

Data Description Sheet for:

Using Unconscious Thought to Improve Evaluations of Complex Accounting Estimates By: Blake Holman, Benjamin P. Commerford, and Finn Kinserdal

April 2026

Item 1 – Study 1 uses experienced auditors from three Big 4 public accounting firms operating in Norway as participants. For this study, Professor Kinserdal coordinated with the participating Norwegian audit firms and facilitated the distribution of experimental materials via a hyperlink to Qualtrics. For Study 2 and Study 3, the Qualtrics program and Prolific recruitment and payment were managed by Professor Holman. Across all three studies, Professor Holman downloaded the raw data from Qualtrics which was then reviewed by Professor Commerford along with the coding. Professor Holman conducted the statistical analyses in SPSS which were then re-performed by Professor Commerford for verification. Professor Kinserdal reviewed all statistical analyses.

Item 2 – All experimental data was collected via Qualtrics surveys. As mentioned, Study 1 uses experienced auditors from three Big 4 public accounting firms operating in Norway as participants. These participants were obtained by Professor Kinserdal coordinating with the participating Norwegian audit firms and facilitating the distribution of experimental materials via a hyperlink to Qualtrics. Data for Study 1 was collected in late 2023. Meanwhile, Study 2 and Study 3 use Prolific participants, recruited through the Prolific website. Study 2 and 3 was collected in late 2022. Full instruments for all studies are attached (see file entitled “Experimental Materials – Final”).

Item 3 – For Study 2 and Study 3, our data was not obtained from an organization. For Study 1, the participating audit firms simply asked that results be anonymized so that responses would not be attributed to any one specific firm.

Item 4 – As noted above, the full instruments for all three studies are attached in a separate file entitled “Experimental Materials – Final”. Further, section 3.1 in the paper outlines the recruitment process for Study 1 participants, while section 4.1 and section 5.1 describe the recruitment processes for Study 2 and Study 3, respectively.

Prolific was used for Study 2 and Study 3, allowing for potential participants to be filtered based on predetermined requirements set by the author team. As such, all participants were required to have an undergraduate degree and employment experience in business management, finance, or marketing and sales. For Study 1, all participants who completed the study are included in our analysis.

Further, participants were required to correctly respond to three attention check questions. The first attention check question asks participants about the experimental task while the second and third attention check questions relate to the impairment of goodwill, reinforcing the relationship between a company’s fair value estimate and carrying amount. For Study 2, seventy-nine participants responded incorrectly to at least one of these questions and were therefore excluded from our analyses, resulting in a final sample of 122 participants. For Study 3, seventy-four participants responded incorrectly to at least one of the three attention check questions, resulting in a final sample of 131 participants.

All three studies used Qualtrics surveys to collect responses. For Study 1, Professor Kinserdal coordinated with the participating Norwegian audit firms and facilitated the distribution of

experimental materials via a hyperlink to our survey. As discussed, for Study 2 and Study 3 we opened a task for all qualifying Prolific participants. By accepting the task, participants were provided a link that routed them to Qualtrics. Upon completion, participants were automatically re-routed back to Prolific to earn credit and receive their compensation (all participants were paid a fixed wage of \$3).

Item 5

After downloading the raw data for each experiment, all manipulations of the data and empirical analyses were performed using SPSS. Refer to *Item 7* for the comprehensive log file (i.e., SPSS syntax) for all three studies.

Item 6

The surveys were designed and reviewed by the author team using Qualtrics. Data is automatically generated via Qualtrics based on participants' decisions during the experiment and exported to Excel prior to being imported to SPSS. Refer to *Item 7* for the comprehensive log file (i.e., SPSS syntax) for all three studies. We detail the steps taken and purpose for each portion of the code within the SPSS syntax for each study, referencing the analyses that correspond to the tabulated results within the paper.

Item 7

Study 1 - SPSS Syntax

DELETE VARIABLES

StartDate

EndDate

Status

Progress

RecordedDate

ResponseId

DistributionChannel

UserLanguage

PartAgree

GenInstrTimer_FirstClick

GenInstrTimer_LastClick

GenInstrTimer_ClickCount

BackIncrTimer_FirstClick

BackIncrTimer_LastClick

BackIncrTimer_ClickCount

AuditIncrTimer_FirstClick

AuditIncrTimer_LastClick

AuditIncrTimer_ClickCount

MgmtArgIncrTimer_FirstClick

MgmtArgIncrTimer_LastClick

MgmtArgIncrTimer_ClickCount

TimeConsciousDelib_FirstClick

TimeConsciousDelib_LastClick

TimeConsciousDelib_ClickCount

BackDecrTimer_FirstClick

BackDecrTimer_LastClick

BackDecrTimer_ClickCount

AuditDecrTimer_FirstClick

AuditDecrTimer_LastClick
AuditDecrTimer_ClickCount
MgmtArgDecrTimer_FirstClick
MgmtArgDecrTimer_LastClick
MgmtArgDecrTimer_ClickCount
UncThCounter_FirstClick
UncThCounter_LastClick
UncThCounter_ClickCount
MainDVTimer_FirstClick
MainDVTimer_LastClick
MainDVTimer_ClickCount
ActDV1Timer_FirstClick
ActDV1Timer_LastClick
ActDV1Timer_ClickCount
ActDV2Timer_FirstClick
ActDV2Timer_LastClick
ActDV2Timer_ClickCount
ActDV3Timer_FirstClick
ActDV3Timer_LastClick
ActDV3Timer_ClickCount
ActDV4Timer_FirstClick
ActDV4Timer_LastClick
ActDV4Timer_ClickCount
ActDV5Timer_FirstClick
ActDV5Timer_LastClick
ActDV5Timer_ClickCount
PEQ5IncrTimer_FirstClick
PEQ5IncrTimer_LastClick
PEQ5IncrTimer_ClickCount
PEQ5DecrTimer_FirstClick
PEQ5DecrTimer_LastClick
PEQ5DecrTimer_ClickCount
PEQsDelibTimer_FirstClick
PEQsDelibTimer_LastClick
PEQsDelibTimer_ClickCount
PEQsUTTimer_FirstClick
PEQsUTTimer_LastClick
PEQsUTTimer_ClickCount
PEQ78Timer_FirstClick
PEQ78Timer_LastClick
PEQ78Timer_ClickCount
TimerDemo_FirstClick
TimerDemo_LastClick
TimerDemo_ClickCount
TimeConsciousDelib_PageSubmit
UncThCounter_PageSubmit
notmobile.
EXECUTE.

*Combining Variable from all conditions.

COMPUTE BiasDirectionPEQ=sum.1(DirBiasIncr, DirBiasDecr).

COMPUTE HelpfulPEQ=sum.1(PEQHelpDelib, PEQHelpUT).

COMPUTE AttentionPEQ=sum.1(PEQAwareDelib, PEQAwareUT).

COMPUTE TimeBiasDirPEQ = sum.1(PEQ5IncrTimer_PageSubmit, PEQ5DecrTimer_PageSubmit).

COMPUTE TimeHelpAwarePEQ = sum.1(PEQsDelibTimer_PageSubmit,
PEQsUTTimer_PageSubmit).

COMPUTE TimeActionDV =

sum.1(ActDV1Timer_PageSubmit,ActDV2Timer_PageSubmit,ActDV3Timer_PageSubmit,ActDV4Ti
mer_PageSubmit,ActDV5Timer_PageSubmit).

COMPUTE TimeBackground = sum.1(BackIncrTimer_PageSubmit,BackDecrTimer_PageSubmit).

COMPUTE TimeAuditProc = sum.1(AuditIncrTimer_PageSubmit,AuditDecrTimer_PageSubmit).

COMPUTE TimeMgmtArg =

sum.1(MgmtArgIncrTimer_PageSubmit,MgmtArgDecrTimer_PageSubmit).

COMPUTE TimePreMan =

sum.1(GenInstrTimer_PageSubmit,TimeBackground,TimeAuditProc,TimeMgmtArg).

EXECUTE.

DELETE VARIABLES

DirBiasIncr

DirBiasDecr

PEQHelpDelib

PEQHelpUT

PEQAwareDelib

PEQAwareUT

PEQ5IncrTimer_PageSubmit

PEQ5DecrTimer_PageSubmit

PEQsDelibTimer_PageSubmit

PEQsUTTimer_PageSubmit

ActionDVTimer_FirstClick

ActionDVTimer_LastClick

ActionDVTimer_ClickCount

ActDV1Timer_PageSubmit

ActDV2Timer_PageSubmit

ActDV3Timer_PageSubmit

ActDV4Timer_PageSubmit

ActDV5Timer_PageSubmit

BackIncrTimer_PageSubmit

BackDecrTimer_PageSubmit

AuditIncrTimer_PageSubmit

AuditDecrTimer_PageSubmit

MgmtArgIncrTimer_PageSubmit

MgmtArgDecrTimer_PageSubmit.

EXECUTE.

COMPUTE TimePreMan = GenInstrTimer_PageSubmit + TimeBackground + TimeAuditProc +
TimeMgmtArg.

Compute TotTime = Durationinseconds / 60.

EXECUTE.

*Create IVProcessing.
Compute IVProcessing = 1.
IF (Condition = 1) IVProcessing = 0.
IF (Condition = 2) IVProcessing = 0.
EXECUTE.

VALUE LABELS

IVProcessing
0 'Conscious'
1 'Unconscious'.
EXECUTE.

*Create IVIncomeBias.
Compute IVIncomeBias = 1.
IF (Condition = 1) IVIncomeBias = 0.
IF (Condition = 3) IVIncomeBias = 0.
EXECUTE.

VALUE LABELS

IVIncomeBias
0 'Increasing'
1 'Decreasing'.
EXECUTE.

VALUE LABELS

Condition
1 'Conscious/Increasing'
2 'Conscious/Decreasing'
3 'Unconscious/Increasing'
4 'Unconscious/Decreasing'.
EXECUTE.

VALUE LABELS

DemoPosition
1 'Staff'
2 'Senior'
3 'Manager'
4 'Partner'
5 'Other'.
EXECUTE.

VALUE LABELS

DemoGender
2 'Pass'
1 'Female'
0 'Male'.
EXECUTE.

***Table 2 – Panel B: 3-way interaction *Information Processing x Direction of Bias x Experience Level* on Proposed Audit Adjustments**

```
UNIANOVA PropAdj_1 BY IVProcessing IVIncomeBias YearsSplit
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/EMMEANS=TABLES(IVProcessing*IVIncomeBias*YearsSplit) COMPARE(IVProcessing)
ADJ(LSD)
/EMMEANS=TABLES(IVProcessing*IVIncomeBias*YearsSplit) COMPARE(IVIncomeBias)
ADJ(LSD)
/EMMEANS=TABLES(IVProcessing*IVIncomeBias*YearsSplit) COMPARE(YearsSplit)
ADJ(LSD)
/PRINT DESCRIPTIVE
/CRITERIA=ALPHA(.05)
/DESIGN=IVProcessing IVIncomeBias YearsSplit IVProcessing*IVIncomeBias
IVProcessing*YearsSplit
IVIncomeBias*YearsSplit IVProcessing*IVIncomeBias*YearsSplit.
```

***Table 2 – Panel C: Planned Orthogonal Contrasts for Less Experienced (Main effect of *Information Processing*, Main effect of *Direction of Bias*, Interaction).**

```
GLM PropAdj_1 BY Contrast
/CONTRAST(Contrast)=SPECIAL(1 1 -1 -1 0 0 0 0).
GLM PropAdj_1 BY Contrast
/CONTRAST(Contrast)=SPECIAL(1 -1 1 -1 0 0 0 0).
GLM PropAdj_1 BY Contrast
/CONTRAST(Contrast)=SPECIAL(1 -1 -1 1 0 0 0 0).
```

***Table 2 – Panel C: Planned Orthogonal Contrasts for More Experienced (Main effect of *Information Processing*, Main effect of *Direction of Bias*, Interaction).**

```
GLM PropAdj_1 BY Contrast
/CONTRAST(Contrast)=SPECIAL(0 0 0 0 1 1 -1 -1).
GLM PropAdj_1 BY Contrast
/CONTRAST(Contrast)=SPECIAL(0 0 0 0 1 -1 1 -1).
GLM PropAdj_1 BY Contrast
/CONTRAST(Contrast)=SPECIAL(0 0 0 0 1 -1 -1 1).
```

***Table 2 – Panel D: Simple Effects for Less Experienced.**

```
GLM PropAdj_1 BY Contrast
/CONTRAST(Contrast)=SPECIAL(1 -1 0 0 0 0 0 0).
GLM PropAdj_1 BY Contrast
/CONTRAST(Contrast)=SPECIAL(0 0 1 -1 0 0 0 0).
GLM PropAdj_1 BY Contrast
/CONTRAST(Contrast)=SPECIAL(1 0 -1 0 0 0 0 0).
GLM PropAdj_1 BY Contrast
/CONTRAST(Contrast)=SPECIAL(0 1 0 -1 0 0 0 0).
```

Study 2 - SPSS Syntax

DELETE VARIABLES

StartDate

EndDate

Status

Progress

RecordedDate

ResponseId

DistributionChannel

UserLanguage

PartAgree

ProID

PROLIFIC_PID

notmobile.

EXECUTE.

DELETE VARIABLES

Timer_ProID_FirstClick

Timer_ProID_LastClick

Timer_ProID_ClickCount

GenInstrTimer_FirstClick

GenInstrTimer_LastClick

GenInstrTimer_ClickCount

KC1_Timer_FirstClick

KC1_Timer_LastClick

KC1_Timer_ClickCount

GenInstr2_Timer_FirstClick

GenInstr2_Timer_LastClick

GenInstr2_Timer_ClickCount

GImpairTimer_FirstClick

GImpairTimer_LastClick

GImpairTimer_ClickCount

KC2_Timer_FirstClick

KC2_Timer_LastClick

KC2_Timer_ClickCount

GoodImpair2_Timer_FirstClick

GoodImpair2_Timer_LastClick

GoodImpair2_Timer_ClickCount

RevProjTimer_FirstClick

RevProjTimer_LastClick

RevProjTimer_ClickCount

OpExProjTimer_FirstClick

OpExProjTimer_LastClick

OpExProjTimer_ClickCount

DiscRateTimer_FirstClick

DiscRateTimer_LastClick

DiscRateTimer_ClickCount

TimeReason1_FirstClick

TimeReason1_LastClick

TimeReason1_ClickCount

Memo_Timer_FirstClick
 Memo_Timer_LastClick
 Memo_Timer_ClickCount
 TimePEQs35Cond1_FirstClick
 TimePEQs35Cond1_LastClick
 TimePEQs35Cond1_ClickCount
 TimePEQs68Cond1_FirstClick
 TimePEQs68Cond1_LastClick
 TimePEQs68Cond1_ClickCount
 TimePEQs1012Cond1_FirstClick
 TimePEQs1012Cond1_LastClick
 TimePEQs1012Cond1_ClickCount
 TimeConsciousDelib_FirstClick
 TimeConsciousDelib_LastClick
 TimeConsciousDelib_ClickCount
 TimePEQs35Cond2_FirstClick
 TimePEQs35Cond2_LastClick
 TimePEQs35Cond2_ClickCount
 TimePEQs69Cond2_FirstClick
 TimePEQs69Cond2_LastClick
 TimePEQs69Cond2_ClickCount
 TimePEQs1012Cond2_FirstClick
 TimePEQs1012Cond2_LastClick
 TimePEQs1012Cond2_ClickCount
 TimeUnconThought_FirstClick
 TimeUnconThought_LastClick
 TimeUnconThought_ClickCount
 TimePEQs35Cond3_FirstClick
 TimePEQs35Cond3_LastClick
 TimePEQs35Cond3_ClickCount
 TimePEQs69Cond3_FirstClick
 TimePEQs69Cond3_LastClick
 TimePEQs69Cond3_ClickCount
 TimePEQ9Cond3_FirstClick
 TimePEQ9Cond3_LastClick
 TimePEQ9Cond3_ClickCount
 TimePEQs1012Cond3_FirstClick
 TimePEQs1012Cond3_LastClick
 TimePEQs1012Cond3_ClickCount
 TimerDemo_FirstClick
 TimerDemo_LastClick
 TimerDemo_ClickCount.
 EXECUTE.

*Combining Variable from all conditions.

COMPUTE RevProj=sum.1(PEQRevProj1, PEQRevProj2, PEQRevProj3).

COMPUTE OpExProj =sum.1(PEQOpEXProj1, PEQOpEXProj2, PEQOpEXProj3).

COMPUTE DiscRate =sum.1(PEQDiscRate1, PEQDiscRate2, PEQDiscRate3).

COMPUTE Difficult =sum.1(PEQDifficult1, PEQDifficult2, PEQDifficult3).

COMPUTE Confidence =sum.1(PEQConfidence1, PEQConfidence2, PEQConfidence3).

```

COMPUTE EstQuality =sum.1(PEQEstQuality1, PEQEstQuality2, PEQEstQuality3).
COMPUTE Underst =sum.1(PEQUnderst1, PEQUnderst2, PEQUnderst3).
COMPUTE Effort =sum.1(PEQEffort1, PEQEffort2, PEQEffort3).
COMPUTE AffectPEQ =sum.1(PEQAffect1, PEQAffect2, PEQAffect3).
COMPUTE Helpful =sum.1(PEQHelpful2, PEQHelpful3).
COMPUTE TimePEQs35 = sum.1(TimePEQs35Cond1_PageSubmit,
TimePEQs35Cond2_PageSubmit, TimePEQs35Cond3_PageSubmit).
COMPUTE TimePEQs69 = sum.1(TimePEQs69Cond1_PageSubmit,
TimePEQs69Cond2_PageSubmit, TimePEQs69Cond3_PageSubmit, TimePEQ9Cond3_PageSubmit).
COMPUTE TimePEQs1012 = sum.1(TimePEQs1012Cond1_PageSubmit,
TimePEQs1012Cond2_PageSubmit, TimePEQs1012Cond3_PageSubmit).
COMPUTE TimePEQs = TimeReason1_PageSubmit + Memo_Timer_PageSubmit + TimePEQs35 +
TimePEQs69 + TimePEQs1012 + TimerDemo_PageSubmit.
EXECUTE.

```

```

COMPUTE TimeGenInstr = sum.1(GenInstrTimer_PageSubmit, KC1_Timer_PageSubmit,
GenInstr2_Timer_PageSubmit).
COMPUTE TimeGImpair = sum.1(GImpairTimer_PageSubmit, KC2_Timer_PageSubmit,
GoodImpair2_Timer_PageSubmit).
COMPUTE TimePreMan = Timer_ProID_PageSubmit + TimeGenInstr + TimeGImpair +
RevProjTimer_PageSubmit + OpExProjTimer_PageSubmit + DiscRateTimer_PageSubmit.
COMPUTE TimeEncode = TimeGenInstr + TimeGImpair + RevProjTimer_PageSubmit +
OpExProjTimer_PageSubmit + DiscRateTimer_PageSubmit.
COMPUTE TimeInterv = sum.1(TimeConsciousDelib_PageSubmit,
TimeUnconThought_PageSubmit).
RECODE TimeInterv (SYSMIS=0).
COMPUTE TimeonStudy = TimePreMan + TimePEQs.
COMPUTE TotTimeCalc = TimePreMan + TimeInterv + TimePEQs.
Compute TotTime = Durationinseconds / 60.
EXECUTE.

```

DELETE VARIABLES

```

PEQRevProj1
PEQRevProj2
PEQRevProj3
PEQOpEXProj1
PEQOpEXProj2
PEQOpEXProj3
PEQDiscRate1
PEQDiscRate2
PEQDiscRate3
PEQDifficult1
PEQDifficult2
PEQDifficult3
PEQConfidence1
PEQConfidence2
PEQConfidence3
PEQEstQuality1
PEQEstQuality2
PEQEstQuality3

```

PEQUnderst1
PEQUnderst2
PEQUnderst3
PEQEffort1
PEQEffort2
PEQEffort3
PEQAffect1
PEQAffect2
PEQAffect3
PEQHelpful2
PEQHelpful3.
EXECUTE.

*Create IVProcessing.
Compute IVProcessing = 1.
IF (Condition = 2) IVProcessing = 2.
IF (Condition = 3) IVProcessing = 3.
EXECUTE.

VALUE LABELS
IVProcessing
1 'Immediate'
2 'Conscious'
3 'Unconscious'.
EXECUTE.

Table 3 – Panel B: One-Way Anova *Information Processing on Reasonableness.

UNIANOVA Reason BY IVProcessing
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/PRINT DESCRIPTIVE
/CRITERIA=ALPHA(.05)
/DESIGN=IVProcessing.

***Table 3 – Panel C: Planned Contrasts.**

ONEWAY Reason BY IVProcessing
/CONTRAST=1 -1 0
/CONTRAST=1 0 -1
/CONTRAST=0 1 -1
/STATISTICS DESCRIPTIVES
/MISSING ANALYSIS
/CRITERIA=CILEVEL(0.95).

Study 3 - SPSS Syntax

DELETE VARIABLES

StartDate

EndDate

Status

Progress

RecordedDate

ResponseId

DistributionChannel

UserLanguage

PartAgree

ProID

PROLIFIC_PID

notmobile.

EXECUTE.

DELETE VARIABLES

Timer_ProID_FirstClick

Timer_ProID_LastClick

Timer_ProID_ClickCount

GenInstrTimer_FirstClick

GenInstrTimer_LastClick

GenInstrTimer_ClickCount

KC1_Timer_FirstClick

KC1_Timer_LastClick

KC1_Timer_ClickCount

GenInstr2_Timer_FirstClick

GenInstr2_Timer_LastClick

GenInstr2_Timer_ClickCount

GImpairTimer_FirstClick

GImpairTimer_LastClick

GImpairTimer_ClickCount

KC2_Timer_FirstClick

KC2_Timer_LastClick

KC2_Timer_ClickCount

GoodImpair2_Timer_FirstClick

GoodImpair2_Timer_LastClick

GoodImpair2_Timer_ClickCount

BiasedRevProjTimer_FirstClick

BiasedRevProjTimer_LastClick

BiasedRevProjTimer_ClickCount

BiasedOpExTimer_FirstClick

BiasedOpExTimer_LastClick

BiasedOpExTimer_ClickCount

BiasedDiscRateTimer_FirstClick

BiasedDiscRateTimer_LastClick

BiasedDiscRateTimer_ClickCount

TimeConsciousDelib_FirstClick

TimeConsciousDelib_LastClick

TimeConsciousDelib_ClickCount

TimeReason1_FirstClick
 TimeReason1_LastClick
 TimeReason1_ClickCount
 Memo_Timer_FirstClick
 Memo_Timer_LastClick
 Memo_Timer_ClickCount
 TimePEQs35Cond2_FirstClick
 TimePEQs35Cond2_LastClick
 TimePEQs35Cond2_ClickCount
 TimePEQs69Cond2_FirstClick
 TimePEQs69Cond2_LastClick
 TimePEQs69Cond2_ClickCount
 TimePEQs1012Cond2_FirstClick
 TimePEQs1012Cond2_LastClick
 TimePEQs1012Cond2_ClickCount
 UnbiasedRevProjTimer_FirstClick
 UnbiasedRevProjTimer_LastClick
 UnbiasedRevProjTimer_ClickCount
 UnbiasedOpExTimer_FirstClick
 UnbiasedOpExTimer_LastClick
 UnbiasedOpExTimer_ClickCount
 UnbiasDiscRateTimer_FirstClick
 UnbiasDiscRateTimer_LastClick
 UnbiasDiscRateTimer_ClickCount
 TimeUnconThought_FirstClick
 TimeUnconThought_LastClick
 TimeUnconThought_ClickCount
 TimePEQs35Cond3_FirstClick
 TimePEQs35Cond3_LastClick
 TimePEQs35Cond3_ClickCount
 TimePEQs69Cond3_FirstClick
 TimePEQs69Cond3_LastClick
 TimePEQs69Cond3_ClickCount
 TimePEQ9Cond3_FirstClick
 TimePEQ9Cond3_LastClick
 TimePEQ9Cond3_ClickCount
 TimePEQs1012Cond3_FirstClick
 TimePEQs1012Cond3_LastClick
 TimePEQs1012Cond3_ClickCount
 TimerDemo_FirstClick
 TimerDemo_LastClick
 TimerDemo_ClickCount.
 EXECUTE.

*Combining Variable from all conditions.

COMPUTE RevProj=sum.1(PEQRevProj2, PEQRevProj3).

COMPUTE OpExProj =sum.1(PEQOpEXProj2, PEQOpEXProj3).

COMPUTE DiscRate =sum.1(PEQDiscRate2, PEQDiscRate3).

COMPUTE Difficult =sum.1(PEQDifficult2, PEQDifficult3).

COMPUTE Confidence =sum.1(PEQConfidence2, PEQConfidence3).

```

COMPUTE EstQuality =sum.1(PEQEstQuality2, PEQEstQuality3).
COMPUTE Underst =sum.1(PEQUnderst2, PEQUnderst3).
COMPUTE Effort =sum.1(PEQEffort2, PEQEffort3).
COMPUTE AffectPEQ =sum.1(PEQAffect2, PEQAffect3).
COMPUTE Helpful =sum.1(PEQHelpful2, PEQHelpful3).
COMPUTE TimePEQs35 = sum.1(TimePEQs35Cond2_PageSubmit,
TimePEQs35Cond3_PageSubmit).
COMPUTE TimePEQs69 = sum.1(TimePEQs69Cond2_PageSubmit,
TimePEQs69Cond3_PageSubmit, TimePEQ9Cond3_PageSubmit).
COMPUTE TimePEQs1012 = sum.1(TimePEQs1012Cond2_PageSubmit,
TimePEQs1012Cond3_PageSubmit).
COMPUTE TimePEQs = TimeReason1_PageSubmit + Memo_Timer_PageSubmit + TimePEQs35 +
TimePEQs69 + TimePEQs1012 + TimerDemo_PageSubmit.
EXECUTE.

```

```

COMPUTE TimeGenInstr = sum.1(GenInstrTimer_PageSubmit, KC1_Timer_PageSubmit,
GenInstr2_Timer_PageSubmit).
COMPUTE TimeGImpair = sum.1(GImpairTimer_PageSubmit, KC2_Timer_PageSubmit,
GoodImpair2_Timer_PageSubmit).
COMPUTE TimeRevProj = sum.1(BiasedRevProjTimer_PageSubmit,
UnbiasedRevProjTimer_PageSubmit).
COMPUTE TimeOpExProj = sum.1(BiasedOpExTimer_PageSubmit,
UnbiasedOpExTimer_PageSubmit).
COMPUTE TimeDiscRate = sum.1(BiasedDiscRateTimer_PageSubmit,
UnbiasDiscRateTimer_PageSubmit).
COMPUTE TimePreMan = Timer_ProID_PageSubmit + TimeGenInstr + TimeGImpair +
TimeRevProj + TimeOpExProj + TimeDiscRate.
COMPUTE TimeEncode = TimeGenInstr + TimeGImpair + TimeRevProj + TimeOpExProj +
TimeDiscRate.
COMPUTE TimeInterv = sum.1(TimeConsciousDelib_PageSubmit,
TimeUnconThought_PageSubmit).
RECODE TimeInterv (SYSMIS=0).
COMPUTE TimeonStudy = TimePreMan + TimePEQs.
COMPUTE TotTimeCalc = TimePreMan + TimeInterv + TimePEQs.
Compute TotTime = Durationinseconds / 60.
EXECUTE.

```

DELETE VARIABLES

```

PEQRevProj2
PEQRevProj3
PEQOpEXProj2
PEQOpEXProj3
PEQDiscRate2
PEQDiscRate3
PEQDifficult2
PEQDifficult3
PEQConfidence2
PEQConfidence3
PEQEstQuality2
PEQEstQuality3

```

PEQUnderst2
PEQUnderst3
PEQEffort2
PEQEffort3
PEQAffect2
PEQAffect3
PEQHelpful2
PEQHelpful3.
EXECUTE.

*Create IVProcessing.
Compute IVProcessing = 1.
IF (Condition = 1) IVProcessing = 0.
IF (Condition = 2) IVProcessing = 0.
EXECUTE.

VALUE LABELS
IVProcessing
0 'Conscious'
1 'Unconscious'.
EXECUTE.

*Create IVEstBias.
Compute IVEstBias = 1.
IF (Condition = 1) IVEstBias = 0.
IF (Condition = 3) IVEstBias = 0.
EXECUTE.

VALUE LABELS
IVEstBias
0 'Biased'
1 'Unbiased'.
EXECUTE.

VALUE LABELS
Condition
1 'Biased/Conscious'
2 'Unbiased/Conscious'
3 'Biased/Unconscious'
4 'Unbiased/Unconscious'.
EXECUTE.

Table 4 – Panel B: Two-Way ANOVA *Information Processing x Degree of Bias on Reasonableness.

UNIANOVA Reason BY IVProcessing IVEstBias
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/PLOT=PROFILE(IVEstBias*IVProcessing) TYPE=LINE ERRORBAR=NO
MEANREFERENCE=NO YAXIS=AUTO

***Table 4 – Panel C: Simple Effects.**

/EMMEANS=TABLES(IVProcessing*IVEstBias) COMPARE(IVProcessing) ADJ(LSD)

```
/EMMEANS=TABLES(IVProcessing*IVEstBias) COMPARE(IVEstBias) ADJ(LSD)
/PRINT DESCRIPTIVE
/CRITERIA=ALPHA(.05)
/DESIGN=IVProcessing IVEstBias IVProcessing*IVEstBias.
```

Item 8

Professor Holman agrees to maintain all the data and programs for at least six years, consistent with the National Science Foundation guidelines.