6474 1.7297   
## Minimum Dissonance\_no\_write 1.0000 1.0000 1.0000   
## Dissonance\_write 1.0000 1.0000 1.0000   
## Negative 1.0000 1.0000 1.0000   
## Neutral 1.0000 1.0000 1.0000   
## Worthy 1.0000 1.0000 1.0000   
## Maximum Dissonance\_no\_write 7.0000 7.0000 8.0000   
## Dissonance\_write 9.0000 9.0000 8.0000   
## Negative 9.0000 8.0000 8.0000   
## Neutral 9.0000 9.0000 9.0000   
## Worthy 9.0000 9.0000 9.0000   
## ─────────────────────────────────────────────────────────────────────────────────────────────────

# Study 2 scenario 1  
## total  
jmv::descriptives(  
 data = cleaned\_df,  
 vars = vars(Exp2\_S1\_seen\_wrong, Exp2\_S1\_self\_action, Exp2\_S1\_guide\_other),  
 missing = FALSE, median = FALSE)

## Descriptives   
## ──────────────────────────────────────────────────────────────────────────────────────────   
## Exp2\_S1\_seen\_wrong Exp2\_S1\_self\_action Exp2\_S1\_guide\_other   
## ──────────────────────────────────────────────────────────────────────────────────────────   
## N 765 765 765   
## Mean 7.3922 2.3163 2.2170   
## Standard deviation 2.0008 2.0750 1.9643   
## Minimum 1.0000 1.0000 1.0000   
## Maximum 9.0000 9.0000 9.0000   
## ──────────────────────────────────────────────────────────────────────────────────────────

## by condition  
jmv::descriptives(  
 formula = Exp2\_S1\_seen\_wrong + Exp2\_S1\_self\_action + Exp2\_S1\_guide\_other ~ condition,  
 data = cleaned\_df,  
 missing = FALSE, median = FALSE)

## Descriptives   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## condition Exp2\_S1\_seen\_wrong Exp2\_S1\_self\_action Exp2\_S1\_guide\_other   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## N Dissonance\_no\_write 156 156 156   
## Dissonance\_write 152 152 152   
## Negative 157 157 157   
## Neutral 122 122 122   
## Worthy 178 178 178   
## Mean Dissonance\_no\_write 7.0962 2.4679 2.4423   
## Dissonance\_write 7.2303 2.7961 2.4737   
## Negative 7.5796 2.1401 2.1911   
## Neutral 7.5738 1.9590 1.9508   
## Worthy 7.5000 2.1742 2.0056   
## Standard deviation Dissonance\_no\_write 2.2020 2.1595 2.2121   
## Dissonance\_write 2.0376 2.3228 2.1591   
## Negative 1.8644 1.8378 1.7836   
## Neutral 2.0120 1.8560 1.7715   
## Worthy 1.8693 2.0524 1.8024   
## Minimum Dissonance\_no\_write 1.0000 1.0000 1.0000   
## Dissonance\_write 1.0000 1.0000 1.0000   
## Negative 1.0000 1.0000 1.0000   
## Neutral 1.0000 1.0000 1.0000   
## Worthy 1.0000 1.0000 1.0000   
## Maximum Dissonance\_no\_write 9.0000 9.0000 9.0000   
## Dissonance\_write 9.0000 9.0000 9.0000   
## Negative 9.0000 9.0000 9.0000   
## Neutral 9.0000 9.0000 9.0000   
## Worthy 9.0000 9.0000 9.0000   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────

# Study scenario 2  
## total   
jmv::descriptives(  
 data = cleaned\_df,  
 vars = vars(Exp2\_S2\_seen\_wrong\_T2, Exp2\_S2\_self\_action\_T2, Exp2\_S2\_guide\_other\_T2),  
 missing = FALSE, median = FALSE)

## Descriptives   
## ───────────────────────────────────────────────────────────────────────────────────────────────────   
## Exp2\_S2\_seen\_wrong\_T2 Exp2\_S2\_self\_action\_T2 Exp2\_S2\_guide\_other\_T2   
## ───────────────────────────────────────────────────────────────────────────────────────────────────   
## N 765 765 765   
## Mean 4.7111 3.9647 3.7961   
## Standard deviation 2.5157 2.6841 2.5071   
## Minimum 1.0000 1.0000 1.0000   
## Maximum 9.0000 9.0000 9.0000   
## ───────────────────────────────────────────────────────────────────────────────────────────────────

## by condition  
jmv::descriptives(  
 formula = Exp2\_S2\_seen\_wrong\_T2 + Exp2\_S2\_self\_action\_T2 + Exp2\_S2\_guide\_other\_T2 ~ condition,  
 data = cleaned\_df,  
 missing = FALSE, median = FALSE)

## Descriptives   
## ──────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## condition Exp2\_S2\_seen\_wrong\_T2 Exp2\_S2\_self\_action\_T2 Exp2\_S2\_guide\_other\_T2   
## ──────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## N Dissonance\_no\_write 156 156 156   
## Dissonance\_write 152 152 152   
## Negative 157 157 157   
## Neutral 122 122 122   
## Worthy 178 178 178   
## Mean Dissonance\_no\_write 4.5064 4.2692 4.0064   
## Dissonance\_write 4.3553 4.4145 4.3158   
## Negative 4.9299 3.7707 3.7197   
## Neutral 5.0000 3.6639 3.3361   
## Worthy 4.8034 3.6910 3.5506   
## Standard deviation Dissonance\_no\_write 2.4029 2.5535 2.4429   
## Dissonance\_write 2.5693 2.9576 2.7487   
## Negative 2.6094 2.5941 2.4880   
## Neutral 2.4596 2.5925 2.2768   
## Worthy 2.4976 2.6404 2.4449   
## Minimum Dissonance\_no\_write 1.0000 1.0000 1.0000   
## Dissonance\_write 1.0000 1.0000 1.0000   
## Negative 1.0000 1.0000 1.0000   
## Neutral 1.0000 1.0000 1.0000   
## Worthy 1.0000 1.0000 1.0000   
## Maximum Dissonance\_no\_write 9.0000 9.0000 9.0000   
## Dissonance\_write 9.0000 9.0000 9.0000   
## Negative 9.0000 9.0000 9.0000   
## Neutral 9.0000 9.0000 9.0000   
## Worthy 9.0000 9.0000 9.0000   
## ──────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────

# Study 3  
## total  
jmv::descriptives(  
 data = cleaned\_df,  
 vars = vars(MASC\_set1\_mean, MASC\_set2\_mean, MASC\_set3\_mean, BIDR\_self\_deceptive, BIDR\_impre\_manage))

## Descriptives   
## ────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## MASC\_set1\_mean MASC\_set2\_mean MASC\_set3\_mean BIDR\_self\_deceptive BIDR\_impre\_manage   
## ────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## N 765 765 765 765 765   
## Missing 0 0 0 0 0   
## Mean 3.9742 3.8778 5.2464 3.5739 7.3359   
## Median 4.0000 3.8333 5.5000 3.0000 7.0000   
## Standard deviation 0.68778 0.47102 1.3218 3.1183 4.5592   
## Minimum 2.7500 2.2500 1.0000 0.0000 0.0000   
## Maximum 5.7500 5.2500 7.0000 17.000 20.000   
## ────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────

## condition  
jmv::descriptives(  
 formula = MASC\_set1\_mean + MASC\_set2\_mean + MASC\_set3\_mean + BIDR\_self\_deceptive + BIDR\_impre\_manage ~ condition,  
 data = cleaned\_df,  
 missing = FALSE, median = FALSE)

## Descriptives   
## ───────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## condition MASC\_set1\_mean MASC\_set2\_mean MASC\_set3\_mean BIDR\_self\_deceptive BIDR\_impre\_manage   
## ───────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## N Dissonance\_no\_write 156 156 156 156 156   
## Dissonance\_write 152 152 152 152 152   
## Negative 157 157 157 157 157   
## Neutral 122 122 122 122 122   
## Worthy 178 178 178 178 178   
## Mean Dissonance\_no\_write 4.0136 3.8526 5.3205 3.3718 7.0128   
## Dissonance\_write 3.9885 3.8969 5.1842 4.2500 6.7303   
## Negative 3.9391 3.8270 5.1943 3.3567 7.4204   
## Neutral 3.9728 3.9337 5.4713 3.5410 8.1967   
## Worthy 3.9593 3.8900 5.1264 3.3876 7.4719   
## Standard deviation Dissonance\_no\_write 0.68385 0.49176 1.4401 3.1072 4.4359   
## Dissonance\_write 0.65216 0.44971 1.3783 3.2312 4.4065   
## Negative 0.70615 0.49306 1.2476 3.0551 4.5364   
## Neutral 0.68804 0.42974 1.1594 3.0752 4.5321   
## Worthy 0.70957 0.47681 1.3243 3.0682 4.7754   
## Minimum Dissonance\_no\_write 2.7500 2.2500 1.0000 0.0000 0.0000   
## Dissonance\_write 2.7500 2.2500 1.0000 0.0000 0.0000   
## Negative 2.7500 2.3333 1.5000 0.0000 0.0000   
## Neutral 2.7500 2.2500 3.0000 0.0000 0.0000   
## Worthy 2.7500 2.2500 1.0000 0.0000 0.0000   
## Maximum Dissonance\_no\_write 5.4375 5.2500 7.0000 17.000 18.000   
## Dissonance\_write 5.5625 5.2500 7.0000 15.000 18.000   
## Negative 5.7500 5.2500 7.0000 13.000 19.000   
## Neutral 5.7500 5.0000 7.0000 16.000 18.000   
## Worthy 5.7500 5.2500 7.0000 14.000 20.000   
## ───────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────

# Age and Gender distribution  
jmv::descriptives(  
 data = cleaned\_df,  
 vars = vars(age, gender),  
 freq = TRUE)

## Descriptives   
## ───────────────────────────────────────────   
## age gender   
## ───────────────────────────────────────────   
## N 765 765   
## Missing 0 0   
## Mean 45.267 1.5582   
## Median 42.000 2.0000   
## Standard deviation 13.298 0.56125   
## Minimum 20.000 1.0000   
## Maximum 79.000 4.0000   
## ───────────────────────────────────────────   
##   
## Frequencies of gender   
## ──────────────────────────────────────────────────   
## Levels Counts % of Total Cumulative %   
## ──────────────────────────────────────────────────   
## 1 356 46.536 46.536   
## 2 399 52.157 98.693   
## 3 2 0.261 98.954   
## 4 8 1.046 100.000   
## ──────────────────────────────────────────────────

# gender coding: 1 - male, 2- female, 3 - other, 4 - rather not disclose

# Planned Analysis - Main Analysis

## Manipulation check - ANOVA

#Cronbach's alpha of 3 raw items  
cleaned\_df %>% dplyr::select(starts\_with("ManiCheck") & !contains("mean")) %>% cronbach.alpha(standardized=TRUE,CI=TRUE)

##   
## Standardized Cronbach's alpha for the '.' data-set  
##   
## Items: 3  
## Sample units: 765  
## alpha: 0.901  
##   
## Bootstrap 95% CI based on 1000 samples  
## 2.5% 97.5%   
## 0.884 0.915

jmv::ANOVA(  
 formula = ManiCheck\_mean ~ condition,  
 data = cleaned\_df,  
 effectSize = "partEta",  
 homo = TRUE,  
 norm = TRUE,  
 postHoc = ~ condition,  
 postHocCorr = "holm",  
 postHocES = "d",  
 postHocEsCi = TRUE,  
 emmPlots = FALSE)

## ANOVA - ManiCheck\_mean   
## ──────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²p   
## ──────────────────────────────────────────────────────────────────────────────────────   
## condition 250.75 4 62.6866 29.634 < .00001 0.13492   
## Residuals 1607.70 760 2.1154   
## ──────────────────────────────────────────────────────────────────────────────────────   
##   
##

## ASSUMPTION CHECKS  
##   
## Homogeneity of Variances Test (Levene's)   
## ────────────────────────────────────────   
## F df1 df2 p   
## ────────────────────────────────────────   
## 9.1668 4 760 < .00001   
## ────────────────────────────────────────   
##   
##   
## Normality Test (Shapiro-Wilk)   
## ─────────────────────────────   
## Statistic p   
## ─────────────────────────────   
## 0.96964 < .00001   
## ─────────────────────────────   
##   
##   
## POST HOC TESTS  
##   
## Post Hoc Comparisons - condition   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## condition condition Mean Difference SE df t p-holm Cohen's d Lower Upper   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## Dissonance\_no\_write - Dissonance\_write -0.39142 0.16576 760.00 -2.3613 0.03749 -0.26912 -0.49326 -0.044977   
## - Negative -0.87235 0.16442 760.00 -5.3056 < .00001 -0.59979 -0.82375 -0.375820   
## - Neutral -1.31186 0.17578 760.00 -7.4630 < .00001 -0.90197 -1.14354 -0.660406   
## - Worthy -1.52307 0.15951 760.00 -9.5483 < .00001 -1.04719 -1.26885 -0.825528   
## Dissonance\_write - Negative -0.48093 0.16550 760.00 -2.9059 0.01507 -0.33067 -0.55467 -0.106665   
## - Neutral -0.92044 0.17679 760.00 -5.2063 < .00001 -0.63285 -0.87359 -0.392108   
## - Worthy -1.13165 0.16063 760.00 -7.0452 < .00001 -0.77807 -0.99838 -0.557755   
## Negative - Neutral -0.43951 0.17554 760.00 -2.5038 0.03749 -0.30218 -0.53960 -0.064770   
## - Worthy -0.65072 0.15924 760.00 -4.0864 0.00024 -0.44740 -0.66351 -0.231292   
## Neutral - Worthy -0.21121 0.17095 760.00 -1.2355 0.21702 -0.14522 -0.37607 0.085631   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## Note. Comparisons are based on estimated marginal means

# plot the APA style table   
ANOVA\_mani\_check <- lm(ManiCheck\_mean ~ condition, data = cleaned\_df)  
  
# plot ggstatsplot and save  
ggstatsplot::ggbetweenstats(  
 data = cleaned\_df,  
 y = ManiCheck\_mean,  
 x = condition,  
 originaltheme = TRUE,  
 ylab = "Manipulation Check",  
 xlab = "Conditions")

Diagram

Description automatically generated

apa.aov.table(ANOVA\_mani\_check, filename = "Manipulation check ANOVA.doc",table.number = 1)  
## Table 1   
## ANOVA results using ManiCheck\_mean as the dependent variable  
##   
## Predictor SS df MS F p partial\_eta2 CI\_90\_partial\_eta2  
## (Intercept) 17802.63 1 17802.63 8415.77 .000   
## condition 250.75 4 62.69 29.63 .000 .13 [.10, .17]  
## Error 1607.70 760 2.12   
##   
## Note: Values in square brackets indicate the bounds of the 90% confidence interval for partial eta-squared

ggsave(  
 "ManipulationCheck\_plot.png", plot = last\_plot(),width = 9, height = 5.5,dpi = 600)

## Study 1 - ANOVA

Study 1 DV1 - Likelihood of Hiring the canditate with ethically questionable behavior.

jmv::ANOVA(  
 formula = Exp1\_prob\_hiring ~ condition,  
 data = cleaned\_df,  
 effectSize = "partEta",  
 homo = TRUE,  
 norm = TRUE,  
 postHoc = ~ condition,  
 postHocCorr = "holm",  
 postHocES = "d",  
 postHocEsCi = TRUE,  
 emmPlots = FALSE)  
##   
## ANOVA - Exp1\_prob\_hiring   
## ──────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²p   
## ──────────────────────────────────────────────────────────────────────────────────────   
## condition 5.2944 4 1.3236 0.44968 0.77267 0.00236   
## Residuals 2236.9749 760 2.9434   
## ──────────────────────────────────────────────────────────────────────────────────────   
##   
##   
## ASSUMPTION CHECKS  
##   
## Homogeneity of Variances Test (Levene's)   
## ────────────────────────────────────────   
## F df1 df2 p   
## ────────────────────────────────────────   
## 1.4838 4 760 0.20520   
## ────────────────────────────────────────   
##   
##   
## Normality Test (Shapiro-Wilk)   
## ─────────────────────────────   
## Statistic p   
## ─────────────────────────────   
## 0.75195 < .00001   
## ─────────────────────────────   
##   
## Post Hoc Comparisons - condition   
## ───────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## condition condition Mean Difference SE df t p-holm Cohen's d Lower Upper   
## ───────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## Dissonance\_no\_write - Dissonance\_write 0.078441 0.19553 760.00 0.4011712 1.00000 0.045722 -0.178024 0.26947   
## - Negative 0.078148 0.19395 760.00 0.4029340 1.00000 0.045551 -0.176383 0.26748   
## - Neutral 0.261034 0.20735 760.00 1.2589057 1.00000 0.152151 -0.085231 0.38953   
## - Worthy 0.038894 0.18816 760.00 0.2067067 1.00000 0.022670 -0.192631 0.23797   
## Dissonance\_write - Negative -2.9333e-4 0.19522 760.00 -0.0015025 1.00000 -1.7097e-4 -0.223553 0.22321   
## - Neutral 0.182593 0.20854 760.00 0.8755606 1.00000 0.106429 -0.132255 0.34511   
## - Worthy -0.039548 0.18947 760.00 -0.2087235 1.00000 -0.023051 -0.239858 0.19375   
## Negative - Neutral 0.182886 0.20706 760.00 0.8832518 1.00000 0.106600 -0.130387 0.34359   
## - Worthy -0.039254 0.18784 760.00 -0.2089780 1.00000 -0.022880 -0.237816 0.19206   
## Neutral - Worthy -0.222140 0.20165 760.00 -1.1016230 1.00000 -0.129480 -0.360306 0.10135   
## ───────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## Note. Comparisons are based on estimated marginal means

ANOVA\_Study1\_DV1 <- lm(Exp1\_prob\_hiring ~ condition, data = cleaned\_df)  
  
# plot ggstatsplot and save  
ggstatsplot::ggbetweenstats(  
 data = cleaned\_df,  
 y = Exp1\_prob\_hiring, x = condition, originaltheme = TRUE,  
 ylab = "Study 1 Likelihood of hiring", xlab = "Conditions")

A picture containing text, sky, map, traffic

Description automatically generated

apa.aov.table(ANOVA\_Study1\_DV1, filename = "Exp1 DV1 ANOVA.doc",table.number = 2)

## Table 2   
## ANOVA results using Exp1\_prob\_hiring as the dependent variable  
##   
## Predictor SS df MS F p partial\_eta2 CI\_90\_partial\_eta2  
## (Intercept) 3574.68 1 3574.68 1214.48 .000   
## condition 5.29 4 1.32 0.45 .773 .00 [.00, .01]  
## Error 2236.97 760 2.94   
##   
## Note: Values in square brackets indicate the bounds of the 90% confidence interval for partial eta-squared

ggsave(  
 "Study1DV1Hiring.png", plot = last\_plot(), width = 9, height = 5.5, dpi = 600)

Study 1 DV2 - Perceived Loyalty to company if the candidate is hired.

jmv::ANOVA(  
 formula = Exp1\_loyalty ~ condition,  
 data = cleaned\_df,  
 effectSize = "partEta",  
 homo = TRUE,  
 norm = TRUE,  
 postHoc = ~ condition,  
 postHocCorr = "holm",  
 postHocES = "d",  
 postHocEsCi = TRUE,  
 emmPlots = FALSE)

## ANOVA - Exp1\_loyalty   
## ──────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²p   
## ──────────────────────────────────────────────────────────────────────────────────────   
## condition 7.0417 4 1.7604 0.69176 0.59778 0.00363   
## Residuals 1934.0747 760 2.5448   
## ──────────────────────────────────────────────────────────────────────────────────────   
##   
## ASSUMPTION CHECKS  
##   
## Homogeneity of Variances Test (Levene's)   
## ────────────────────────────────────────   
## F df1 df2 p   
## ────────────────────────────────────────   
## 1.9986 4 760 0.09294   
## ────────────────────────────────────────   
##   
##   
## Normality Test (Shapiro-Wilk)   
## ─────────────────────────────   
## Statistic p   
## ─────────────────────────────   
## 0.79589 < .00001   
## ─────────────────────────────   
##   
##

## Post Hoc Comparisons - condition   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## condition condition Mean Difference SE df t p-holm Cohen's d Lower Upper   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## Dissonance\_no\_write - Dissonance\_write 0.026147 0.18181 760.00 0.14381 1.00000 0.016391 -0.207345 0.240126   
## - Negative -0.062061 0.18034 760.00 -0.34414 1.00000 -0.038904 -0.260834 0.183027   
## - Neutral 0.231820 0.19280 760.00 1.20238 1.00000 0.145319 -0.092052 0.382689   
## - Worthy -0.030107 0.17496 760.00 -0.17208 1.00000 -0.018873 -0.234173 0.196428   
## Dissonance\_write - Negative -0.088208 0.18153 760.00 -0.48593 1.00000 -0.055294 -0.278693 0.168105   
## - Neutral 0.205673 0.19391 760.00 1.06065 1.00000 0.128928 -0.109784 0.367640   
## - Worthy -0.056254 0.17618 760.00 -0.31930 1.00000 -0.035263 -0.252074 0.181547   
## Negative - Neutral 0.293881 0.19253 760.00 1.52640 1.00000 0.184222 -0.052885 0.421330   
## - Worthy 0.031954 0.17466 760.00 0.18295 1.00000 0.020031 -0.194904 0.234966   
## Neutral - Worthy -0.261927 0.18750 760.00 -1.39694 1.00000 -0.164191 -0.395073 0.066691   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## Note. Comparisons are based on estimated marginal means

ANOVA\_exp1\_DV2 <- lm(Exp1\_loyalty ~ condition, data = cleaned\_df)  
  
# plot ggstatsplot and save  
ggstatsplot::ggbetweenstats(  
 data = cleaned\_df,  
 y = Exp1\_loyalty,  
 x = condition,  
 originaltheme = TRUE,  
 ylab = "Study 1 Perceived Loyalty",  
 xlab = "Conditions")

Chart, box and whisker chart

Description automatically generated

apa.aov.table(ANOVA\_exp1\_DV2, filename = "Exp1 DV2 ANOVA.doc",table.number = 3)

##   
## Table 3   
## ANOVA results using Exp1\_loyalty as the dependent variable  
##   
## Predictor SS df MS F p partial\_eta2 CI\_90\_partial\_eta2  
## (Intercept) 3725.01 1 3725.01 1463.75 .000   
## condition 7.04 4 1.76 0.69 .598 .00 [.00, .01]  
## Error 1934.07 760 2.54   
##   
## Note: Values in square brackets indicate the bounds of the 90% confidence interval for partial eta-squared

ggsave(  
 "Study1DV2Loyalty.png", plot = last\_plot(),  
 width = 9, height = 5.5, dpi = 600)

Study 1 DV3 - Perceived honesty of the candidate.

jmv::ANOVA(  
 formula = Exp1\_honesty ~ condition,  
 data = cleaned\_df,  
 effectSize = "partEta",  
 homo = TRUE,  
 norm = TRUE,  
 postHoc = ~ condition,  
 postHocCorr = "holm",  
 postHocES = "d",  
 postHocEsCi = TRUE,  
 emmPlots = FALSE)

## ANOVA - Exp1\_honesty   
## ──────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²p   
## ──────────────────────────────────────────────────────────────────────────────────────   
## condition 2.8256 4 0.70641 0.24632 0.91192 0.00129   
## Residuals 2179.5273 760 2.86780   
## ──────────────────────────────────────────────────────────────────────────────────────   
##   
## ASSUMPTION CHECKS  
##   
## Homogeneity of Variances Test (Levene's)   
## ────────────────────────────────────────   
## F df1 df2 p   
## ────────────────────────────────────────   
## 0.87954 4 760 0.47565   
## ────────────────────────────────────────   
##   
##   
## Normality Test (Shapiro-Wilk)   
## ─────────────────────────────   
## Statistic p   
## ─────────────────────────────   
## 0.81591 < .00001   
## ─────────────────────────────   
##   
##

## Post Hoc Comparisons - condition   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## condition condition Mean Difference SE df t p-holm Cohen's d Lower Upper   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## Dissonance\_no\_write - Dissonance\_write 0.1592443 0.19300 760.00 0.825084 1.00000 0.0940350 -0.12975 0.31782   
## - Negative 0.0920301 0.19144 760.00 0.480723 1.00000 0.0543445 -0.16759 0.27628   
## - Neutral 0.0060950 0.20467 760.00 0.029780 1.00000 0.0035991 -0.23366 0.24086   
## - Worthy 0.0217517 0.18573 760.00 0.117116 1.00000 0.0128445 -0.20246 0.22814   
## Dissonance\_write - Negative -0.0672142 0.19270 760.00 -0.348802 1.00000 -0.0396905 -0.26308 0.18370   
## - Neutral -0.1531493 0.20585 760.00 -0.743990 1.00000 -0.0904358 -0.32910 0.14823   
## - Worthy -0.1374926 0.18702 760.00 -0.735157 1.00000 -0.0811905 -0.29803 0.13565   
## Negative - Neutral -0.0859351 0.20438 760.00 -0.420459 1.00000 -0.0507453 -0.28769 0.18619   
## - Worthy -0.0702784 0.18541 760.00 -0.379040 1.00000 -0.0414999 -0.25644 0.17344   
## Neutral - Worthy 0.0156567 0.19904 760.00 0.078660 1.00000 0.0092454 -0.22149 0.23998   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## Note. Comparisons are based on estimated marginal means

ANOVA\_exp1\_DV3 <- lm(Exp1\_honesty ~ condition, data = cleaned\_df)  
  
# plot ggstatsplot and save  
ggstatsplot::ggbetweenstats(  
 data = cleaned\_df,  
 y = Exp1\_honesty,  
 x = condition,  
 originaltheme = TRUE,  
 ylab = "Study 1 Perceived Honesty",  
 xlab = "Conditions")

Chart, diagram

Description automatically generated

apa.aov.table(ANOVA\_exp1\_DV3, filename = "Exp1 DV3 ANOVA.doc",table.number = 4)

##   
##   
## Table 4   
##   
## ANOVA results using Exp1\_honesty as the dependent variable  
##   
##   
## Predictor SS df MS F p partial\_eta2 CI\_90\_partial\_eta2  
## (Intercept) 4315.17 1 4315.17 1504.70 .000   
## condition 2.83 4 0.71 0.25 .912 .00 [.00, .00]  
## Error 2179.53 760 2.87   
##   
## Note: Values in square brackets indicate the bounds of the 90% confidence interval for partial eta-squared

ggsave(  
 "Study1DV3Honesty.png", plot = last\_plot(),  
 width = 9, height = 5.5, dpi = 600)

## Study 2 - Repeated ANOVA

Pivot to long format for ggstatsplot.

# add a column of unique participant ID  
cleaned\_df <- dplyr::mutate(cleaned\_df, ID = row\_number())  
  
#pivot longer  
df\_s2DV1 <- pivot\_longer(cleaned\_df, cols = c(Exp2\_S1\_seen\_wrong, Exp2\_S2\_seen\_wrong\_T2),names\_to = "scenario",values\_to = "Exp2\_seen\_wrong")   
df\_s2DV2 <- pivot\_longer(cleaned\_df, cols = c(Exp2\_S1\_self\_action, Exp2\_S2\_self\_action\_T2),names\_to = "scenario",values\_to = "Exp2\_self\_action")   
df\_s2DV3<- pivot\_longer(cleaned\_df, cols = c(Exp2\_S1\_guide\_other, Exp2\_S2\_guide\_other\_T2),names\_to = "scenario",values\_to = "Exp2\_guide\_other")   
  
# combine three DVs  
df\_s2long <- df\_s2DV1 %>% dplyr::select("ID","condition","scenario","Exp2\_seen\_wrong") %>% dplyr::mutate(Exp2\_seen\_wrong = as.numeric(Exp2\_seen\_wrong)) %>%  
 cbind(Exp2\_self\_action = as.numeric(df\_s2DV2$Exp2\_self\_action)) %>%  
 cbind(Exp2\_guide\_other = as.numeric(df\_s2DV3$Exp2\_guide\_other))  
  
# rename the scenario variable for plotting   
df\_s2long <- df\_s2long %>%   
 mutate(scenario = case\_when(  
 scenario == "Exp2\_S1\_seen\_wrong" ~ "Scenario 1 Leaking interview questions",  
 scenario == "Exp2\_S2\_seen\_wrong\_T2" ~ "Scenario 2 Changing used product"))

Study 2 DV2 - Perception of suggested actions as wrong.

jmv::anovaRM(  
 data = cleaned\_df,  
 rm = list(  
 list(  
 label="scenario",  
 levels=c("S1", "S2"))),  
 rmCells = list(  
 list(  
 measure="Exp2\_S1\_seen\_wrong",  
 cell="S1"),  
 list(  
 measure="Exp2\_S2\_seen\_wrong\_T2",  
 cell="S2")),  
 bs = condition,  
 effectSize = "partEta",  
 rmTerms = ~ scenario,  
 bsTerms = ~ condition,  
 leveneTest = TRUE,  
 postHoc = list(  
 "condition"),  
 postHocCorr = "bonf",   
 #emMeans = ~ scenario:condition,  
 emmPlots = FALSE,  
 emmTables = TRUE)

##   
## REPEATED MEASURES ANOVA  
##   
## Within Subjects Effects   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²-p   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## scenario 2700.2646 1 2700.2646 853.74003 < .00001 0.52904   
## scenario:condition 4.3100 4 1.0775 0.34067 0.85055 0.00179   
## Residual 2403.7776 760 3.1629   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## Note. Type 3 Sums of Squares  
##   
##

## Between Subjects Effects   
## ─────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²-p   
## ─────────────────────────────────────────────────────────────────────────────────────   
## condition 69.952 4 17.4881 2.4543 0.04454 0.01275   
## Residual 5415.468 760 7.1256   
## ─────────────────────────────────────────────────────────────────────────────────────   
## Note. Type 3 Sums of Squares  
##   
##   
## ASSUMPTIONS  
##   
## Homogeneity of Variances Test (Levene's)   
## ─────────────────────────────────────────────────────────────   
## F df1 df2 p   
## ─────────────────────────────────────────────────────────────   
## Exp2\_S1\_seen\_wrong 1.10681 4 760 0.35212   
## Exp2\_S2\_seen\_wrong\_T2 0.52831 4 760 0.71497   
## ─────────────────────────────────────────────────────────────   
##   
##   
## POST HOC TESTS  
##   
## Post Hoc Comparisons - condition   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## condition condition Mean Difference SE df t p-bonferroni   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## Dissonance\_no\_write - Dissonance\_write 0.0085189 0.21512 760.00 0.039600 1.00000   
## - Negative -0.4534950 0.21338 760.00 -2.125281 0.33885   
## - Neutral -0.4856032 0.22813 760.00 -2.128654 0.33604   
## - Worthy -0.3504033 0.20701 760.00 -1.692665 0.90929   
## Dissonance\_write - Negative -0.4620139 0.21478 760.00 -2.151054 0.31787   
## - Neutral -0.4941221 0.22944 760.00 -2.153597 0.31586   
## - Worthy -0.3589222 0.20846 760.00 -1.721785 0.85515   
## Negative - Neutral -0.0321082 0.22781 760.00 -0.140944 1.00000   
## - Worthy 0.1030917 0.20666 760.00 0.498844 1.00000   
## Neutral - Worthy 0.1351999 0.22185 760.00 0.609410 1.00000   
## ─────────────────────────────────────────────────────────────────────────────────────────────────────────────────────

# ggstatsplot for condition comparisons in between-subjects designs repeated across all levels of a grouping variable.  
# link to tutorial: https://indrajeetpatil.github.io/ggstatsplot/reference/grouped\_ggbetweenstats.html  
ggstatsplot::grouped\_ggbetweenstats(  
 data = df\_s2long,  
 y = Exp2\_seen\_wrong,x = condition,  
 grouping.var = scenario,  
 ylab = "Perceived unethicality",xlab = "Conditions")

Diagram, box and whisker chart

Description automatically generated

# manually calculate CI for effect size  
# sample code from https://dstanley4.github.io/apaTables/reference/get.ci.partial.eta.squared.html  
get.ci.partial.eta.squared(2.45, 4, 760, conf.level = 0.9)

## $LL  
## [1] 0.0001467  
## $UL  
## [1] 0.024366

ggsave(  
 "Study2DV1SeenWrong.png", plot = last\_plot(),  
 width = 11.8, height = 6, dpi = 600)

Study 2 DV2 - Likelihood of the self conducting similar behavior.

jmv::anovaRM(  
 data = cleaned\_df,  
 rm = list(  
 list(  
 label="scenario",  
 levels=c("S1", "S2"))),  
 rmCells = list(  
 list(  
 measure="Exp2\_S1\_self\_action",  
 cell="S1"),  
 list(  
 measure="Exp2\_S2\_self\_action\_T2",  
 cell="S2")),  
 bs = condition,  
 effectSize = "partEta",  
 rmTerms = ~ scenario,  
 bsTerms = ~ condition,  
 leveneTest = TRUE,  
 postHoc = list(  
 "condition"),  
 postHocCorr = "bonf",   
 #emMeans = ~ scenario:condition,  
 emmPlots = FALSE,  
 emmTables = TRUE)

##   
## REPEATED MEASURES ANOVA  
##   
## Within Subjects Effects   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²-p   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## scenario 1031.3524 1 1031.35236 291.00134 < .00001 0.27688   
## scenario:condition 3.6513 4 0.91282 0.25756 0.90508 0.00135   
## Residual 2693.5540 760 3.54415   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## Note. Type 3 Sums of Squares  
##   
##

## Between Subjects Effects   
## ─────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²-p   
## ─────────────────────────────────────────────────────────────────────────────────────   
## condition 134.46 4 33.6145 4.2851 0.00196 0.02206   
## Residual 5961.83 760 7.8445   
## ─────────────────────────────────────────────────────────────────────────────────────   
## Note. Type 3 Sums of Squares  
##   
##   
## ASSUMPTIONS  
##   
## Homogeneity of Variances Test (Levene's)   
## ─────────────────────────────────────────────────────────────   
## F df1 df2 p   
## ─────────────────────────────────────────────────────────────   
## Exp2\_S1\_self\_action 6.8193 4 760 0.00002   
## Exp2\_S2\_self\_action\_T2 3.0229 4 760 0.01726   
## ─────────────────────────────────────────────────────────────   
##   
##   
## POST HOC TESTS  
##   
## Post Hoc Comparisons - condition   
## ────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## condition condition Mean Difference SE df t p-bonferroni   
## ────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## Dissonance\_no\_write - Dissonance\_write -0.236673 0.22571 760.00 -1.04855 1.00000   
## - Negative 0.413176 0.22389 760.00 1.84547 0.65358   
## - Neutral 0.557114 0.23936 760.00 2.32753 0.20199   
## - Worthy 0.436005 0.21720 760.00 2.00735 0.45066   
## Dissonance\_write - Negative 0.649849 0.22536 760.00 2.88361 0.04042   
## - Neutral 0.793788 0.24074 760.00 3.29733 0.01021   
## - Worthy 0.672679 0.21872 760.00 3.07549 0.02177   
## Negative - Neutral 0.143939 0.23902 760.00 0.60219 1.00000   
## - Worthy 0.022830 0.21684 760.00 0.10529 1.00000   
## Neutral - Worthy -0.121109 0.23278 760.00 -0.52028 1.00000   
## ────────────────────────────────────────────────────────────────────────────────────────────────────────────────────

ggstatsplot::grouped\_ggbetweenstats(  
 data = df\_s2long,  
 y = Exp2\_self\_action,  
 x = condition,  
 grouping.var = scenario,  
 ylab = "Likelihood of the self conducting suggested behavior",  
 xlab = "Conditions"  
 )

Diagram

Description automatically generated

# manually calculate CI for effect size  
# sample code from https://dstanley4.github.io/apaTables/reference/get.ci.partial.eta.squared.html  
get.ci.partial.eta.squared(4.29, 4, 760, conf.level = 0.9)

## $LL  
## [1] 0.0050185  
##   
## $UL  
## [1] 0.037765

ggsave(  
 "Study2DV2SelfAction.png", plot = last\_plot(),  
 width = 11.8, height = 6, dpi = 600)

Study 2 DV3 - Likelihood of advising others to perform unethical but self-benefiting behavior.

jmv::anovaRM(  
 data = cleaned\_df,  
 rm = list(  
 list(  
 label="scenario",  
 levels=c("S1", "S2"))),  
 rmCells = list(  
 list(  
 measure="Exp2\_S1\_guide\_other",  
 cell="S1"),  
 list(  
 measure="Exp2\_S2\_guide\_other\_T2",  
 cell="S2")),  
 bs = condition,  
 effectSize = "partEta",  
 rmTerms = ~ scenario,  
 bsTerms = ~ condition,  
 leveneTest = TRUE,  
 postHoc = list(  
 "condition"),  
 postHocCorr = "bonf",   
 #emMeans = ~ scenario:condition,  
 emmPlots = FALSE,  
 emmTables = TRUE)

##   
## REPEATED MEASURES ANOVA  
##   
## Within Subjects Effects   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²-p   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## scenario 932.3630 1 932.3630 308.17061 < .00001 0.28850   
## scenario:condition 7.8705 4 1.9676 0.65035 0.62676 0.00341   
## Residual 2299.3622 760 3.0255   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## Note. Type 3 Sums of Squares  
##   
##

## Between Subjects Effects   
## ─────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²-p   
## ─────────────────────────────────────────────────────────────────────────────────────   
## condition 112.18 4 28.0459 3.9985 0.00323 0.02061   
## Residual 5330.75 760 7.0141   
## ─────────────────────────────────────────────────────────────────────────────────────   
## Note. Type 3 Sums of Squares  
##   
##   
## ASSUMPTIONS  
##   
## Homogeneity of Variances Test (Levene's)   
## ─────────────────────────────────────────────────────────────   
## F df1 df2 p   
## ─────────────────────────────────────────────────────────────   
## Exp2\_S1\_guide\_other 4.8288 4 760 0.00075   
## Exp2\_S2\_guide\_other\_T2 2.7456 4 760 0.02750   
## ─────────────────────────────────────────────────────────────   
##   
##   
## POST HOC TESTS  
##   
## Post Hoc Comparisons - condition   
## ────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## condition condition Mean Difference SE df t p-bonferroni   
## ────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## Dissonance\_no\_write - Dissonance\_write -0.17038 0.21343 760.00 -0.79827 1.00000   
## - Negative 0.26894 0.21171 760.00 1.27037 1.00000   
## - Neutral 0.58092 0.22634 760.00 2.56662 0.10460   
## - Worthy 0.44627 0.20539 760.00 2.17282 0.30102   
## Dissonance\_write - Negative 0.43932 0.21310 760.00 2.06160 0.39586   
## - Neutral 0.75129 0.22764 760.00 3.30038 0.01011   
## - Worthy 0.61665 0.20682 760.00 2.98153 0.02960   
## Negative - Neutral 0.31197 0.22602 760.00 1.38029 1.00000   
## - Worthy 0.17732 0.20504 760.00 0.86483 1.00000   
## Neutral - Worthy -0.13465 0.22011 760.00 -0.61172 1.00000   
## ────────────────────────────────────────────────────────────────────────────────────────────────────────────────────

ggstatsplot::grouped\_ggbetweenstats(  
 data = df\_s2long,  
 y = Exp2\_guide\_other,x = condition,  
 grouping.var = scenario,  
 ylab = "Likelihood of advising others to behave unethically",  
 xlab = "Conditions")

Diagram, box and whisker chart

Description automatically generated

# manually calculate CI for effect size  
# sample code from https://dstanley4.github.io/apaTables/reference/get.ci.partial.eta.squared.html  
get.ci.partial.eta.squared(4.00, 4, 760, conf.level = 0.9)

## $LL  
## [1] 0.0041676  
## $UL  
## [1] 0.035755

ggsave("Study2DV3AdviseOthers.png", plot = last\_plot(),width = 11.8, height = 6, dpi = 600)

## Study 3 - MASC

Calculate t tests or ANOVA according to original reporting. T-test sample code from <https://rempsyc.remi-theriault.com/articles/t-test.html>

# Overall measurements for all participants  
  
## MASC set 1  
  
#Cronbach alpha of 8 raw items  
cleaned\_df %>% dplyr::select(starts\_with("MASC\_set1") & !contains("mean")) %>% cronbach.alpha(standardized=TRUE,CI=TRUE)

## Standardized Cronbach's alpha for the '.' data-set  
##   
## Items: 8  
## Sample units: 765  
## alpha: 0.888  
##   
## Bootstrap 95% CI based on 1000 samples  
## 2.5% 97.5%   
## 0.875 0.900

## MASC set 2  
#Cronbach alpha of 6 raw items  
cleaned\_df %>% dplyr::select(starts\_with("MASC\_set2") & !contains("mean")) %>% cronbach.alpha(standardized=TRUE,CI=TRUE)

##   
## Standardized Cronbach's alpha for the '.' data-set  
##   
## Items: 6  
## Sample units: 765  
## alpha: 0.604  
##   
## Bootstrap 95% CI based on 1000 samples  
## 2.5% 97.5%   
## 0.545 0.658

# t-test for set 1-3  
Study3\_main <- ethi\_dis\_write %>%   
 rbind(con\_worthy)  
  
nice\_t\_test(data = Study3\_main,  
 response = c("MASC\_set1\_mean","MASC\_set2\_mean","MASC\_set3\_mean"),  
 group = "condition",  
 warning = FALSE) -> MASC\_t\_tests  
# reformat results  
MASC\_t\_table <- nice\_table(MASC\_t\_tests)  
MASC\_t\_table

| Dependent Variable | *t* | *df* | *p* | *d* | 95% CI |
| --- | --- | --- | --- | --- | --- |
| MASC\_set1\_mean | 0.39 | 326.21 | .697 | 0.04 | [-0.17, 0.26] |
| MASC\_set2\_mean | 0.14 | 324.75 | .892 | 0.01 | [-0.20, 0.23] |
| MASC\_set3\_mean | 0.39 | 315.60 | .699 | 0.04 | [-0.17, 0.26] |

save\_as\_docx(MASC\_t\_table,path = "MASC\_t\_tests.docx")

# using only conditions in original study  
  
## MASC set 3  
jmv::ANOVA(  
 formula = MASC\_set3\_mean ~ condition,  
 data = Study3\_main,  
 effectSize = "partEta",  
 homo = TRUE,  
 norm = TRUE,  
 postHoc = ~ condition,  
 postHocCorr = "holm",  
 postHocES = "d",  
 postHocEsCi = TRUE,  
 emmPlots = FALSE)

## ANOVA - MASC\_set3\_mean   
## ──────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²p   
## ──────────────────────────────────────────────────────────────────────────────────────   
## condition 0.27397 1 0.27397 0.15046 0.69835 0.00046   
## Residuals 597.24800 328 1.82088   
## ──────────────────────────────────────────────────────────────────────────────────────   
##   
## ASSUMPTION CHECKS  
##   
## Homogeneity of Variances Test (Levene's)   
## ────────────────────────────────────────   
## F df1 df2 p   
## ────────────────────────────────────────   
## 0.48436 1 328 0.48695   
## ────────────────────────────────────────   
##   
##   
## Normality Test (Shapiro-Wilk)   
## ─────────────────────────────   
## Statistic p   
## ─────────────────────────────   
## 0.94300 < .00001   
## ─────────────────────────────   
##   
##   
##   
## Post Hoc Comparisons - condition   
## ────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## condition condition Mean Difference SE df t p-holm Cohen's d Lower Upper   
## ────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## Dissonance\_write - Worthy 0.057806 0.14903 328.00 0.38789 0.69835 0.042838 -0.17445 0.26012   
## ────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────   
## Note. Comparisons are based on estimated marginal means

ANOVA\_study3\_MASC3 <- lm(MASC\_set3\_mean ~ condition, data = Study3\_main)  
  
ggstatsplot::ggbetweenstats(  
 data = Study3\_main,  
 y = MASC\_set3\_mean,  
 x = condition,  
 originaltheme = TRUE,  
 ylab = "MASC - Predict action in dillemmas",  
 xlab = "Conditions",  
 title = "Multi Aspect Scale of Cheating (MASC) - Likelihood of actors to behave dishonestly in dilemmas")

Diagram

Description automatically generated

apa.aov.table(ANOVA\_study3\_MASC3, filename = "Exp3 MASC set3 ANOVA.doc",table.number = 7)

##   
## Table 7   
##   
## ANOVA results using MASC\_set3\_mean as the dependent variable  
##   
##   
## Predictor SS df MS F p partial\_eta2 CI\_90\_partial\_eta2  
## (Intercept) 8716.03 1 8716.03 4786.72 .000   
## condition 0.27 1 0.27 0.15 .698 .00 [.00, .01]  
## Error 597.25 328 1.82   
##   
## Note: Values in square brackets indicate the bounds of the 90% confidence interval for partial eta-squared

ggsave(  
 "MASC3\_dilemmas\_plot.png", plot = last\_plot(),   
 width = 9, height = 5.5, dpi = 600)

## Study 3 - BIDR

Calculate ANOVA, generate APA style ANOVA table, and plot ggstatsplot. Calculate t tests according to original study.

nice\_t\_test(data = Study3\_main,  
 response = c("BIDR\_self\_deceptive","BIDR\_impre\_manage"),  
 group = "condition",  
 warning = FALSE) -> BIDR\_t\_tests  
# reformat results  
BIDR\_t\_table <- nice\_table(BIDR\_t\_tests)  
BIDR\_t\_table

| Dependent Variable | *t* | *df* | *p* | *d* | 95% CI |
| --- | --- | --- | --- | --- | --- |
| BIDR\_self\_deceptive | 2.47 | 314.16 | .014 | 0.27 | [0.06, 0.49] |
| BIDR\_impre\_manage | -1.47 | 326.01 | .144 | -0.16 | [-0.38, 0.06] |

save\_as\_docx(BIDR\_t\_table,path = "BIDR\_t\_tests.docx")

# Robustness check - planned contrasts for recall conditions

## Study 1 - planned contrast for ANOVA

contrast1 = c(3, 3,-2,-2,-2)  
contrast2 = c(1,-1, 0, 0, 0)  
# comprehensive data  
cleaned\_df$condition=factor(cleaned\_df$condition)  
contrasts(cleaned\_df$condition) = cbind(contrast1, contrast2)  
  
#Check  
contrasts(cleaned\_df$condition)

## contrast1 contrast2   
## Dissonance\_no\_write 3 1 -0.000000000000000041633  
## Dissonance\_write 3 -1 -0.000000000000000026743  
## Negative -2 0 -0.577350269189625731059  
## Neutral -2 0 0.788675134594812865529  
## Worthy -2 0 -0.211324865405187106715  
##   
## Dissonance\_no\_write -0.000000000000000055511  
## Dissonance\_write -0.000000000000000017154  
## Negative -0.577350269189625731059  
## Neutral -0.211324865405187134471  
## Worthy 0.788675134594812865529

# ANOVA command  
# result in the form of regression  
#summary.lm(aov1)  
  
ANOVA\_mani\_check <- lm(ManiCheck\_mean ~ condition, data = cleaned\_df)  
summary.lm(ANOVA\_mani\_check)

##   
## Call:  
## lm(formula = ManiCheck\_mean ~ condition, data = cleaned\_df)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -4.564 -0.913 0.293 1.087 2.959   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.8603 0.0530 91.74 <0.0000000000000002 \*\*\*  
## conditioncontrast1 -0.2080 0.0216 -9.65 <0.0000000000000002 \*\*\*  
## conditioncontrast2 -0.1957 0.0829 -2.36 0.0185 \*   
## condition 0.2091 0.1257 1.66 0.0967 .   
## condition 0.4203 0.1125 3.74 0.0002 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 1.45 on 760 degrees of freedom  
## Multiple R-squared: 0.135, Adjusted R-squared: 0.13   
## F-statistic: 29.6 on 4 and 760 DF, p-value: <0.0000000000000002

ANOVA\_exp1\_DV1 <- lm(Exp1\_prob\_hiring ~ condition, data = cleaned\_df)  
summary.lm(ANOVA\_exp1\_DV1)

##   
## Call:  
## lm(formula = Exp1\_prob\_hiring ~ condition, data = cleaned\_df)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -1.27 -1.19 -1.01 0.77 6.99   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.1779 0.0625 34.85 <0.0000000000000002 \*\*\*  
## conditioncontrast1 0.0174 0.0254 0.68 0.49   
## conditioncontrast2 0.0392 0.0978 0.40 0.69   
## condition -0.1525 0.1483 -1.03 0.30   
## condition 0.0696 0.1327 0.52 0.60   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 1.72 on 760 degrees of freedom  
## Multiple R-squared: 0.00236, Adjusted R-squared: -0.00289   
## F-statistic: 0.45 on 4 and 760 DF, p-value: 0.773

ANOVA\_exp1\_DV2 <- lm(Exp1\_loyalty ~ condition, data = cleaned\_df)  
summary.lm(ANOVA\_exp1\_DV2)

##   
## Call:  
## lm(formula = Exp1\_loyalty ~ condition, data = cleaned\_df)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -1.318 -1.256 -0.287 0.713 6.975   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.2233 0.0581 38.26 <0.0000000000000002 \*\*\*  
## conditioncontrast1 0.0067 0.0236 0.28 0.78   
## conditioncontrast2 0.0131 0.0909 0.14 0.89   
## condition -0.2250 0.1379 -1.63 0.10   
## condition 0.0369 0.1234 0.30 0.76   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 1.6 on 760 degrees of freedom  
## Multiple R-squared: 0.00363, Adjusted R-squared: -0.00162   
## F-statistic: 0.692 on 4 and 760 DF, p-value: 0.598

ANOVA\_exp1\_DV3 <- lm(Exp1\_honesty ~ condition, data = cleaned\_df)  
summary.lm(ANOVA\_exp1\_DV3)

##   
## Call:  
## lm(formula = Exp1\_honesty ~ condition, data = cleaned\_df)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -1.449 -1.357 -0.427 0.643 6.573   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.39289 0.06169 38.79 <0.0000000000000002 \*\*\*  
## conditioncontrast1 -0.00793 0.02510 -0.32 0.75   
## conditioncontrast2 0.07962 0.09650 0.83 0.41   
## condition 0.05292 0.14639 0.36 0.72   
## condition 0.03727 0.13100 0.28 0.78   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 1.69 on 760 degrees of freedom  
## Multiple R-squared: 0.00129, Adjusted R-squared: -0.00396   
## F-statistic: 0.246 on 4 and 760 DF, p-value: 0.912

ANOVA\_exp3\_MASC1 <- lm(MASC\_set1\_mean ~ condition, data = cleaned\_df)  
summary.lm(ANOVA\_exp3\_MASC1)

##   
## Call:  
## lm(formula = MASC\_set1\_mean ~ condition, data = cleaned\_df)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -1.2636 -0.5218 0.0407 0.5115 1.8109   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.97466 0.02510 158.34 <0.0000000000000002 \*\*\*  
## conditioncontrast1 0.00880 0.01021 0.86 0.39   
## conditioncontrast2 0.01257 0.03927 0.32 0.75   
## condition 0.02236 0.05957 0.38 0.71   
## condition 0.00878 0.05330 0.16 0.87   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 0.689 on 760 degrees of freedom  
## Multiple R-squared: 0.0014, Adjusted R-squared: -0.00385   
## F-statistic: 0.267 on 4 and 760 DF, p-value: 0.899

ANOVA\_exp3\_MASC2 <- lm(MASC\_set2\_mean ~ condition, data = cleaned\_df)  
summary.lm(ANOVA\_exp3\_MASC2)

##   
## Call:  
## lm(formula = MASC\_set2\_mean ~ condition, data = cleaned\_df)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -1.6837 -0.2692 -0.0171 0.2767 1.4230   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.88004 0.01715 226.19 <0.0000000000000002 \*\*\*  
## conditioncontrast1 -0.00176 0.00698 -0.25 0.801   
## conditioncontrast2 -0.02218 0.02683 -0.83 0.409   
## condition 0.07090 0.04071 1.74 0.082 .   
## condition 0.02714 0.03643 0.74 0.457   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 0.471 on 760 degrees of freedom  
## Multiple R-squared: 0.00572, Adjusted R-squared: 0.000483   
## F-statistic: 1.09 on 4 and 760 DF, p-value: 0.359

ANOVA\_exp3\_MASC3 <- lm(MASC\_set3\_mean ~ condition, data = cleaned\_df)  
summary.lm(ANOVA\_exp3\_MASC3)

##   
## Call:  
## lm(formula = MASC\_set3\_mean ~ condition, data = cleaned\_df)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -4.321 -0.971 0.179 1.179 1.874   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.25934 0.04808 109.38 <0.0000000000000002 \*\*\*  
## conditioncontrast1 -0.00233 0.01956 -0.12 0.905   
## conditioncontrast2 0.06815 0.07522 0.91 0.365   
## condition 0.23284 0.11410 2.04 0.042 \*   
## condition -0.11207 0.10211 -1.10 0.273   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 1.32 on 760 degrees of freedom  
## Multiple R-squared: 0.00795, Adjusted R-squared: 0.00272   
## F-statistic: 1.52 on 4 and 760 DF, p-value: 0.194

ANOVA\_exp3\_BIDR1 <- lm(BIDR\_self\_deceptive ~ condition, data = cleaned\_df)  
summary.lm(ANOVA\_exp3\_BIDR1)

##   
## Call:  
## lm(formula = BIDR\_self\_deceptive ~ condition, data = cleaned\_df)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -4.250 -2.372 -0.388 1.628 13.628   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.5814 0.1132 31.64 <0.0000000000000002 \*\*\*  
## conditioncontrast1 0.0765 0.0461 1.66 0.097 .   
## conditioncontrast2 -0.4391 0.1771 -2.48 0.013 \*   
## condition 0.1388 0.2686 0.52 0.606   
## condition -0.0145 0.2404 -0.06 0.952   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 3.11 on 760 degrees of freedom  
## Multiple R-squared: 0.0121, Adjusted R-squared: 0.00686   
## F-statistic: 2.32 on 4 and 760 DF, p-value: 0.0556

ANOVA\_exp3\_BIDR2 <- lm(BIDR\_impre\_manage ~ condition, data = cleaned\_df)  
summary.lm(ANOVA\_exp3\_BIDR2)

##   
## Call:  
## lm(formula = BIDR\_impre\_manage ~ condition, data = cleaned\_df)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -8.20 -4.01 -0.42 3.27 12.53   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 7.3664 0.1656 44.47 <0.0000000000000002 \*\*\*  
## conditioncontrast1 -0.1650 0.0674 -2.45 0.015 \*   
## conditioncontrast2 0.1413 0.2591 0.55 0.586   
## condition 0.6014 0.3931 1.53 0.126   
## condition -0.1234 0.3517 -0.35 0.726   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 4.55 on 760 degrees of freedom  
## Multiple R-squared: 0.0105, Adjusted R-squared: 0.0053   
## F-statistic: 2.02 on 4 and 760 DF, p-value: 0.0902

## Study 2 - planned contrast for repeated ANOVA

# Repeated-measures ANOVA with the afex package  
library("afex")

## Loading required package: lme4

## Loading required package: Matrix

##   
## Attaching package: 'Matrix'

## The following objects are masked from 'package:tidyr':  
##   
## expand, pack, unpack

## \*\*\*\*\*\*\*\*\*\*\*\*  
## Welcome to afex. For support visit: http://afex.singmann.science/

## - Functions for ANOVAs: aov\_car(), aov\_ez(), and aov\_4()  
## - Methods for calculating p-values with mixed(): 'S', 'KR', 'LRT', and 'PB'  
## - 'afex\_aov' and 'mixed' objects can be passed to emmeans() for follow-up tests  
## - NEWS: emmeans() for ANOVA models now uses model = 'multivariate' as default.  
## - Get and set global package options with: afex\_options()  
## - Set orthogonal sum-to-zero contrasts globally: set\_sum\_contrasts()  
## - For example analyses see: browseVignettes("afex")  
## \*\*\*\*\*\*\*\*\*\*\*\*

##   
## Attaching package: 'afex'

## The following object is masked from 'package:lme4':  
##   
## lmer

# using the long format "df\_s2long" created in main analysis:  
  
# planned contrast notation  
contrast1 = c(3, 3,-2,-2,-2)  
contrast2 = c(1,-1, 0, 0, 0)  
df\_s2long$condition <- as.factor(df\_s2long$condition)  
contrasts(df\_s2long$condition) = cbind(contrast1, contrast2)  
  
#Check  
contrasts(df\_s2long$condition)

## contrast1 contrast2   
## Dissonance\_no\_write 3 1 -0.000000000000000041633  
## Dissonance\_write 3 -1 -0.000000000000000026743  
## Negative -2 0 -0.577350269189625731059  
## Neutral -2 0 0.788675134594812865529  
## Worthy -2 0 -0.211324865405187106715  
##   
## Dissonance\_no\_write -0.000000000000000055511  
## Dissonance\_write -0.000000000000000017154  
## Negative -0.577350269189625731059  
## Neutral -0.211324865405187134471  
## Worthy 0.788675134594812865529

# ANOVA command  
ANOVA\_Exp2\_DV1 <- afex::aov\_car(Exp2\_seen\_wrong ~ condition\*scenario + Error(ID/scenario), data=df\_s2DV1)

## Converting to factor: condition

ANOVA\_Exp2\_DV2 <- afex::aov\_car(Exp2\_self\_action ~ condition\*scenario + Error(ID/scenario), data=df\_s2DV2)

## Converting to factor: condition

ANOVA\_Exp2\_DV3 <- afex::aov\_car(Exp2\_guide\_other ~ condition\*scenario + Error(ID/scenario), data=df\_s2DV3)

## Converting to factor: condition

summary(ANOVA\_Exp2\_DV1)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## Sum Sq num Df Error SS den Df F value Pr(>F)  
## (Intercept) 55305 1 5415 760 7761.44 <0.0000000000000002  
## condition 70 4 5415 760 2.45 0.045  
## scenario 2700 1 2404 760 853.74 <0.0000000000000002  
## condition:scenario 4 4 2404 760 0.34 0.851  
##   
## (Intercept) \*\*\*  
## condition \*   
## scenario \*\*\*  
## condition:scenario   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

summary(ANOVA\_Exp2\_DV2)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## Sum Sq num Df Error SS den Df F value Pr(>F)  
## (Intercept) 14810 1 5962 760 1887.98 <0.0000000000000002  
## condition 134 4 5962 760 4.29 0.002  
## scenario 1031 1 2694 760 291.00 <0.0000000000000002  
## condition:scenario 4 4 2694 760 0.26 0.905  
##   
## (Intercept) \*\*\*  
## condition \*\*   
## scenario \*\*\*  
## condition:scenario   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

summary(ANOVA\_Exp2\_DV3)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## Sum Sq num Df Error SS den Df F value Pr(>F)  
## (Intercept) 13558 1 5331 760 1932.94 <0.0000000000000002  
## condition 112 4 5331 760 4.00 0.0032  
## scenario 932 1 2299 760 308.17 <0.0000000000000002  
## condition:scenario 8 4 2299 760 0.65 0.6268  
##   
## (Intercept) \*\*\*  
## condition \*\*   
## scenario \*\*\*  
## condition:scenario   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

# Planned Additional Analysis

Investigate the order effect if we fail to find support for the original’s analyses.

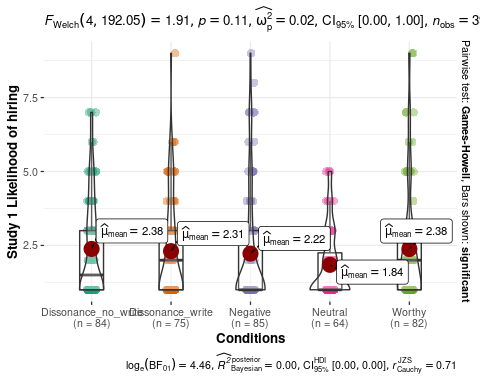
## Study 1 - ANOVA

Only include participants that saw study 1 before study 2.

df\_s1 <- cleaned\_df %>% filter(study\_order == "Exp1First")  
write.csv(df\_s1, "stimulated\_cleaned\_study1.csv",fileEncoding = "UTF-8")  
  
# DV1 Probability of hiring the candicate  
jmv::ANOVA(  
 formula = Exp1\_prob\_hiring ~ condition,  
 data = df\_s1,  
 effectSize = "eta",  
 modelTest = TRUE,  
 homo = TRUE,  
 postHocES = "d",  
 postHocEsCi = TRUE,  
 #emMeans = ~ condition, # using ggstatsplot instead  
 emmTables = TRUE)

##   
## ANOVA  
##   
## ANOVA - Exp1\_prob\_hiring   
## ─────────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²   
## ─────────────────────────────────────────────────────────────────────────────────────────   
## Overall model 13.632 4 3.4080 1.1098 0.35149   
## condition 13.632 4 3.4080 1.1098 0.35149 0.01140   
## Residuals 1182.227 385 3.0707   
## ─────────────────────────────────────────────────────────────────────────────────────────   
##   
##   
## ASSUMPTION CHECKS  
##   
## Homogeneity of Variances Test (Levene's)   
## ────────────────────────────────────────   
## F df1 df2 p   
## ────────────────────────────────────────   
## 3.1426 4 385 0.01460   
## ────────────────────────────────────────

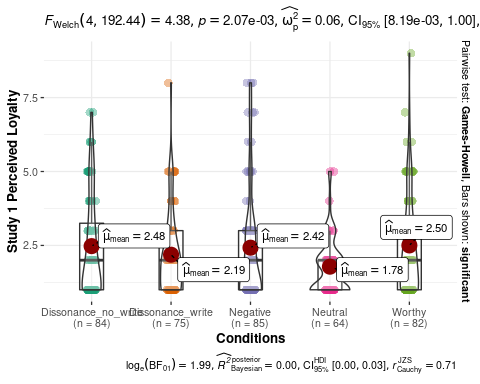
ANOVA\_exp1\_DV1 <- lm(Exp1\_prob\_hiring ~ condition, data = df\_s1)  
#apa.aov.table(ANOVA\_exp1\_DV1, filename = "Exp1 DV1 ANOVA.doc",table.number = 10)  
  
# plot ggstatsplot  
ggstatsplot::ggbetweenstats(  
 data = df\_s1,  
 y = Exp1\_prob\_hiring,  
 x = condition,  
 originaltheme = TRUE,  
 ylab = "Study 1 Likelihood of hiring",  
 xlab = "Conditions")



# DV2 Perceived loyalty of the candidate  
jmv::ANOVA(  
 formula = Exp1\_loyalty ~ condition,  
 data = df\_s1,  
 effectSize = "eta",  
 modelTest = TRUE,  
 homo = TRUE,  
 postHocES = "d",  
 postHocEsCi = TRUE,  
 #emMeans = ~ condition,  
 emmTables = TRUE)

##   
## ANOVA  
##   
## ANOVA - Exp1\_loyalty   
## ─────────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²   
## ─────────────────────────────────────────────────────────────────────────────────────────   
## Overall model 25.371 4 6.3426 2.4904 0.04285   
## condition 25.371 4 6.3426 2.4904 0.04285 0.02522   
## Residuals 980.529 385 2.5468   
## ─────────────────────────────────────────────────────────────────────────────────────────   
##   
##   
## ASSUMPTION CHECKS  
##   
## Homogeneity of Variances Test (Levene's)   
## ────────────────────────────────────────   
## F df1 df2 p   
## ────────────────────────────────────────   
## 7.3369 4 385 0.00001   
## ────────────────────────────────────────

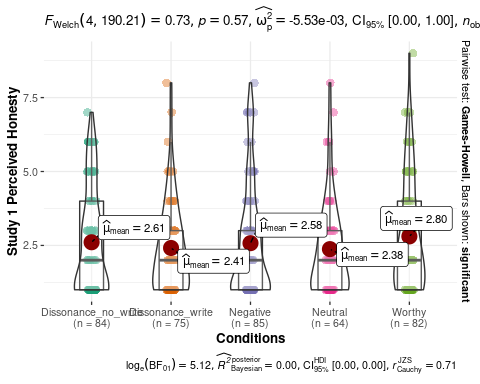
ANOVA\_exp1\_DV2 <- lm(Exp1\_loyalty ~ condition, data = df\_s1)  
#apa.aov.table(ANOVA\_exp1\_DV2, filename = "Exp1 DV2 ANOVA.doc",table.number = 11)  
  
# plot ggstatsplot  
ggstatsplot::ggbetweenstats(  
 data = df\_s1,  
 y = Exp1\_loyalty,  
 x = condition,  
 originaltheme = TRUE,  
 ylab = "Study 1 Perceived Loyalty",  
 xlab = "Conditions")



# DV3 Perceived honesty of the candidate  
jmv::ANOVA(  
 formula = Exp1\_honesty ~ condition,  
 data = df\_s1,  
 effectSize = "eta",  
 modelTest = TRUE,  
 homo = TRUE,  
 postHocES = "d",  
 postHocEsCi = TRUE,  
 #emMeans = ~ condition,  
 emmTables = TRUE)

##   
## ANOVA  
##   
## ANOVA - Exp1\_honesty   
## ──────────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²   
## ──────────────────────────────────────────────────────────────────────────────────────────   
## Overall model 8.9133 4 2.2283 0.73272 0.57006   
## condition 8.9133 4 2.2283 0.73272 0.57006 0.00756   
## Residuals 1170.8534 385 3.0412   
## ──────────────────────────────────────────────────────────────────────────────────────────   
##   
##   
## ASSUMPTION CHECKS  
##   
## Homogeneity of Variances Test (Levene's)   
## ────────────────────────────────────────   
## F df1 df2 p   
## ────────────────────────────────────────   
## 1.8221 4 385 0.12379   
## ────────────────────────────────────────

ANOVA\_exp1\_DV3 <- lm(Exp1\_honesty ~ condition, data = df\_s1)  
#apa.aov.table(ANOVA\_exp1\_DV3, filename = "Exp1 DV3 ANOVA.doc",table.number = 12)  
  
# plot ggstatsplot   
ggstatsplot::ggbetweenstats(  
 data = df\_s1,  
 y = Exp1\_honesty,  
 x = condition,  
 originaltheme = TRUE,  
 ylab = "Study 1 Perceived Honesty",  
 xlab = "Conditions")



## Study 2 - Repeated ANOVA

Only include participants that saw study 2 before study 1.

Pivot to long format for ggstatsplot.

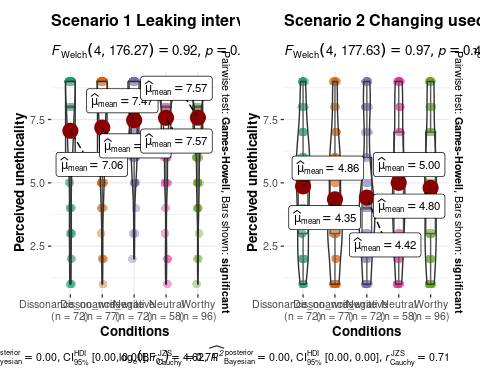
# add a column of unique participant ID  
cleaned\_df <- dplyr::mutate(cleaned\_df, ID = row\_number())  
  
df\_s2 <- cleaned\_df %>% filter(study\_order == "Exp2First")  
#write.csv(df\_s2, "stimulated\_cleaned\_study2.csv",fileEncoding = "UTF-8")  
  
#pivot longer  
df\_s2DV1A <- pivot\_longer(df\_s2, cols = c(Exp2\_S1\_seen\_wrong, Exp2\_S2\_seen\_wrong\_T2),names\_to = "scenario",values\_to = "Exp2\_seen\_wrong")   
df\_s2DV2A <- pivot\_longer(df\_s2, cols = c(Exp2\_S1\_self\_action, Exp2\_S2\_self\_action\_T2),names\_to = "scenario",values\_to = "Exp2\_self\_action")   
df\_s2DV3A <- pivot\_longer(df\_s2, cols = c(Exp2\_S1\_guide\_other, Exp2\_S2\_guide\_other\_T2),names\_to = "scenario",values\_to = "Exp2\_guide\_other")   
  
# combine three DVs  
df\_s2longA <- df\_s2DV1A %>% dplyr::select("ID","condition","scenario","Exp2\_seen\_wrong") %>% dplyr::mutate(Exp2\_seen\_wrong = as.numeric(Exp2\_seen\_wrong)) %>%  
 cbind(Exp2\_self\_action = as.numeric(df\_s2DV2A$Exp2\_self\_action)) %>%  
 cbind(Exp2\_guide\_other = as.numeric(df\_s2DV3A$Exp2\_guide\_other))  
  
# rename the scenario variable for plotting   
df\_s2longA <- df\_s2longA %>%   
 mutate(scenario = case\_when(  
 scenario == "Exp2\_S1\_seen\_wrong" ~ "Scenario 1 Leaking interview questions",  
 scenario == "Exp2\_S2\_seen\_wrong\_T2" ~ "Scenario 2 Changing used product"))

Study 2 DV1 - Perception of suggested actions as wrong.

jmv::anovaRM(  
 data = df\_s2,  
 rm = list(  
 list(  
 label="scenario",  
 levels=c("S1", "S2"))),  
 rmCells = list(  
 list(  
 measure="Exp2\_S1\_seen\_wrong",  
 cell="S1"),  
 list(  
 measure="Exp2\_S2\_seen\_wrong\_T2",  
 cell="S2")),  
 bs = condition,  
 effectSize = "eta",  
 rmTerms = ~ scenario,  
 bsTerms = ~ condition,  
 leveneTest = TRUE,  
 #emMeans = ~ scenario:condition,  
 emmTables = TRUE,  
 groupSumm = TRUE)

##   
## REPEATED MEASURES ANOVA  
##   
## Within Subjects Effects   
## ─────────────────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²   
## ─────────────────────────────────────────────────────────────────────────────────────────────────   
## scenario 1316.245 1 1316.2446 417.4895 < .00001 0.25972   
## scenario:condition 15.150 4 3.7876 1.2014 0.30982 0.00299   
## Residual 1166.522 370 3.1528   
## ─────────────────────────────────────────────────────────────────────────────────────────────────   
## Note. Type 3 Sums of Squares  
##   
##   
## Between Subjects Effects   
## ──────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²   
## ──────────────────────────────────────────────────────────────────────────────────────   
## condition 24.767 4 6.1917 0.90007 0.46395 0.00489   
## Residual 2545.252 370 6.8791   
## ──────────────────────────────────────────────────────────────────────────────────────   
## Note. Type 3 Sums of Squares  
##   
##   
## ASSUMPTIONS  
##   
## Homogeneity of Variances Test (Levene's)   
## ─────────────────────────────────────────────────────────────   
## F df1 df2 p   
## ─────────────────────────────────────────────────────────────   
## Exp2\_S1\_seen\_wrong 1.07926 4 370 0.36647   
## Exp2\_S2\_seen\_wrong\_T2 0.28074 4 370 0.89040   
## ─────────────────────────────────────────────────────────────   
##   
##   
## Group Summary   
## ─────────────────────────────────────────   
## condition N Excluded   
## ─────────────────────────────────────────   
## Dissonance\_no\_write 72 0   
## Dissonance\_write 77 0   
## Negative 72 0   
## Neutral 58 0   
## Worthy 96 0   
## ─────────────────────────────────────────

# ggstatsplot for condition comparisons in between-subjects designs repeated across all levels of a grouping variable.  
# link to tutorial: https://indrajeetpatil.github.io/ggstatsplot/reference/grouped\_ggbetweenstats.html  
  
ggstatsplot::grouped\_ggbetweenstats(  
 data = df\_s2longA,  
 y = Exp2\_seen\_wrong,  
 x = condition,  
 grouping.var = scenario,  
 ylab = "Perceived unethicality",  
 xlab = "Conditions"  
 )



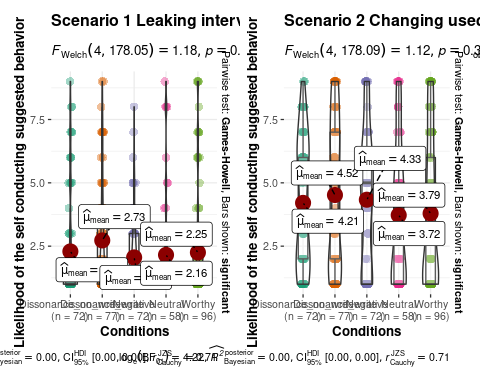
ggsave(  
 "Study2DV1SeenWrong.png", plot = last\_plot(),  
 width = 11.8, height = 6, dpi = 600)

Study 2 DV2 - Likelihood of the self conducting similar behavior.

jmv::anovaRM(  
 data = df\_s2,  
 rm = list(  
 list(  
 label="scenario",  
 levels=c("S1", "S2"))),  
 rmCells = list(  
 list(  
 measure="Exp2\_S1\_self\_action",  
 cell="S1"),  
 list(  
 measure="Exp2\_S2\_self\_action\_T2",  
 cell="S2")),  
 bs = condition,  
 effectSize = "eta",  
 rmTerms = ~ scenario,  
 bsTerms = ~ condition,  
 leveneTest = TRUE,  
 #emMeans = ~ scenario:condition,  
 emmTables = TRUE,  
 groupSumm = TRUE)

##   
## REPEATED MEASURES ANOVA  
##   
## Within Subjects Effects   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## scenario 604.773 1 604.7731 166.08004 < .00001 0.12032   
## scenario:condition 13.440 4 3.3600 0.92271 0.45068 0.00267   
## Residual 1347.339 370 3.6415   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## Note. Type 3 Sums of Squares  
##   
##   
## Between Subjects Effects   
## ─────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²   
## ─────────────────────────────────────────────────────────────────────────────────────   
## condition 41.929 4 10.4823 1.2848 0.27544 0.00834   
## Residual 3018.706 370 8.1587   
## ─────────────────────────────────────────────────────────────────────────────────────   
## Note. Type 3 Sums of Squares  
##   
##   
## ASSUMPTIONS  
##   
## Homogeneity of Variances Test (Levene's)   
## ─────────────────────────────────────────────────────────────   
## F df1 df2 p   
## ─────────────────────────────────────────────────────────────   
## Exp2\_S1\_self\_action 3.0649 4 370 0.01667   
## Exp2\_S2\_self\_action\_T2 1.2384 4 370 0.29415   
## ─────────────────────────────────────────────────────────────   
##   
##   
## Group Summary   
## ─────────────────────────────────────────   
## condition N Excluded   
## ─────────────────────────────────────────   
## Dissonance\_no\_write 72 0   
## Dissonance\_write 77 0   
## Negative 72 0   
## Neutral 58 0   
## Worthy 96 0   
## ─────────────────────────────────────────

ggstatsplot::grouped\_ggbetweenstats(  
 data = df\_s2longA,  
 y = Exp2\_self\_action,  
 x = condition,  
 grouping.var = scenario,  
 ylab = "Likelihood of the self conducting suggested behavior",  
 xlab = "Conditions"  
 )



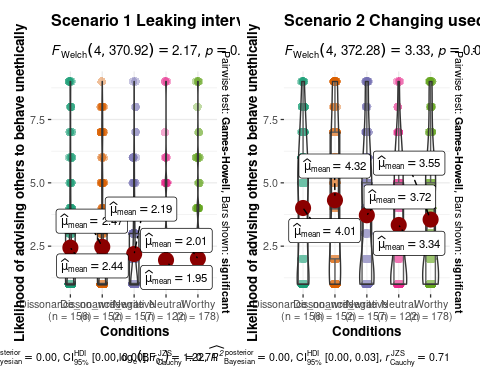
ggsave(  
 "Study2DV2SelfAction.png", plot = last\_plot(),  
 width = 11.8, height = 6, dpi = 600)

Study 2 DV3 - Likelihood of advising others to perform unethical but self-benefiting behavior.

jmv::anovaRM(  
 data = cleaned\_df,  
 rm = list(  
 list(  
 label="scenario",  
 levels=c("S1", "S2"))),  
 rmCells = list(  
 list(  
 measure="Exp2\_S1\_guide\_other",  
 cell="S1"),  
 list(  
 measure="Exp2\_S2\_guide\_other\_T2",  
 cell="S2")),  
 bs = condition,  
 effectSize = "eta",  
 rmTerms = ~ scenario,  
 bsTerms = ~ condition,  
 leveneTest = TRUE,  
 #emMeans = ~ scenario:condition,  
 emmTables = TRUE,  
 groupSumm = TRUE)

##   
## REPEATED MEASURES ANOVA  
##   
## Within Subjects Effects   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## scenario 932.3630 1 932.3630 308.17061 < .00001 0.10738   
## scenario:condition 7.8705 4 1.9676 0.65035 0.62676 0.00091   
## Residual 2299.3622 760 3.0255   
## ──────────────────────────────────────────────────────────────────────────────────────────────────   
## Note. Type 3 Sums of Squares  
##   
##   
## Between Subjects Effects   
## ─────────────────────────────────────────────────────────────────────────────────────   
## Sum of Squares df Mean Square F p η²   
## ─────────────────────────────────────────────────────────────────────────────────────   
## condition 112.18 4 28.0459 3.9985 0.00323 0.01292   
## Residual 5330.75 760 7.0141   
## ─────────────────────────────────────────────────────────────────────────────────────   
## Note. Type 3 Sums of Squares  
##   
##   
## ASSUMPTIONS  
##   
## Homogeneity of Variances Test (Levene's)   
## ─────────────────────────────────────────────────────────────   
## F df1 df2 p   
## ─────────────────────────────────────────────────────────────   
## Exp2\_S1\_guide\_other 4.8288 4 760 0.00075   
## Exp2\_S2\_guide\_other\_T2 2.7456 4 760 0.02750   
## ─────────────────────────────────────────────────────────────   
##   
##   
## Group Summary   
## ──────────────────────────────────────────   
## condition N Excluded   
## ──────────────────────────────────────────   
## Dissonance\_no\_write 156 0   
## Dissonance\_write 152 0   
## Negative 157 0   
## Neutral 122 0   
## Worthy 178 0   
## ──────────────────────────────────────────

ggstatsplot::grouped\_ggbetweenstats(  
 data = df\_s2long,  
 y = Exp2\_guide\_other,  
 x = condition,  
 grouping.var = scenario,  
 ylab = "Likelihood of advising others to behave unethically",  
 xlab = "Conditions"  
 )



ggsave(  
 "Study2DV3AdviseOthers.png", plot = last\_plot(),  
 width = 11.8, height = 6, dpi = 600)

## Testing order effect as a moderator

note: the moderator pacakge is not yet available for the current version of R, hence we pasted all code on running moderation analysis from JAMOVI, but will provide the analysis and result in a separate .omv file.

study 1

install.packages("medmod")  
library(medmod)  
medmod::mod(  
 data = cleaned\_df,  
 dep = Exp1\_prob\_hiring,  
 mod = study\_order\_n,  
 pred = Condition\_n,  
 ci = TRUE,  
 simpleSlopeEst = TRUE,  
 simpleSlopePlot = TRUE)  
  
medmod::mod(  
 data = cleaned\_df,  
 dep = Exp1\_honesty,  
 mod = study\_order\_n,  
 pred = Condition\_n,  
 ci = TRUE,  
 simpleSlopeEst = TRUE,  
 simpleSlopePlot = TRUE,  
 duplicate = 2)  
  
medmod::mod(  
 data = cleaned\_df,  
 dep = Exp1\_loyalty,  
 mod = study\_order\_n,  
 pred = Condition\_n,  
 ci = TRUE,  
 simpleSlopeEst = TRUE,  
 simpleSlopePlot = TRUE,  
 duplicate = 2)

study 2

medmod::mod(  
 data = cleaned\_df,  
 dep = Exp2\_S1\_seen\_wrong,  
 mod = study\_order\_n,  
 pred = Condition\_n,  
 ci = TRUE,  
 simpleSlopeEst = TRUE,  
 simpleSlopePlot = TRUE,  
 duplicate = 2)  
  
medmod::mod(  
 data = cleaned\_df,  
 dep = Exp2\_S1\_self\_action,  
 mod = study\_order\_n,  
 pred = Condition\_n,  
 ci = TRUE,  
 simpleSlopeEst = TRUE,  
 simpleSlopePlot = TRUE,  
 duplicate = 2)  
  
medmod::mod(  
 data = cleaned\_df,  
 dep = Exp2\_S1\_guide\_other,  
 mod = study\_order\_n,  
 pred = Condition\_n,  
 ci = TRUE,  
 simpleSlopeEst = TRUE,  
 simpleSlopePlot = TRUE,  
 duplicate = 2)  
  
medmod::mod(  
 data = cleaned\_df,  
 dep = Exp2\_S2\_seen\_wrong\_T2,  
 mod = study\_order\_n,  
 pred = Condition\_n,  
 ci = TRUE,  
 simpleSlopeEst = TRUE,  
 simpleSlopePlot = TRUE,  
 duplicate = 2)  
  
medmod::mod(  
 data = cleaned\_df,  
 dep = Exp2\_S2\_self\_action\_T2,  
 mod = study\_order\_n,  
 pred = Condition\_n,  
 ci = TRUE,  
 simpleSlopeEst = TRUE,  
 simpleSlopePlot = TRUE,  
 duplicate = 2)  
  
medmod::mod(  
 data = cleaned\_df,  
 dep = Exp2\_S2\_guide\_other\_T2,  
 mod = study\_order\_n,  
 pred = Condition\_n,  
 ci = TRUE,  
 simpleSlopeEst = TRUE,  
 simpleSlopePlot = TRUE,  
 duplicate = 2)