

## Data Request form YOUth (version 5.0, December 11, 2019)

AMENDMENT TO DATA REQUEST FORM: 'Investigating the relation between gaze following and attentional disengagement – VERSION 2' SENT ON 8 APRIL 2019

### Introduction

The information you provide here will be used by the YOUth Executive Board, the Data Manager, and the Data Management Committee to evaluate your data request. Details regarding this evaluation procedure can be found in the Data Access Protocol.

All data requests will be published on the YOUth researcher's website in order to provide a searchable overview of past, current, and pending data requests. By default, the publication of submitted and pending data requests includes the names and institutions of the contact person and participating researchers as well as a broad description of the research context.

After approval of a data request, the complete request (including hypotheses and proposed analyses) will be published. If an applicant has reasons to object to the publication of their complete data request, they should notify the Project Manager, who will evaluate the objection with the other members of the Executive Board and the Data Management Committee. If the objection is rejected, the researcher may decide to withdraw their data request.

### Section 1: Researchers

In this section, please provide information about the researchers involved with this data request.

- Name, affiliation and contact information of the contact person
- Name and details of participating researchers (e.g. intended co-authors)
- Name and details of the contact person within YOUth (if any)

<b>Contact person for the proposed study:</b>	
Name:	Yentl de Kloe
Institution:	Utrecht University
Department:	Faculteit Sociale Wetenschappen
Address:	Heidelberglaan 1 3583 CS Utrecht
Email:	y.j.r.dekloe@uu.nl
Phone:	-

<b>Participating researcher:</b>	
Name:	Roy Hessels
Institution:	Utrecht University
Department:	Faculteit Sociale Wetenschappen
Address:	Heidelberglaan 1 3583 CS Utrecht
Email:	r.s.hessels@uu.nl
Phone:	-

<b>Contact person for the proposed study:</b>	
Name:	Caroline Junge
Institution:	Utrecht University
Department:	Faculteit Sociale Wetenschappen

Address:	Heidelberglaan 1 3583 CS Utrecht
Email:	C.M.M.Junge@uu.nl
Phone:	-

<b>Participating researcher:</b>	
Name:	Ignace Hooge
Institution:	Utrecht University
Department:	Faculteit Sociale Wetenschappen
Address:	Heidelberglaan 1 3583 CS Utrecht
Email:	i.hooge@uu.nl
Phone:	-

<b>Contact person within YOUth (if any)</b>	
Name:	Chantal Kemner
Institution:	Utrecht University
Department:	Faculteit Sociale Wetenschappen
Address:	Heidelberglaan 1 3583 CS Utrecht
Email:	c.kemner@uu.nl
Phone:	-

## **Section 2: Research context**

In this section, please briefly describe the context for your research plans. This section should logically introduce the next section (hypotheses). As mentioned, please note that this section will be made publicly available on our researcher's website after submission of your request.

Please provide:

- The title of your research plan
- A very brief background for the topic of your research plan
- The rationale for and relevance of your specific research plan
- The specific research question(s) or aim(s) of your research (Please also provide a brief specification)
- A short description of the data you request

References can be added at the end of this section (optional).

<b>Title of the study</b>
<b>Do eye-tracking measures relate to social competence and behavioral control in school-age and pre-adolescent children?</b>

<b>Background of the topic of your research plan, rationale, relevance (max. 500 words)</b>
In the YOUth study, potential early predictors of a child's social competence and behavioural control are investigated. The attentional shift that occurs due to a gaze cue is assumed to be a predictor for a child's social skill. This is operationalized in a gaze-cueing experiment as the difference in saccadic reaction time (SRT) between a congruent and incongruent gaze cue. Attentional (dis)engagement is assumed to be a predictor for the development of behavioural control. This is operationalized in a gap-overlap experiment as the difference in SRT between a gap and overlap condition. As these two operationalizations are seemingly similar, we investigate whether these measures are related.

<b>The specific research question(s) or aim(s) of your research</b>
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We will start by studying (I) whether the outcomes of the gaze cueing experiment are a predictor for social competence as measured in a questionnaire and (II) whether the outcomes of the gap overlap experiment are a predictor for behavioural control, also measured with a questionnaire. Then, since the operationalizations seem very similar, we will investigate whether (III) the outcomes on the gap overlap experiment predict social competence as measured with a questionnaire and (IV) whether the outcomes on the gaze cueing experiment predict behavioural control as measured with a questionnaire.

**Summary of the data requested for your project:** Please indicate which data you request to answer your research question.

All R9 data for the gap-overlap and gaze cueing ET experiment, and all data for the IRI, EATQ-r (self and parent report) and BIS questionnaire for the R9 wave.

**References (optional)**

### **Section 3: Hypotheses**

In this section, please provide your research hypotheses. For each hypothesis:

- Be as specific as possible
- Provide the anticipated outcomes for accepting and/or rejecting the hypothesis

#### **Hypotheses**

We expect to see a relation between the gaze cueing effect and scores on the IRI (assessing social competence) and between the gap effect and scores on the EATQ-r and the BIS (assessing behavioral control).

### **Section 4: Methods**

In this section, you should make clear how the hypotheses are tested. Be as specific as possible.

Please describe:

- The study design and study population (Which data do you require from which subjects?)
- The general processing steps (to prepare the data for analysis)
- The analysis steps (How are the data analysed to address the hypotheses? If possible, link each description to a specific hypothesis)
- Any additional aspects that need to be described to clarify the methodological approach (optional)

**Study design, study population and sample size** (e.g. cross-sectional or longitudinal; entire population or a subset; substantiate your choices)

With the Gap-Overlap task the so-called gap effect will be measured, which is the difference between the saccadic reaction time (SRT) in the gap and the overlap condition. SRT's are usually longer in the overlap condition, since active disengagement from the central stimulus is required within this condition in comparison to the gap condition. With the gaze-cueing experiment, the difference in SRTs between the congruent and incongruent conditions will be measured. Saccadic reaction times appear to be longer in the incongruent condition in comparison to the congruent condition, since the eye gaze in the congruent condition correctly predicts the location of the peripheral stimulus. Within CID, the definition of social competence is the ability to engage in meaningful interactions with others. This ability is measured within the pilot for the YOUth Child & Adolescent cohort. with the Interpersonal Reactivity Index. The definition of behavioral control is the ability to control one's emotions, behavior, and impulses and to adapt to rules. Within in

9-15 years old, this is measured with the subscales activation control, attention & inhibitory control from the Early Adolescent Temperament Questionnaire (EATQ) and the Behavioral Inhibition Scale. We will use (simple) linear regression to study whether the eye tracking experiments are indeed predictors for BC and SC.

We studied the hypotheses above with the pilot for the YOUth Child & Adolescent cohort and concluded that the sample size might be too small. Therefore, we are now requesting all the data of the R9 wave for the gap-overlap and gaze cueing ET experiment, and all data for the IRI, EATQ-r (self and parent report) and BIS questionnaire for the R9 wave.

#### General processing steps to prepare the data for analysis

From the ET experiments we will calculate the saccadic reaction times for all trials. We will calculate the gap-effect in the gap-overlap experiment and the congruency effect in the gaze cueing experiment. We will correlate these eye tracking measures with the scores on the questionnaires assessing social competence and behavioral control.

#### Specific processing and analysis steps to address the hypotheses

#### Additional methodological aspects (optional)

### Section 5: Data request

In this section, please specify as detailed as possible which data (and from which subjects) you request.

#### Data requested

All the data of the R9 wave for the gap-overlap and gaze cueing ET experiment, and all data for the IRI, EATQ-r (self and parent report) and BIS questionnaire for the R9 wave.

#### Data request for the purpose of:

- Analyses in order to publish  
 Analyses for data assessment only (results will not be published)

Publication type (in case of analyses in order to publish):

- Article or report  
 PhDthesis

#### Would you like to be notified when a new data lock is available?

- Yes  
 No

Upon approval of a data request, the complete request will be made publicly available on our researcher's website by default.

**Do you agree with publishing the complete request on our researcher's website after it is approved?**

Yes

No. Please provide a rationale