Coding Manual of Qualitative Errors in Neuropsychological Exams

Note:

- 1. This dataset contains measurements related to Boston Process Approach (BPA) Errors which participants made during their neuropsychological assessments, administered between 2005 and 2021
- 2. Analysts should evaluate the use of this dataset according to their research study designs. To better understand these error measurements, it will be important to read through the protocol document.
- 3. Key NP Error Type Terminology:
 - Confabulation- Details "made up" by the participant that were not part of the
 information presented by the examiner. Sometimes confabulations are
 semantically related to a detail or item mentioned during the learning phase of
 the test (ex: examiner said "grocery" and the participant later recalled
 "vegetables") and sometimes they are unrelated.
 - Interference- Old information interferes with the learning of new information; typically, a detail from a previous conversation or testing that the participant presents as part of the current test. For example, if the participant mentioned they were a doctor during the demographics section of testing, then recalled that Anna Thompson (Logical Memory) was a doctor, which she is not, that is an intrusion. Like confabulations, intrusions can also be related or unrelated to the presented stimuli.
 - Contaminations- Contamination refers to the erroneous inclusion of a detail from another stimulus into the current drawing/ test (similar, in concept, to an intrusion). For example, if there was a flag in the first drawing a participant recalled, and they drew that same flag in their second drawing (which should not have a flag), that is a contamination error.
 - Perseverations Perseverations are errors of repetition; when the participant recalls the same detail more than once, without being asked to do so.

Last updated: Jan 2023

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ID and Neuropsychological Exams related variables

IDTYPE

Variable name: IDTYPE

Description: Framingham Heart Study cohort identifier

Code or Value Description Count 0 Original Cohort (Generation 1) 478 1 Offspring Cohort (Generation 2) 5303 2 **New Offspring Spouse Cohort** 63 3 Generation 3 Cohort 3737 Omni 1 Cohort 432 72 Omni 2 Cohort 227

Note: IDTYPE and ID taken together form a unique study participant identification number.

ID

Variable name: ID

Description: Framingham Heart Study participant identifier within a cohort

Code or Value	Description
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0 – 9999	Range of values
0 - 3333	Mange of values

Note: IDTYPE and ID taken together form a unique study participant identification number. To preserve confidentiality, the exact range for the ID is not reflected in the coding manual.

EXAMDATE

Variable name: EXAMDATE

Description: Framingham ID assigned to each participant

Code or Value	Description	Count
3/2005 — 12/2021	Range of values	10240

Note: Dates include month, day and year, however coding manual displays only month and year to preserve confidentiality.

NP FORM

Variable name: NP_FORM

ID and Neuropsychological Exams related variables

Description: Form of the exam that was administered – short or long (Long form includes 3 additional tests: Block Design, Information, and Cookie Theft)

Code or Value	Description	Count	
1	Short form	6316	
2	Long form	3901	
3	Remote	23	

VERSION

Variable name: VERSION

Description: Date of the NP exam version

Code or Value	Description	Count
10/2005 — 10/2018	Range of values	10227
•	Missing	13

Note: Dates include month, day and year, however coding manual displays only month and year to preserve confidentiality.

LM_I_RC

Variable name: LM_I_RC

Description: Logical Memory: Immediate – Total number of Confabulations Related to the story

details.

Code or Value	Description	Count
0	No confabulations	2697
1-18	Number of confabulations	6923
	Missing	620

LM_I_RI

Variable name: LM_I_RI

Description: Logical Memory: Immediate – Total number of Intrusions Related to the story

details.

Code or Value	Description	Count	
0	No intrusions	9527	
1-3	Number of intrusions	93	
	Missing	620	

LM D NRC

Variable name: LM D NRC

Description: Logical Memory: Delayed – Total number of New Confabulations Related to the

story details.

Code or Value	Description	Count
0	No new confabulations	3456
1-10	Number of new confabulations	6114
	Missing	670

LM_D_NRI

Variable name: LM_D_NRI

Description: Logical Memory: Delayed - Total number of New Intrusions Related to the story

details.

Code or Value	Description	Count
0	No new intrusions	9409

Logical Memory

1-4	Number of new intrusions	161
	Missing	670

LM_I_UC

Variable name: LM | UC

Description: Logical Memory: Immediate - Confabulations Unrelated to the story details.

Code or ValueDescriptionCount0No confabulations88201-10Number of confabulations800.Missing620

LM_I_UI

Variable name: LM | U|

Description: Logical Memory: Immediate - Intrusions Unrelated to the story details.

Code or Value	Description	Count	
0	No intrusions	9545	
1-6	Number of intrusions	75	
	Missing	620	

LM D NUC

Variable name: LM_D_NUC

Description: Logical Memory: Delayed - New Confabulations Unrelated to the story details.

Code or Value	Description	Count
0	No new confabulations	8554
1-6	Number of new confabulations	1016
	Missing	670

LM_D_NUI

Variable name: LM D NUI

Description: Logical Memory: Delayed - Total number of New Intrusions Related to the story

details.

Code or Value	Description	Count
0	No new intrusions	9454

Logical Memory

1-9	Number of new intrusions	116
	Missing	670

LM_D_RRC

Variable name: LM D RRC

Description: Logical Memory: Delayed – Total number of repeated confabulations Related to

the story details.

Code or Value	Description	Count
0	No confabulations	4555
1-7	Number of confabulations	5015
	Missing	670

LM D RRI

Variable name: LM D RRI

Description: Logical Memory: Delayed – Total number of Repeated intrusions Related to the

story details.

Code or Value	Description	Count	
0	No intrusions	9520	
1-2	Number of intrusions	50	
•	Missing	670	

LM_D_RUC

Variable name: LM_D_RUC

Description: Logical Memory: Delayed – Total number of Repeated confabulations Unrelated to

the story details.

Code or Value	Description	Count
0	No confabulations	9125
1-2	Number of confabulations	445
	Missing	670

LM_D_RUI

Variable name: LM D RUI

Description: Logical Memory: Delayed – Total number of Repeated intrusions Unrelated to the

story details.

Code or Value	Description	Count	
0	No intrusions	9550	
1	Number of intrusions	20	
	Missing	670	

LM_I_CUE

Variable name: LM_I_CUE

Description: Logical Memory: Immediate – Participant could not remember any story details

and needed the following Cue: "It was a story about a woman."

Code or Value	Description	Count	
0	No cue given	9524	
1	Yes, cue given	96	
	Missing	620	

LM_I_VERBATIM

Variable name: LM | VERBATIM

Description: Logical Memory: Immediate – Total number of details from the story that were

recalled Verbatim by participant.

Code or Value	Description	Count
0	No details recalled	163
1-22	Number of details recalled	9457
	Missing	620

LM_I_PARAPHRASED

Variable name: LM | PARAPHRASED

Description: Logical Memory: Immediate – Total number of details from the story that were

paraphrased by participant.

Code or Value	Description	Count
0	No paraphrases	370
1-10	Number of paraphrases	9250
•	Missing	620

LM_D_CUE

Variable name: LM D CUE

Description: Logical Memory: Delayed – Participant could not remember any story details and

needed the following Cue: "It was a story about a woman."

Code or Value	Description	Count	
0	No cue given	9156	
1	Yes, cue given	414	
	Missing	670	

LM_D_VERBATIM

Variable name: LM_D_VERBATIM

Description: Logical Memory: Delayed – Total number of details from the story that were

recalled Verbatim by participant.

Code or Value	Description	Count
0	No details recalled	437
1-21	Number of details recalled	9133
	Missing	670

LM_D_PARAPHRASED

Variable name: LM D PARAPHRASED

Description: Logical Memory: Delayed – Total number of details from the story that were

paraphrased by participant.

Code or Value	Description	Count
0	No paraphrases	433
1-12	Number of paraphrases	9137
	Missing	670

LM R NG

Variable name: LM_R_NG

Description: Logical Memory: Recognition – Total number of 'no guess' responses from

participants.

Code or Value	Description	Count
0	No 'no guess' responses	9190
1-10	Number of 'no guess' responses	382
	Missing	668

VR_R_A

Variable name: VR_R_A

Description: Visual Reproductions: Recognition – Design A option chosen by participant is the

same as the Design A they drew on delayed.

Code or Value	Description	Count
0	No, participant did not draw same design	7749
1	Yes, participant drew same design	2203
	Missing	288

VR R B

Variable name: VR_R_B

Description: Visual Reproductions: Recognition – Design B option chosen by participant is the

same as the Design B they drew on delayed.

Code or Value	Description	Count
0	No, participant did not draw same design	9168
1	Yes, participant drew same design	784
	Missing	288

VR_R_C1

Variable name: VR_R_C1

Description: Visual Reproductions: Recognition – Design C1 option chosen by participant is the

same as the Design C1 they drew on delayed.

Code or Value	Description	Count
0	No, participant did not draw same design	7731
1	Yes, participant drew same design	2220
	Missing	289

VR_R_C2

Variable name: VR_R_C2

Description: Visual Reproductions: Recognition – Design C2 option chosen by participant is the

same as the Design C2 they drew on delayed.

Code or Value	Description	Count
0	No, participant did not draw same design	5226
1	Yes, participant drew same design	4725
	Missing	289

VR_I_CONTAMINATION

Variable name: VR_I_CONTAMINATION

Description: Visual Reproductions: Immediate - Total number of Contaminations from another

design(s).

Code or Value	Description	Count
0	No contaminations	8855
1-3	Number of contaminations	1157
	Missing	228

VR D CONTAMINATION

Variable name: VR D CONTAMINATION

Description: Visual Reproductions: Delayed - Total number of Contaminations from another

design(s).

Code or Value	Description	Count
0	No contaminations	8923
1-4	Number of contaminations	1040
	Missing	277

VR_I_CONFABULATION

Variable name: VR_I_CONFABULATION

Description: Visual Reproductions: Immediate - Total number Confabulations across all 4

designs

Code or Value	Description	Count
0	No confabulations	8474

1-4	Number of confabulations	1538
	Missing	228

VR_D_CONFABULATION

Variable name: VR D CONFABULATION

Description: Visual Reproductions: Delayed - Total number Confabulations across all 4 designs.

Code or Value	Description	Count
0	No confabulations	8454
1-4	Number of confabulations	1509
	Missing	277

VR_I_PERSEVERATION

Variable name: VR_I_PERSEVERATION

Description: Visual Reproductions: Immediate - Total number of designs with Perseverations.

Code or Value	Description	Count
0	No perseverations	7459
1-4	Number of perseverations	2553
	Missing	228

VR D PERSEVERATION

Variable name: VR_D_PERSEVERATION

Description: Visual Reproductions: Delayed - Total number of designs with Perseverations.

Code or Value	Description	Count
0	No perseverations	7696
1-4	Number of perseverations	2267
	Missing	277

VR_I_EARLYSTART

Variable name: VR | EARLYSTART

Description: Visual Reproductions: Immediate—Participant started test before being told to

begin.

Code or Value	Description	Count
0	No early starts	9699

Visual Reproductions

1-4	Number of early starts	313
	Missing	228

VR_D_CR

Variable name: VR D CR

Description: Visual Reproductions: Delayed – Indicates that participant drew a design on delayed which was a Complete (exact) Replication of the design drawn on immediate.

Code or ValueDescriptionCount0No complete replications25931Complete replications exist7370.Missing277

VR D PR

Variable name: VR D PR

Description: Visual Reproductions: Delayed- Indicates that participant drew a design on delayed which was a Partial Replication of the design drawn on immediate.

Code or Value	Description	Count
0	No partial replications	3943
1	Number of partial replications	6020
	Missing	277

VR_I_NA

Variable name: VR_I_NA

Description: Visual Reproductions: Immediate – Total number of times the participant made no attempt to produce a drawing.

Code or Value	Description	Count
0	No 'no attempts'	8882
1-4	Number of 'no attempts'	1130
	Missing	228

VR_I_DR

Variable name: VR_I_DR

Visual Reproductions

Description: Visual Reproductions: Immediate – Total number of times, after which the participant made no attempt to produce a drawing, they state they do not remember it as well as indicate a specific location for that design.

Code or Value	Description	Count
0	No 'do not remember' and location indication	8818
1-4	Number of 'do not remember' and location indications	1194
	Missing	228

VR_D_NA

Variable name: VR_D_NA

Description: Visual Reproductions: Delayed – Total number of times the participant made no

attempt to produce a drawing.

Code or Value	Description	Count
0	No 'no attempts'	7055
1-4	Number of 'no attempts'	2908
	Missing	277

VR D DR

Variable name: VR D DR

Description: Visual Reproductions: Delayed – Total number of times, after which the participant made no attempt to produce a drawing, they state they do not remember it as well as indicate a specific location for that design.

Code or Value	Description	Count
0	No 'do not remember' and	7782
	location indication	
1-4	Number of 'do not remember'	2181
	and location indications	
	Missing	277

VR R NG

Variable name: VR_R_NG

Description: Visual Reproductions: Recognition – Total number of 'no guess' responses from

participant.

Code or Value	Description	Count
0	No 'no guess' responses	9836
1-4	Number of 'no guess' responses	124
	Missing	280

VR_D_CND

Variable name: VR_D_CND

Description: Visual Reproductions: Delayed – Total number of Correct New Details recalled on

delayed that were not drawn on immediate.

Code or Value	Description	Count
0	No new correct details	7135
1-6	Number of new correct details	2828
	Missing	277

VR_I_MICROGRAPHIA

Variable name: VR | MICROGRAPHIA

Description: Visual Reproductions: Immediate—Total Instances of Micrographia (abnormally

small drawings).

Code or Value	Description	Count
0	No instances of micrographia	9714
1-4	Number of instances of micrographia	298
	Missing	228

VR_D_MICROGRAPHIA

Variable name: VR D MICROGRAPHIA

Description: Visual Reproductions: Delayed—Total Instances of Micrographia (abnormally small

drawings).

Code or Value	Description	Count
0	No instances of micrographia	9732
1-4	Number of instances of micrographia	231
	Missing	277

VR_I_TREMOR

Visual Reproductions

Variable name: VR_I_TREMOR

Description: Visual Reproductions: Immediate—Total Instances of Tremor.

Code or Value Description	Count
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0	No instances of tremor	7856
1-4	Number of instances of tremor	2156
	Missing	228

VR_D_TREMOR

Variable name: VR_D_TREMOR

Description: Visual Reproductions: Delay—Total Instances of Tremor.

Code or Value Description Count

0	No instances of tremor	8246
1-4	Number of instances of tremor	1717
	Missing	277

VR_I_LR

Variable name: VR_I_LR

Description: Visual Reproductions: Immediate—Total Instances of Drawing Left to Right.

Code or Value	Description	Count

0	No instances of drawing left to right	9229
1-4	Number of instances of drawing left to right	783
	Missing	228

VR_D_LR

Variable name: VR D LR

Description: Visual Delayed: Immediate—Total Instances of Drawing Left to Right.

Code or Value Description Count

0	No instances of drawing left to right	9294
1-4	Number of instances of drawing	669
	left to right	
	Missing	277

PA_T1_INT

Variable name: PA_T1_INT

Description: Paired Associates: Learning Trial 1 - Total number of PAL Interference errors

(another word from the list).

Code or Value	Description	Count	
0	No PAL errors	5945	
1-6	Number of PAL errors	3869	
	Missing	426	

PA_T2_INT

Variable name: PA T2 INT

Description: Paired Associates: Learning Trial 2 - Total number of PAL Interference errors

(another word from the list).

Code or Value	Description	Count	
0	No PAL errors	4719	
1-6	Number of PAL errors	5095	
	Missing	426	

PA T3 INT

Variable name: PA T3 INT

Description: Paired Associates: Learning Trial 3 – Total number of PAL Interference errors

(another word from the list).

Code or Value	Description	Count
0	No PAL errors	5262
1-6	Number of PAL errors	4552
	Missing	426

PA_T1_REL

Variable name: PA_T1_REL

Description: Paired Associates: Learning Trial 1 – Total number of Related word errors

(response is related to first word of the pair).

Code or Value	Description	Count
0	No related word errors	5652

Paired Associate Learning

1-7	Number of related word errors	4162
	Missing	426

PA_T2_REL

Variable name: PA T2 REL

Description: Paired Associates: Learning Trial 2 – Total number of Related word errors

(response is related to first word of the pair).

Code or Value	Description	Count
0	No related word errors	8705
1-7	Number of related word errors	1109
	Missing	426

PA T3 REL

Variable name: PA_T3_REL

Description: Paired Associates: Learning Trial 3 – Total number of Related word errors

(response is related to first word of the pair).

Code or Value	Description	Count
0	No related word errors	9175
1-7	Number of related word errors	639
•	Missing	426

PA_D_INT

Variable name: PA_D_INT

Description: Paired Associates: Delayed - Total number of PAL Interference errors (another

word from the list).

Code or Value	Description	Count
0	No PAL errors	5497
1-5	Number of PAL errors	4339
	Missing	404

PA_D_REL

Variable name: PA D REL

Description: Paired Associates: Delayed – Total number of Related word errors (response is

related to the first word of the pair).

Code or ValueDescriptionCount0No related word errors90481-7Number of related word errors788.Missing404

PA T1 NR

Variable name: PA_T1_NR

Description: Paired Associates: Learning Trial 1 – Total number of response errors with words

Not Related to the first word of the pair.

Code or Value	Description	Count
0	No unrelated errors	8304
1-5	Number of unrelated errors	1510
	Missing	426

PA_T2_NR

Variable name: PA_T2_NR

Description: Paired Associates: Learning Trial 2 – Total number of response errors with words

Not Related to the first word of the pair.

Code or Value	Description	Count
0	No unrelated errors	9209
1-3	Number of unrelated errors	605
	Missing	426

PA_T3_NR

Variable name: PA_T3_NR

Description: Paired Associates: Learning Trial 3 – Total number of response errors with words

Not Related to the first word of the pair.

Code or Value	Description	Count
0	No unrelated errors	9459
1-5	Number of unrelated errors	355
•	Missing	426

PA D NR

Paired Associate Learning

Variable name: PA D NR

Description: Paired Associates: Learning Trial 3 – Total number of response errors with words

Not Related to the first word of the pair.

Code or Value	Description	Count
0	No unrelated errors	9093
1-5	Number of unrelated errors	743
	Missing	404

PA_REP

Variable name: PA REP

Description: Paired Associates: Learning Trials (2 & 3) – Presence of a Repeated word pair error

from a previous trial.

Code or Value	Description	Count
0	No repeated word pairs	7637
1	One repeated word pair	2177
•	Missing	426

PA_T2_REP

Variable name: PA_T2_REP

Description: Paired Associates: Learning Trial 2 – Total number of Repeated word pair errors

(repeated from Trial 1).

Code or Value	Description	Count
0	No repeated word pairs	8747
1-6	Number of repeated word pairs	1067
	Missing	426

PA_T3_REP

Variable name: PA_T3_REP

Description: Paired Associates: Learning Trial 3 – Total number of Repeated word pair errors

(repeated from Trials 1 or 2).

Code or Value	Description	Count
0	No repeated word pairs	8209
1-6	Number of repeated word pairs	1605
	Missing	426

PA_D_REP

Variable name: PA_D_REP

Description: Paired Associates-Delayed: Total number of Repeated word pair errors (repeated

from any of the 3 Learning trials).

Code or Value	Description	Count
0	No repeated word pairs	7487
1-5	Number of repeated word pairs	2349
	Missing	404

PA_R_NG

Variable name: PA_R_NG

Description: Paired Associates: Recognition – Total number of 'no guess' responses from

participant.

Code or Value	Description	Count
0	No 'no guess' responses	9621
1-7	Number of 'no guess' responses	216
	Missing	403

DSF_SEQ

Variable name: DSF_SEQ

Description: Digit Span: Forward— Sequencing error only; All numbers recalled were correct,

but one or more were in the wrong order.

Code or Value	Description	Count
0	No sequencing errors	3782
1-6	Number of sequencing errors	6239
	Missing	219

DSB_SEQ

Variable name: DSB SEQ

Description: Digit Span: Backward— All numbers recalled were correct, but one or more were

in the wrong order.

Code or Value	Description	Count
0	No sequencing errors	4526
1-7	Number of sequencing errors	5368
	Missing	346

DSF_LONG

Variable name: DSF_LONG

Description: Digit Span: Forward—Longest digit span with all correct numbers and sequence.

Code or Value	Description	Count	
0	No sequencing errors	6	
3	Longest span (3)	27	
4	Longest span (4)	325	
5	Longest span (5)	2009	
6	Longest span (6)	2207	
7	Longest span (7)	2698	
8	Longest span (8)	1950	
9	Longest span (9)	799	
	Missing	219	

DSB_LONG

Variable name: DSB_LONG

Description: Digit Span: Backward— Longest digit span with all correct numbers and sequence.

Code or Value	Description	Count
0	No correct sequence	8
1	Span 3 was incorrect while span	13
	2 was missing	
2	Longest span (2)	103
3	Longest span (3)	1203
4	Longest span (4)	3219
5	Longest span (5)	2638
6	Longest span (6)	1411
7	Longest span (7)	1016
8	Longest span (8)	283
	Missing	346

DSF_LN

Variable name: DSF_LN

Description: Digit Span: Forward—Longest digit span with all correct numbers, regardless of

sequence.

Code or Value	Description	Count	
0	No correct sequence	3	
3	Longest span (3)	18	
4	Longest span (4)	104	
5	Longest span (5)	749	
6	Longest span (6)	1367	
7	Longest span (7)	3102	
8	Longest span (8)	3227	
9	Longest span (9)	1451	
	Missing	219	

DSB_LN

Variable name: DSB LN

Description: Digit Span: Backward— Longest digit span with all correct numbers, regardless of

sequence.

Code or Value	Description	Count
0	No sequencing errors	8

Digit Span

1	Span 3 was incorrect while span	1
	2 was missing	
2	Longest span (2)	18
3	Longest span (3)	358
4	Longest span (4)	2087
5	Longest span (5)	3280
6	Longest span (6)	1981
7	Longest span (7)	1559
8	Longest span (8)	602
	Missing	346

TA_EC_OMISSION

Variable name: TA_EC_OMISSION

Description: Trails A—Number of errors corrected by examiner. (Note: Does not include

perceptual errors).

Code or Value	Description	Count	
0	No errors	9042	
1-5	Number of errors	791	
	Missing	407	

TA_S_EARLYSTART

Variable name: TA_S_EARLYSTART

Description: Trails A: Sample— Participant started test before being told to begin.

Code or Value	Description	Count	
0	No	8698	
1	Yes	1135	
	Missing	407	

TA EARLYSTART

Variable name: TA_EARLYSTART

Description: Trails A— Participant started test before being told to begin.

Code or Value	Description	Count
0	No	8892
1	Yes	941
	Missing	407

TB S EARLYSTART

Variable name: TB_S_EARLYSTART

Description: Trails B: Sample— Participant started test before being told to begin.

Code or Value	Description	Count	
0	No	8728	
1	Yes	548	
	Missing	964	

TB_EARLYSTART

Variable name: TB_EARLYSTART

Description: Trails B— Participant started test before being told to begin.

Code or Value Description Count 0 No 8789 1 Yes 487 . Missing 964

TA SC PERCEPTUAL

Variable name: TA_SC_PERCEPTUAL

Description: Trails A— Participant self-corrected a perceptual error (I.e mistaking "B" for "8").

Code or Value	Description	Count
0	No self-corrected perceptual errors	9720
1-2	Number of self-corrected perceptual errors	113
	Missing	407

TA_SC_OTHER

Variable name: TA SC OTHER

Description: Trails A—Self-Corrected Other (non-perceptual) Error.

Code or Value	Description	Count
0	No self-corrections	9051
1-5	Number of self-corrections	782
	Missing	407

TB_SC_PERCEPTUAL

Variable name: TB SC PERCEPTUAL

Description: Trails B— Participant self-corrected a perceptual error (i.e., mistaking "B" for "8").

Code or Value	Description	Count
0	No self-corrected perceptual errors	9105
1-3	Number of self-corrected perceptual errors	171
	Missing	964

TB SC OTHER

Variable name: TB_SC_OTHER

Description: Trails B—Self-Corrected Other (non-perceptual) Error.

Code or Value	Description	Count
0	No self-corrections	8669
1-4	Number of self-corrections	607
	Missing	964

TA_LIFTPEN

Variable name: TA LIFTPEN

Description: Trails A—Number of times participant lifted their pen from the paper.

Code or Value	Description	Count
0	Participant did not lift pen	5009
1-28	Number of pen lifts	4824
	Missing	407

TB_LIFTPEN

Variable name: TB_LIFTPEN

Description: Trails B— Number of times participant lifted their pen from the paper.

Code or Value	Description	Count
0	Participant did not lift pen	4402
1-32	Number of pen lifts	4874
	Missing	964

TB_EC_OTHER

Variable name: TB_EC_OTHER

Description: Trails B - Total number of Examiner-Corrected (non-perceptual) Other errors

including LOS or sequencing errors.

Code or Value	Description	Count
0	No examiner corrected errors	6634
1-19	Number of examiner corrected errors	2642
	Missing	964

TA TREMOR

Variable name: TA_TREMOR

Description: Trails A—Obvious Tremor Present.

Code or Value	Description	Count	
0	No	8515	
1	Yes	1318	
•	Missing	407	

TB_TREMOR

Variable name: TB_TREMOR

Description: Trails B—Obvious Tremor Present.

Code or Value	Description	Count	
0	No	7976	
1	Yes	1300	
	Missing	964	

TA_EC_PERCEPTUAL

Variable name: TA_EC_PERCEPTUAL

Description: Trails A—Examiner-Corrected Perceptual Error (ex: Mistaking "B" for "8").

Code or Value	Description	Count
0	No perceptual errors	9723
1-5	Number of perceptual errors	110
	Missing	407

TB_EC_PERCEPTUAL

Variable name: TB_EC_PERCEPTUAL

Description: Trails B—Examiner-Corrected Perceptual Error (ex: Mistaking "B" for "8").

Code or Value	Description	Count
0	No perceptual errors	8880
1-9	Number of perceptual errors	396
•	Missing	964

SIM_PERSEVERATION

Variable name: SIM_PERSEVERATION

Description: Similarities: Total number of repeated (perseverated) responses.

Code or Value Description Count

0	No perseverations	9962
1-4	Number of perseverations	146
	Missing	132

SIM_CC

Variable name: SIM_CC

Description: Similarities—Total Number of Completely Correct (2-point) Responses.

Code or Value Description Count

0	No 2-points responses	95
1-13	Number of 2-points responses	10013
	Missing	132

SIM_PC

Variable name: SIM PC

Description: Similarities—Total Number of Partially Correct Responses (1 point, concrete,

answers).

Code or Value	Description	Count
0	No 1-point responses	462
1-10	Number of 1-point responses	9646

132

SIM OPT C

Variable name: SIM_OPT_C

Description: Similarities—Total Number of 0-point Responses, Concrete Error.

Missing

Code or Value	Description	Count

0	No 0-point concrete responses	601
1-12	Number of 0-point concrete responses	9507
	Missing	132

Similarities

SIM_LOS

Variable name: SIM_LOS

Description: Similarities - Total number of 0-point responses with the error being a loss of set.

Code or Value	Description	Count
0	No 0-point LOS responses	4267
1-8	Number of 0-point LOS responses	5841
•	Missing	132

H_ISOLATE

Variable name: H_ISOLATE

Description: Hooper—Total Number of Isolate Errors (error in which pt only attends to one part

of stimulus).

Code or Value	Description	Count
0	No isolate errors	2134
1-12	Number of isolate errors	7021
	Missing	1085

H_PERCEPTUAL

Variable name: H_PERCEPTUAL

Description: Hooper—Total Number of Perceptual Errors (error in which pt correctly combines

all of parts of stimulus but interprets it incorrectly).

Code or Value	Description	Count
0	No perceptual errors	3609
1-13	Number of perceptual errors	5546
	Missing	1085

H_OTHER

Variable name: H_OTHER

Description: Hooper—Total Number of Other Errors.

Code or Value	Description	Count
0	No 'other' errors	7848
1-13	Number of 'other' errors	1307
	Missing	1085

BNT_PERSEVERATION

Variable name: BNT_PERSEVERATION

Description: Boston Naming Test: Total number of perseveration (repeated response) errors.

Code or Value	Description	Count
0	No perseverations	8712
1-10	Number of perseverations	1112
•	Missing	416

BNT CIR

Variable name: BNT_CIR

Description: Boston Naming Test – Total number of Circumlocution errors, where a participant indicates that they understand what the object is (by describing where you see it, what you use it for) but cannot think of its name.

Code or Value	Description	Count
0	No circumlocution errors	2991
1-27	Number of circumlocution errors	6833
	Missing	416

BNT SP

Variable name: BNT SP

Description: Boston Naming Test – Total number of Semantic Paraphasia errors, where a

participant incorrectly names the object in the picture.

Code or Value	Description	Count
0	No semantic paraphasia errors	2466
1-18	Number of semantic paraphasia errors	7358
	Missing	416

BNT PP

Variable name: BNT_PP

Description: Boston Naming Test – Total number of Phonemic Paraphasia errors, where a

participant mispronounces the name of the object.

Code or Value	Description	Count
0	No phonemic paraphasia errors	6582

Boston Naming Test

1-14	Number of phonemic paraphasia errors	3242
	Missing	416

BNT_PERCEPTUAL

Variable name: BNT_PERCEPTUAL

Description: Boston Naming Test – Total number of Perceptual errors, where participant

misidentifies the object they have been tasked with naming.

Code or Value	Description	Count
0	No perceptual errors	5752
1-13	Number of perceptual errors	4072
	Missing	416

FAS_PERSEVERATION

Variable name: FAS_PERSEVERATION

Description: FAS: Total number of repeated response errors across all 3 Trials (F, A, and S).

Code or Value	Description	Count

0	No perseverations	4473
1-18	Number of perseverations	5377
	Missing	390

ANI PERSEVERATION

Variable name: ANI_PERSEVERATION

Description: Animals: Total number of perseveration (repeated response) errors.

0	No perseverations	7054
1-10	Number of perseverations	2795
	Missing	391

FAS_F1

Variable name: FAS F1

Description: FAS: F Trial – Total number of correct responses from time 0-15 seconds.

Code or Value Description Count

0	No correct responses	31
1-16	Number of correct responses	9819
	Missing	390

FAS_F2

Variable name: FAS F2

Description: FAS: F Trial – Total number of correct responses from time 16-30 seconds.

Code or Value Description Count

0	No correct responses	557
1-11	Number of correct responses	9293
	Missing	390

FAS F3

Verbal Fluency

Variable name: FAS_F3

Description: FAS: F Trial – Total number of correct responses from time 31-45 seconds.

Code or Value	Description	Count
0	No correct responses	1158
1-9	Number of correct responses	8692
	Missing	390

FAS_F4

Variable name: FAS F4

Description: FAS: F Trial – Total number of correct responses from time 46-60 seconds.

Code or Value	Description	Count
0	No correct responses	1535
1-11	Number of correct responses	8315
	Missing	390

FAS_A1

Variable name: FAS_A1

Description: FAS: A Trial – Total number of correct responses from time 0-15 seconds.

Code or Value	Description	Count
0	No correct responses	59
1-12	Number of correct responses	9791
	Missing	390

FAS_A2

Variable name: FAS_A2

Description: FAS: A Trial – Total number of correct responses from time 16-30 seconds.

Code or Value	Description	Count
0	No correct responses	774
1-10	Number of correct responses	9076
	Missing	390

FAS_A3

Verbal Fluency

Variable name: FAS_A3

Description: FAS: A Trial – Total number of correct responses from time 31-45 seconds.

Code or ValueDescriptionCount0No correct responses14761-9Number of correct responses8374.Missing390

FAS A4

Variable name: FAS_A4

Description: FAS: A Trial – Total number of correct responses from time 46-60 seconds.

Code or Value	Description	Count
0	No correct responses	2050
1-9	Number of correct responses	7800
	Missing	390

FAS S1

Variable name: FAS_S1

Description: FAS: S Trial – Total number of correct responses from time 0-15 seconds.

Code or Value	Description	Count
0	No correct responses	53
1-12	Number of correct responses	9797
	Missing	390

FAS_S2

Variable name: FAS S2

Description: FAS: S Trial – Total number of correct responses from time 16-30 seconds.

Code or Value	Description	Count
0	No correct responses	308
1-14	Number of correct responses	9542
	Missing	390

FAS_S3

Variable name: FAS_S3

Verbal Fluency

Description: FAS: S Trial – Total number of correct responses from time 31-45 seconds.

Code or Value	Description	Count
0	No correct responses	696
1-11	Number of correct responses	9154
	Missing	390

FAS S4

Variable name: FAS S4

Description: FAS: S Trial – Total number of correct responses from time 46-60 seconds.

Code or ValueDescriptionCount0No correct responses10681-10Number of correct responses8782.Missing390

FAS_WFL

Variable name: FAS_WFL

Description: FAS - Total number of Wrong First Letter errors from time 0-60 seconds across

trials F, A, and S.

Code or Value	Description	Count
0	No wrong first letter errors	9173
1-12	Number of wrong first letter errors	677
	Missing	390

FAS_BR

Variable name: FAS BR

Description: FAS - Total number of Broken Rules (I.e. proper noun or same word with different

ending) from time 0-60 seconds across trials F, A, and S.

Code or Value	Description	Count
0	No broken rule errors	6977
1-14	Number of broken rule errors	2873
	Missing	390

ANI 1

Verbal Fluency

Variable name: ANI 1

Description: Animals - Total number of correct responses from time 0-15 seconds.

Code or Value Description Count

0	No correct responses	57
1-16	Number of correct responses	9793
	Missing	390

ANI_2

Variable name: ANI_2

Description: Animals - Total number of correct responses from time 16-30 seconds.

Code or Value Description Count

0	No correct responses	309
1-15	Number of correct responses	9541
	Missing	390

ANI_3

Variable name: ANI_3

Description: Animals - Total number of correct responses from time 31-45 seconds.

Code or Value Description Count

0	No correct responses	742
1-14	Number of correct responses	9108
	Missing	390

ANI_4

Variable name: ANI 4

Description: Animals - Total number of correct responses from time 46-60 seconds.

Code or Value Description Count

0	No correct responses	1182
1-14	Number of correct responses	8668
	Missing	390

ANI_BR

Variable name: ANI_BR

Verbal Fluency

Description: Animals - Total number of Broken Rules (I.e. not name of an animal) from time 0-60 seconds.

Code or Value	Description	Count
0	No broken rule errors	9621
1-6	Number of broken rule errors	228
	Missing	391

BD_IE_1B

Variable name: BD_IE_1B

Description: Block Design— Total number of designs incorrect due to only one block (i.e.

inattention error).

Code or Value	Description	Count
0	No inattention errors	2697
1-3	Number of inattention errors	374
	Missing	7169

BD_BC

Variable name: BD_BC

Description: Block Design—Total Instances of Broken Configuration (1 or more blocks placed

outside the square design).

Code or Value	Description	Count
0	No broken configurations	2780
1-3	Number of broken configurations	291
	Missing	7169

CMC_SEQ

Variable name: CMC_SEQ

Description: Command Clock—One or more number(s) is placed in the wrong order on clock

face.

Code or Value	Description	Count	
0	No	9507	
1	Yes	68	
	Missing	665	

Note: This does NOT include counterclockwise order, omission of number(s), or duplication of number(s).

CMC_12S

Variable name: CMC 12S

Description: Command Clock: Two numeral 12s are drawn.

Code or Value	Description	Count
0	No	9541
1	Yes	37
•	Missing	662

CMC_DUP

Variable name: CMC_DUP

Description: Command Clock: Duplication of any numeral 1-11.

Code or Value	Description	Count	
0	No	9418	
1	Yes	173	
•	Missing	649	

CMC_B12

Variable name: CMC B12

Description: Command Clock: Numerals present go beyond 12 (I.e. 13 or greater).

Code or Value	Description	Count
0	No	9551

1	Yes	27
	Missing	662

CPC_SEQ

Variable name: CPC SEQ

Description: Copy Clock—One or more number(s) is placed in the wrong order on clock face.

Code or Value	Description	Count	
0	No	9488	
1	Yes	24	
	Missing	728	

Note: This does NOT include counterclockwise order, omission of number(s), or duplication of number(s).

CPC_12S

Variable name: CPC_12S

Description: Copy Clock: Two numeral 12s are drawn.

Code or Value	Description	Count	
0	No	9488	
1	Yes	26	
	Missing	726	

CPC DUP

Variable name: CPC DUP

Description: Command Clock: Duplication of any numeral 1-11.

Code or Value	Description	Count	
0	No	9391	
1	Yes	126	
	Missing	723	

CPC_B12

Variable name: CPC_B12

Description: Command Clock: Numerals present go beyond 12 (I.e. 13-N/A).

Code or Value	Description	Count
0	No	9510
1	Yes	4
	Missing	726

CNP_SEQ

Variable name: CNP SEQ

Description: Clock Number Placement — One or more number is placed in the wrong order on

clock face.

Code or Value	Description	Count
0	No	8305
1	Yes	26
	Missing	1909

Note: This does NOT include counter-clockwise order (i.e., 1 in 11 position; 2 in 10 position, etc.), omission of number(s), or duplication of numbers(s).

CNP_RP

Variable name: CNP_RP

Description: Clock Number Placement—Rotated Paper While Inserting Numbers.

 Code or Value
 Description
 Count

 0
 No
 8905

 1
 Yes
 95

 .
 Missing
 1240

CNP_DUP

Variable name: CNP DUP

Description: Clock Number Placement: Duplication of any numeral 1-11.

Code or Value	Description	Count	
0	No	8230	
1	Yes	102	
	Missing	1908	

CNP_12S

Variable name: CNP_12S

Description: Number Placement Clock: Two numeral 12s are drawn.

Code or Value	Description	Count	
0	No	8299	
1	Yes	34	
	Missing	1907	

CPC_C1L

Variable name: CPC C1L

Description: Copy Clock—Contour Formed by 1 Complete Line.

Code or Value	Description	Count	
0	No	462	
1	Yes	9032	
	Missing	746	

CPC_RP

Variable name: CPC_RP

Description: Copy Clock—Rotated Paper While Inserting Numbers.

Code or Value	Description	Count
0	No	9471
1	Yes	33
	Missing	736

CPC PCF

Variable name: CPC_PCF

Description: Copy Clock: Perseveratively overdrawn clock face (drawn circle more than 2x

around).

Code or Value	Description	Count	
0	No	9487	
1	Yes	14	
•	Missing	739	

CPC_MCF

Variable name: CPC_MCF

Description: Copy Clock: Multiple clock faces are drawn.

Code or Value	Description	Count	
0	No	9156	
1	Yes	6	
•	Missing	1078	

CPC H10E

Variable name: CPC H10E

Description: Copy Clock— Participant incorrectly drew one hand pointing to 10.

Code or Value Description Count 0 No 9472 1 Yes 31 . Missing 737

CMC_C1L

Variable name: CMC C1L

Description: Command Clock—Contour Formed by 1 Complete Line.

Code or Value	Description	Count
0	No	517
1	Yes	9056
	Missing	667

CMC RP

Variable name: CMC_RP

Description: Command Clock—Rotated Paper While Inserting Numbers.

Code or Value	Description	Count
0	No	9520
1	Yes	58
	Missing	662

CMC HSR

Variable name: CMC_HSR

Description: Command Clock – Participant needs reminder of the time in order to set the hands.

Code or Value	Description	Count	
0	No	8425	
1	Yes	1110	
•	Missing	705	

CMC PCF

Variable name: CMC_PCF

Description: Command Clock: Perseveratively overdrawn clock face (drawn circle more than 2x

around).

Code or Value	Description	Count	
0	No	9572	
1	Yes	6	
	Missing	662	

CMC_MCF

Variable name: CMC_MCF

Description: Command Clock: Multiple clock faces are drawn.

Code or Value	Description	Count	
0	No	9219	
1	Yes	14	
	Missing	1007	

CMC_H10E

Variable name: CMC_H10E

Description: Command Clock— Participant incorrectly drew one hand pointing to 10.

Code or Value	Description	Count
0	No	9043
1	Yes	478
•	Missing	719

CMC_OMISSION

Variable name: CMC_OMISSION

Description: Command Clock—One or more number(s) left off clock face.

Code or Value	Description	Count	
0	No	9087	
1	Yes	505	
•	Missing	648	

CPC_OMISSION

Variable name: CPC_OMISSION

Description: Copy Clock— One or more number(s) left off clock face.

Code or Value	Description	Count	
0	No	9351	
1	Yes	166	
	Missing	723	

CNP OMISSION

Variable name: CNP_OMISSION

Description: Clock Number Placement— One number left off clock face.

Code or Value	Description	Count	
0	No	8237	
1	Yes	95	
	Missing	1908	

CPC_DC

Variable name: CPC DC

Description: Copy Clock—Direction Contour is Drawn (Clock-wise, counter-clockwise or mixed).

Code or Value	Description	Count	
1	Clockwise	703	
2	Counterclockwise	8271	
3	Mixed	509	
	Missing	757	

CMC_DC

Variable name: CMC DC

Description: Command Clock—Direction Contour is Drawn.

Code or Value Description Count 1 Clockwise 739 2 Counterclockwise 8310 3 Mixed 499 . Missing 692

CPC_SC

Variable name: CPC_SC

Description: Copy Clock— Participant self-corrected error on clock.

Code or Value	Description	Count
0	No self-correction	1001
1	Yes (Either correct or incorrect)	850
88	Original Answer was Correct	7653
	Missing	736

CMC_SC

Variable name: CMC_SC

Description: Command Clock—Participant self-corrected error on clock.

Code or Value	Description	Count
0	No self-correction	1912
1	Yes (Either correct or incorrect)	1787
88	Original Answer was Correct	5878
	Missing	663

CMC AN NONE

Variable name: CMC_AN_NONE

Description: Command Clock—A number other than an anchor numeral (12, 3, 6, or 9) was

placed first on the clock face.

Code or Value	Description	Count	
0	No non-anchor first	8863	
1	Yes non-anchor first	707	
•	Missing	670	

CMC_AN_12

Variable name: CMC_AN_12

Description: Command Clock—12 was placed first on the clock face.

Code or Value Description Count 0 No 772 1 Yes 8798 . Missing 670

CMC AN 3

Variable name: CMC_AN_3

Description: Command Clock—12 was placed first on the clock face.

Code or Value	Description	Count
0	No	5995
1	Yes	3575
	Missing	670

CMC_AN_6

Variable name: CMC AN 6

Description: Command Clock—6 was placed first on the clock face.

Code or Value	Description	Count
0	No	5539
1	Yes	4031
•	Missing	670

CMC_AN_9

Variable name: CMC AN 9

Description: Command Clock—9 was placed first on the clock face.

Code or Value	Description	Count
0	No	6091
1	Yes	3479
•	Missing	670

CMC AN UNKNOWN

Variable name: CMC_AN_UNKNOWN

Description: Command Clock—A non-applicable or unknown number/ symbol was placed first

on the clock face.

Code or Value	Description	Count	
0	No	9523	
1	Yes	71	
	Missing	646	

CPC_AN_NONE

Variable name: CPC_AN_NONE

Description: Copy Clock— A number other than an anchor numeral (12, 3, 6, or 9) was placed

first on the clock face.

Code or Value	Description	Count	
0	No	9212	
1	Yes	297	
	Missing	731	

CPC_AN_12

Variable name: CPC_AN_12

Description: Copy Clock—12 was placed first on the clock face.

Code or Value	Description	Count
0	No	337
1	Yes	9172
	Missing	731

CPC AN 3

Variable name: CPC_AN_3

Description: Copy Clock—3 was placed first on the clock face.

Code or Value	Description	Count	
0	No	6391	
1	Yes	3118	
•	Missing	731	

CPC_AN_6

Variable name: CPC_AN_6

Description: Copy Clock—6 was placed first on the clock face.

Code or Value Description Count 0 No 6073 1 Yes 3436 . Missing 731

CPC AN 9

Variable name: CPC AN 9

Description: Copy Clock—9 was placed first on the clock face.

Code or Value	Description	Count	
0	No	6499	
1	Yes	3010	
	Missing	731	

CPC_AN_UNKNOWN

Variable name: CPC AN UNKNOWN

Description: Copy Clock—A non-applicable or unknown number/ symbol was placed first on the clock face.

Code or Value	Description	Count
0	No	9475
1	Yes	42
	Missing	723

CNP AN NONE

Variable name: CNP_AN_NONE

Description: Clock Number Placement — A number other than an anchor numeral (12, 3, 6, or

9) was placed first on the clock face.

Code or Value	Description	Count	
0	No	8129	
1	Yes	202	
	Missing	1909	

CNP_AN_12

Variable name: CNP_AN_12

Description: Clock Number Placement—12 was placed first on the clock face.

Code or Value	Description	Count	
0	No	243	
1	Yes	8714	
•	Missing	1283	

CNP_AN_3

Variable name: CNP_AN_3

Description: Clock Number Placement—3 was placed first on the clock face.

Code or Value	Description	Count
0	No	3949
1	Yes	4753
	Missing	1538

CNP_AN_6

Variable name: CNP_AN_6

Description: Clock Number Placement—6 was placed first on the clock face.

Code or Value	Description	Count	
0	No	3689	
1	Yes	5037	
	Missing	1523	

CNP_AN 9

Variable name: CNP_AN_9

Description: Clock Number Placement—9 was placed first on the clock face.

Code or Value	Description	Count
0	No	4043
1	Yes	4652
	Missing	1545

CNP_AN_UNKNOWN

Variable name: CNP_AN_UNKNOWN

Description: Clock Number Placement—A non-applicable or unknown number/ symbol was

placed first on the clock face.

Code or Value	Description	Count	
0	No	8924	
1	Yes	83	
	Missing	1233	

CMC_EM

Variable name: CMC EM

Description: Command Clock—Extraneous Marks on Clock (i.e bisecting, criss-crossing, or

radiating line(s); tick marks NOT used as number place marks; etc).

Code or Value	Description	Count
0	No	9210
1	Yes	383
	Missing	647

CPC EM

Variable name: CPC EM

Description: Copy Clock—Extraneous Marks on Clock (i.e bisecting, criss-crossing, or radiating

line(s); tick marks NOT used as number place marks; etc).

Code or Value	Description	Count	
0	No	9432	
1	Yes	85	
•	Missing	723	

CTS_EM

Variable name: CTS_EM

Description: Clock Time Setting—Extraneous Marks on Clock (i.e bisecting, criss-crossing, or

radiating line(s); tick marks NOT used as number place marks; etc).

Code or Value	Description	Count
0	No	8784

1	Yes	60
	Missing	1396

CT_USC

Variable name: CT_USC

Description: Cookie Theft—Unusual Spatial Clumping of Words.

Code or Value Description Count 0 No 2673 1 Yes 86 . Missing 7481

CT RP

Variable name: CT_RP

Description: Cookie Theft—Rotated Paper Error (from landscape to portrait).

Code or Value	Description	Count
0	No	2386
1	Yes	367
	Missing	7487

CT_CAP

Variable name: CT CAP

Description: Cookie Theft – Categorization of participant's use of capitalization.

Code or Value	Description	Count
0	No capitalization errors	2036
1	Yes, capitalization errors	723
•	Missing	7481

CT_PUN

Variable name: CT PUN

Description: Cookie Theft – Categorization of participant's use of punctuation.

Code or Value	Description	Count
0	No incorrect punctuation	1990
1	Yes, incorrect punctuation	768
	Missing	7482

CT WRITING

Cookie Theft

Variable name: CT_WRITING

Description: Cookie Theft – Categorization of the type of Writing used by participant: none,

print, cursive, or some combination of print and cursive.

Code or Value	Description	Count
0	No relevant writing	1
1	Print	847
2	Cursive	1523
3	Combined print and cursive	386
	Missing	7483

CT_SC

Variable name: CT_SC

Description: Cookie Theft – Categorization of the Syntactic Complexity of participant's writing:

incomplete, simple, or complex sentences.

Code or Value	Description	Count	
0	Incomplete sentences	744	
1	Simple sentences	771	
2	Complex sentences	1233	
	Missing	7492	

Factors Affecting Testing

FAT_LOS

Variable name: FAT_LOS

Description: Factors Affecting Testing (FAT) Summary - Tests in which examiner indicated

participant could not maintain set.

Code or Value	Description	Count	
0	No LOS errors	9014	
1-18	Number of LOS errors	351	
	Missing	875	

Neuropsychological Test References

Neuropsychological test	Reference
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Appendix

Itasca, IL: Riverside Publishing
Company.

Revisions

Revisions		
August 2020	Original Draft	
Oct 2022	Updated dataset and documentations for npqerrors_2021 dataset	
Jan 2023	Reordering of variables Corrected typos	