**–Gamen tegen je brein-**
**InScience 2018**

**Repeat these steps for each participant:**

1. **Sign consent form (5mins)**
   - Re-wet all sponges in the Porti cap + wrist bands
   - Make sure that participant is at least 18 years old
   - Participant + experimenter sign consent form before experiment starts
   - Note participant name on participant list
   - Put consent form in letterbox

2. **Set up EEG (10mins)**
   - Go to Documents/slimegame
   - Start startJavaBuffer.bat. Note the output folder on participant list.
   - Start start_tmsi.bat. Check that data is running and Porti amplifier says "fiber".
   - Start startSigViewer.bat. Choose capfile: slimegame/resources/cap_porti_16ch_slimegame.txt
   - Put cap on participant. Check visually that it is positioned correctly on the head.
   - Put reference wristband on left wrist.
   - Raw EEG should at least be within [-20,20]mV range. Most important channels are C3, Cz and C4.
   - Check for eyeblinks.
   - When happy, put EMG wristbands on right arm: channel 15 on the wrist and channel 16 on the muscle of the lower arm (top, near the elbow). Check whether EMG works by asking subject to perform some wrist flexions.
   - Close figure window so sigViewer shuts down.

3. **Play game (2 blocks of 12 minutes each + 5mins of explanation at end)**
   - Run slimegame_bci from Matlab 2015b. This will automatically start the erpGameViewer in the background.
   - Use the correct participant number (i.e. laptopX_ppX) and make sure to note it on the participant sheet.
   - Instruct the participant: "You will see a scene with a scientist and a robot in it. You are the scientist who will take it up against the robot in a slime bucket challenge. During multiple rounds, you will see a bucket being filled with green slime. Both you and the robot want to collect as much slime as possible and throw it over your opponent. The more slime you throw over your opponent, the more points you can earn. The robot is sneaky and will try to predict your acts by listening to your brain activity. Every time the robot thinks you are intending to act, he will flip the bucket and beat you to it. We want to know how accurate these predictions are and need your help. Every time the robot acts, you will be asked whether you *wanted* to act at that moment in time."
   - Block 1 = 3x practice trial, Block 2 and 3 are the real experiment.
   - There is a short questionnaire after each block.
   - When the game is done, show the erpGameViewer figure to the participant and explain what you see: spectogram with alpha/beta ERD, erp with RP and EMG with muscle. Time 0=movement onset of the participant, the dotted black line is the average reported onset of an intention to move (from previous research). Do you see any characteristic brain activity before the dotted black line?
   - CRL+C in the erpGameViewer Matlab Command window to shut it down. CRL+C in the buffer and tmsi terminal windows to close them properly.
   - Close everything and repeat from the top

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