Protocol for a safe, phased upscaling of subject testing by CLCG staff and students: phase 1

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1 Introduction
In the past months, the CCT has granted permission for the use of office spaces and lecture halls in the Harmonie building, as well as for a number of teaching activities. In order to enable the reopening of the building, we have arranged for general matters, such as a registration procedure, walking directions throughout the building and the in-house emergency response team (BHV). The present protocol outlines participant-based research conducted at the Center for Language and Cognition Groningen (CLCG) carried out in labs inside the Harmonie building, taking the guidelines of the previously approved protocols into consideration.

A number of research groups within the CLCG that use various methodologies to collect their data. These methodologies can be divided into three categories, based on the distance that can be kept between the researcher and the participant at any given point (see Table 1). Category A refers to experiments that can be conducted with 1.5 m distance. Category B refers to experiments that don’t involve much physical contact but do require the researcher to be within 1.5 m of the participant during set-up. Category C refers to experiments that need prolonged physical contact with the participant during the set-up. Category C experiments will not be resumed prior to January 2021 and therefore do not form part of this protocol.

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of experiment</th>
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<tbody>
<tr>
<td>Category A</td>
<td>Behavioral experiments (e.g., reaction time experiments)</td>
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<tr>
<td></td>
<td>Acoustic speech production experiments</td>
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<td></td>
<td>Other experiments that can be performed at 1.5 m</td>
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<tr>
<td>Category B</td>
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<td>Other experiments that require the researcher to come close to the participant</td>
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<td>Category C</td>
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<td>EEG experiments</td>
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<td></td>
<td>Other experiments that require prolonged physical contact</td>
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</table>

The experiments will take place in various different labs inside the Harmonie building. Only those labs that have sufficient ventilation and are spacious enough for max. three people to move around, will be used for the experiments described in the protocol.

The upscaling of the CLCG lab activities will happen in stages; the present protocol, tailored specifically towards research with human participants, applies to phase 1. The phase 1 stage is characterized by limited access to the Harmonie building to perform essential research activities only. Commencing research with human participants is based on the assumptions that 1) the protocol contains adequate guidelines and rules of conduct, 2) there is mutual trust among those involved, and 3) we have good control and enforcement of the guidelines and agreements made in this protocol.

The following principles also apply:
1. **Voluntariness**: researchers and support staff should not feel obligated to commence their work in the labs.
2. **Work from home as much as possible**: access to the lab is granted to researchers and students only for the purpose of running the experiments, and performing tasks that cannot be done from home.
3. **Priority** to lab facilities is given to PhD candidates and postdocs at stages in their project where they need to collect the data in order to successfully complete their project.
4. **Planning**: research will take place according to a planning or schedule.

5. **With approval only**: staff may only perform lab activities after approval by the managers of the labs concerned, namely:
   - Speech Lab Groningen: Teja Rebernik, t.rebernik@rug.nl
   - ERP lab: Srdjan Popov, s.popov@rug.nl
   - Eye lab: Amélie la Roi, a.la.roi@rug.nl
   - Psycholinguistics lab: Wander Lowie, w.m.lowie@rug.nl
   - In all other cases, approval has to be obtained by the CLCG director, g.j.m.van.noord@rug.nl.

6. **Safety measures**: RIVM guidelines will be strictly adhered to in every lab. These include (but are not limited to) keeping appropriate distance between those present, and by washing or disinfecting hands frequently. The lab managers and staff will bear responsibility for compliance with the guidelines and agreements by all involved.

7. The current protocol inherits all requirements that apply to visiting the Harmonie building. Please consult the information on Infonet for the most important and updated regulations for the University buildings: https://myuniversity.rug.nl/infonet/medewerkers/actueel/announcements/step-by-step

8. At-risk participants (as defined by the RIVM, see https://www.rivm.nl/en/novel-coronavirus-covid-19/risk-groups) CANNOT yet be tested.

The remainder of this document describes those measures that apply to lab-based research with human participants at the CLCG. We focus on research in categories A and B (as mentioned above, category C is suspended for now).

2 **Research: general requirements**

Participant-based research follows premises that are similar to “contactberoepen” as defined by the RIVM (e.g., researchers often come close to participants, research equipment often has to be used on multiple participants). The aim is to minimize the time a participant and researcher spend together, based on evidence that aerosolized SARS-CoV-2 particles can stay active indoors for quite long (up to 3 hours, see this source). To ensure this, the following procedure will be put in place.

2.1 **Safety**

- Disinfectant is available at both the entry of the building and next to the entrance of the labs.
- Face masks brought from home are encouraged. If participants do not have one, disposable masks are available upon entering the lab. Hand sanitizer should be applied before putting on masks and participants should be discouraged from touching their face or masks afterwards.
- The experimenters wear gloves and face masks at all times unless it defeats the purpose of the experiment or when 1.5 m distance can be kept during the experiment. When child participants are involved, face masks are preferably not used.
- We do not offer participants coffee or tea to limit the use of the pantry spaces and coffee machines, but we do have a disposable cup of water ready for them in the room. We can offer child participants a juice carton with individual and pre-packed straw.
- Should a participant or experimenter feel unwell during the testing session, testing is stopped immediately.
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- For eye-tracking research (category B experiment), participants are asked to apply the calibration sticker to their own foreheads with the use of a mirror. Parents may assist their children.

2.2 Steps to be completed prior to participant arrival

- Ask participants whether they have any symptoms (through a questionnaire/phone call).
- Ask participants to bring a face mask to reduce the exhaled aerosols in the environment. If participants do not own a face mask, we can provide a (disposable) face mask.
- Ask participants to provide signed informed consent beforehand (over the internet or via the post) to minimize time spent on this in the lab. The consent form will state that the participant’s name and contact details will be shared with building management personnel (gebouwbeheer). It also notifies participants that the University of Groningen has taken all necessary precautionary measures, but that the risk of COVID-19 infection cannot be fully precluded.
- Provide clear instructions (in a document or alternatively a video describing the complete procedure) on where participants should go (parking, walking route, pictures of where to wait at the building). The cellphone number of the experimenter will be communicated as well.

2.3 Lab preparation

- Air out the room (open the door (and windows)). Only the experimenter touches the door handles of the lab (they open the door for the participant).
- Disinfect the necessary surfaces before the arrival of a participant.
- All used material, surfaces, and door handles are thoroughly cleaned after each participant and prepared for the next participant. A bin (with lid) is present in the hallway just outside of every lab space and will be emptied every day. Before meeting the participant, the researcher disinfects his or her hands. Inside the lab, the experimenter wears a mask.

2.4 Arrival of the participant

- Participants are asked to enter the Harmonie building via the automatically revolving doors at the front of the building to minimize the touching of door handles.
- Participants are asked to disinfect their hands upon entry of the building.
- The researcher waits for the participant in the entry hall and signs them in to keep records of who was in the building at what time and day. The list is given to the porters to avoid personal data being moved around the building. These records are stored in a designated place that can be locked, and do not leave the Harmonie building.
- Waiting time should be minimal; participants will be asked to arrive at the location no longer than 5 minutes before their appointment.
- We prefer to use the stairs to get to the actual testing location. If participants cannot use the stairs, they may use the elevator. In that case, the researcher takes the stairs and meets the participant at the designated floor.
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- Participant and experimenter disinfect hands when entering the lab at all times. Disinfection gel will be on a table near the entrance of the lab.
- In smaller spaces: to minimize contact between the experiment and the participant, a moveable Plexiglas screen can be installed to separate the participants’ area from the experimenters’ area.

2.5 Scheduling and planning

- It is possible for different CLCG labs to test simultaneously, provided that:
  - they use different lab spaces,
  - no more people than required for the experiment are present,
  - no more than two participants are in the welcoming area at the same time.
- In case of child subjects, at most one accompanying parent or caregiver can additionally join, who then also signs in the child. Siblings are not allowed to come along.
- A confederate participant (for interaction experiments, at least 1.5 m from the other participant) can also be present in the testing room provided that the conditions stipulated earlier are met.
- Participants cannot be tested immediately following each other. We will schedule enough waiting time between participants to ensure that the facilities can be properly cleaned, the lab space can be ventilated, and the risk of overlap between participants is minimized.
- To this end, Google Calendar is used by all research groups using the same facilities to schedule the lab sessions. Only one research group should use the lab facilities per half day.
- Per lab, one lab coordinator (see list above) is responsible for keeping the schedule up to date and ensuring that the conditions outlined above are met.
- Any physical presence in the lab facilities is reduced to a bare minimum. This also means that things that can be done at home should be done at home (e.g., informed consent, experiments that could be carried out online etc.).

2.6 Materials (generally) used by the participant

Behavioral experiments (category A):
- Keyboard
- Mouse
- Pen
- Headphones
- Table and chair

Speech production experiments (category A):
- Keyboard
- Mouse
- Microphone and soundcard
- Headphones
- Laptop
- Table and chair

Eye-tracking experiments (category B):
- Eye-tracker
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- Laptop
- Keyboard
- Mouse
- Headphones
- Pen
- Table and chair

Ultrasound experiments (category B):
- Ultrasound probe
- Ultrasound helmet
- Microphone and soundcard
- Headphones
- Laptop
- Table and chair

All above mentioned materials (if applicable for the specific experiment) are disinfected after each participant (with 70% alcohol). Plastic covers (or foil) for the keyboard and mouse are recommended, as is using removable foam covers for microphones.

2.7 After the experiment

- Air out the room (open the door (and windows)). The cabin inside the Psycholinguistics Lab should be ventilated for at least one hour after each participant (in accordance with the approved BSS COVID-19 lab protocol).
- All participant reimbursement is handled online through the participant portal. For child subjects a small wrapped gift may be presented.
- There is a container to dispose of any protective equipment (e.g., mask) in the hallway of each lab.
- The experimenter walks each participant out, keeping an appropriate distance at all times and following the walking directions in the building.
- Participants are then asked to disinfect their hands once more and are signed out by the experimenter.
- Participants are presented with an information sheet that asks them to contact the lab manager in case they develop (mild) COVID-19 related complaints following their visit to our lab so that we may take proper actions.
- At the end of the testing day, experimenters also sign out and that day’s records are stored at a designated place.