MacSHAPA History

- Academic research, not for $, not geared toward particular content
- (Penelope Sanderson, John Mainzer, et al)

MacSHAPA Goals

- Exploratory data analyses
- Extracting meaning
- Visualizing data
- Behavioral coding (converting behavior into numbers)

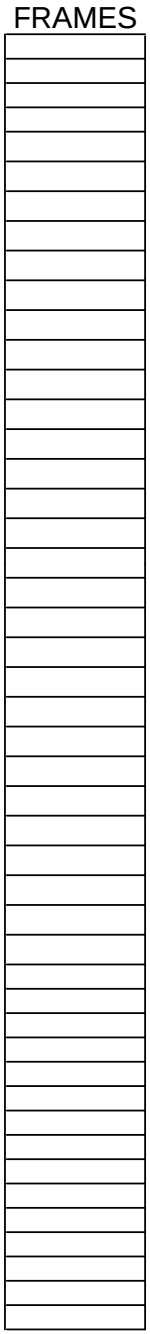
Adolph Lab Involvement

- Paper & pencil, data entry,hand-turning jog-shuttle
- Early 1990s, content-geared softwares failed
- 1994, recoded data with MacSHAPA, became query experts
- 1994-2007 became irreplaceable by other existing software

Rewrite/Upgrade: OpenSHAPA

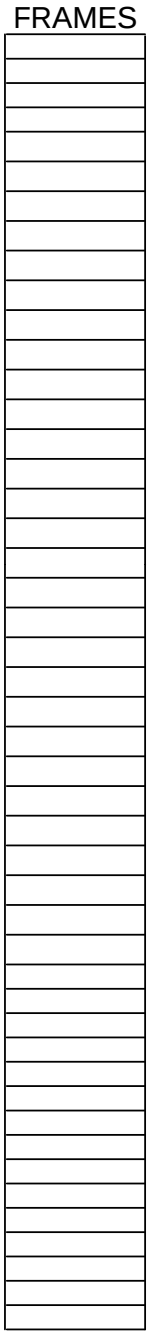
- Open platform, open source
  - Modifications, etc.
  - Plug-ins
- CHILDES language database
- Replicate & expand MacSHAPA
  - Exploratory sequential data analyses
  - Powerful query language
  - Behavioral coding

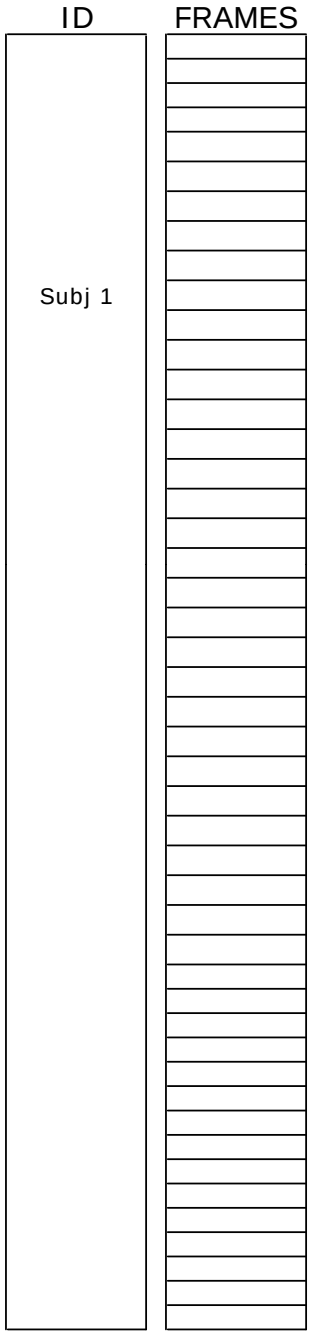
Video ~ long, serial list of numbered cells. You tag these cells with info.

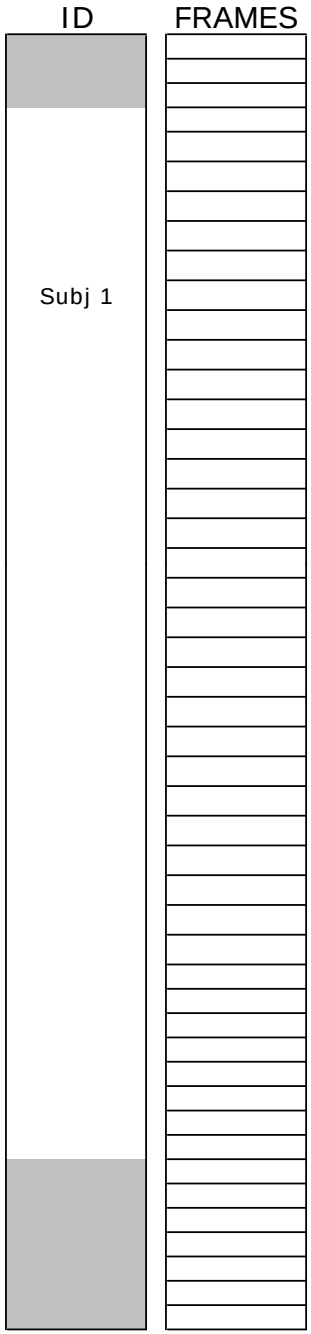


Nested Structure of Data

- Data are organized somehow in the video
- Some of the data is not of interest (usually at the beginning and end of the relevant time blocks)


FRAMES


ID
FRAMES
Subj 1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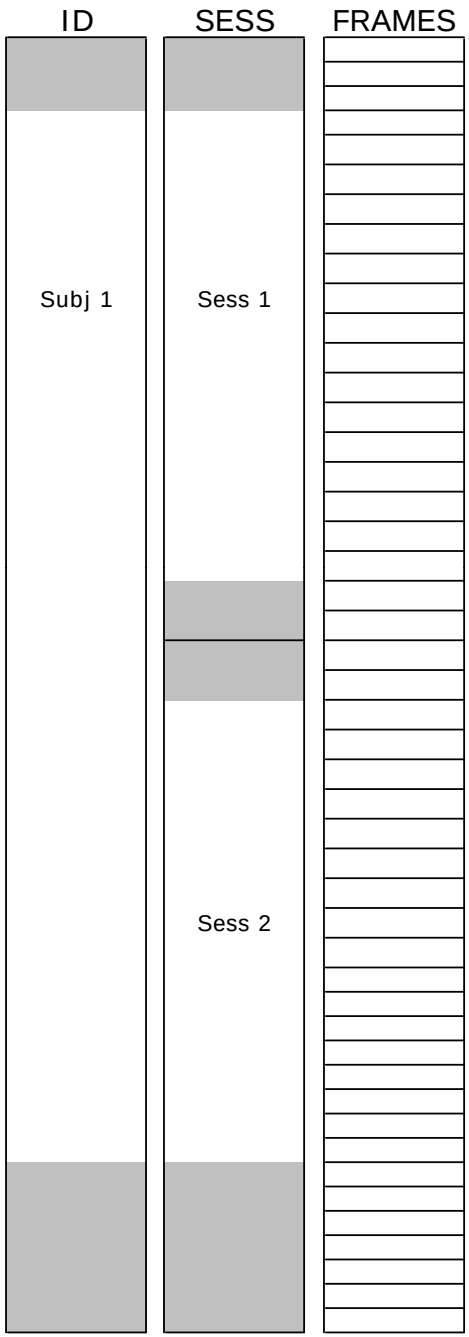
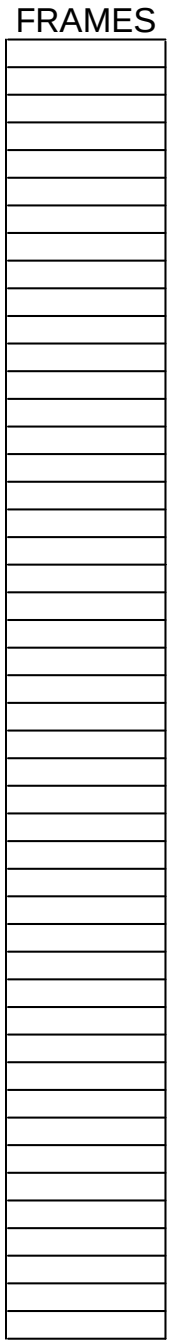
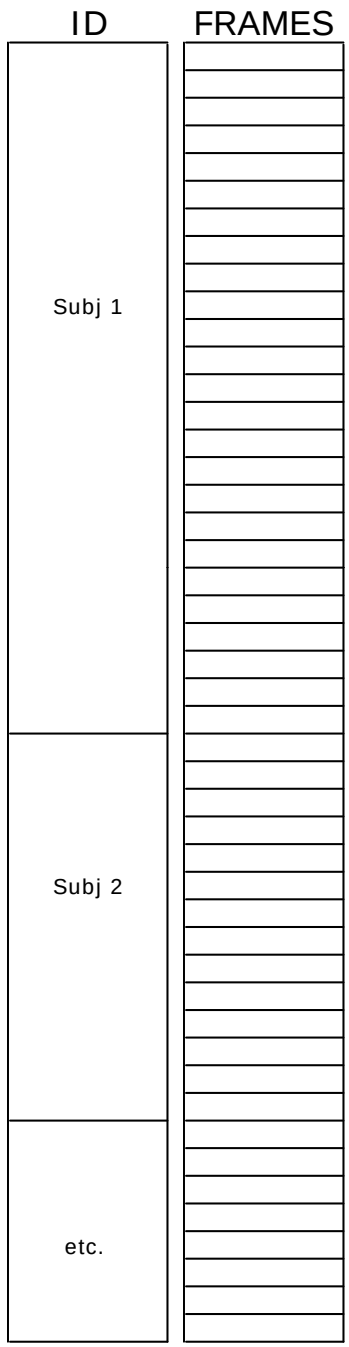
FRAMES
Subj 1

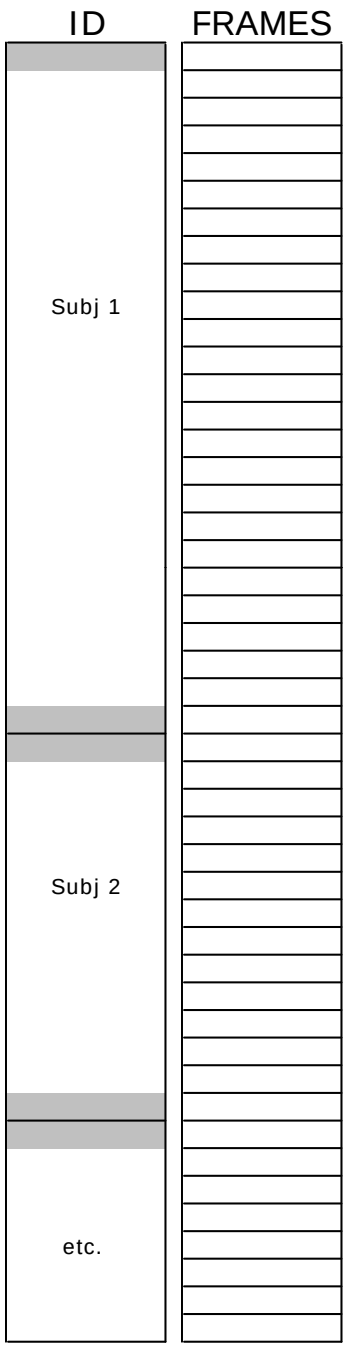

ID
SESS
FRAMES
Subj 1
Sess 1
Sess 2

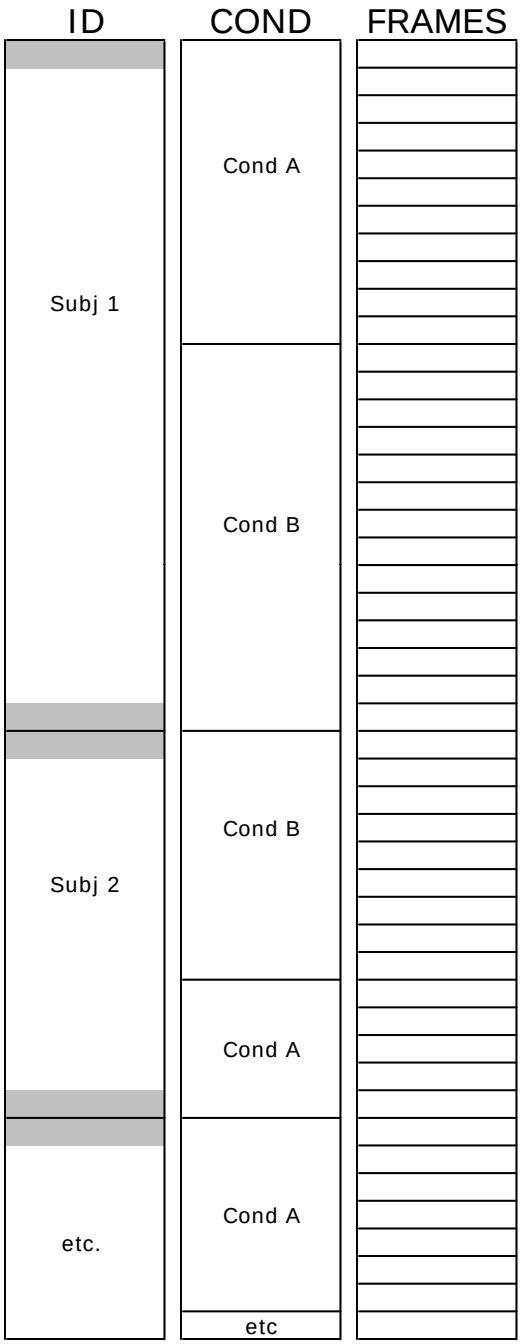
Study Design Affects Nested Structure of Videos

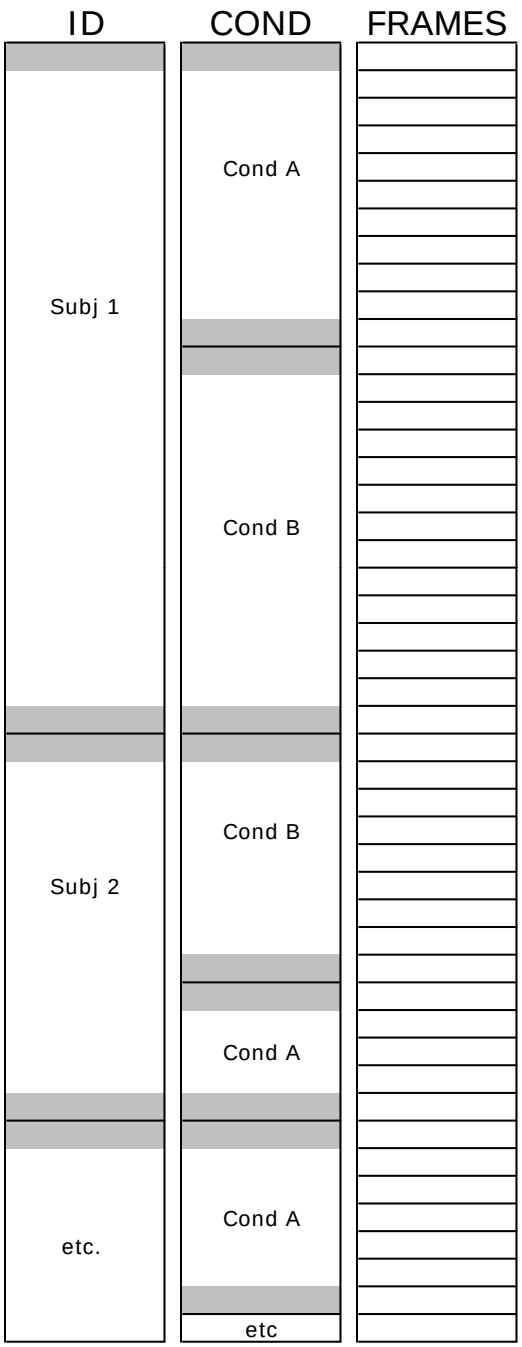
- Age groups
- Sessions
- Conditions
- Trials
- Etc.

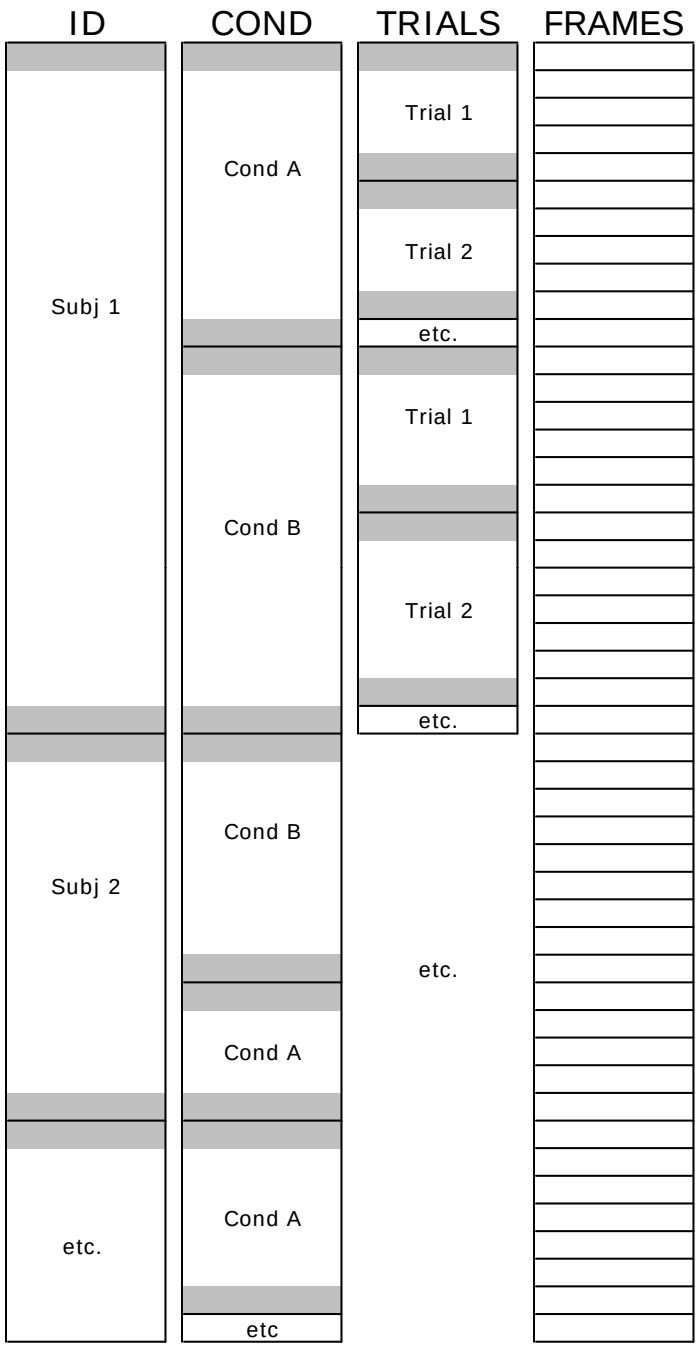

FRAMES

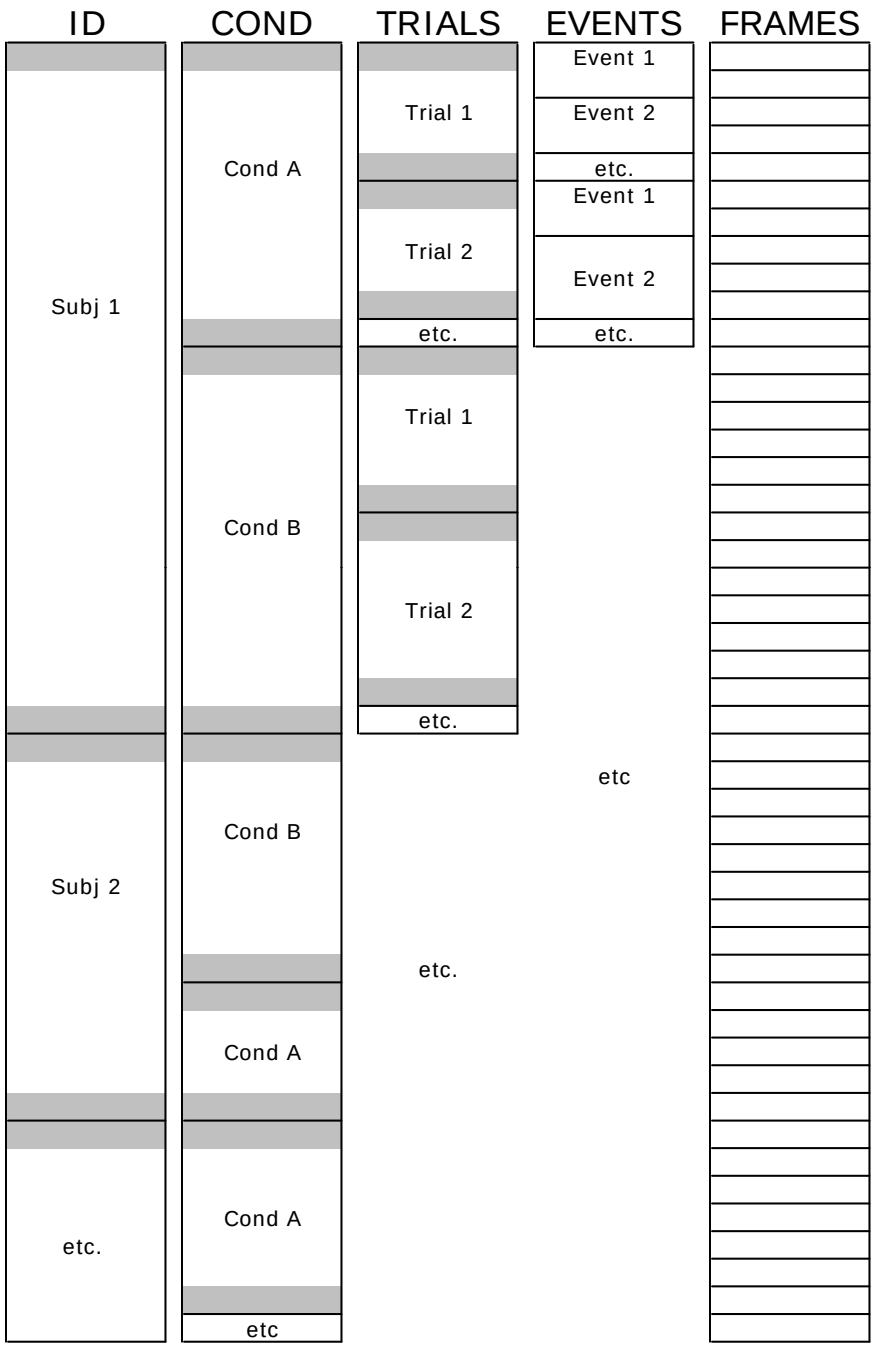

ID
FRAMES
Subj 1
Subj 2
etc.


ID
FRAMES
Subj 1
Subj 2
etc.


ID
COND
FRAMES
Subj 1
Cond A
Cond B
Subj 2
Cond B
Cond A
etc.
Cond A
etc


ID
COND
FRAMES
Subj 1
Cond A
Cond B
Subj 2
Cond B
Cond A
etc.
Cond A
etc


ID
COND
TRIALS
FRAMES
Subj 1
Cond A
Trial 1
Trial 2
etc.
Cond B
Trial 1
Trial 2
etc.
Subj 2
Cond B
etc.
Cond A
etc.
Cond A
etc


ID
COND
TRIALS
EVENTS
FRAMES
Subj 1
Cond A
Trial 1
Event 1
Event 2
etc.
Trial 2
Event 1
Event 2
etc.
etc.
Cond B
Trial 1
Trial 2
etc.
Subj 2
Cond B
etc
etc.
Cond A
etc.
Cond A
etc

Benefits of Coding in Passes

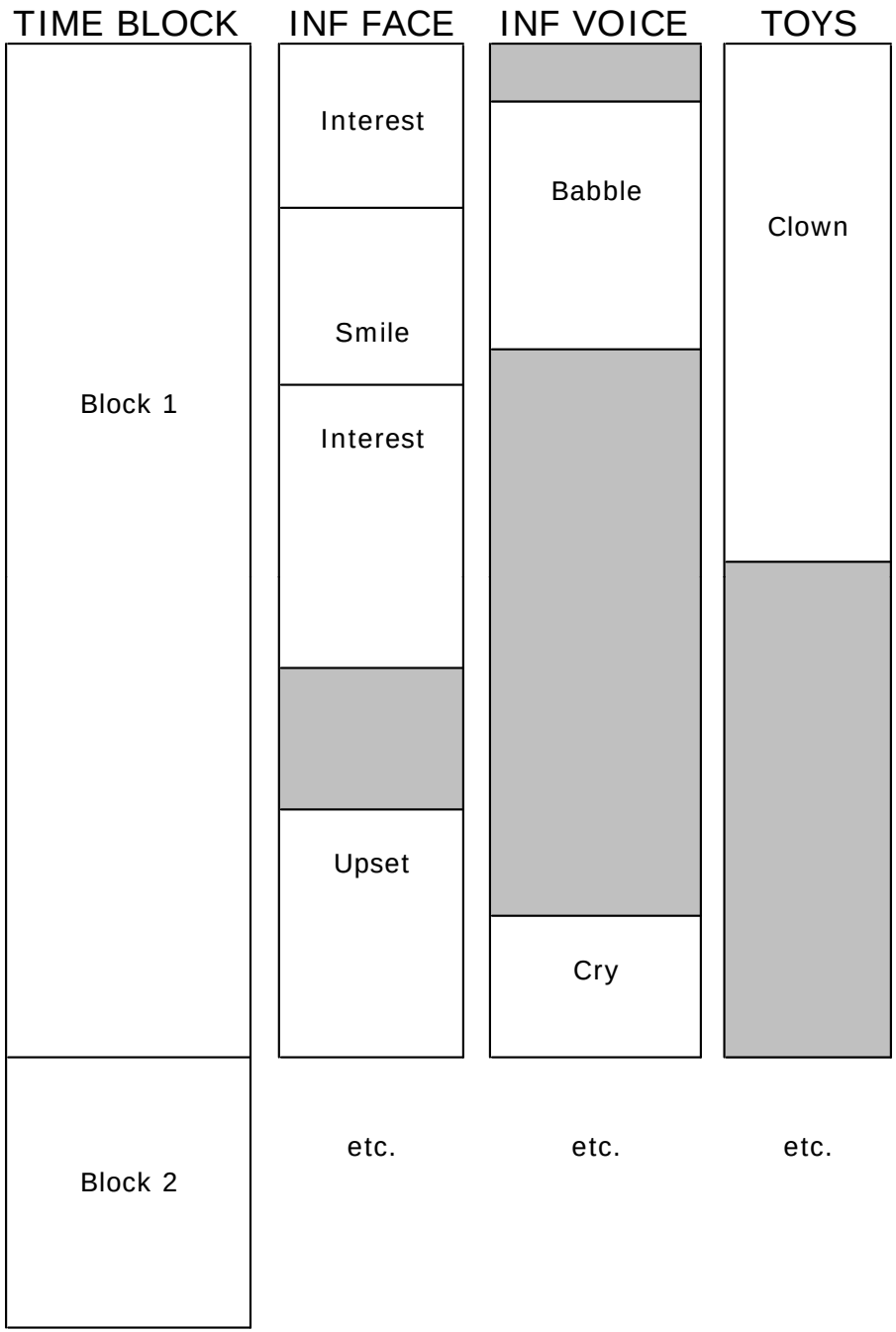
- Inter-rater reliability

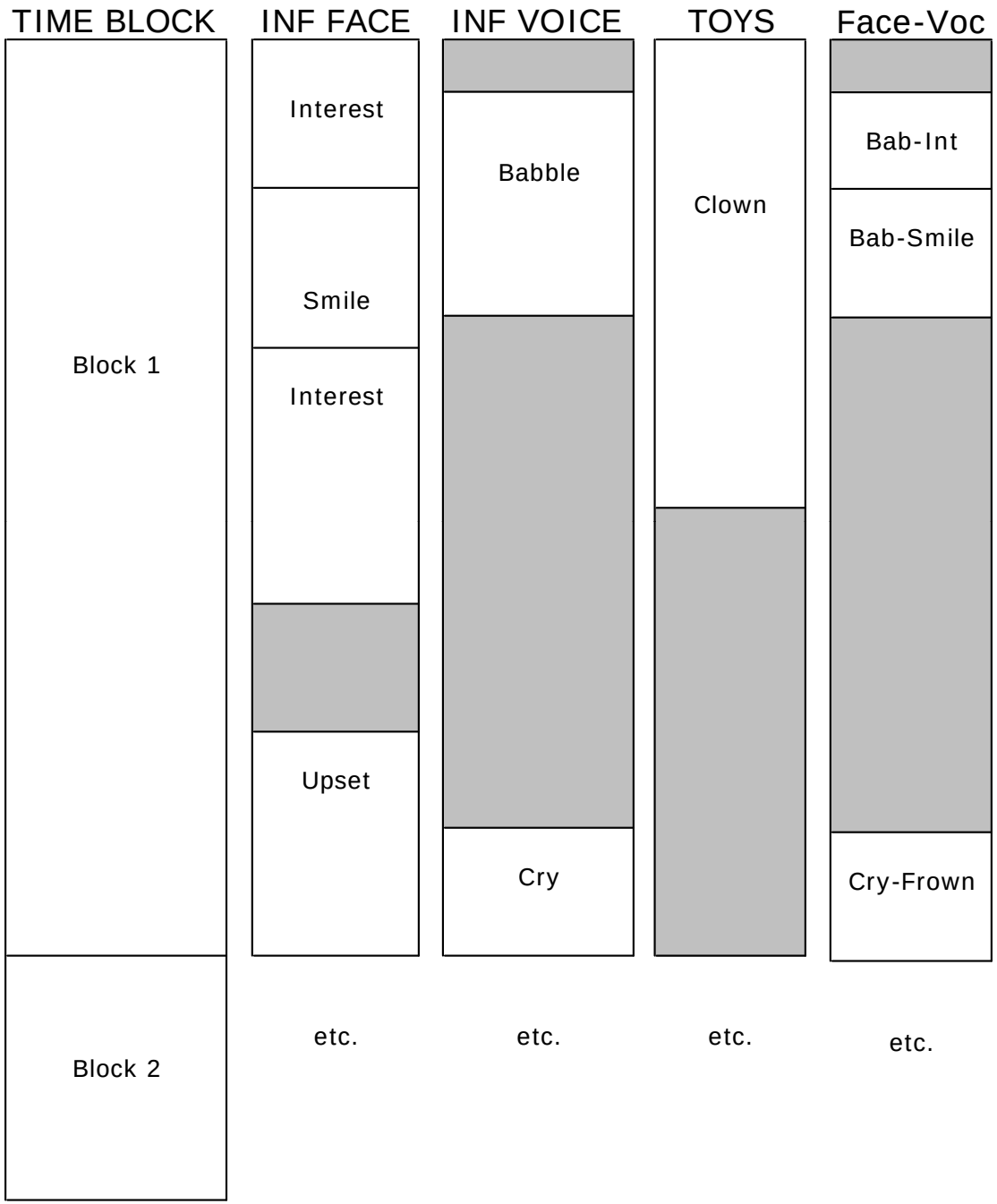
Inter-rater Reliability

TRIALS PRIM CODER	TRIALS RELIAB CODER
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30

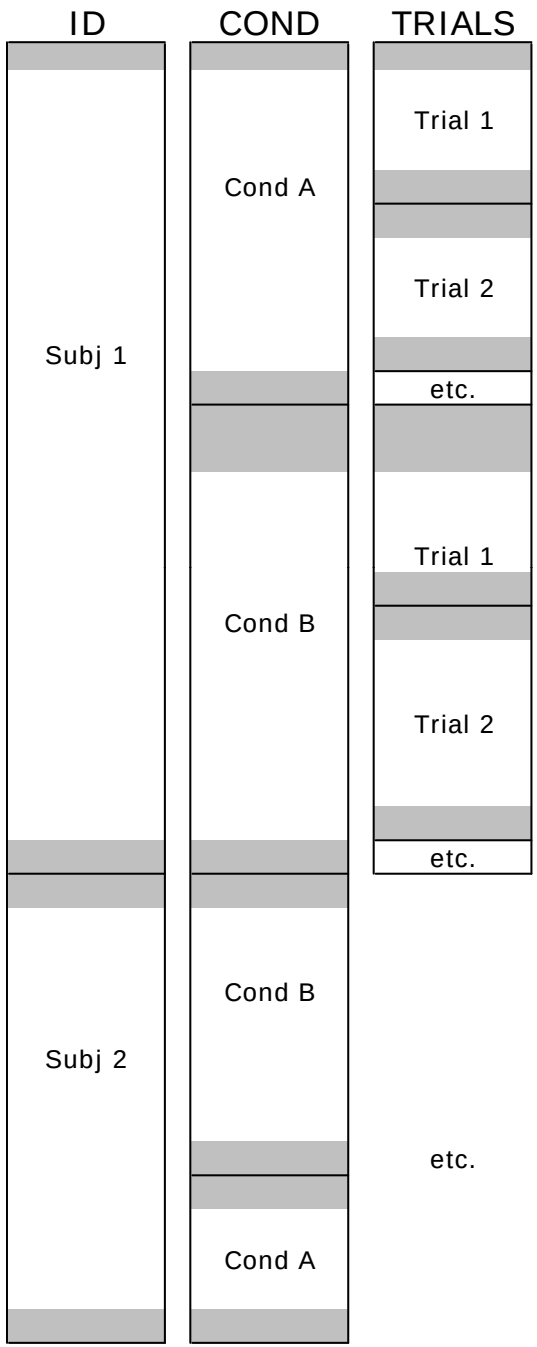
Benefits of Coding in Passes

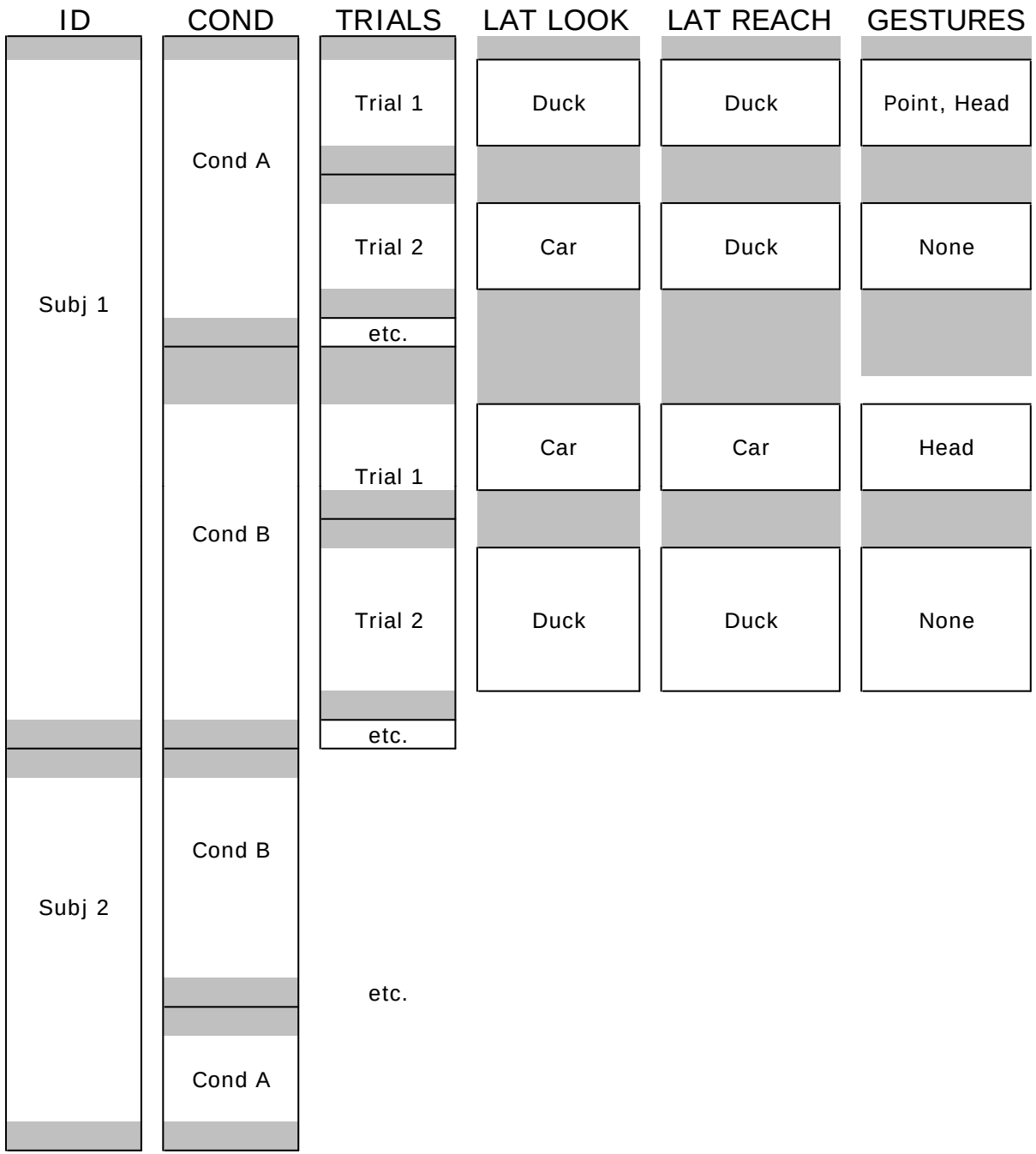
- Inter-rater reliability
- Allows for coders with specialized expertise
- Splits coders' attention efficiently
- Organizes codes for analyses
- Allows visualization of nested & interleaved structure of data


TIME BLOCK
INF FACE
INF VOICE
TOYS
Block 1
Block 2
Interest
Smile
Interest
Upset
Babble
Cry
Clown
etc.
etc.
etc.


TIME BLOCK
INF FACE
INF VOICE
TOYS
Face-Voc
Block 1
Block 2
Interest
Smile
Interest
Upset
Babble
Cry
Clown
Bab-Int
Bab-Smile
Cry-Frown
etc.
etc.
etc.
etc.

Coding in Passes on Nested Data


ID
COND
TRIALS
Trial 1
Cond A
Trial 2
Subj 1
etc.
Trial 1
Cond B
Trial 2
etc.
Cond B
Subj 2
etc.
Cond A


ID
COND
TRIALS
LAT LOOK
LAT REACH
GESTURES
Subj 1
Cond A
Trial 1
Duck
Duck
Point, Head
Trial 2
Car
Duck
None
etc.
Cond B
Trial 1
Car
Car
Head
Trial 2
Duck
Duck
None
etc.
Subj 2
Cond B
etc.
Cond A