**VOT3 Script**

scenario = "One-Back-Arm"; # This name is recorded in the log file

scenario\_type = trials;

response\_matching = simple\_matching;

response\_logging = log\_all;

active\_buttons = 3;

#button\_codes = 1, 2, 3; # These values will be used to code participant responses

#target\_button\_codes = 0, 0, 2;

button\_codes = 0, 0, 2;

target\_button\_codes = 0, 0, 1;

write\_codes = true; # Enables triggering via the parallel port

pulse\_width = 10; # Trigger pulses are set to 10 msec in duration

response\_port\_output = true; # Enables trigger codes for response buttons

default\_font\_size = 56;

default\_font = "Arial";

default\_background\_color = 0,0,0; #Black#

default\_text\_color = 255,255,255; #White#

begin;

# Instructions for block

trial{

trial\_duration=forever;

trial\_type=specific\_response;

terminator\_button = 3;

picture{

text{font\_size = 25; caption = "Dieses ist ein Block in dem Du auf dem Arm gestreichelt wirst.

Wenn Du bereit bist zu beginnen, druecke bitte die 'Enter' Taste.";

};

x = 0; y = 0;

};

time = 0;

}instructions\_notouch;

#500ms fixation at beginning of trial

trial{

trial\_duration=500;

trial\_type=fixed;

picture{

text{font\_size = 56; caption = "+";

};

x = 0; y = 0;

};

time = 0;

}fix;

#List of dummy sounds (2 used at the beginning of each block)

array{

sound { wavefile { filename = "Neutral\_TLSM.wav"; }; default\_port\_code =10; description = "dummy"; } stim;

sound { wavefile { filename = "Neutral\_6.wav"; }; };

sound { wavefile { filename = "Neutral\_61.wav"; }; };

}soundlistD;

#First half of stimuli (no sound appears with its rotated counterpart in each half)

array{

TEMPLATE "declaresounds.tem"{

file;

"Neutral\_TKH.wav";

"Neutral\_LS.wav";

"Neutral\_Edward.wav";

"Neutral\_NXR.wav";

"Neutral\_46.wav";

"Neutral\_SG.wav";

"Neutral\_Joyce.wav";

"Neutral\_58.wav";

"Neutral\_ML.wav";

"Neutral\_Elizabeth.wav";

"Neutral\_CW.wav";

"Neutral\_SH.wav";

"Neutral\_Daryl.wav";

"Neutral\_Janvin.wav";

"Surprise\_Ernest\_rot.wav";

"Surprise\_TKH\_rot.wav";

"Surprise\_55\_rot.wav";

"Surprise\_Madeline\_rot.wav";

"Surprise\_CKH\_rot.wav";

"Surprise\_60\_rot.wav";

"Surprise\_GZ\_rot.wav";

"Surprise\_GC\_rot.wav";

"Surprise\_Edward\_rot.wav";

"Surprise\_MY\_rot.wav";

"Surprise\_Elizabeth\_rot.wav";

"Surprise\_NXR\_rot.wav";

"Surprise\_MSC\_rot.wav";

"Surprise\_45.wav";

"Surprise\_59.wav";

"Surprise\_6.wav";

"Surprise\_CC.wav";

"Surprise\_CW.wav";

"Surprise\_Daryl.wav";

"Surprise\_Janvin.wav";

"Surprise\_Joyce.wav";

"Surprise\_LS.wav";

"Surprise\_ML.wav";

"Surprise\_Rena.wav";

"Surprise\_SG.wav";

"Surprise\_SH.wav";

"Surprise\_TLSM.wav";

"Neutral\_42\_rot.wav";

"Neutral\_55\_rot.wav";

"Neutral\_59\_rot.wav";

"Neutral\_CC\_rot.wav";

"Neutral\_CKH\_rot.wav";

"Neutral\_DK\_rot.wav";

"Neutral\_Ernest\_rot.wav";

"Neutral\_GC\_rot.wav";

"Neutral\_GZ\_rot.wav";

"Neutral\_Madeline\_rot.wav";

"Neutral\_MSC\_rot.wav";

"Neutral\_MY\_rot.wav";

"Neutral\_Rena\_rot.wav";};

}soundlist1;

#Second half of stimuli

array{

TEMPLATE "declaresounds.tem"{

file;

"Neutral\_ML\_rot.wav";

"Neutral\_Elizabeth\_rot.wav";

"Neutral\_SH\_rot.wav";

"Neutral\_NXR\_rot.wav";

"Neutral\_CW\_rot.wav";

"Neutral\_TKH\_rot.wav";

"Neutral\_Janvin\_rot.wav";

"Neutral\_58\_rot.wav";

"Neutral\_Edward\_rot.wav";

"Neutral\_Daryl\_rot.wav";

"Neutral\_LS\_rot.wav";

"Neutral\_46\_rot.wav";

"Neutral\_SG\_rot.wav";

"Neutral\_Joyce\_rot.wav";

"Neutral\_42.wav";

"Neutral\_55.wav";

"Neutral\_59.wav";

"Neutral\_CC.wav";

"Neutral\_CKH.wav";

"Neutral\_DK.wav";

"Neutral\_Ernest.wav";

"Neutral\_GC.wav";

"Neutral\_GZ.wav";

"Neutral\_Madeline.wav";

"Neutral\_MSC.wav";

"Neutral\_MY.wav";

"Neutral\_Rena.wav";

"Surprise\_45\_rot.wav";

"Surprise\_59\_rot.wav";

"Surprise\_6\_rot.wav";

"Surprise\_CC\_rot.wav";

"Surprise\_CW\_rot.wav";

"Surprise\_Daryl\_rot.wav";

"Surprise\_Janvin\_rot.wav";

"Surprise\_Joyce\_rot.wav";

"Surprise\_LS\_rot.wav";

"Surprise\_ML\_rot.wav";

"Surprise\_Rena\_rot.wav";

"Surprise\_SG\_rot.wav";

"Surprise\_SH\_rot.wav";

"Surprise\_TLSM\_rot.wav";

"Surprise\_CKH.wav";

"Surprise\_Ernest.wav";

"Surprise\_GZ.wav";

"Surprise\_60.wav";

"Surprise\_Elizabeth.wav";

"Surprise\_Madeline.wav";

"Surprise\_GC.wav";

"Surprise\_MY.wav";

"Surprise\_Edward.wav";

"Surprise\_55.wav";

"Surprise\_NXR.wav";

"Surprise\_MSC.wav";

"Surprise\_TKH.wav"; };

}soundlist2;

#Each trial has fixation cross and sound, and lasts as long as each sound

picture{

text{font\_size = 56; caption = "+";

};

x = 0; y = 0;

}trialfix;

trial{

trial\_duration=stimuli\_length;

trial\_type=fixed;

picture trialfix;

target\_button = 3;

stimulus\_event{

sound stim;

code = "repeat";

port\_code = 11;

}eventr;

}trialr;

trial{

trial\_duration=stimuli\_length;

trial\_type=fixed;

picture trialfix;

target\_button = 3;

stimulus\_event{

sound stim;

code = "dummy";

port\_code = 10;

}event1;

}trial1;

#inter-trial interval

trial {

trial\_type = fixed;

trial\_duration = 1; #we will change this using PCL

picture {} default;

target\_button = 3;

} ITI;

#------------------------------------------------------------------------

begin\_pcl;

output\_port my\_port = output\_port\_manager.get\_port(1);

#arrays to assign port codes to stimuli

array<int> soundCode1[54][2] = {

{1,100},

{2,100},

{3,100},

{4,100},

{5,100},

{6,100},

{7,100},

{8,100},

{9,100},

{10,100},

{11,100},

{12,100},

{13,100},

{14,100},

{15,201},

{16,201},

{17,201},

{18,201},

{19,201},

{20,201},

{21,201},

{22,201},

{23,201},

{24,201},

{25,201},

{26,201},

{27,201},

{28,101},

{29,101},

{30,101},

{31,101},

{32,101},

{33,101},

{34,101},

{35,101},

{36,101},

{37,101},

{38,101},

{39,101},

{40,101},

{41,101},

{42,200},

{43,200},

{44,200},

{45,200},

{46,200},

{47,200},

{48,200},

{49,200},

{50,200},

{51,200},

{52,200},

{53,200},

{54,200}

};

array<int> soundCode2[54][2] = {

{1,200},

{2,200},

{3,200},

{4,200},

{5,200},

{6,200},

{7,200},

{8,200},

{9,200},

{10,200},

{11,200},

{12,200},

{13,200},

{14,200},

{15,100},

{16,100},

{17,100},

{18,100},

{19,100},

{20,100},

{21,100},

{22,100},

{23,100},

{24,100},

{25,100},

{26,100},

{27,100},

{28,201},

{29,201},

{30,201},

{31,201},

{32,201},

{33,201},

{34,201},

{35,201},

{36,201},

{37,201},

{38,201},

{39,201},

{40,201},

{41,201},

{42,101},

{43,101},

{44,101},

{45,101},

{46,101},

{47,101},

{48,101},

{49,101},

{50,101},

{51,101},

{52,101},

{53,101},

{54,101}

};

#Make an array of random ints from 1 - 108 for repeated trials.

#array<int> oneback\_trials [108];

#oneback\_trials.fill(1,108,1,1);

#oneback\_trials.shuffle();

#oneback\_trials.resize(22);

#Subroutine used by the sort subroutine to insert a value in an array

sub array<int, 1> insert ( int value, array<int, 1>& arr, int place )

begin

array<int>temp[0];

loop int i = 1 until i > arr.count()

begin

if i == place then

temp.add( value )

end;

temp.add( arr[i] );

i = i + 1;

end;

return temp

end;

#This subroutine sorts the array.

sub array<int, 1> sort ( array<int, 1>& my\_array )

begin

array<int>temp[0];

if my\_array.count() > 0 then

temp.add(my\_array[1]);

loop int i = 2 until i > my\_array.count()

begin

bool inserted = false;

loop int j = 1 until j > temp.count() || inserted

begin

if my\_array[i] < temp[j] then

temp.assign( insert( my\_array[i], temp, j ) );

inserted = true;

end;

j = j + 1;

end;

if !inserted then

temp.add( my\_array[i] ) end;

i = i + 1;

end;

end;

return temp

end;

#term.print("repeated trials:\n");

#Call the subroutine to sort the array and assigns back to original array.

#oneback\_trials.assign( sort(oneback\_trials) );

#print the values to the terminal.

#loop int i = 1 until i > oneback\_trials.count()

#begin

# term.print( oneback\_trials[i] );

# term.print( "\t" );

# i = i + 1;

#end;

instructions\_notouch.present();

soundlistD.shuffle();

loop int d = 1

until d > 2

begin

fix.present(); #500ms fixation

soundlistD[d].get\_wavefile().load();

event1.set\_stimulus( soundlistD[d] );

ITI.set\_duration( random(1000,3000) );

trial1.present();

ITI.present(); #inter-trial interval (2-4s)

soundlistD[d].get\_wavefile().unload();

d = d + 1;

end;

#soundCode1.shuffle();

#soundCode2.shuffle();

#begin

int x = random(1,2);

loop int z = 1

until z > 3

begin

array<int> oneback\_trials [108];

oneback\_trials.fill(1,108,1,1);

oneback\_trials.shuffle();

oneback\_trials.resize(22);

oneback\_trials.assign( sort(oneback\_trials) );

soundCode1.shuffle();

soundCode2.shuffle();

begin

if x == 1 then

#present first half of stimuli

term.print( "\nfirst half" );

int r = 1;

loop int i = 1

until i > soundlist1.count()

begin

fix.present(); #500ms fixation

soundlist1[int(soundCode1[i][1])].get\_wavefile().load();

event1.set\_stimulus(soundlist1[int(soundCode1[i][1])]);

event1.set\_port\_code(int(soundCode1[i][2]));

event1.set\_event\_code(soundlist1[int(soundCode1[i][1])].description());

ITI.set\_duration( random(1000,3000) );

array<int> bcodes[3] = {0, 0, 2};

response\_manager.set\_target\_button\_codes( bcodes );

event1.set\_target\_button(0);

event1.set\_response\_active( true );

trial1.present(); #trial

response\_manager.set\_target\_button\_codes( bcodes );

ITI.present(); #inter-trial interval (2-4s)

if r <= oneback\_trials.count() then

if i == oneback\_trials[r] then

fix.present();

ITI.set\_duration( random(1000,3000) );

eventr.set\_stimulus(soundlist1[int(soundCode1[i][1])]);

eventr.set\_port\_code (11);

array<int> rcodes[3] = {0, 0, 1};

response\_manager.set\_target\_button\_codes( rcodes );

trialr.present(); #trial

response\_manager.set\_target\_button\_codes( rcodes );

ITI.present(); #inter-trial interval (2-4s)

r = r + 1;

end;

end;

soundlist1[int(soundCode1[i][1])].get\_wavefile().unload();

i = i + 1;

end;

#present second half of stimuli

term.print( "\nsecond half" );

loop int j = 1

until j > soundlist2.count()

begin

fix.present(); #500ms fixation

soundlist2[int(soundCode2[j][1])].get\_wavefile().load();

event1.set\_stimulus(soundlist2[int(soundCode2[j][1])]);

event1.set\_port\_code(int(soundCode2[j][2]));

event1.set\_event\_code(soundlist2[int(soundCode2[j][1])].description());

ITI.set\_duration( random(1000,3000) );

array<int> bcodes[3] = {0, 0, 2};

response\_manager.set\_target\_button\_codes( bcodes );

event1.set\_target\_button(0);

event1.set\_response\_active( true );

trial1.present(); #trial

response\_manager.set\_target\_button\_codes( bcodes );

ITI.present(); #inter-trial interval (2-4s)

if r <= oneback\_trials.count() then

if (j + soundlist1.count()) == oneback\_trials[r] then

fix.present();

ITI.set\_duration( random(1000,3000) );

eventr.set\_stimulus(soundlist2[int(soundCode2[j][1])]);

eventr.set\_port\_code (11);

array<int> rcodes[3] = {0, 0, 1};

response\_manager.set\_target\_button\_codes( rcodes );

trialr.present(); #trial

response\_manager.set\_target\_button\_codes( rcodes );

ITI.present();

r = r + 1;

end;

end;

soundlist2[int(soundCode2[j][1])].get\_wavefile().unload();

j = j + 1;

end;

else

#present second half of stimuli

term.print( "\nsecond half" );

int r = 1;

loop int i = 1

until i > soundlist2.count()

begin

fix.present(); #500ms fixation

soundlist2[int(soundCode2[i][1])].get\_wavefile().load();

event1.set\_stimulus(soundlist2[int(soundCode2[i][1])]);

event1.set\_port\_code(int(soundCode2[i][2]));

event1.set\_event\_code(soundlist2[int(soundCode2[i][1])].description());

ITI.set\_duration( random(1000,3000) );

array<int> bcodes[3] = {0, 0, 2};

response\_manager.set\_target\_button\_codes( bcodes );

event1.set\_target\_button(0);

event1.set\_response\_active( true );

trial1.present(); #trial

response\_manager.set\_target\_button\_codes( bcodes );

ITI.present(); #inter-trial interval (2-4s)

if r <= oneback\_trials.count() then

if i == oneback\_trials[r] then

fix.present();

ITI.set\_duration( random(1000,3000) );

eventr.set\_stimulus(soundlist2[int(soundCode2[i][1])]);

eventr.set\_port\_code (11);

array<int> rcodes[3] = {0, 0, 1};

response\_manager.set\_target\_button\_codes( rcodes );

trialr.present(); #trial

response\_manager.set\_target\_button\_codes( rcodes );

ITI.present(); #inter-trial interval (2-4s)

r = r + 1;

end;

end;

soundlist2[int(soundCode2[i][1])].get\_wavefile().unload();

i = i + 1;

end;

#present first half of stimuli

term.print("\nfirst half");

loop int j = 1

until j > soundlist1.count()

begin

fix.present(); #500ms fixation

soundlist1[int(soundCode1[j][1])].get\_wavefile().load();

event1.set\_stimulus(soundlist1[int(soundCode1[j][1])]);

event1.set\_port\_code(int(soundCode1[j][2]));

event1.set\_event\_code(soundlist1[int(soundCode1[j][1])].description());

ITI.set\_duration( random(1000,3000) );

array<int> bcodes[3] = {0, 0, 2};

response\_manager.set\_target\_button\_codes( bcodes );

event1.set\_target\_button(0);

event1.set\_response\_active( true );

trial1.present(); #trial

response\_manager.set\_target\_button\_codes( bcodes );

ITI.present(); #inter-trial interval (2-4s)

if r <= oneback\_trials.count() then

if (j + soundlist2.count()) == oneback\_trials[r] then

fix.present();

ITI.set\_duration( random(1000,3000) );

eventr.set\_stimulus(soundlist1[int(soundCode1[j][1])]);

eventr.set\_port\_code (11);

array<int> rcodes[3] = {0, 0, 1};

response\_manager.set\_target\_button\_codes( rcodes );

trialr.present(); #trial

response\_manager.set\_target\_button\_codes( rcodes );

ITI.present();

r = r + 1;

end;

end;

soundlist1[int(soundCode1[j][1])].get\_wavefile().unload();

j = j + 1;

end;

end;

end;

z = z + 1;

end;