Archived data: Why are some faces' names easier to learn than others? The effects of face similarity on memory for face-name associations.

Note: The data are provided in both raw text form and in more accessible and organized Matlab structures. To assist in the loading and filtering (respectively) of these structures in Matlab, I have included a directory ("events") containing the Matlab functions "loadEvents" and "filterStruct" and their dependencies.

The data are first separated into folders for the three different experiments, along with a folder containing the data for the introductory same-different task.

Experiment 1:

The raw experimental data for each subject is contained in a separate folder (e.g. "NFA01"). Each of these folders contains a "session_0" folder that contains the pertinent information for the experimental session. The .par files are text files that contain the names recalled by the subject, and numbers with which these names can be conveniently indexed:

1- JIM
2- JOHN
3- ROB
4- BILL
5- DAVE
6- RICH
7- CHARLES
8- JOE
9- TOM
10- CHRIS
11- DAN
12- PAUL
13- MARK
14- MIKE
15- GEORGE
16- KEN

Also contained in these .par files are the times at which these names were recalled, in milliseconds, from the beginning of the respective test phase.

The file "session.log" in the "session_0" folder contains a record of every recorded event during the respective subject's experimental session. A sample event looks like this:

1154530817817 0 1 study 1154530812817 1 1 8 KEN

The first term (and fifth term) are the computer time of the event. The second term is an "offset" recorded by the software, which is always zero in this experiment's logs (it's irrelevant to the experiment.) The third column is the trial number, out of 8 in a particular study or test phase. The fourth column tells whether the event being recorded

is a study event or a test event (or, if the experiment has begun to take a sound recording). The sixth term is the number of the study set (1 or 2). The seventh term is the block number (out of 20, 10 per study set). The eighth term is an index number for the face displayed during the experimental trial (0-15). The ninth and final term is the name of the face presented---during study trials this is the name displayed under the face.

The above data is all in raw form; it is far better integrated in a Matlab file called Experiment1.mat contained in this archive.

Experiment1.mat is a matlab structure containing all the events from the entire experiment. The fields are:

mstime: the computer time of the event
msoffset: an irrelevant "offset" time, always zero in this experiment
trialnum: the trial number during this study or test phase
typeevent: refers to whether this is a study or test presentation, or a subject's recall.
1 = study, 2 = test, 3 = recall.
halfnum: refers to which study set this trial is from (1 or 2)
blocknum: refers to the block number of the experimental session (there are 20 total)
face: A number that indexes the face displayed during the experimental trial.
facename: The corresponding name to the face shown.
subject: The subject's number.
facecoordinates: The MDS coordinates of the face shown.
msresponse: The computer time of a given recall, from the start of the test phase.
rt: The reaction time of a given recall, in milliseconds.
recallname: The name recalled by a subject during a recall event.
recallface: The index number of the face corresponding to the name recalled.
recallfacecoordinates: The MDS coordinates of this recalled name's face.
iscorrect: Was the recall correct? 0=no, 1=yes.
intrusion: Was the recall an extra-list intrusion? 0=no, 1=yes.
vocalization: Was the recall made a non-verbal vocalization? 0=no, 1=yes.
theorfacecoordinates: The Hugh Wilson coordinates of the presented face.
theorrecallfacecoordinates: The Hugh Wilson coordinates of the recalled name's face.
distance: The Euclidean distance between the recalled name's face and the presented face, in MDS space.
theordistance: The Euclidean distance between the recalled name's face and the presented face, in Hugh Wilson's theoretical space.

By MDS space and MDS coordinates, we mean the space and coordinates derived from a Multi-dimensional Scaling study described in the paper.

Experiment 2:

In Experiment 2, every subject saw the same stimuli projected onto a screen; thus, there is only one computer log of the experiment. This log is contained in "session.log" This

log contains all the stimuli presentations during the experiment. A sample line looks like this:

1171556014585 0 1 study 1 4

The first term is the computer time; the second term is an irrelevant offset number (always zero in this experiment). The third term is the trial number during the study or test phase (out of 13). The fourth term indicates whether this event is a study or test trial. The fifth term tells what block the event occurred in (out of 5). The sixth and final term is an index number for which face was displayed during this test or study trial.

The written recalls subjects made are contained in the respective subjects' folders (e.g., "1"). Many or most of these folders are empty because not every student in the class provided us with his data after the experiment. The folders that are not empty contain 5 text files, each corresponding to a test block of the experiment. Each line of each text files refers to the written recall the subject made in response to a test face.

The above information is integrated into a Matlab structure contained in the Experiment 2 folder: "Experiment2.mat". The structure contains information about every event in the experiment; the first 130 events correspond to the first subject, the second 130 correspond to the second subject, etc (n=32).

The fields in the structure are:

mstime: The computer time of the event.
msoffset: The irrelevant computer offset of the event (always zero).
trialnum: The trial number in the study or test block (out of 13).
typeevent: Refers to whether this event is from a study or test phase.
1 = study, 2 = test.
blocknum: Refers to the block number (out of 5).
num: The index number of the face presented on this trial.
recallname: The name the subject recalled in response to a test trial.
recallface: The index number of the recalled name's corresponding face.
recallfacecoordinates: The MDS coordinates of the recalled name's face.
xli: Was the recall an extra-list intrusion? 0=no, 1=yes.
facename: The name of the face presented.
facecoordinates: The MDS coordinates of the face presented.
iscorrect: Was the recall correct? 0=no, 1=yes.
distance: The Euclidean distance between the recalled name's face and the presented face, in MDS space.

Experiment 3:

The raw experimental data for each subject is contained in a separate folder (e.g. "ARF06"). Each of these folders contains a "session_0" folder that contains the pertinent information for the experimental session. The .par file is a text files that contains the

names recalled by the subject during the cued recall phase at the end of the main experiment, and the numbers with which these names can be conveniently indexed. Also contained in this .par files are the times at which these names were recalled, in milliseconds, from the beginning of the final cued recall phase.

The file "session.log" in the "session_0" folder contains a record of every recorded event during the respective subject's experimental session. A sample event looks like this:

1165440039332 0 11 resp 1 3 5 MARK 5

1 3 0 4253

For trials for which a particular field was not applicable, a "-2" was placed in that term.

The first term is the computer time of the event. The second term is a computer offset number (always zero) that is irrelevant to this experiment. The third term is the trial number during this particular study or test block (out of 16). The fourth term is the type of event: a study trial, test trial, response by the subject, or cue face (during the final cued recall phase of the experiment). The fifth term is "1" during the 10 blocks of the main experiment, and "3" during the final cued recall phase. The sixth term represents the block number (out of 10). The seventh term is a number than indexes the face presented during the trial. The eighth term is the name of the face presented. The ninth term is a number that indexes the face of the name corresponding to the name presented during a given trial.

The tenth through thirteenth terms apply only to test trials. The tenth trial refers to whether the probe face-name pair was a target (1) or lure (0). The eleventh refers to the confidence (1-6) rating entered by the subject on the keyboard. The twelfth indicates whether the subject was correct (1) or not (0). The thirteenth indicates the reaction time of the respond, in milliseconds.

All of this information is condensed and made more coherent in a Matlab structure included in the Experiment 3 folder: Experiment3.mat. The fields in this structure, which contains all the events of the experiment, are:

mstime: The computer time of the event.
msoffset: An irrelevant computer offset number, always zero in this experiment.
trialnum: The trial number in a given study or test or recall block.
typeevent: This indicates what kind of event is being represented:
1 = study, 2 = test, 3 = response to test, 4 = cue during final cued recall, 5= response during final cued recall.
halfnum: This will be 1 during the main part of the experiment, and 3 during the final cued recall phase.
blocknum: Refers to the block number (out of 10).
face: The index number of the face being presented during this trial.
name: The name being presented during this trial.

studyface: The index number of the face corresponding to the name being presented.
istarget: Is this a target trial (1) or a lure trial (0)?
confidence: The confidence judgment (1-6) made by the subject.
iscorrect: Was the subject correct (1) in his judgment, or did he make an error (0)?
rt: The reaction time, in milliseconds, of the subjects response.
facename: The name corresponding to the face being presented on this trial.
facecoordinates: The MDS coordinates of the face being presented on this trial.
subject: The subject's number.
studyfacecoordinates: The MDS coordinates of the face corresponding to the name presented on this trial.
recallname: During final cued recall, the name the subject recalled.
exintrusion: Did the subject make an extra-list intrusion on this recall (1)?
inintrusion: Did the subject make an intra-list intrusion on this recall (1)?
theorfacecoordinates: The coordinates of the presented face, in Hugh Wilson's face space.
theorstudyfacecoordinates: The coordinates of the face corresponding to the name presented, in Hugh Wilson's face space.
distance: The Euclidean distance between the presented face and the face corresponding to the presented name, in MDS space.
theordistance: The Euclidean distance between the presented face and the face corresponding to the presented name, in Hugh Wilson's face space.

Introductory same-different task:

Logs of the introductory same-different task are contained in a separate folder for each subject (e.g. "NFA04" for Experiment 1, "ARF05" for Experiment 3). Within each of these folders is a subfolder titled "session_0", which contains a file called "session_log" that contains the data. The logs for Experiment 1 contain lines that look like this:

1159392147617 1 FACE **723** **PRES** **1_PNNP** **Correct** LL1 PP1 **Target_PNNP** 0 PRACTICE

1159392151567 1 FACE **723** **CUE** **Correct** LL1 PP1 **Target_PNNP** 0 PRACTICE

1159392152290 0 FACE **723** **RESP** **Correct** LL1 PP1 **Target_PNNP** 0 PRACTICE

These three lines correspond to the presentation of a face, the presentation of a probe face moments later, and the response by the subject, respectively. Each trial of the same-different task will contain three such lines.

The code for the experiment was adapted from another experiment, so there is information here not relevant to the current study. Only the terms of each line I have put

in bold are relevant to this study. The fourth term in each line (here, 723), represents the reaction time on this trial, in milliseconds.

"PRES" "CUE" or "RESP" refer to whether this event represents the first face presented ("PRES"), the probe face presented shortly after ("CUE"), or the response of the subject "RESP".

Next to "PRES" is a string (in this example, 1_PNNP), which is a code for which face out of our set was presented first during this trial. The term Target_PNNP is a code for which face out of the set was presented second during this trial, as the probe(they are both the same for trial for which the faces should be judged "same").

If the subject was correct (hit or correct rejection), the experiment logged this "Correct", if he was incorrect the experiment logged this "Incorrect."

For Experiment 3, the experimental logs contain lines that are similar, except an additional term expresses the confidence judgment entered by the subject (shown in bold below):

1192213825364 1 FACE 853 PRES1_NNNN CorrectLL1 PP1 Target_NNNN**6** 0 PRACTICE
1192213829231 1 FACE 853 CUE CorrectLL1 PP1 Target_NNNN **6** 0 PRACTICE
1192213830084 0 FACE 853 RESP CorrectLL1 PP1 Target_NNNN **6** 0 PRACTICE

All of the analyses and data presented in the paper should be theoretically extractable from the data included in this archive.

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