Fieldwork Protocol

Summer 2015

SCAN Project

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Contents

1 Cognition

1.1 Mental Rotation

- Open "Practice" application.
- Select screen resolution of "1366 X 768" and "Good" graphics quality.
- "Your task is to decide if the body on the top matches either this body [*point to left*] or this body [*point to right*]. They match if the same arm on the top and bottom body is pointed out in the same direction. For example [*point to screen*], this body on top matches this body [*point to left or right depending on answer*] but not this one [*point to other body*]. [*Press the correct answer and get the tone feedback*][*Tap the screen to go to the next trial*]. The body may be rotated, so you need to think about the body rotating back to upright to decide about the match. For example, to decide which body this matches [*point to top*], you would think about it rotating like this [*press the correct response so that they see it rotating*] and then you decide that it matches this one [*point to correct response*][*Tap the screen to go to the next trial*]."

  "Now, you try it [*this should be the 3rd practice trial*]. Here is a rotated body. Decide whether it matches this one [*point to left*] or this one [*point to right*]. When you have decided, press that body. [*When they press, they will see the rotating target and will have feedback on whether it is correct or not. Explain that the correct tone is high pitch and the incorrect tone is low pitch*]. Lets try it again [*go on to 4th trial*]. Decide whether it matches this one [*point to left*] or this one [*point to right*][*Participant responds*]. [*This would complete the first 4 trials, and then move on to the next 4, for testing for criterion*]."

  "Here are a few more to practice on. As soon as you decide which one the top body matches, touch the answer. Remember that it is important to touch your answer as quickly as you can, as soon as you have made the decision. [*Have them complete this on their own*], with the feedback from the rotation. If they get 3 out of 4 correct, move on to the actual trials. If not, restart the practice file until they perform to criterion (3 out of 4)."
- Open "Trial" application.
- Select screen resolution of "1366 X 768" and "Good" graphics quality.
- Enter subject ID, Date, Age, Sex, and "1" for the number of blocks.
- "Now you will do this task a few more times. This time you will not see the top body rotate after you make a decision. Still try to decide which one matches to the top body. Press the cross when you are reading to go on to the next one. Remember to try to respond as quickly as you can. Press the body that is your answer as soon as you decide."

- When the participate indicates he/she is ready. Touch the screen to begin the trial.

1.2 Corsi Blocks

[Needs to be adapted for the forthcoming version.]

- "You will see some blue squares on the computer screen that will look like this [*Point to the squares on the screen*]. The squares will turn yellow one at a time in an order. I would like you to remember the order that they turned yellow. When they are finished turning yellow you will need to touch each square in the same order they turned yellow. Here is an example [*Press down arrow*]. [*Note: This is a pdf file made to look like the experiment, so you need to control it by hand by pressing the down arrow to move on to another page.*]"

  "Do you see how this one is now yellow? Different squares will turn yellow each time. Do your best to remember which squares turned yellow and the order that they turned yellow.[*Press down arrow and squares will be blue again.*] Please practice touching the square that turned yellow. [*Tell them if they are right or wrong. The squares will not turn yellow as they press them in this practice, although they will in the real experiment.*]"

  "Now more than 1 square will turn yellow. Try to remember which squares turn yellow and the order that they turn in. [*Press down 3 times slowly to show the different squares turning yellow.*] Please touch the squares that turned yellow in the order that they turned in. [*Tell them if they were right or wrong. If they seem to understand move on to the experiment*]"

1.3 Rod and Frame

To be added.

2 Mobility

2.1 Daily mobility

- Label trackers.
- Build a tracker-tracker worksheet
  - Table 2.1 is an example worksheet for keeping track of tracker status.

- Each row represents a tracker, and uses the device's label as an ID.
- The second column should be updated to indicate the tracker's status (i.e. is it out with a participant? ready to leave?, currently charging? broken? lost?).
- The next three columns repeat for each additional participant to handle each device. The first participant is listed as PID1, then next as PID2 and so on...
- For each participant, we indicate their name of ID, the exact time and date they receive the device, and the exact time and date they return the device.
- It may also be advisable to include an additional column to make notes for each participant when necessary.

ID	**Status**	**PID1**	**OUT1**	**IN1**	**PIDn**	**OUTn**	**INn**
1	ready	v223	$1015.25jun15$	$1535.28jun15$			
2	chrg	t173	$0720.20jun15$	$2000.27jun15$	x095	$1937.28jun15$	
3	out	z515	$0800.01jul15$				

- Prepare tracker, show it to participant, then ask the participant to affix the device somewhere out of the way. Inform the participant that you would like them to carry it for N days.
- Recover tracker. Export entire track as a single .gpx and .csv file in the format POPULATION_EXPERIMENTER_PARTICIPANT_DATEBGN_DATEEND_TRACKERID

  ex: TWE_LJV_v223_25jun15_28jun15_T1

2.2 Annual mobility

- "Which places away from home did you visit and stay the night at during the past year? Did you visit that place more than once? " [*record all places*]
- Once you have a list of locations move through the list starting with "Tell me about the most recent time you visited X," then moving on to the enumerated questions below.

1. When did you go? (i.e. month/season)
2. How did you get there? (mode of transport)
3. Why did you go? Did you do anything else there?
4. Who did you go with? (age/sex/relationship)

5. Who did you stay with? (age/sex/relationship)
6. Do you have any children there? (number/age)
7. Do you have a lover there? (only if appropriate)

2.3 Lifetime range

- Create a list of 50 locations in the broader region.
- For each location, ask the participant "Have you ever visited X". If they respond affirmatively, ask "Have you visited X only once? a few times? or many times?" Indicate 0 for "never", 1 for "once", 2 for "a few times", 3 for "many times", and 4 if they state that the location was a previous residence.

3 Navigation

3.1 Pointing task

- Select 10 well-known locations spread throughout the local region. These locations should be at least 10km away, and make sure that the target and distance are balanced such that there is only one correct answer.

  For each location ask participants:

  - When they most recently visited that location
  - to indicate the bearing to each location

- Accurately measuring the exact bearing of participants' points is a difficult task. There are two preferred options:

  1. Using a tripod mounted Brunton compass, teach the participant that the arrow should point exactly where they would point with their finger. The participant will then rotate the compass to the correct location. Regularly challenge participants to ensure that the indicated bearings are consistent with bearings indicated by simple pointing.
  2. Using a handheld compass (either an Autohelm fluxgate or Suunto) ask the participant to naturally point to the location. Stand directly in front of the participant at least 10' away to ensure you are not blocking their view of any potential cues. Lineup the compass along the participant's finger and dominant eye (need to determine eye dominance before beginning task). Since you are facing the participant, you need to either reverse the compass or the reading to record the indicated bearing.

3.2 Imaginary pointing task

- Select 5 pairs of well-known locations spread throughout the local region. These locations should be at least 10km away, and make sure that the target and distance are balanced such that there is only one correct answer.

  For each pair of locations ask participants:

- When they most recently visited each location
- to indicate the bearing to location B while imagining that they are standing in location A.
- Use one of the two methods noted in the discussion of the standard pointing task for this task as well.

3.3 Out of camp pointing task

- During focal follows, ask participants to point to home at random times.
- Use the second method discussed in the standard pointing task section above to record indicated bearings.
- Note the indicated bearing, GPS position, and the other people traveling with the participant at the time of the testing.

3.4 Cue preference: Map Drawing

- "Draw a map of X village (ideally a very well-known village that is not the current location)"
- Ideally, record the participant drawing the map with a handheld camera.
- If a video camera is not available:
  - describe the order in which participants draw the map. (i.e. which features are drawn first?)
  - note all distal, proximal, and gradient cues, as well as landmarks that the participant draws
  - code accuracy of spatial relations and complexity (how?)

3.5 Cue preference: Directions

- Select three pairs of locations. These could be villages, major landmarks, market towns, or any other well-known places in the local region.

- For each pair of locations, ask participants: "Pretend I am in location A and would like to walk to location B. How would I get there?"
- Ideally, record the participant giving directions with a handheld camera. We are interested in both the cues used in their verbal description as well as any supporting body-language (e.g. pointing towards the goal)
- If a video camera is not available:
  - attempt to transcribe the participants' directions (including notes of non-verbal communication)
  - note all distal and proximal landmarks used by the participants
  - code accuracy of spatial relations and complexity (how?)
- Alternatively. You could ask the participant to draw the directions from A to B with paper and pencil.

4 Additional Questionnaires

4.1 Spatial Anxiety

Wayfinding anxiety:

1. When you are someplace you don't know well, are you concerned about getting lost? Or are you not concerned about getting lost, even in a new place?
2. When going to a place you don't know, would you feel safer going with others or would you feel as comfortable going by yourself?
3. If you made a wrong turn when you were out alone and didn't recognize where you were, would you be concerned that you might not find your way home? Or would you be sure you would find?
4. Would you feel comfortable trying a new route that you thought would be shorter, even if no one had traveled it before? Or would you feel anxious to try it?
5. Should parents worry about their children becoming lost when they travel without supervision? Or is there nothing to worry about?

Travel anxiety:

1. Do you worry an animal could attack you while out in the bush? Or is that not a danger?
2. While traveling alone, if you see a stranger from a different tribe do you hide from them? Or do you go to greet the stranger?
3. If you become injured while alone in the bush there is nobody to help you. Does this worry you when you travel alone? Or does it not concern you?
4. Is it safer to stay with company when you need to sleep in the bush, or is it no different than sleeping alone?
5. If you see the weather becoming worse after you begin a trip do you return home for shelter or do you continue on your trip?

5 Pilot

5.1 Perceptual biases under fear

- *height bias*: How tall is that point on the tree?
  - Find a distinguishable branch on a tree, measure its height (with Brunton?)
  - Ask person to imagine sitting on it
  - Ask person to estimate height: stop you as you walk backwards as far as tree is tall
- *distance bias*: How far is it across the pool of death?
  - mark out a circle, fill with brush and knives with blades up
  - Ask person to imagine jumping across it
  - Ask person to estimate distance, as you walk backwards, as above
- NOTES: The tree has a potential bias since men climb trees. The pool of death has a potential bias because men can jump farther, use height as a covariate?