Barkan etal (2012) data analysis using raw data - V1

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```
df <- read_sav("RRR-Barkan-etal-2012-WITH-order.sav")
colnames(df)
```

```
##   [1] "StartDate"
##   [2] "EndDate"
##   [3] "Status"
##   [4] "IPAddress"
##   [5] "Progress"
##   [6] "Duration__in_seconds_"
##   [7] "Finished"
##   [8] "RecordedDate"
##   [9] "ResponseId"
##  [10] "RecipientLastName"
##  [11] "RecipientFirstName"
##  [12] "RecipientEmail"
##  [13] "ExternalReference"
##  [14] "LocationLatitude"
##  [15] "LocationLongitude"
##  [16] "DistributionChannel"
##  [17] "UserLanguage"
##  [18] "Q_RecaptchaScore"
##  [19] "Q_RelevantIDDuplicate"
##  [20] "Q_RelevantIDDuplicateScore"
##  [21] "Q_RelevantIDFraudScore"
##  [22] "Q_RelevantIDLastStartDate"
##  [23] "consentagree_1"
##  [24] "outline1"
##  [25] "outline1_DO_1"
##  [26] "outline1_DO_2"
##  [27] "outline1_DO_3"
##  [28] "outline2"
##  [29] "outline2_DO_1"
##  [30] "outline2_DO_2"
##  [31] "outline2_DO_3"
##  [32] "englishnative"
##  [33] "englishnative_DO_1"
##  [34] "englishnative_DO_2"
##  [35] "writing_check"
##  [36] "RecallComprDissoWri"
##  [37] "RecallTaskDissoWrite"
##  [38] "RecallCheck1DissoWri"
##  [39] "RecallCheck2DissoWri"
```

```
## [40] "RecallComprDissNWri"
## [41] "RecallTaskDissNWrite"
## [42] "RecallCheck1DissNWri"
## [43] "RecallCheck2DissNWri"
## [44] "RecallComprehWorthy"
## [45] "Recall_Task_Worthy"
## [46] "Recall_Check1_Worthy"
## [47] "Recall_Check2_Worthy"
## [48] "Recall_Compr_Neutral"
## [49] "Recall_Task_Neutral"
## [50] "Recall_Check1_Neutra"
## [51] "Recall_Check2_neutra"
## [52] "Recall_Compr_negativ"
## [53] "RecallTask_Negative"
## [54] "Recall_Check1_Negati"
## [55] "Recall_Check2_negati"
## [56] "ManiCheck_esteem_1"
## [57] "ManiCheck_esteem_2"
## [58] "ManiCheck_esteem_3"
## [59] "ManiCheck_esteem_DO_1"
## [60] "ManiCheck_esteem_DO_2"
## [61] "ManiCheck_esteem_DO_3"
## [62] "Exp1_check"
## [63] "Exp1_check_DO_1"
## [64] "Exp1_check_DO_2"
## [65] "Exp1_check_DO_3"
## [66] "Exp1_prob_hiring"
## [67] "Exp1_loyalty"
## [68] "Exp1_honesty"
## [69] "Exp2_S1_check"
## [70] "Exp2_S1_seen_wrong"
## [71] "Exp2_S1_self_action"
## [72] "Exp2_S1_guide_other"
## [73] "Exp2_S2F_check"
## [74] "Exp2_S2F_seen_wrong"
## [75] "Exp2_S2F_self_action"
## [76] "Exp2_S2F_guide_other"
## [77] "Exp2_S2M_check"
## [78] "Exp2_S2M_seen_wrong"
## [79] "Exp2_S2M_self_action"
## [80] "Exp2_S2M_guide_other"
## [81] "MASC_set1_1"
## [82] "MASC_set1_2"
## [83] "MASC_set1_3"
## [84] "MASC_set1_4"
## [85] "MASC_set1_5"
## [86] "MASC_set1_6"
## [87] "MASC_set1_7"
## [88] "MASC_set1_8"
## [89] "MASC_set1_DO_1"
```

```
##  [90] "MASC_set1_DO_2"
##  [91] "MASC_set1_DO_3"
##  [92] "MASC_set1_DO_4"
##  [93] "MASC_set1_DO_5"
##  [94] "MASC_set1_DO_6"
##  [95] "MASC_set1_DO_7"
##  [96] "MASC_set1_DO_8"
##  [97] "MASC_set2_1"
##  [98] "MASC_set2_2"
##  [99] "MASC_set2_3"
## [100] "MASC_set2_4"
## [101] "MASC_set2_5"
## [102] "MASC_set2_6"
## [103] "MASC_set2_DO_1"
## [104] "MASC_set2_DO_2"
## [105] "MASC_set2_DO_3"
## [106] "MASC_set2_DO_4"
## [107] "MASC_set2_DO_5"
## [108] "MASC_set2_DO_6"
## [109] "MASC_set3_1"
## [110] "MASC_set3_2"
## [111] "BIDR_Self_deceptive_1"
## [112] "BIDR_Self_deceptive_2"
## [113] "BIDR_Self_deceptive_3"
## [114] "BIDR_Self_deceptive_4"
## [115] "BIDR_Self_deceptive_5"
## [116] "BIDR_Self_deceptive_6"
## [117] "BIDR_Self_deceptive_7"
## [118] "BIDR_Self_deceptive_8"
## [119] "BIDR_Self_deceptive_9"
## [120] "BIDR_Self_deceptive_10"
## [121] "BIDR_Self_deceptive_11"
## [122] "BIDR_Self_deceptive_12"
## [123] "BIDR_Self_deceptive_13"
## [124] "BIDR_Self_deceptive_14"
## [125] "BIDR_Self_deceptive_15"
## [126] "BIDR_Self_deceptive_16"
## [127] "BIDR_Self_deceptive_17"
## [128] "BIDR_Self_deceptive_18"
## [129] "BIDR_Self_deceptive_19"
## [130] "BIDR_Self_deceptive_20"
## [131] "BIDR_Self_deceptive_DO_1"
## [132] "BIDR_Self_deceptive_DO_2"
## [133] "BIDR_Self_deceptive_DO_3"
## [134] "BIDR_Self_deceptive_DO_4"
## [135] "BIDR_Self_deceptive_DO_5"
## [136] "BIDR_Self_deceptive_DO_6"
## [137] "BIDR_Self_deceptive_DO_7"
## [138] "BIDR_Self_deceptive_DO_8"
## [139] "BIDR_Self_deceptive_DO_9"
```

```
## [140] "BIDR_Self_deceptive_DO_10"
## [141] "BIDR_Self_deceptive_DO_11"
## [142] "BIDR_Self_deceptive_DO_12"
## [143] "BIDR_Self_deceptive_DO_13"
## [144] "BIDR_Self_deceptive_DO_14"
## [145] "BIDR_Self_deceptive_DO_15"
## [146] "BIDR_Self_deceptive_DO_16"
## [147] "BIDR_Self_deceptive_DO_17"
## [148] "BIDR_Self_deceptive_DO_18"
## [149] "BIDR_Self_deceptive_DO_19"
## [150] "BIDR_Self_deceptive_DO_20"
## [151] "BIDR_Impre_manage_1"
## [152] "BIDR_Impre_manage_2"
## [153] "BIDR_Impre_manage_3"
## [154] "BIDR_Impre_manage_4"
## [155] "BIDR_Impre_manage_5"
## [156] "BIDR_Impre_manage_6"
## [157] "BIDR_Impre_manage_7"
## [158] "BIDR_Impre_manage_8"
## [159] "BIDR_Impre_manage_9"
## [160] "BIDR_Impre_manage_10"
## [161] "BIDR_Impre_manage_11"
## [162] "BIDR_Impre_manage_12"
## [163] "BIDR_Impre_manage_13"
## [164] "BIDR_Impre_manage_14"
## [165] "BIDR_Impre_manage_15"
## [166] "BIDR_Impre_manage_16"
## [167] "BIDR_Impre_manage_17"
## [168] "BIDR_Impre_manage_18"
## [169] "BIDR_Impre_manage_19"
## [170] "BIDR_Impre_manage_20"
## [171] "BIDR_Impre_manage_DO_1"
## [172] "BIDR_Impre_manage_DO_2"
## [173] "BIDR_Impre_manage_DO_3"
## [174] "BIDR_Impre_manage_DO_4"
## [175] "BIDR_Impre_manage_DO_5"
## [176] "BIDR_Impre_manage_DO_6"
## [177] "BIDR_Impre_manage_DO_7"
## [178] "BIDR_Impre_manage_DO_8"
## [179] "BIDR_Impre_manage_DO_9"
## [180] "BIDR_Impre_manage_DO_10"
## [181] "BIDR_Impre_manage_DO_11"
## [182] "BIDR_Impre_manage_DO_12"
## [183] "BIDR_Impre_manage_DO_13"
## [184] "BIDR_Impre_manage_DO_14"
## [185] "BIDR_Impre_manage_DO_15"
## [186] "BIDR_Impre_manage_DO_16"
## [187] "BIDR_Impre_manage_DO_17"
## [188] "BIDR_Impre_manage_DO_18"
## [189] "BIDR_Impre_manage_DO_19"
```

```
## [190] "BIDR_Impre_manage_DO_20"
## [191] "funnel_time_First_Click"
## [192] "funnel_time_Last_Click"
## [193] "funnel_time_Page_Submit"
## [194] "funnel_time_Click_Count"
## [195] "serious"
## [196] "seen"
## [197] "seen_2_TEXT"
## [198] "funnel_purpose"
## [199] "funnel_improve"
## [200] "age"
## [201] "gender"
## [202] "origcount"
## [203] "residence"
## [204] "soc_class"
## [205] "engunder"
## [206] "funnel_pay"
## [207] "assignmentId"
## [208] "hitId"
## [209] "CountryCode"
## [210] "CountryName"
## [211] "STUDY_ID"
## [212] "SESSION_ID"
## [213] "PROLIFIC_PID"
## [214] "Q_BallotBoxStuffing"
## [215] "FL_9_DO_RecallManipulation_EthicalDissonancebyWriting_UnethicalB"
## [216] "FL_9_DO_RecallManipulation_EthicalDissonanceWithoutWriting"
## [217] "FL_9_DO_RecallManipulation_WorthyConduct"
## [218] "FL_9_DO_RecallManipulation_Neutral"
## [219] "FL_9_DO_RecallManipulation_NegativeValence"
## [220] "FL_11_DO_Experiment1_HiringDecisionasHR"
## [221] "FL_11_DO_FL_25"
## [222] "FL_25_DO_Experiment2scenario1_JobInterviewAdvice"
## [223] "FL_25_DO_FL_27"
## [224] "FL_27_DO_Experiment2scenario2_ExchangingProductAdvice_Female"
## [225] "FL_27_DO_Experiment2scenario2_ExchangingProductAdvice_Male"
## [226] "FL_38_DO_MultiAspectScaleofCheatingMASC_Set1"
## [227] "FL_38_DO_MultiAspectScaleofCheatingMASC_Set2"
## [228] "FL_38_DO_MultiAspectScaleofCheatingMASC_Set3"
## [229] "FL_38_DO_BalancedInventoryofDesirableRespondingBIDR_SelfDeceptiv"
## [230] "FL_38_DO_BalancedInventoryofDesirableRespondingBIDR_ImpressionMa"
## [231] "Experiment1_HiringDecisionasHR_DO_Exp1_honesty"
## [232] "Experiment1_HiringDecisionasHR_DO_Exp1_loyalty"
## [233] "Experiment1_HiringDecisionasHR_DO_Exp1_prob_hiring"
## [234] "Experiment1_HiringDecisionasHR_DO_Exp1_check"
## [235] "Experiment1_HiringDecisionasHR_DO_Exp1_text"
## [236] "Experiment2scenario1_JobInterviewAdvice_DO_Exp2_S1_self_action"
## [237] "Experiment2scenario1_JobInterviewAdvice_DO_Exp2_S1_seen_wrong"
## [238] "Experiment2scenario1_JobInterviewAdvice_DO_Exp2_S1_check"
## [239] "Experiment2scenario1_JobInterviewAdvice_DO_Exp2_scenario1"
```

```
## [240] "Experiment2scenario1_JobInterviewAdvice_DO_Exp2_S1_guide_other"
## [241] "Experiment2scenario2_ExchangingProductAdvice_Female_DO_Exp2_S2F_"
## [242] "Experiment2scenario2_ExchangingProductAdvice_Female_DO_Exp2_S2F"
## [243] "Experiment2scenario2_ExchangingProductAdvice_Female_DO_Exp2_S2"
## [244] "Experiment2scenario2_ExchangingProductAdvice_Female_DO_Exp2_S2.0"
## [245] "Experiment2scenario2_ExchangingProductAdvice_Female_DO_Exp2_S2Fe"
## [246] "Experiment2scenario2_ExchangingProductAdvice_Male_DO_Exp2_S2M_gu"
## [247] "Experiment2scenario2_ExchangingProductAdvice_Male_DO_Exp2_S2M_se"
## [248] "Experiment2scenario2_ExchangingProductAdvice_Male_DO_Exp2_S2M_s"
## [249] "Experiment2scenario2_ExchangingProductAdvice_Male_DO_Exp2_S2M_ch"
## [250] "Experiment2scenario2_ExchangingProductAdvice_Male_DO_Exp2_S2Male"
## [251] "MultiAspectScaleofCheatingMASC_Set3_DO_MASC_set3_2"
## [252] "MultiAspectScaleofCheatingMASC_Set3_DO_MASC_set3_1"
## [253] "MultiAspectScaleofCheatingMASC_Set3_DO_MASC_set3_int"
```

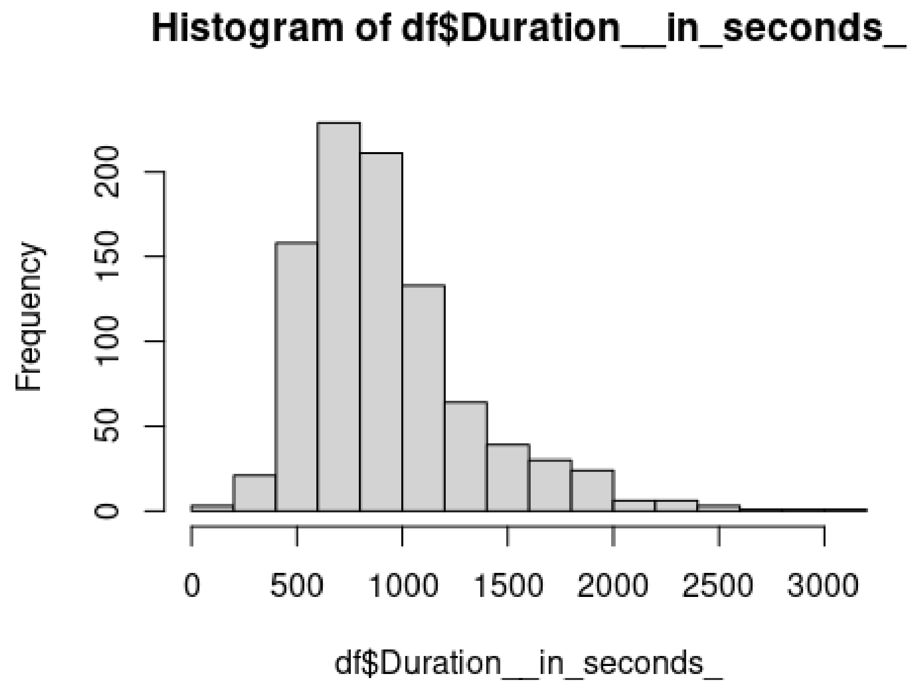
```
df_recall <- df %>%
dplyr::select("RecallComprDissoWri":"Recall_Check2_negati")
```

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 <- df %>% dplyr::select(starts_with("ManiCheck")) %>% rowMeans()
# 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$MASC_set1 <- df %>% dplyr::select(starts_with("MASC_set1")) %>% rowMeans()
df$MASC_set2 <- df %>% dplyr::select(starts_with("MASC_set2")) %>% rowMeans()
df$MASC_set3 <- 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("BIDR_Self_deceptive_2","BIDR_Self_deceptive_4","BIDR_Self_dece
ptive_6",

"BIDR_Self_deceptive_8","BIDR_Self_deceptive_10","BIDR_Self_deceptive_12",

"BIDR_Self_deceptive_14","BIDR_Self_deceptive_16","BIDR_Self_deceptive_18",
                "BIDR_Self_deceptive_20")
# iterate the item to avoid counting 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("BIDR_Self_deceptive_1","BIDR_Self_deceptive_3","BIDR_Self_dece
ptive_5",

"BIDR_Self_deceptive_7","BIDR_Self_deceptive_9","BIDR_Self_deceptive_11",

"BIDR_Self_deceptive_13","BIDR_Self_deceptive_15","BIDR_Self_deceptive_17",
                "BIDR_Self_deceptive_19")

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("BIDR_Impre_manage_2","BIDR_Impre_manage_4","BIDR_Impre_manage_
6",

"BIDR_Impre_manage_8","BIDR_Impre_manage_10","BIDR_Impre_manage_12",
```

```
"BIDR_Impre_manage_14","BIDR_Impre_manage_16","BIDR_Impre_manage_18",
                "BIDR_Impre_manage_20")

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("BIDR_Impre_manage_1","BIDR_Impre_manage_3","BIDR_Impre_manage_
5",

"BIDR_Impre_manage_7","BIDR_Impre_manage_9","BIDR_Impre_manage_11",

"BIDR_Impre_manage_13","BIDR_Impre_manage_15","BIDR_Impre_manage_17",
                "BIDR_Impre_manage_19")
# iterate the item to avoid counting variables like"BIDR_Impre_manage_DO_11"

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"
```

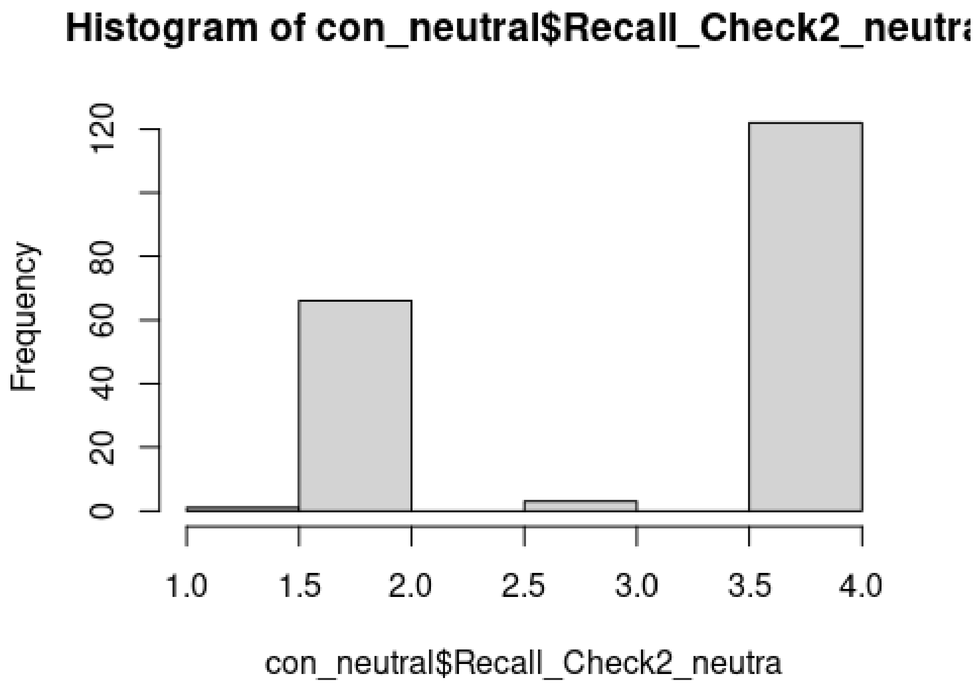
```
##  [6] "FL_11_DO_Experiment1_HiringDecisionasHR"
##  [7] "FL_11_DO_FL_25"
##  [8] "FL_25_DO_Experiment2scenario1_JobInterviewAdvice"
##  [9] "FL_25_DO_FL_27"
## [10] "FL_27_DO_Experiment2scenario2_ExchangingProductAdvice_Female"
## [11] "FL_27_DO_Experiment2scenario2_ExchangingProductAdvice_Male"
## [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",
         "ManiCheck", # precalculated average
         starts_with("Exp1"),
         starts_with("Exp2"),
         "MASC_set1", "MASC_set2", "MASC_set3", # precalculated average
         "BIDR_self_deceptive","BIDR_impre_manage", # precalculated
         age:CountryName, Duration__in_seconds_) %>% #demographic data and
condition marker
  mutate(condition = "Dissonance_write")

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",
         "ManiCheck",
         starts_with("Exp1"),
         starts_with("Exp2"),
         "MASC_set1", "MASC_set2", "MASC_set3",
         "BIDR_self_deceptive","BIDR_impre_manage",
         age:CountryName, Duration__in_seconds_) %>%
  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",
         "ManiCheck",
         starts_with("Exp1"),
         starts_with("Exp2"),
         "MASC_set1", "MASC_set2", "MASC_set3",
         "BIDR_self_deceptive","BIDR_impre_manage",
         age:CountryName, Duration__in_seconds_) %>%
  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",
         "ManiCheck",
         starts_with("Exp1"),
         starts_with("Exp2"),
         "MASC_set1", "MASC_set2", "MASC_set3",
         "BIDR_self_deceptive","BIDR_impre_manage",
         age:CountryName, Duration__in_seconds_) %>%
  mutate(condition = "Neutral") # control condition: Neutral behavior

hist(con_neutral$Recall_Check2_neutra)
```



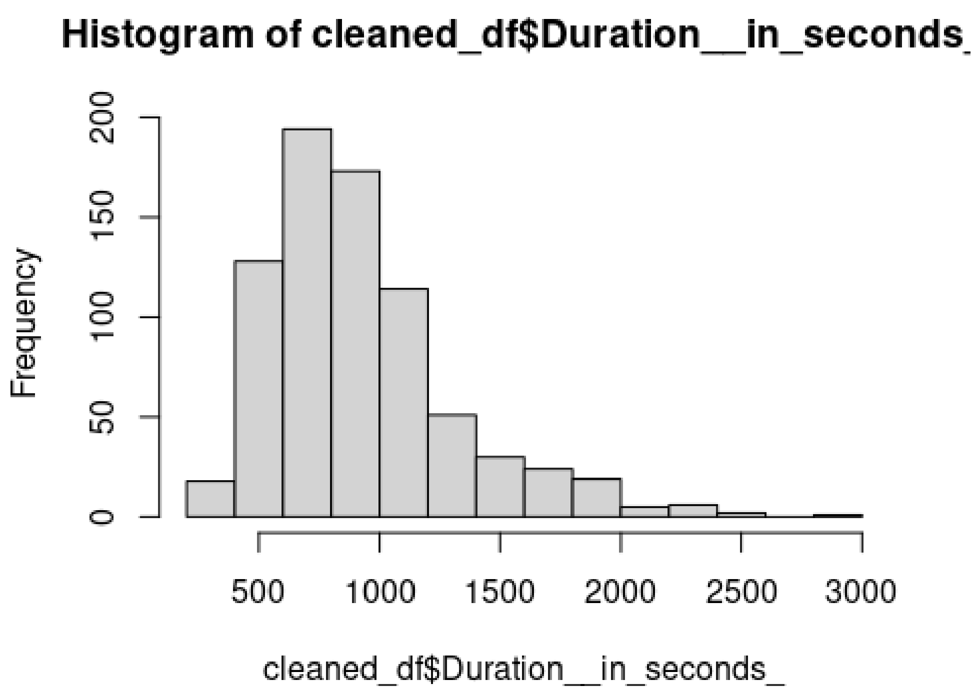

```
# more than 70 participants chose 2: Happy / Fulfilled / Wholesome instead of
4: Normal / Peaceful / As usual
#con_neutral <- con_neutral %>% filter(Recall_Compr_Neutral == 2 &
(Recall_Check2_neutra == 4 | Recall_Check2_neutra == 2) )

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",
         "ManiCheck",
         starts_with("Exp1"),
         starts_with("Exp2"),
         "MASC_set1", "MASC_set2", "MASC_set3",
         "BIDR_self_deceptive","BIDR_impre_manage",
         age:CountryName, Duration__in_seconds_) %>%
  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.

```
cleaned_df <- ethi_dis_write[5:43] %>%
  rbind(ethi_dis_nowrite[5:43]) %>%
  rbind(con_worthy[5:43]) %>%
  rbind(con_neutral[5:43]) %>%
  rbind(con_nega[5:43])
# 930 -> 765
colnames(cleaned_df)
```

```
##  [1] "study_order"            "ManiCheck"              "Exp1_check"
##  [4] "Exp1_check_DO_1"        "Exp1_check_DO_2"        "Exp1_check_DO_3"
##  [7] "Exp1_prob_hiring"       "Exp1_loyalty"           "Exp1_honesty"
## [10] "Exp2_S1_check"          "Exp2_S1_seen_wrong"     "Exp2_S1_self_action"
## [13] "Exp2_S1_guide_other"    "Exp2_S2F_check"         "Exp2_S2F_seen_wrong"
## [16] "Exp2_S2F_self_action"   "Exp2_S2F_guide_other"   "Exp2_S2M_check"
## [19] "Exp2_S2M_seen_wrong"    "Exp2_S2M_self_action"
"Exp2_S2M_guide_other"
## [22] "MASC_set1"              "MASC_set2"              "MASC_set3"
## [25] "BIDR_self_deceptive"    "BIDR_impre_manage"      "age"
## [28] "gender"                 "origcount"              "residence"
## [31] "soc_class"              "engunder"               "funnel_pay"
## [34] "assignmentId"           "hitId"                  "CountryCode"
## [37] "CountryName"            "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_0719_screened_812.csv",fileEncoding =
"UTF-8")
```

Descriptive data

```
# Manipulation Check
## overall
jmv::descriptives(data = cleaned_df, vars = vars(ManiCheck))

##
##  DESCRIPTIVES
##
##  Descriptives
##  ───────────────────────────────────
##                          ManiCheck
##  ───────────────────────────────────
##    N                           765
##    Missing                       0
##    Mean                     3.4305
##    Median                   3.5000
##    Standard deviation      0.77983
##    Minimum                  1.5000
##    Maximum                  4.5000
##  ───────────────────────────────────

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

##
##  DESCRIPTIVES
##
##  Descriptives
##  ───────────────────────────────────────────────────────────────
##                               condition              ManiCheck
##  ───────────────────────────────────────────────────────────────
##    N                          Dissonance_no_write          156
```

```
##                              Dissonance_write           152
##                              Negative                   157
##                              Neutral                    122
##                              Worthy                     178
##    Mean                      Dissonance_no_write     3.0203
##                              Dissonance_write        3.2160
##                              Negative                3.4565
##                              Neutral                 3.6762
##                              Worthy                  3.7818
##    95% CI mean lower bound   Dissonance_no_write     2.8872
##                              Dissonance_write        3.0950
##                              Negative                3.3353
##                              Neutral                 3.5675
##                              Worthy                  3.6937
##    95% CI mean upper bound   Dissonance_no_write     3.1534
##                              Dissonance_write        3.3371
##                              Negative                3.5777
##                              Neutral                 3.7850
##                              Worthy                  3.8700
##    Standard deviation        Dissonance_no_write    0.84801
##                              Dissonance_write       0.76143
##                              Negative               0.77491
##                              Neutral                0.61295
##                              Worthy                 0.60027
##    Variance                  Dissonance_no_write    0.71912
##                              Dissonance_write       0.57978
##                              Negative               0.60048
##                              Neutral                0.37571
##                              Worthy                 0.36033
##  ───────────────────────────────────────────────────────────────
```

```
# Study 1
## total
jmv::descriptives(data = cleaned_df, vars = vars(Exp1_prob_hiring, Exp1_loyalty, Exp1_honesty))
```

```
##
##  DESCRIPTIVES
##
##  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
##
##  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
##
##  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
##
##  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
##
##  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
##
##  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, MASC_set2, MASC_set3, BIDR_self_deceptive, BIDR_impre_manage))

##
##  DESCRIPTIVES
##
##  Descriptives
##  ──────────────────────────────────────────────────────────────────────────────────────────────────────────
##                           MASC_set1    MASC_set2    MASC_set3    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 + MASC_set2 + MASC_set3 + BIDR_self_deceptive + BIDR_impre_manage ~ condition,
    data = cleaned_df,
    missing = FALSE, median = FALSE)

##
##  DESCRIPTIVES
##
##  Descriptives
##
────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────
##                          condition               MASC_set1    MASC_set2    MASC_set3    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))
```

```
##
##  DESCRIPTIVES
##
##  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
```

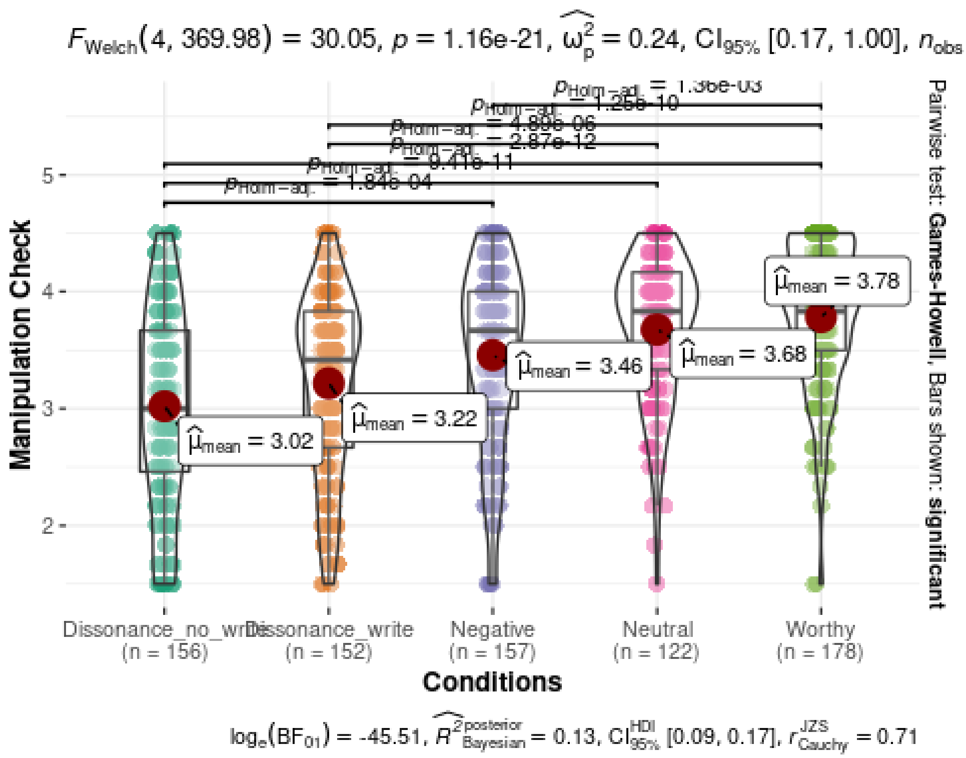
```
##    Minimum                 20.000     1.0000
##    Maximum                 79.000     4.0000
##  ─────────────────────────────────────────────

# plot descriptive table
#tableby.control()
#table_one <- tableby(age ~ ., data = cleaned_df)
#table_one
#summary(table_one, title = "Descriptive Data")
```

Planned Analysis - Main Analysis

Manipulation check - ANOVA

```
jmv::ANOVA(
    formula = ManiCheck ~ condition,
    data = cleaned_df,
    effectSize = "eta",
    modelTest = TRUE,
    homo = TRUE,
    postHocES = "d",
    postHocEsCi = TRUE,
    #emMeans = ~ condition,
    emmTables = TRUE)

## 
##  ANOVA
## 
##  ANOVA - ManiCheck
##  ───────────────────────────────────────────────────────────────────────────────────────────
##                       Sum of Squares    df     Mean Square    F         p           η²
##  ───────────────────────────────────────────────────────────────────────────────────────────
##    Overall model              62.687      4       15.67166    29.634    < .00001
##    condition                  62.687      4       15.67166    29.634    < .00001    0.13492
##    Residuals                 401.924    760        0.52885
##  ───────────────────────────────────────────────────────────────────────────────────────────
## 
## 
##  ASSUMPTION CHECKS
## 
##  Homogeneity of Variances Test (Levene's)
```

```
## ─────────────────────────────────────────
##    F           df1     df2     p
## ─────────────────────────────────────────
##    9.1668        4     760     < .00001
## ─────────────────────────────────────────

# plot the APA style table
ANOVA_mani_check <- lm(ManiCheck ~ condition, data = cleaned_df)

# plot ggstatsplot and save
ggstatsplot::ggbetweenstats(
    data = cleaned_df,
    y = ManiCheck,
    x = condition,
    originaltheme = TRUE,
    ylab = "Manipulation Check",
    xlab = "Conditions")
```



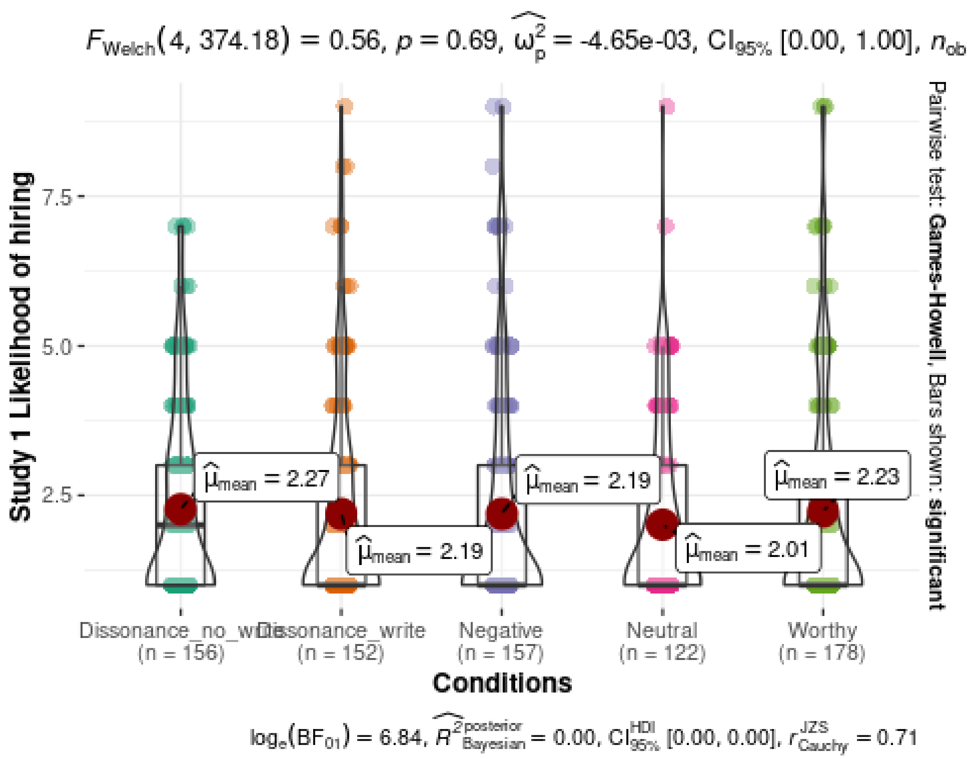
```r
# save the table and plot to local folder. Might interrupt with knitting, hence disabled after export.

apa.aov.table(ANOVA_mani_check, filename = "Manipulation check ANOVA.doc",table.number = 1)
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.

```r
jmv::ANOVA(
    formula = Exp1_prob_hiring ~ condition,
    data = cleaned_df,
    effectSize = "eta",
    modelTest = TRUE,
    homo = TRUE,
    postHocES = "d",
    postHocEsCi = TRUE,
    emmTables = TRUE)

## 
##  ANOVA
##
##  ANOVA - Exp1_prob_hiring
##  ─────────────────────────────────────────────────────────────────────────────────────────
##                       Sum of Squares    df     Mean Square    F          p          η²
##  ─────────────────────────────────────────────────────────────────────────────────────────
##    Overall model              5.2944      4         1.3236    0.44968    0.77267
##    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
##   ────────────────────────────────────────

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")
```

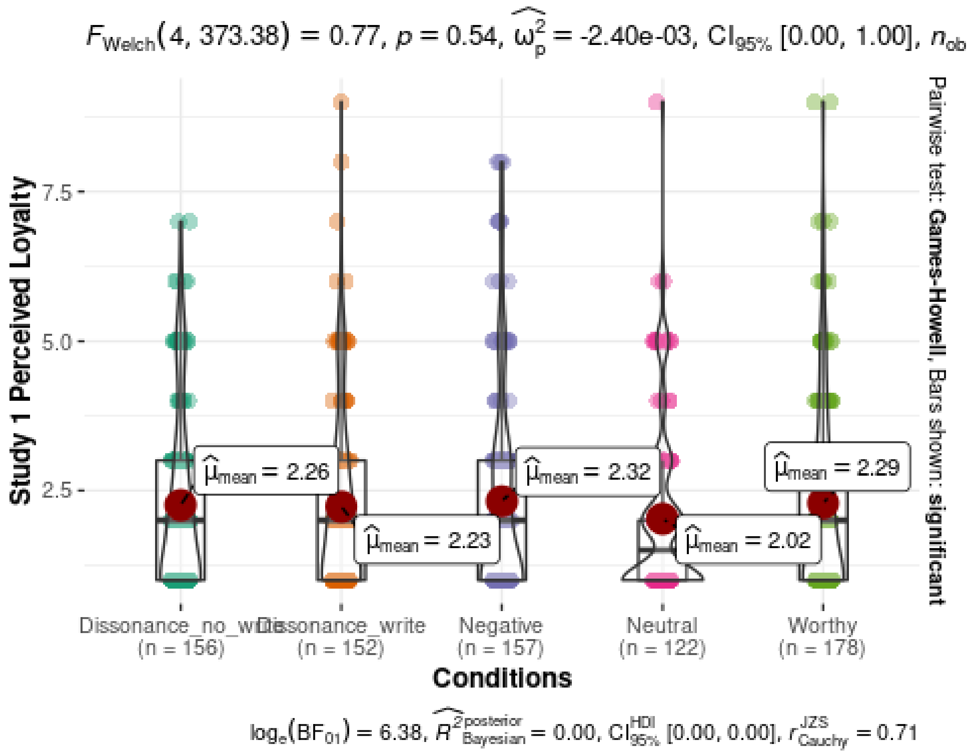



```
apa.aov.table(ANOVA_Study1_DV1, filename = "Exp1 DV1 ANOVA.doc",table.number = 2)
ggsave(
  "Study1DV1Hiring.png", plot = last_plot(),
  width = 9, height = 5.5, dpi = 600)
```

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

```
jmv::ANOVA(
    formula = Exp1_loyalty ~ condition,
    data = cleaned_df,
    effectSize = "eta",
    modelTest = TRUE,
    homo = TRUE,
    postHocES = "d",
    postHocEsCi = TRUE,
    emmTables = TRUE)

## 
##  ANOVA
## 
##  ANOVA - Exp1_loyalty
##  ───────────────────────────────────────────────────────────────────────────────────────────
##                         Sum of Squares    df     Mean Square    F          p          η²
##  ───────────────────────────────────────────────────────────────────────────────────────────
##    Overall model                7.0417      4         1.7604    0.69176    0.59778
##    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
##  ────────────────────────────────────────

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")
```

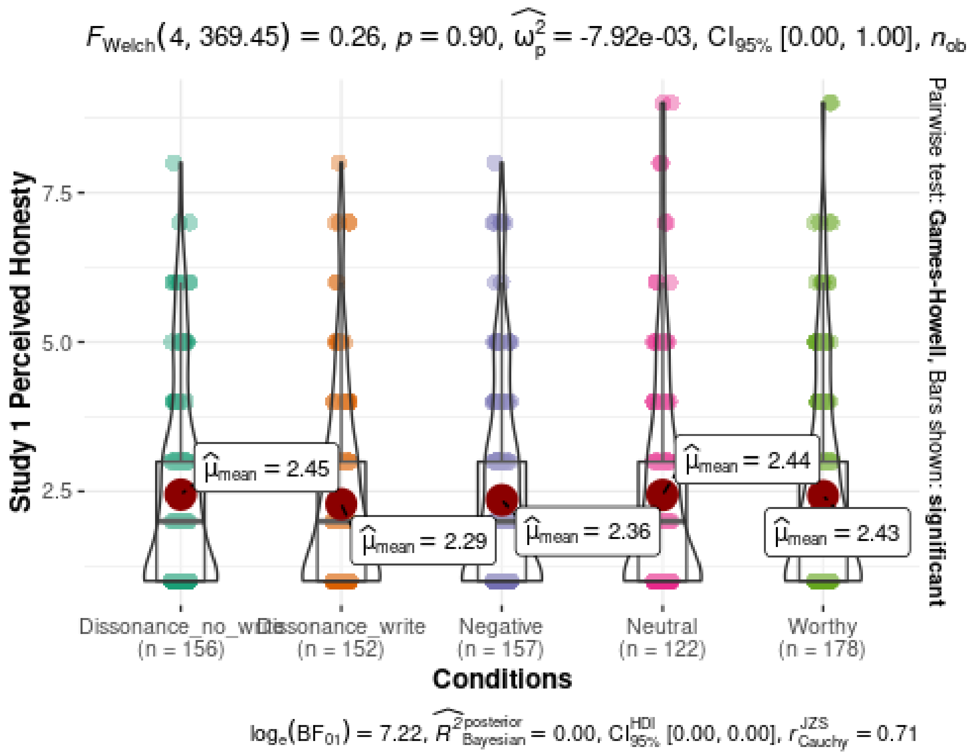



```
apa.aov.table(ANOVA_exp1_DV2, filename = "Exp1 DV2 ANOVA.doc",table.number = 3)
ggsave(
  "Study1DV2Loyalty.png", plot = last_plot(),
  width = 9, height = 5.5, dpi = 600)
```

Study 1 DV3 - Perceived honesty of the candidate.

```
jmv::ANOVA(
    formula = Exp1_honesty ~ condition,
    data = cleaned_df,
    effectSize = "eta",
    modelTest = TRUE,
    homo = TRUE,
    postHocES = "d",
    postHocEsCi = TRUE,
    emmTables = TRUE)
```

```
##
##  ANOVA
##
##  ANOVA - Exp1_honesty
##  ─────────────────────────────────────────────────────────────────────────────────────────
##                           Sum of Squares    df     Mean Square    F          p          η²
##  ─────────────────────────────────────────────────────────────────────────────────────────
##    Overall model                2.8256      4        0.70641    0.24632    0.91192
##    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
##  ────────────────────────────────────────

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")
```




```
apa.aov.table(ANOVA_exp1_DV3, filename = "Exp1 DV3 ANOVA.doc",table.number = 4)
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 =
```

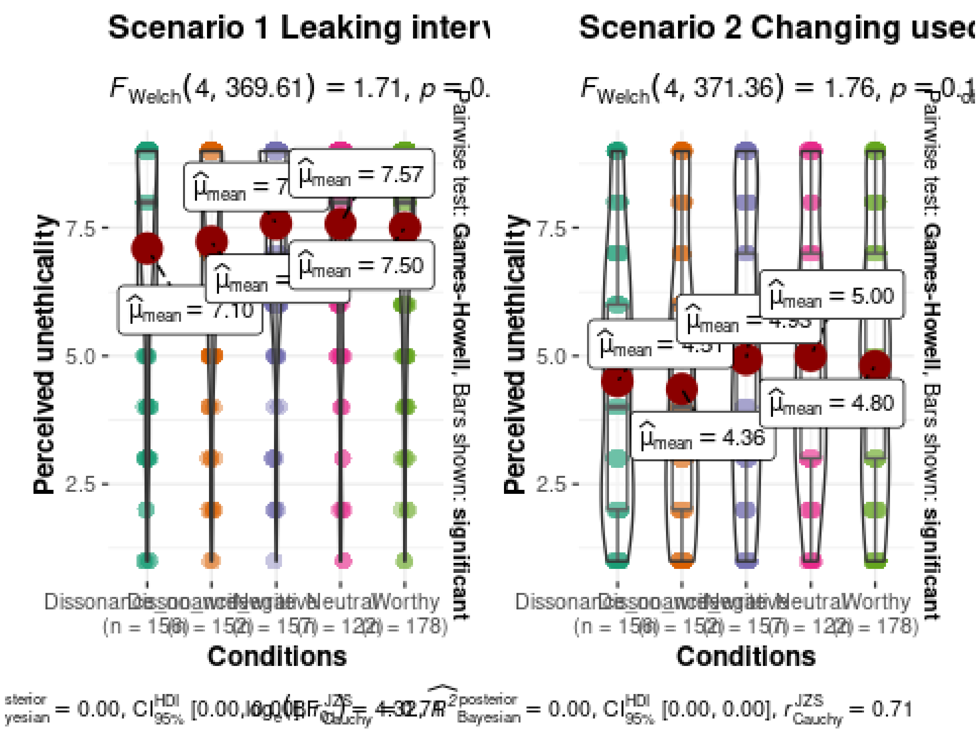
```
"scenario",values_to = "Exp2_guide_other")

# 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 = "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                        2700.2646     1       2700.2646    853.74003    < .00001    0.25489
##   scenario:condition                 4.3100     4          1.0775      0.34067     0.85055    0.00041
##   Residual                        2403.7776   760          3.1629
## ───────────────────────────────────────────────────────────────────────────────────────────────
##   Note. Type 3 Sums of Squares
##
##
## Between Subjects Effects
## ─────────────────────────────────────────────────────────────────────────────────────
##                     Sum of Squares    df     Mean Square    F         p          η²
## ─────────────────────────────────────────────────────────────────────────────────────
##   condition                 69.952      4        17.4881    2.4543    0.04454    0.00660
##   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
## ─────────────────────────────────────────────────────────────
##
##
## Group Summary
## ──────────────────────────────────────────
##   condition              N      Excluded
## ──────────────────────────────────────────
##   Dissonance_no_write    156           0
##   Dissonance_write       152           0
##   Negative               157           0
##   Neutral                122           0
##   Worthy                 178           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_s2long,
  y = Exp2_seen_wrong,
  x = condition,
  grouping.var = scenario,
  ylab = "Perceived unethicality",
  xlab = "Conditions"
  )
```



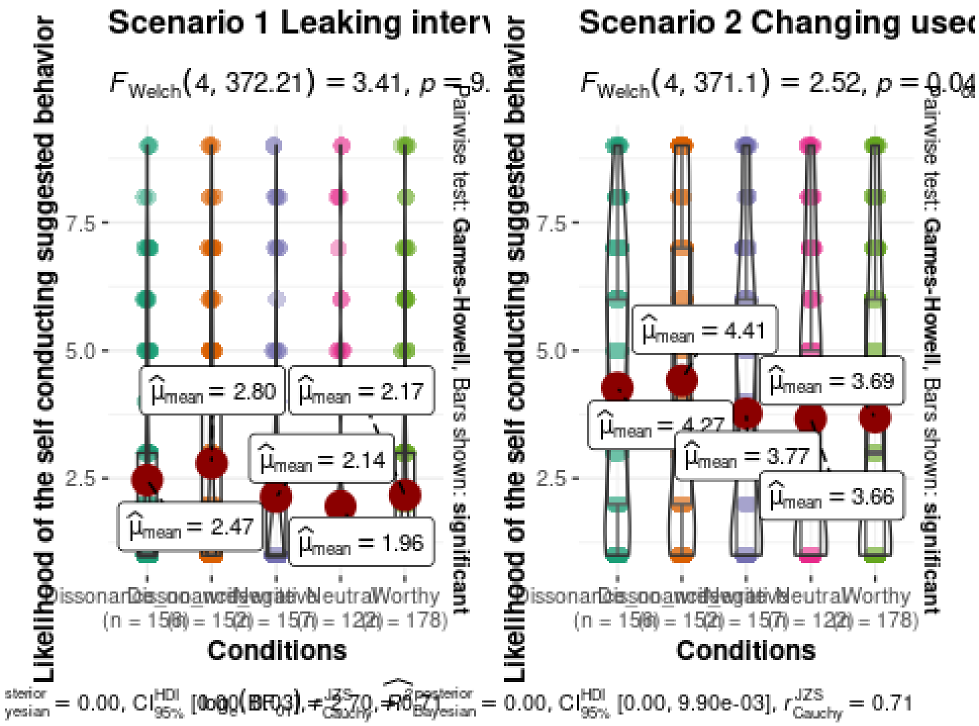

```
ggsave(
  "Study2DV1SeenWrong.png", plot = last_plot(),
  width = 11.8, height = 6, dpi = 600)
```

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

```
jmv::anovaRM(
    data = 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 = "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                     1031.3524      1     1031.35236    291.00134    < .00001    0.10497
##    scenario:condition              3.6513      4        0.91282      0.25756     0.90508    0.00037
##    Residual                     2693.5540    760        3.54415
##  ─────────────────────────────────────────────────────────────────────────────────────────────────
##    Note. Type 3 Sums of Squares
##
##
##  Between Subjects Effects
##  ────────────────────────────────────────────────────────────────────────────────────
##                   Sum of Squares    df     Mean Square    F         p          η²
##  ────────────────────────────────────────────────────────────────────────────────────
##    condition              134.46      4         33.6145    4.2851    0.00196    0.01369
##    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
##  ─────────────────────────────────────────────────────────────
##
##
##  Group Summary
##  ──────────────────────────────────────────
##    condition              N       Excluded
##  ──────────────────────────────────────────
##    Dissonance_no_write    156            0
##    Dissonance_write       152            0
##    Negative               157            0
##    Neutral                122            0
##    Worthy                 178            0
##  ──────────────────────────────────────────
```

```r
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"
  )
```




```r
ggsave(
  "Study2DV2SelfAction.png", plot = last_plot(),
  width = 11.8, height = 6, dpi = 600)
```

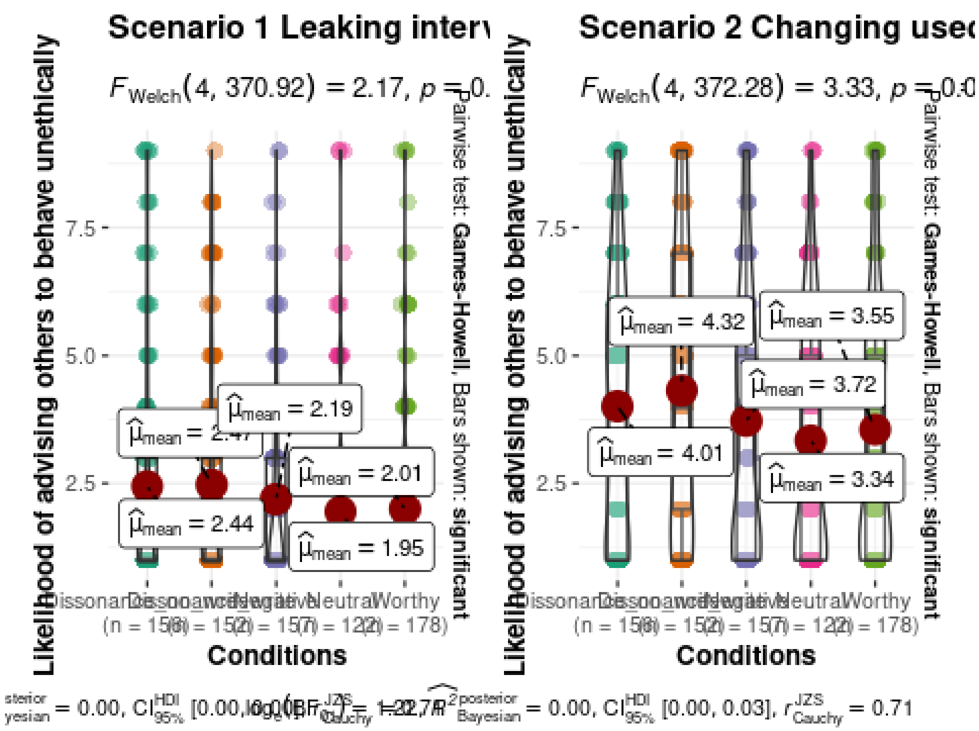
Study 2 DV3 - Likelihood of advising others to perform unethical but self-benefiting behavior.

```r
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"
  )
```



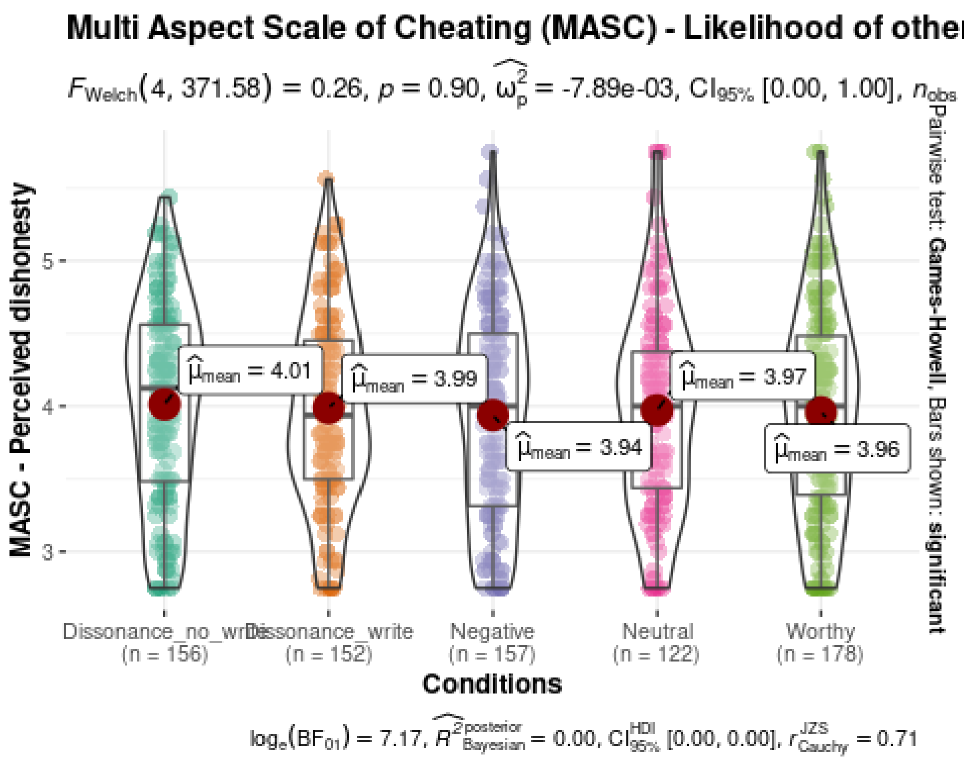

```r
ggsave(
  "Study2DV3AdviseOthers.png", plot = last_plot(),
  width = 11.8, height = 6, dpi = 600)
```

Study 3 - MASC

Calculate ANOVA, generate APA style ANOVA table, and plot ggstatsplot.

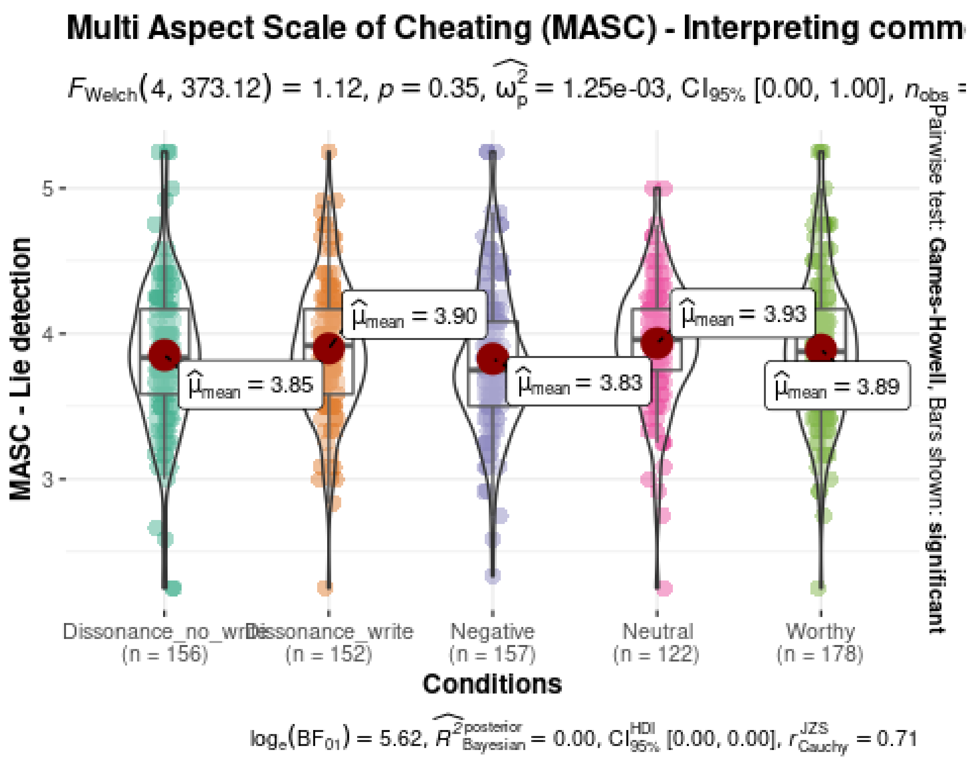
```r
# Overall measurements for all participants.

## MASC set 1
jmv::ANOVA(
    formula = MASC_set1 ~ condition,
    data = cleaned_df,
    effectSize = "eta",
    modelTest = TRUE,
    homo = TRUE,
    postHocES = "d",
```

```
    postHocEsCi = TRUE,
    #emMeans = ~ condition,
    emmTables = TRUE)

##
##  ANOVA
##
##  ANOVA - MASC_set1
##  ─────────────────────────────────────────────────────────────────────────────────────────────
##                         Sum of Squares    df     Mean Square    F          p          η²
##  ─────────────────────────────────────────────────────────────────────────────────────────────
##    Overall model               0.50687      4        0.12672    0.26685    0.89931
##    condition                   0.50687      4        0.12672    0.26685    0.89931    0.00140
##    Residuals                 360.89730    760        0.47486
##  ─────────────────────────────────────────────────────────────────────────────────────────────
##
##
##  ASSUMPTION CHECKS
##
##  Homogeneity of Variances Test (Levene's)
##  ────────────────────────────────────────
##    F          df1    df2    p
##  ────────────────────────────────────────
##    0.49187      4    760    0.74174
##  ────────────────────────────────────────

ANOVA_study3_MASC1 <- lm(MASC_set1 ~ condition, data = cleaned_df)

ggstatsplot::ggbetweenstats(
    data = cleaned_df,
    y = MASC_set1,
    x = condition,
    originaltheme = TRUE,
    ylab = "MASC - Perceived dishonesty",
    xlab = "Conditions",
    title = "Multi Aspect Scale of Cheating (MASC) - Likelihood of others to behave dishonestly")
```



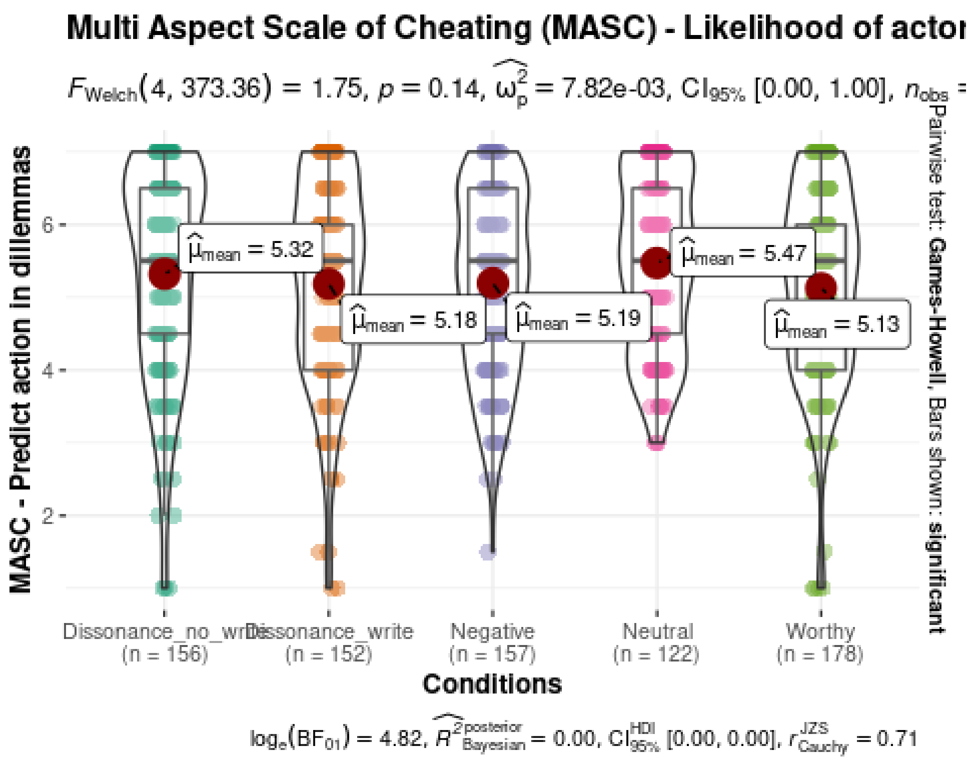

```
apa.aov.table(ANOVA_study3_MASC1, filename = "Exp3 MASC set1 ANOVA.doc",table.number = 5)
ggsave(
  "MASC1_Dishonesty_plot.png", plot = last_plot(),
  width = 9, height = 5.5, dpi = 600)

## MASC set 2
jmv::ANOVA(
    formula = MASC_set2 ~ condition,
    data = cleaned_df,
    effectSize = "eta",
    modelTest = TRUE,
    homo = TRUE,
    postHocES = "d",
    postHocEsCi = TRUE,
    #emMeans = ~ condition,
    emmTables = TRUE)

##
##  ANOVA
```

```
##
## ANOVA - MASC_set2
## ──────────────────────────────────────────────────────────────────────────────────────────
##                       Sum of Squares    df     Mean Square    F         p          η²
## ──────────────────────────────────────────────────────────────────────────────────────────
##   Overall model              0.96894      4        0.24223    1.0924    0.35915
##   condition                  0.96894      4        0.24223    1.0924    0.35915    0.00572
##   Residuals                168.53384    760        0.22176
## ──────────────────────────────────────────────────────────────────────────────────────────
##
##
## ASSUMPTION CHECKS
##
## Homogeneity of Variances Test (Levene's)
## ────────────────────────────────────────
##   F          df1    df2    p
## ────────────────────────────────────────
##   0.67700      4    760    0.60804
## ────────────────────────────────────────

ANOVA_study3_MASC2 <- lm(MASC_set2 ~ condition, data = cleaned_df)

ggstatsplot::ggbetweenstats(
    data = cleaned_df,
    y = MASC_set2,
    x = condition,
    originaltheme = TRUE,
    ylab = "MASC - Lie detection",
    xlab = "Conditions",
    title = "Multi Aspect Scale of Cheating (MASC) - Interpreting common excuses as a lie")
```




```
apa.aov.table(ANOVA_study3_MASC2, filename = "Exp3 MASC set2 ANOVA.doc",table.number = 6)
ggsave(
  "MASC2_Lie_plot.png", plot = last_plot(),
  width = 9, height = 5.5, dpi = 600)

## MASC set 3
jmv::ANOVA(
    formula = MASC_set3 ~ condition,
    data = cleaned_df,
    effectSize = "eta",
    modelTest = TRUE,
    homo = TRUE,
    postHocES = "d",
    postHocEsCi = TRUE,
    #emMeans = ~ condition,
    emmTables = TRUE)

##
##  ANOVA
```

```
##
##  ANOVA - MASC_set3
##  ─────────────────────────────────────────────────────────────────────────────────────────
##                          Sum of Squares    df     Mean Square    F         p          η²
##  ─────────────────────────────────────────────────────────────────────────────────────────
##    Overall model                 10.606      4         2.6515    1.5218    0.19393
##    condition                     10.606      4         2.6515    1.5218    0.19393    0.00795
##    Residuals                   1324.197    760         1.7424
##  ─────────────────────────────────────────────────────────────────────────────────────────
##
##
##  ASSUMPTION CHECKS
##
##  Homogeneity of Variances Test (Levene's)
##  ────────────────────────────────────────
##    F         df1    df2    p
##  ────────────────────────────────────────
##    1.8344      4    760    0.12028
##  ────────────────────────────────────────

ANOVA_study3_MASC3 <- lm(MASC_set3 ~ condition, data = cleaned_df)

ggstatsplot::ggbetweenstats(
    data = cleaned_df,
    y = MASC_set3,
    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")
```



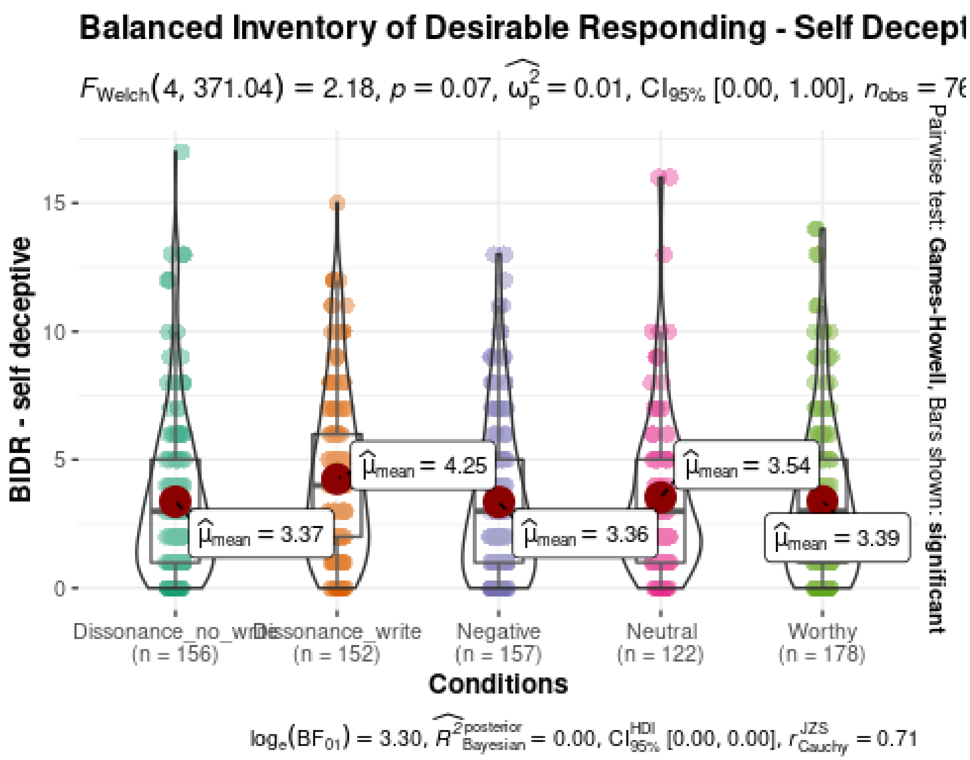

```
apa.aov.table(ANOVA_study3_MASC3, filename = "Exp3 MASC set3 ANOVA.doc",table.number = 7)
ggsave(
  "MASC3_dilemmas_plot.png", plot = last_plot(),
  width = 9, height = 5.5, dpi = 600)
```

Study 3 - BIDR

Calculate ANOVA, generate APA style ANOVA table, and plot ggstatsplot.

```
## BIDR - self deceptive
jmv::ANOVA(
    formula = BIDR_self_deceptive ~ condition,
    data = cleaned_df,
    effectSize = "eta",
    modelTest = TRUE,
    homo = TRUE,
    postHocES = "d",
    postHocEsCi = TRUE,
```

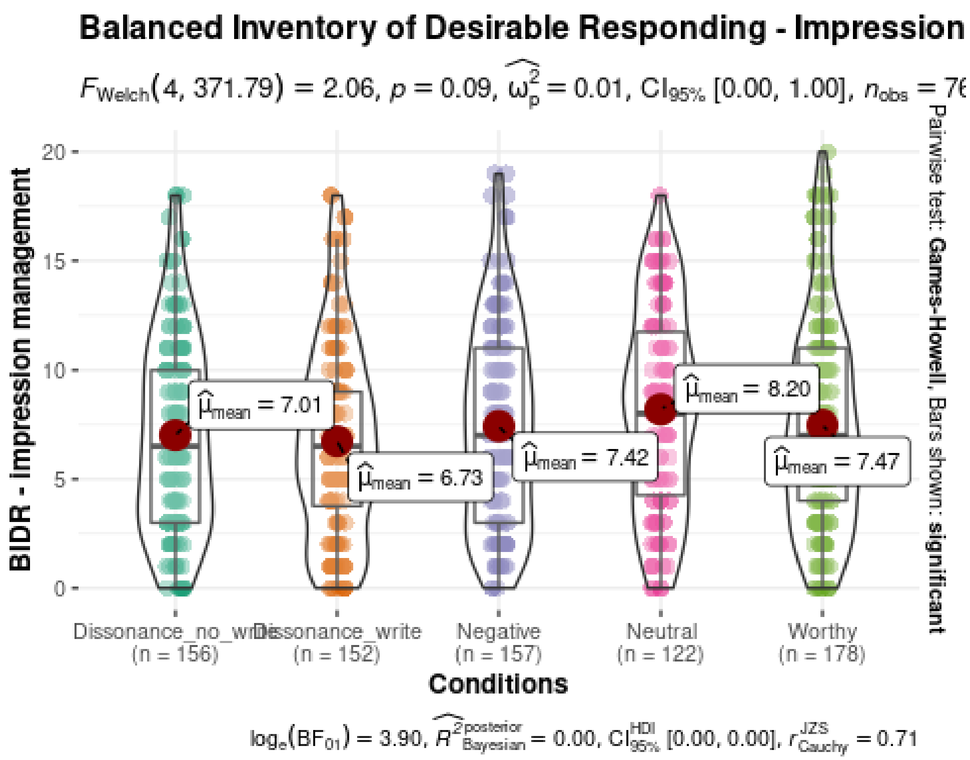
```
    #emMeans = ~ condition,
    emmTables = TRUE)

##
##  ANOVA
##
##  ANOVA - BIDR_self_deceptive
##  ───────────────────────────────────────────────────────────────────────────────────────────
##                        Sum of Squares    df     Mean Square    F         p          η²
##  ───────────────────────────────────────────────────────────────────────────────────────────
##    Overall model               89.568      4        22.3920    2.3187    0.05559
##    condition                   89.568      4        22.3920    2.3187    0.05559    0.01206
##    Residuals                 7339.509    760         9.6572
##  ───────────────────────────────────────────────────────────────────────────────────────────
##
##
##  ASSUMPTION CHECKS
##
##  Homogeneity of Variances Test (Levene's)
##  ────────────────────────────────────────
##    F          df1    df2    p
##  ────────────────────────────────────────
##    0.51664      4    760    0.72354
##  ────────────────────────────────────────

ANOVA_study3_BIDR1 <- lm(BIDR_self_deceptive ~ condition, data = cleaned_df)

ggstatsplot::ggbetweenstats(
    data = cleaned_df,
    y = BIDR_self_deceptive,
    x = condition,
    originaltheme = TRUE,
    ylab = "BIDR - self deceptive",
    xlab = "Conditions",
    title = "Balanced Inventory of Desirable Responding - Self Deceptive Score")
```




```
apa.aov.table(ANOVA_study3_BIDR1, filename = "Exp3 BIDR1 ANOVA.doc",table.number = 8)
ggsave(
  "BIDR_SelfDeceptive_plot.png", plot = last_plot(),
  width = 9, height = 5.5, dpi = 600)

## BIDR - impression management
jmv::ANOVA(
    formula = BIDR_impre_manage ~ condition,
    data = cleaned_df,
    effectSize = "eta",
    modelTest = TRUE,
    homo = TRUE,
    postHocES = "d",
    postHocEsCi = TRUE,
    #emMeans = ~ condition,
    emmTables = TRUE)

##
##  ANOVA
```

```
##
##  ANOVA - BIDR_impre_manage
##  ─────────────────────────────────────────────────────────────────────────────────────────
##                       Sum of Squares    df     Mean Square    F         p          η²
##  ─────────────────────────────────────────────────────────────────────────────────────────
##    Overall model              166.85      4         41.713    2.0175    0.09020
##    condition                  166.85      4         41.713    2.0175    0.09020    0.01051
##    Residuals                15713.81    760         20.676
##  ─────────────────────────────────────────────────────────────────────────────────────────
##
##
##  ASSUMPTION CHECKS
##
##  Homogeneity of Variances Test (Levene's)
##  ────────────────────────────────────────
##    F          df1    df2    p
##  ────────────────────────────────────────
##    0.33881      4    760    0.85184
##  ────────────────────────────────────────
```

```
ANOVA_study3_BIDR2 <- lm(BIDR_impre_manage ~ condition, data = cleaned_df)

ggstatsplot::ggbetweenstats(
    data = cleaned_df,
    y = BIDR_impre_manage,
    x = condition,
    originaltheme = TRUE,
    ylab = "BIDR - impression management",
    xlab = "Conditions",
    title = "Balanced Inventory of Desirable Responding - Impression Management Score")
```




```
apa.aov.table(ANOVA_study3_BIDR2, filename = "Exp3 BIDR2 ANOVA.doc",table.number = 9)
ggsave(
  "BIDR_ImpressionManagement_plot.png", plot = last_plot(),
  width = 9, height = 5.5, dpi = 600)
```

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 -0.0000000000000000041633
## Dissonance_write            3        -1 -0.0000000000000000026743
## Negative                   -2         0 -0.5773502691896257310590
## Neutral                    -2         0  0.7886751345948128655290
## Worthy                     -2         0 -0.2113248654051871067150
##
## Dissonance_no_write -0.0000000000000000055511
## Dissonance_write    -0.0000000000000000017154
## Negative            -0.5773502691896257310590
## Neutral             -0.2113248654051871344710
## Worthy               0.7886751345948128655290
```

```
# ANOVA command
# result in the form of regression
#summary.lm(aov1)

ANOVA_mani_check <- lm(ManiCheck ~ condition, data = cleaned_df)
summary.lm(ANOVA_mani_check)
```

```
##
## Call:
## lm(formula = ManiCheck ~ condition, data = cleaned_df)
##
## Residuals:
##    Min     1Q Median     3Q    Max
## -2.282 -0.457  0.146  0.543  1.480
##
## Coefficients:
##                    Estimate Std. Error t value            Pr(>|t|)
## (Intercept)          3.4302     0.0265  129.49 <0.0000000000000002 ***
## conditioncontrast1  -0.1040     0.0108   -9.65 <0.0000000000000002 ***
## conditioncontrast2  -0.0979     0.0414   -2.36              0.0185 *
## condition            0.1046     0.0629    1.66              0.0967 .
## condition            0.2102     0.0563    3.74              0.0002 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.727 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
```

```r
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 ~ condition, data = cleaned_df)
summary.lm(ANOVA_exp3_MASC1)
```

```
##
## Call:
## lm(formula = MASC_set1 ~ 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 ~ condition, data = cleaned_df)
summary.lm(ANOVA_exp3_MASC2)
```

```
##
## Call:
## lm(formula = MASC_set2 ~ 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 ~ condition, data = cleaned_df)
summary.lm(ANOVA_exp3_MASC3)

##
## Call:
## lm(formula = MASC_set3 ~ 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 -0.00000000000000041633
## Dissonance_write            3        -1 -0.00000000000000026743
## Negative                   -2         0 -0.577350269189625731059
## Neutral                    -2         0  0.788675134594812865529
## Worthy                     -2         0 -0.211324865405187106715
```

```r
##
## 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.

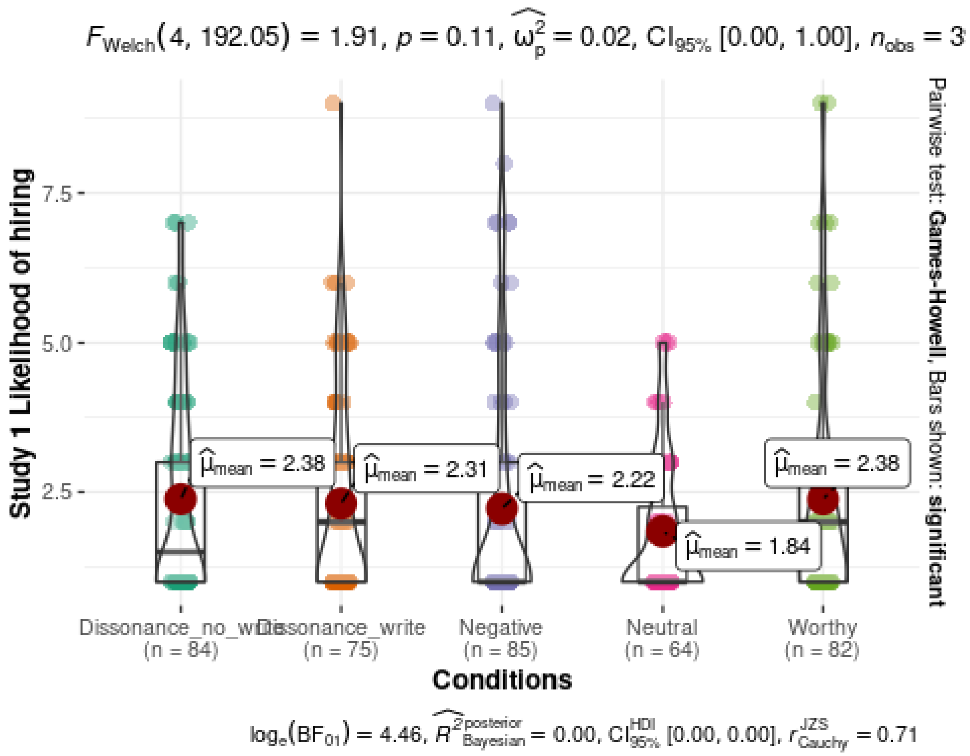
Study 1 - ANOVA

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")
```

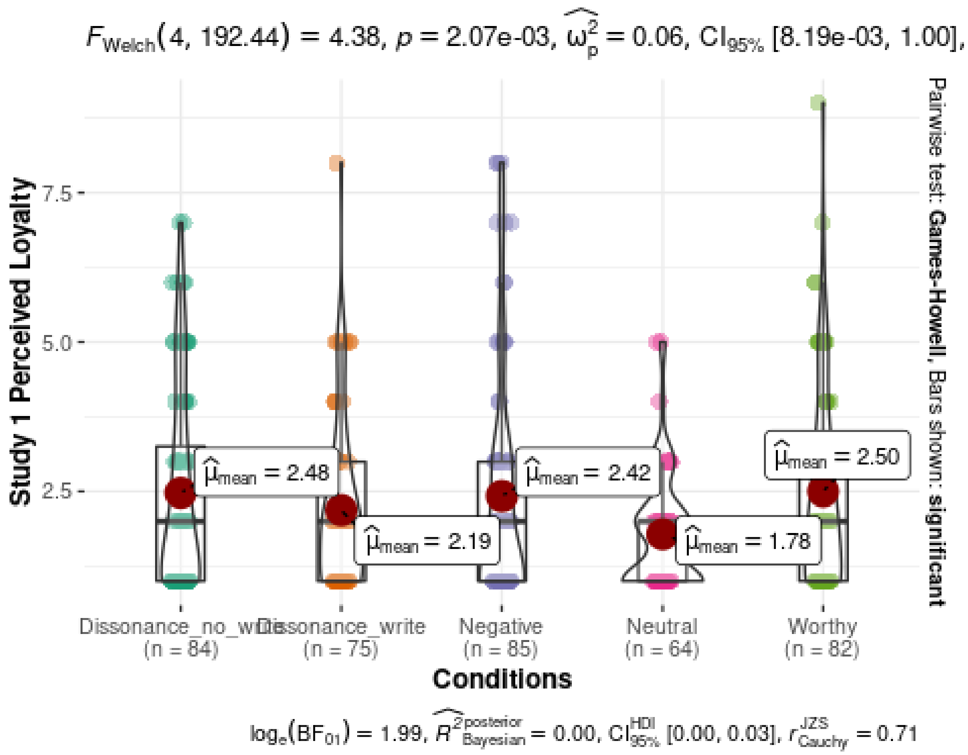
```
# DV1 Probability of hiring the candicate
jmv::ANOVA(
    formula = Exp1_prob_hiring ~ condition,
    data = df_s1,
    effectSize = "eta",
    modelTest = TRUE,
    homo = TRUE,
    postHocES = "d",
    postHocEsCi = TRUE,
    #emMeans = ~ condition, # using ggstatsplot instead
    emmTables = TRUE)

##
##  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,
```

```r
    originaltheme = TRUE,
    ylab = "Study 1 Likelihood of hiring",
    xlab = "Conditions")
```



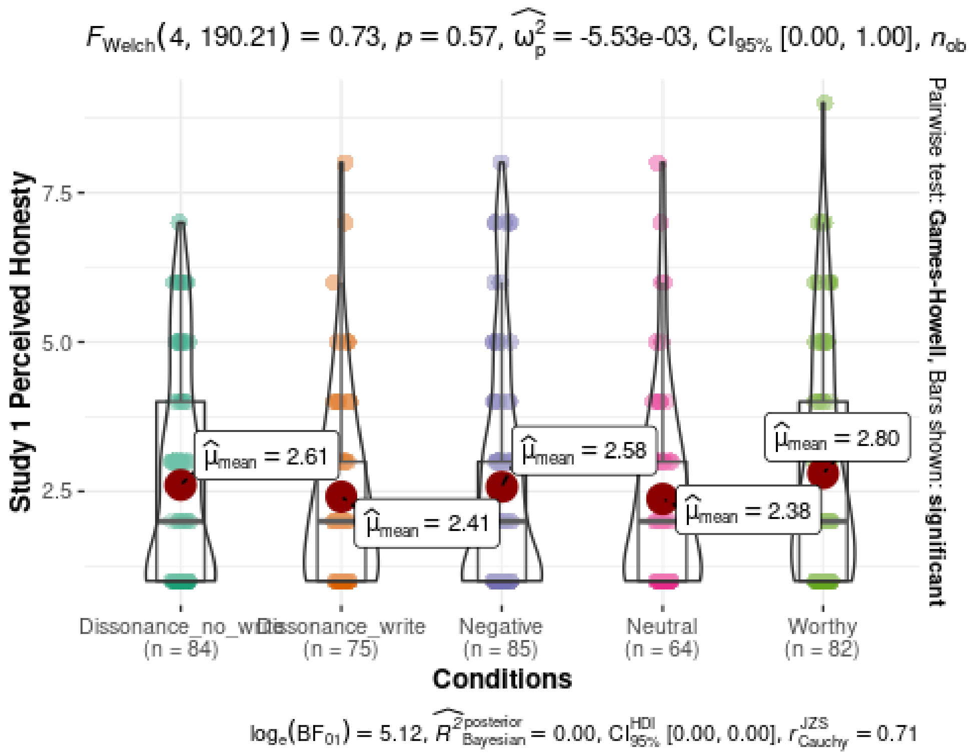

```r
# DV2 Perceived loyalty of the candidate
jmv::ANOVA(
    formula = Exp1_loyalty ~ condition,
    data = df_s1,
    effectSize = "eta",
    modelTest = TRUE,
    homo = TRUE,
    postHocES = "d",
    postHocEsCi = TRUE,
    #emMeans = ~ condition,
    emmTables = TRUE)

##
##  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
```

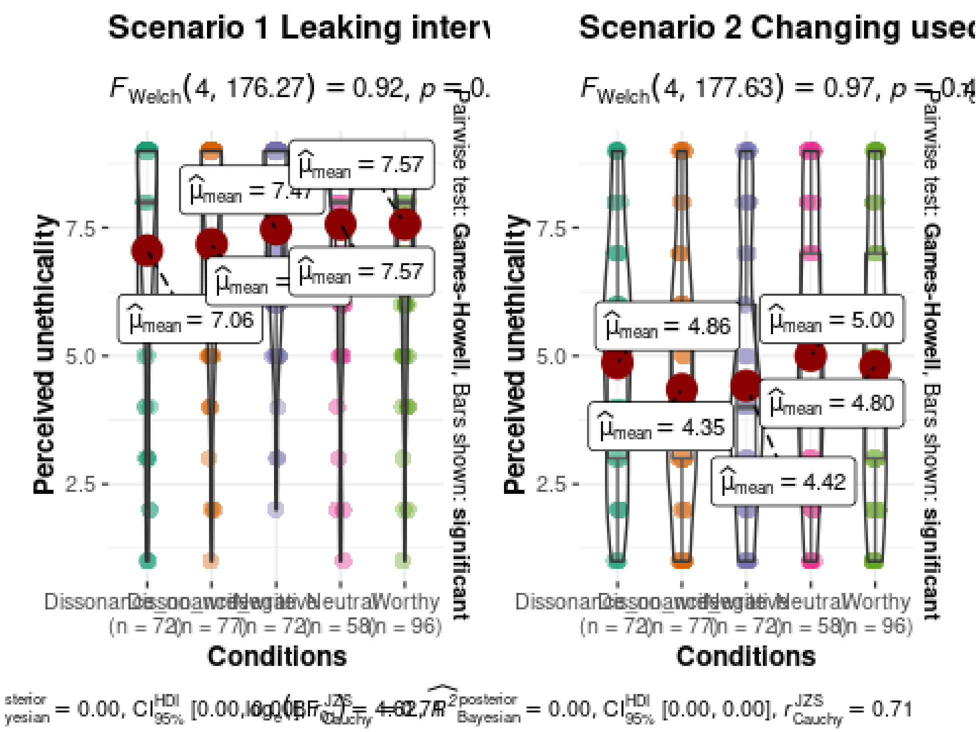
```
= "Exp2_guide_other")

# 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
## ─────────────────────────────────────────
```

```r
# 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"
  )
```

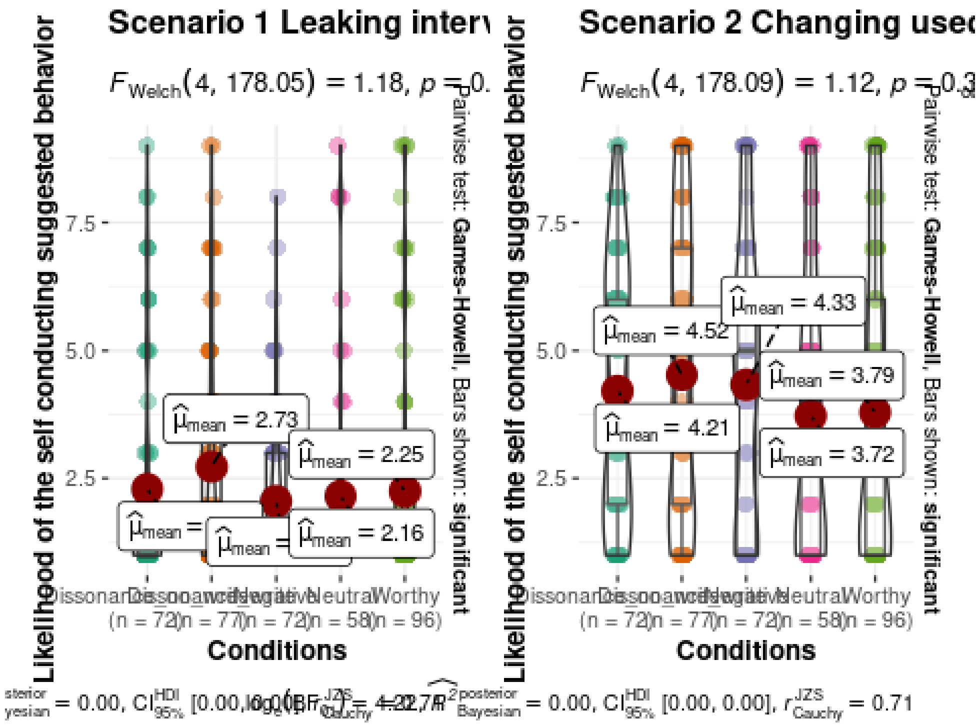



```r
ggsave(
  "Study2DV1SeenWrong.png", plot = last_plot(),
  width = 11.8, height = 6, dpi = 600)
```

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)
```

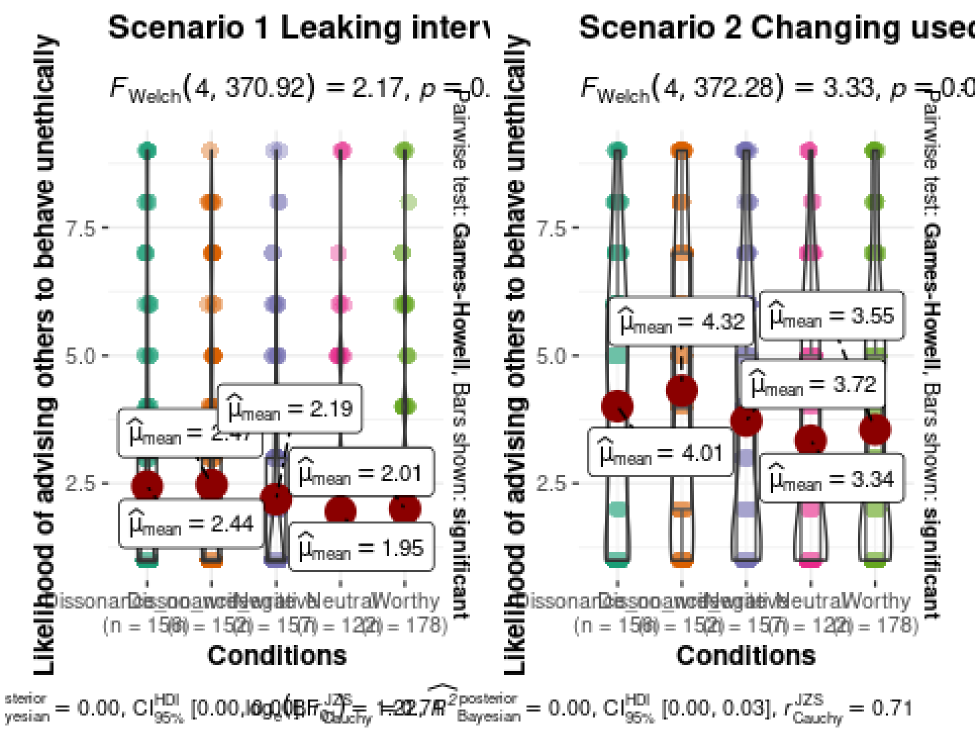
Study 2 DV3 - Likelihood of advising others to perform unethical but self-benefiting behavior.

```
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)
```