Experimental Protocol

This is the experimental protocol for the UCU/UU research on non-native accents of English in a non-native environment. The lead researchers are Rosemary Orr (UCU) and Hugo Quené (UU – UIL OTS).

Please follow the instructions to the letter. High quality speech data is of utmost importance for this work because of the type of signal analysis that we want to run! If you run into problems, you can always call Rosemary Orr at *(number removed)*

Note that the setting up of the experimental area will take about 40 minutes. You should be present at least 45 minutes before the first subject in the session is scheduled. Each recording is expected to take about 45 minutes to an hour.

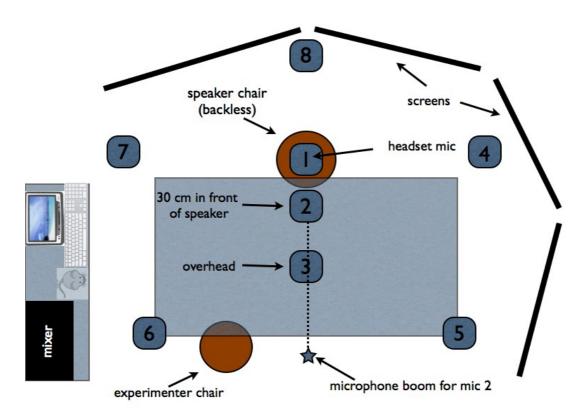


Figure 1: The experimental setup.

Setting up the equipment

- 1 Get the locker-key and the cupboard key from the box in the drawer. You have been shown this drawer already.
- 2 Get the backup disk from locker 32 in Locke. Attach it to the Mac.
- 3 Turn on the Mac
- 4 Close the curtains to damp the noise in the room, even if it is daytime.
- 5 Unplug the fridge and close the windows if they are open.
- 6 In the cupboard, there are three signs requesting silence in the corridor. Place one of these on each

- of the glass doors at either end of the corridor. Place the third one on the door to the student lounge next door.
- 7 Take the green blanket from the basket beside the equipment cupboard and spread it, folded double, over the table like a table cloth. This helps to reduce the echo in the room.
- 8 Place the microphone stands in their positions. The stands are placed at the numbered locations 1 to 8, as shown in *Figure 1* above, except for the stand for mic 2, which is placed directly across the table from the subject at the position of the star.
- 9 Place the microphones in the stands. Make sure that they point at the speaker.
- 10 The XLR cables are connected to the mixer beside the computer. Remove the cable tie from each cable and put it in the labeled box in the cupboard, so that we can find them again at the end of this round.
- 11 Attach the XLR cables to the microphones. Ensure that the numbers of the microphones attach to the correct slot numbers in the mixer so that the channels correspond to the scheme in *Fig. 1*. Place mic 1 near the speaker's seat so that it is easily accessible to the speaker.
- 12 Check that the computer and the mixer are connected by the firewire cable and turn on the mixer.
- 13 Turn on all the microphones. Note, the headset is automatically on, and you can see this from the green light. *Note also that the other microphones do not have led indicators.*
- 14 Once you have logged into the computer, open Chrome, and start up the gmail account for the project. Check for cancellations.
- 15 Open the *session planning* document in google-docs, choose the appropriate tab, and locate the names of the planned speakers for this session.
- 16 Look up the planned speaker names in the shared *Questionnaire* document. Note their file numbers for saving their speech file after their recording. There are post-its and a pen for that purpose on the computer table.
- 9 From the application toolbar, open the Saffire MixControl program. Go to File -> Clear All Settings.
- 10 From the application toolbar, open the *Audacity* program. Note: *Saffire MixControl* must be opened *before* you start up *Audacity*.
- 11 Open System Preferences and select the sound icon. Make sure that the selected device for sound input is the Saffire mixer, and that that sound output is internal speakers. Close the window.
- 12 In *Audacity*, select from the top menu bar: *Audacity: Preferences*. A dialogue box appears with a list of items in the left hand column. The default item should be *devices*, but if not, select this item.
- 13 Check that the recording device is *Saffire* and check that the number of channels selected for recording is 8. OK your preferences.
- 14 Check that the playback device is **not** Saffire but the built-in output.
- 15 In *Saffire*, run a sound check on *each* microphone, making sure that you see activity on all of the first eight channels. You can do this making some sound in front of each microphone, for example, speaking words, or clicking your fingers, clapping your hands, or playing music.
- 16 Switch back to Audacity in readiness for the recording.
- 17 Take the *logbook* from the cupboard and place it where *you* will be seated during the experiment.
- 18 Place the *laminated task list* and the *laminated text sheets* in front of the speaker's seat. There is a full set for each cohort in the cupboard, along with a set for the experimenter.
- 19 Take the ring-binder with the multilingual Human Rights texts, open it on the page with the native language of the speaker, and place it on the table, by the laminated texts.
- 20 Place *two consent forms and a pen* in front of the speaker's seat. There is a box of these in the cupboard.

- 21 From the teacher's room across the corridor, roll in the 4 screens and place them as in Figure 1.
- 22 Fill a jug of water and make sure that you have sufficient clean water glasses available for each speaker for the session. Jugs and glasses are on the drinks table in the corner of the room by the fridge.

Setting up the exit questionnaire

Note: this questionnaire only has to be filled in by speakers in round 5 of their cohort recordings. The questionnaire is the Exit Questionnaire UCU Accent Project. It is best if the speaker does not have to fill the questionnaire in on the Mac computer where you're making the recordings, so if you have your laptop, please use that.

It is important to have the speaker fill in the questionnaire first, so that they can answer questions about their perceived hearing ability without being influenced by the actual measurements in the hearing test.

- 1. Open your laptop and connect to the internet. Open the questionnaire document from the menu item form, select Go to live form ...
- 2. Call up the questionnaire, and enter the speaker code for this recording. You will find the code in the *UCU Accents Study Questionnaire in the shared google drive*. The questionnaire is now ready for the speaker to fill in when s/he is finished recording.

Preparing the speaker

- 1 Ask the speaker to be seated and to read through the consent form carefully and at his/her leisure.
- 2 When the speaker is ready, ask him/her to sign each form.
- 3 Place one copy of the signed form in the folder *Signed Consent Forms*, which is on the shelf in the equipment cupboard. Give the other copy to the speaker.
- 4 Explain, briefly, the order of events, and refer the speaker to the task list.
- Give the speaker a pen and paper and ask them to note three topics for each of the formal and informal spontaneous speech recordings. This is so that, if they run out of things to say, they will have some backup. There are suggestions on the experiment description sheet which they will have received through e-mail, and which is on the table for the for reference.
- 6 Invite the speaker to help him/herself to water at any point during the recordings.
- Ask the speaker if they are ready, or if they have any questions. If there are any questions, answer them as best you can. If in doubt, and the question is not immediate, tell them that they can communicate it to Rosemary Orr (<u>r.orr@uu.nl</u>) afterwards. If there is something that should be answered straight away, call Rosemary Orr at (number removed)
- Help the speaker to put on the headset. Not everyone is equally comfortable doing this! The microphone should be at the left hand side of the head, approximately 1 cm from the mouth. Check also that it is more or less in line with the mouth, and not, for example, half-way up the speaker's cheek. If the shape of the subject's head is such that the microphone must be much more than 1 cm from the mouth, note this in the logbook.
- 9 Check that the microphones did not get moved from their positions and that they are all focused on the speaker before the recordings begin.

Audiometry

Note: you only conduct hearing tests for speakers from the fifth round for their cohort recordings. Conduct this test after the speaker has filled in the Exit Questionnaire.

You can follow the instructions for carrying out a hearing test by reading the manual in the audiometer case, pages 7 and 8.

You should take the time to read these instructions before the speaker arrives. It will add about 15 minutes on to your preparation time for setting up the recordings.

Making the recording and filling in the questionnaire

- 1 Make sure that you also have your set of *text sheets and the task list* to hand.
- 2 In Audacity, open a new file (File: new).
- 3 Record the speaker saying their name and the date. Press the pause button when the speaker is finished. If you press <u>stop</u>, you can re-start the recording by pressing the <u>shift</u> key and clicking on the record button at the same time.
- In *Audacity*, check the recording levels to be sure that there is no clipping and that there is sufficient signal to ensure a good SNR. For the signals from the microphones above and in front of the speaker, and from the headset, this means making sure that there is about 2/3 (two thirds) maximum signal *without clipping*. For most speakers, this means setting the recording level on the mixer for these microphones at around 8.
- Refer the speaker to the next task (see *list*). Press *Record*. Give a bell signal, and speak the title of the task, e.g. "Extract from the Rainbow Passage".. When the speaker is done, pause. Remember: *if* you press <u>stop</u>, you can re-start the recording by pressing the <u>shift</u> key and clicking on the record button at the same time.
- 6 Make the relevant notes in the logbook see section on *logbook* below.
- 7 Repeat the above two steps until each item of read-aloud text on the recording list is completed.
- 8 For the three monologues and the dialogue part of the tasks, move yourself, the logbook and the bell to a seat in front of the speaker. Although you will not engage in conversation during the monologues, it is easier for the speaker to keep his/her head facing the microphone in front if you are seated there. Otherwise the speaker may be inclined to face you, and thus change the speech direction, making later analysis of microphone direction difficult.
- 9 When the recording is finished, *stop*, and *play back a section for yourself* for monitoring purposes.
- 10 Ask the speaker to remove the headset, and place in front of them the computer with the questionnaire.
- 11 For first time recordings, explain briefly how they should fill in the questionnaire. Assure them that they can ask you questions if they have any. Ask them to proceed.
- 12 When they are done, make sure that the *submit* button has been pressed, and that the *confirmation* message is displayed on the screen.
- 13 For all participants, give the speaker €10, if they completed the session. If they only complete a part of the session, give them the appropriate amount as described in the consent form. If the recording was the fifth recording for this cohort, and the speaker has completed all five recordings, give them €20.
- 14 Check that they take their signed consent form. Ask them to sign the subject-payment list, thank them for their time, and tell them they can go now!
- 15 If they have questions about results or follow-up recordings, they can address them to Rosemary Orr

After the recording

- 1. Save the recording (from the menu *File*, choose *Save Project*) in the relevant directory (*Macintosh HD/Users/Shared/accents/cohortd/sXG/*) as "sXGx.aup". The .aup file extension is the default extension for the audacity program. The "d" for cohort is either 1, 2 or 3. The "x" in the filename is 1 for the first recording, or "2" for the second recording, "3" for the third, and so forth.
- 2. Make a backup of the file, by selecting from menu *File ->* Save Project as ..., and save to the external hard drive, which shows up as backup-mac in Finder.
- 3. If you have another subject to record in this session, close the current subject file, and open a new one. Otherwise, close the programs, turn off the mixer, and shut down the computer.
- 4. Remove the subject's water glass from the table. If you have another subject to record in this session, place a fresh glass on the table in readiness.
- 5. Check that you have noted everything that was relevant or unusual in the logbook.

After the session

- 1 Turn off all the microphones.
- 2 Unplug all microphones and put them in their respective boxes
- 3 Tidy up the paperwork, consent forms, instruction sheets, etc, putting everythign back into the cupboard.
- 4 Move the mic stands away from the table, and place them tidily, close to the equipment cupboard.
- 5 Remove the green cloth from the table, fold it, and place it on the back of the couch
- 6 Roll the screens back to the teacher's room across the corridor.
- 7 Wash the glasses and empty the water jug, and return them to the drinks table.
- 8 Remove the *Silence* signs from the corridor doors and return them to the cupboard.
- 9 Turn the fridge on again.
- 10 When the data is copied over, detach the hard drive and place it in the backup-box. Return the box to locker number 23 in Locke. Bring the locker-key back and put it in the box in the drawer.
- 11 Lock the cupboard and place the cupboard-key back in the box in the drawer.
- 12 Lock the doors to both the teacher's room and the experiment room.

You are done - good job!

Notes on the making entries to the logbook

The logbook is intended to supply information about the session that can be used by researchers later. Here are some common types of entries, to give you an idea about what you might like to include.

- speaker deviates from the task list
- s/he makes an error in reading, and has to re-read the material: note here whether the material was re-read at the place of the error, or at the end of the task
- speaker moves noticeably closer to or away from mic 2 while speaking
- · the central heating comes on, and makes loud tapping noises
- there are noises in the corridor or in the lounge next door (note during which task this happens)
- · topic of monologues this is particularly useful for later

- clipping because of sudden change in the speaker's dynamic range
- any observations about unusual or extreme voice qualities or speech behaviour (hoarseness, nasality, stammer, pauses, monotone speaking, difficulty with reading, breathiness, loud voice, etc)
- any observations about the speaker's state (excited, shy, nervous, has a cold, hungover)

Apart from this, please always note the following:

• the topics of each monologue