

## 4. Post-experimental questionnaire

### Introduction

We administered a questionnaire after the hybrid foraging experiment to assess participants' subjective task representation and task strategies. Seven out of 12 older adults (OA) and nine out of 12 younger adults (YA) took part in the post-experimental questionnaire. This document is a one by one transcript of the answers generated by our participants. If answers were repeated several times we wrote them down only once. The answers given by the OA are written in black. The answers given by the YA are written in grey.

### Questions and overview of younger and older adults' answers

#### 1. *What do you think this experiment was about?*

##### OA

- concentration, memory, visual skills
- acquiring the targets quickly, not hitting the decays and the skills/ capacity to do that
- remembering visual objects and identify them as they moved before me
- memoryband, quick hand movements, eye and hand coordination
- short term memory and concentration

##### YA

- Seeing how many objects we can store in our memory and be able to recognize them.
- mental speed and decision making
- Coordination of objects and the belonging process routes in the brain, Strategies we use to recognize the objects or find them faster, Capacity of memorization
- How well and fast people can find a specific image / color / shape / speed of movement.
- Memory and how fast you can visually track objects that you have memorized in a full display of distractors.
- Being able to recall a group of items and quickly identify them in a group of other items. Memory
- memory, tracking objects, and how fast I can do it
- visual memory
- Probably about objects that are easier to memorize according to our memories and life experiences. And what kind of things are we more interesting in.
- Memory test, and if we start to forget something during all the time.

**2. Did you use a particular strategy during this experiment? If so, could you explain it?**

OA

- Tried to link targets by categories before beginning the test e.g. sports, tools, household etc.
- Grouping, snag a whole flock of whatever's w/o much wasted my time, wait for a target to clear decay(s) to avoid false hits. Use mostly visual memory rather than verbal (with some correction)
- I tried to identify what the object was and also looked at colors
- Read the words to myself (description)
- I said objects aloud made associations with less familiar objects
- Yes, towards the end of the experiment I concentrated on just a few of the objects and traced the cursor horizontally, clicking on those that I memorized
- Try to remember as most target objects that I could, after the first trials I forgot a lot of the other target objects due to the fact that I saw „other“ objects/ focused on other targets

YA

- None, just tried to remember as much as I could
- I tried to click all of the objects while also scanning for other ones I recognized
- I tried to find all of the targets I remembered and afterwards checked with one last glimpse on the display
- I tried to find obvious colors first, which was fast and also made room to find other objects
- I would speak the name of the object when memorizing it. Once it was in the display of the distractors I would look for colors that I remembered and click all of the objects I remembered first.
- I found one item I knew and tried to select all of those. As I was selecting them, I looked for other familiar items and began selecting them.
- I tried to separate the objects (targets) in groups. For example: animals, cars, color, etc.
- Picked one object I recognized, found all I could of it, and moved on to the next object
- Try to assign each target object to a specific life experience or daily routine I have.
- Memorize by saying out loud – using words and colors.

**3. Did you change your strategy due after completing several trials?**

OA

- Rate of return declining

- I occasionally hit a possible target to make sure it wasn't a forgotten target class, I waited on the next button just in case I had missed something or something was generated (yes I noticed)
- I found that I went on I tried tapping on move objects and found that I had forgotten them
- Yes – see previous (concentrate on just a few target objects)

YA

- First I clicked randomly on targets I recognized then I used the strategy described above.
- Not really, unless multiple targets were right next to each other. Then I would just get them all.
- No, my strategy stayed the same.
- Yes, I was unable to remember all of the items. When I couldn't remember I would guess twice. If both guesses were wrong I moved on to the next.
- No, but after several trials it is hard to memorize the new targets because I can get confused and mix the targets from the previous trials.
- No.
- I don't think so. I just tried to relate each object to something that has meaning to me.

#### *4. How did you decide to go to the next patch?*

OA

- Partly addressed in previous question. Also made sure look like weren't the real things before searching on. (next display)
- Once I moved quickly through and increased my speed I just advanced to the next screen after making a sweep.
- Just did! When no items were available.
- When I was taking too long to find additional targets.
- When the screen said next (when no targets were around).
- When there were no target objects left I decided to move on.

YA

- I was ready to
- As soon as I couldn't see many more targets or I felt I was too slow.
- When I slowed down too much.
- When I could no longer easily recognize an object I remembered
- Once I could no longer remember which items I was supposed to target.
- I looked through the entire screen and if I couldn't find any of my targets, I'd move to the next patch.
- When I could no longer find any after about 10 seconds.
- I used the same approach every time.

5. *Were there any objects that you found easier or more difficult to memorize, or objects that distracted you from doing the task? If so, why?*

OA

- Even though I was deemphasized verbal memory helped when I knew the objects (congratulations you had some really obscure objects) objects that were comparatively drab/ nondescript were tougher to remember, a couple of objects I simply didn't like were just a bit tougher. Some objects I remembered from taking part in a study last time in the visual attention lab – not easy
- The familiar objects and colors helped me through the task
- Only things that I feel distracted me was the repeats of items that switched from target to distractor in a new block
- Familiar objects were easier, similar shaped objects (target/ non-target) were more difficult. If an object had been a target in the previous exercise it was more difficult to click on it.
- Animals, household items were easier to memorize.
- If target objects were similar e.g. the set size contained several red cars or if the objects were rotated.

YA

- Bigger objects, colorful objects, objects that blocked out the white background were easier to memorize
- The smaller objects were harder to click on in the task (rake, toothbrush) And some of the weird metal objects were hard to memorize because I didn't recognize them.
- Some objects were easier recognizable because I made several associations with them during the memorization phase.
- Some objects I didn't know what they were and those were harder. Also, white ones tended to blend in with the background.
- The vibrant colored objects were easier. The small gray tool like pictures were difficult.
- The bright colored objects were easier. It was difficult to recall items that looked similar to distractors in shape or color.
- Easier: Animals, cars, objects with the same colors; Difficult: small objects; Distracted me: objects similar to the targets.
- Brightly colored objects were easy to find/distract more dull colored objects were harder to pick out.
- Objects that have no particular meaning for me or objects that I do not use in my daily life were more difficult to memorize. Thing that I really like/enjoy or that I would relate with my life were easier.
- Objects that present powerful colors (red, yellow) or bigger objects.