Methodology File

### Experiment 1

1. Consent form (same for Experiment 2 and 3):

**Project Title: AAT STUDY  
Certificate of Informed Consent**

**Overview and Procedures:** The purpose of this study is to examine factors that influence human memory and cognition. During the study you will be asked to emit certain responses using the keyboard. Please be honest and thoughtful in your responses.

**Risk and Benefits.** This study involves no more risk to your physical or psychological health beyond those encountered in the normal course of everyday life. You may benefit by gaining a better understanding of psychological research. No other risks or benefits are anticipated.

**Confidentiality.** Any information obtained in this study will be kept strictly confidential and used solely for research purposes. We do not ask any identifying information and responses will be kept completely anonymous. Your anonymised data may be posted to a public repository for other researchers to make use of.

**Compensation.** You will receive a sum of money for participating.

**Your Rights.** Your decision to participate in this research is voluntary. You can withdraw from the study at any time without penalty. You do not have to answer any questions you do not want to.

**Contact Information.**If you have any questions or issues with this study please contact the principle investigator (X) at …who can review the matter and provide further information.

You must be 18 years of age or older to participate in this research study.

Please indicate below whether you consent to participate in this research study:

 Yes, I consent to participate in this research study.

No, I do not consent to participate.

Please let the experimenter know if you would like a copy of this form for your records.

Please make sure to have your Prolific ID written down so that you can provide it at the end of the study for payment.

1. Demographics (same for Experiment 2 and 3):

Welcome to this experiment.

Before you start, please switch off phone/e-mail/music & anything else distracting.

Please also have your Prolific ID ready [It can be found in your account info].

* What is your age:
* What is your gender: options = ("male", "female")
* What is your country of residence
* Please enter your prolific ID here. (if you cannot remember it please quit the experiment now and retrieve it before continuing). Otherwise you cannot be paid.

Thank you.

Now press the spacebar to start the experiment.

Note that the experiment may take 1-2 minutes to start up.

1. Intro:

P.1: Welcome !

In this experiment you will be learning information about two different persons.

One person is called Bob and one person is called Jake. You can see their pictures below.

P.2: In the next part of the experiment you will learn about certain behaviors of these two individuals.

Each trial, you will see a picture of Bob or Jake, together with information about a certain behavior that this person has engaged in.

It is very important that you:

(1) read this behavioral information very well and

(2) try to remember this information because we will ask questions about it later on.

\*\*Please read these instructions carefully because you will need this information to complete the experiment.\*\*

Please press the spacebar only when you have memorized these instructions and are ready to begin.

1. Learning Task:

* We will now present the information about Bob.

🡪 Informations

Press space to learn the next piece of information

* We will now present the information about Jake.

…

NOTE: informations:

Neutral (same options for Jake):

Bob (or Jake) has a mobile phone. Bob lives near a bookstore. Bob has a carpet in his living room. Bob has a lamp in his room. Bob buys stamps at the post office every once in a while. Bob buys groceries at a nearby store.

Positive (same options for Jake):

Bob helped in developing prosthetic limbs for veterans. Bob gave his jacket to a homeless man.

Negative:

Bob stole an expensive pair of running shoes from a gym locker. Bob viciously insulted a friend on Facebook.

1. AMP:

Now please complete a concentration test.

During each trial, you will see a fixation point (+), an image, and a Chinese ideograph appearing briefly in the middle of the screen and eventually covered by a noisy image (see depiction below).

Your task is to judge the visual pleasantness of each Chinese ideograph:

Press 'E' (Unpleasant) if you find a Chinese ideograph LESS visually pleasing than average.

Press 'I' (Pleasant) if you find a Chinese ideograph MORE visually pleasing than average.

The Chinese ideographs will be presented only for a very brief time. Therefore, please pay close attention during the task.

It's important to note that the images or words flashed before the Chinese ideographs can influence people's responses.

Because we are interested in how people can avoid being biased, please try your best not to let the images or words influence your judgments of the Chinese ideographs.

Note that you will also see two pictures presented at the top of the screen during this task. Please do not base your response on those pictures but respond only to the Chinese ideographs."

Remember:

Press 'E' (Unpleasant) if you find a Chinese ideograph LESS visually pleasing than average.

Press 'I' (Pleasant) if you find a Chinese ideograph MORE visually pleasing than average.

Please do not start hitting buttons randomly after a while but keep evaluating the Chinese ideographs. Thank you!

Please start when ready.

1. Explicit Rating Task:

Thank you very much for completing that task!

Next, please answer some questions about the two persons that you encountered in the previous task.

How pleasant or unpleasant do you find Bob?

To what extent do you have warm or cold feelings for Bob?

How pleasant or unpleasant do you find Jake?

To what extent do you have warm or cold feelings for Jake?

1. Final questions:

We will ask you some final questions.

When answering these questions please think back to the part of the experiment where you learned the informations about Bob and Jake (i.e., the beginning of the experiment).

It is crucial that you try to answer these questions carefully and correctly !

* Which of the following actions did this person engage in? Please indicate ALL correct actions ! options = ("This person viciously insulted a friend on facebook", "This person stole an expensive pair of running shoes from a gym locker","This person walked out of a restaurant without paying the bill", "This person helped in developing prosthetic limbs for veterans","This person sheltered a family who had lost their home in a fire", "This person gave his jacket to a homeless man", "none of the above")
* Earlier you rated pleasantness and warmth feelings for Bob and Jake. Did you base your ratings NOT on how you actually felt about Bob and Jake but ONLY on what you thought the researchers wanted you to say?" / options = ("Yes", "No")
* Earlier you rated pleasantness of Chinese ideographs. During this task, did you base your ratings NOT on how you actually felt about Chinese ideographs but ONLY on what you thought the researchers wanted you to say?" / options = ("Yes", "No")
* Do you speak Chinese or Mandarin (and therefore recognized some of the Chinese ideographs you were asked to rate)?" / options = ("Yes", "No")

1. End:

Thank you for taking part in this experiment !

If you had problems with visibility or any other (e.g., personal) problems that might have prevented you from completing this experiment in an optimal fashion please describe these problems here.

You made it to the end of the experiment, so you will get paid for your efforts.

Noting any problems here will not interfere with payment.

### Experiment 2

Same phases and instructions as Experiment 1.

Exception: informations:

NEUTRAL = experiment 1

Positive: Bob took in and cared for an old woman from his church when her husband died.   
 Bob donated blood. Jake anonymously donated money to develop a new wing of a hospital

Jake offered to share an umbrella with a stranger during a downpour

Negative: Bob snatched a purse that an elderly woman set down on the bus. Bob cheated   
 on a take-home exam from the university. Jake stole money from a church's charity fund

Jake pretended he did not hear a woman's request for his help in lifting a baby carriage over   
 a high curb

### Experiment 3

Same phases and instructions as Experiment 1.

Exceptions:

1. Behaviour Information:

NEUTRAL = experiment 1

Positive (same for Jake): Bob took in and cared for an old woman from his church when   
 her husband died . Bob offered to share an umbrella with a stranger during a downpour.

Negative (same for Jake): Bob snatched a purse that an elderly woman set down on the bus.  
 Bob pretended he did not hear a woman's request for his help in lifting a baby carriage over   
 a high curb.

1. Memory retrieval Manipulation:

Please now look at the information presented below about one of the target persons.

Your task is now to think about this information for a while.

Visualize the information and form an interactive image of the information. Elaborate on the information any way you can.

Press space bar to indicate that you have read the instructions and are ready to start focusing on the information below.

After one minute you will be able to proceed to the next phase of the experiment.

1. Extra question:

Earlier we asked you to form an interactive image of the two informations that were presented with an image. To what extent did you actually form this image? Please be honest here."

/ options = ("1=Not at all", "2","3","4=Moderately","5","6","7=Very much

### Experiment 4

Same phases and instructions as Experiment 3. These were the exact instructions:

***1. General introduction:***

*“Welcome! In this experiment you will be learning some information about three different people. One of those people is named Mark, one is named Paul, and a third person is named Brian.*

*Each trial, you will see a picture of Mark, Paul, or Brian, together with information about a certain behavior that this person has engaged in. It is very important that you (1) read this information carefully and (2) try to remember this information because we will ask questions about it later. Make sure that you remember well which person performed which behavior. Please also remember what the person looks like.*

*\*\*Please read these instructions carefully because you will need this information to complete the experiment\*\**

*Please press the spacebar only when you have memorized these instructions and are ready to begin.”*

***2. Impression formation (+ elaboration) task:***

*- “We will now present the information about Mark”.*

Participants then see four trials: A picture of Mark is always presented at the top of the screen. Then a statement is presented above it (see example screen below). This information stays on screen for 8000 ms. Then participants can progress to the next information after pushing the spacebar. The positive and negative information will be presented on the second and third trial. The other two trials contain the neutral information.

Bob snatched a purse that an elderly woman set down on the bus.



*- “We will now present the information about Paul”.*

Participants then see four trials: 2 with neutral information and 2 with the positive and negative information about Paul. The picture of Paul is presented on top of the screen.

*- “We will now present the information about Brian”.*

Participants then see four trials: 2 with neutral information and 2 with the positive and negative information about Brian. The picture of Brian is presented on top of the screen.

IMPORTANTLY:

For one of the pieces of valenced information about Person 1 (Mark/Paul/Brian), after seeing the information (and proceeding to the next trial), participants are given the following instructions designed to facilitate elaborative rehearsal (known to influence memory retrieval: Goldstein, 2011):

*“Please think about the LAST piece of behavioral information that you just read. Your task is to think about this information for a while.*

*Please visualize the behavior and form an interactive image of what Mark did.*

*Please also elaborate on the information any way you can and write your elaboration below. Make sure to elaborate sufficiently (please write at least four sentences).*

*After writing down the elaboration, you can click below to continue.”*

***3. AMP measuring implicit evaluations of Mark, Paul, and Brian.***

a. Instructions

*Please now complete a concentration test.*

*During each trial, you will see a fixation point (+), an image, and a Chinese ideograph appearing briefly in the middle of the screen and eventually covered by a noisy image (see depiction below). Your task is to judge the visual pleasantness of each Chinese ideograph:*

*Press 'E' (Unpleasant) if you find a Chinese ideograph LESS visually pleasing than average. Press 'I' (Pleasant) if you find a Chinese ideograph MORE visually pleasing than average." “The Chinese ideographs will be presented only for a very brief time. Therefore, please pay close attention during the task. It's important to note that the images flashed before the Chinese ideographs tend to influence people's responses. Because we are interested in how people can avoid being biased, please try your best not to let the images influence your judgments of the Chinese ideographs."*

*Remember: Press 'E' (Unpleasant) if you find a Chinese ideograph LESS visually pleasing than average. Press 'I' (Pleasant) if you find a Chinese ideograph MORE visually pleasing than average. Please do not start hitting buttons randomly after a while but keep evaluating the Chinese ideographs. Thank you! Please start when ready.”*

b. 90 AMP trials:

In line with standard procedures (Payne et al., 2005), during each trial of the AMP, participants are presented with a prime stimulus for 75ms, a blank screen for 125ms, and a Chinese ideograph for 100ms, which is then covered with a black-and-white pattern mask.

Prime stimulus is the picture of Paul/Brian/Mark.



1. ***Explicit ratings for Paul, Brian, and Mark:***

“How pleasant or unpleasant do you find Paul/Brian/Mark…?”   
 (1: Extremely unpleasant -7: Extremely pleasant)

“To what extent do you have warm or cold feelings for Paul/Brian/Mark…?”   
 (1: Extremely cold -7: Extremely warm)

Note: Order of Phase 3 and 4 counterbalanced.

1. ***Memory questions about the behavior of Paul/Brian/Mark***

Which of the following behaviors did this person engage in? Indicate all correct answers.   
(the positive Paul, Brian, and Mark behaviors, the negative behaviors, 4 other behaviors)

Note: Order of questions randomized.

***6. Additional questions:***

*a. Manipulation Check:*

We asked you to form an interactive image of one piece of information. Who was this information about?

Also, to what extent did you actually form this image about the information? Please be honest here. (1: not at all -7: Very much).

*b. Demand compliance questions:*

Earlier you rated pleasantness and warmth feelings for Paul, Brian, and Mark. Did you base your ratings more on how you actually felt about these people or more on what you thought the researchers expected you to say?   
"Based on how I actually felt about these people", "Based on what I thought the researchers wanted me to say”

When you gave these ratings, you might have thought that the researcher wanted you to change your ratings to strongly take into account the information about one of the men that you were asked to elaborate on. Did you have this thought and changed your ratings to accord with this possible demand or did you give ratings that reflected how you actually felt about the three different men?   
"I changed my ratings to accord with this demand", "I gave ratings that reflected how I actually felt about the three different men"

Earlier you rated pleasantness of Chinese ideographs. During this task, did you base your ratings more on how pleasant you actually found the Chinese ideographs or more on what you thought the researchers expected you to indicate as pleasant?   
"Based on how pleasant I actually found the Chinese ideographs", "Based on what I thought the researchers expected me to indicate as pleasant”.

When you rated pleasantness of Chinese ideographs, you might have thought that the researcher wanted you to change your ratings to strongly take into account the information about one of the men that you were asked to elaborate on. Did you have this thought and changed your ratings to accord with this possible demand or did you give ratings that reflected how pleasant you actually found the Chinese ideographs?"   
I changed my ratings to accord with this demand", "I gave ratings that reflected how I actually felt about the Chinese ideographs"

*c. Chinese knowledge question:*

Do you speak Chinese or Mandarin (and therefore recognized some of the Chinese ideographs you were asked to rate)?""Yes"/ "No"