

What's in a child's face? : effects of facial resemblance, love withdrawal, empathy and context on behavioral and neural responses

Heckendorf, E.

#### Citation

Heckendorf, E. (2018, April 17). What's in a child's face? : effects of facial resemblance, love withdrawal, empathy and context on behavioral and neural responses. Retrieved from https://hdl.handle.net/1887/61482

Version: Not Applicable (or Unknown)

License: License agreement concerning inclusion of doctoral thesis in the

Institutional Repository of the University of Leiden

Downloaded from: <a href="https://hdl.handle.net/1887/61482">https://hdl.handle.net/1887/61482</a>

**Note:** To cite this publication please use the final published version (if applicable).

## Cover Page



# Universiteit Leiden



The handle <a href="http://hdl.handle.net/1887/61482">http://hdl.handle.net/1887/61482</a> holds various files of this Leiden University dissertation

Author: Heckendorf, Esther

Title: What's in a child's face? : effects of facial resemblance, love withdrawal, empathy

and context on behavioral and neural responses

**Date:** 2018-04-17

## What's in a child's face?

Effects of facial resemblance, love withdrawal, empathy and context on behavioral and neural responses.

Printed by Mostert & Van Onderen, 2018

Cover design by Evelien Jagtman

Copyright © 2018 Esther Heckendorf, Leiden University

ISBN: 978-94-90858-54-4

All rights reserved. No parts of this book may be reproduced, stored in a retrieval

system, transmitted, or translated in another language, in any form or by any means, electronically, mechanically, by photocopy, by recording, or otherwise,

without written permission from the author.

## What's in a child's face?

Effects of facial resemblance, love withdrawal, empathy and context on behavioral and neural responses.

#### **PROEFSCHRIFT**

ter verkrijging van de graad van Doctor aan de Universiteit Leiden op gezag van de Rector Magnificus prof. mr. C. J. J. M. Stolker, volgens besluit van het college voor promoties te verdedigen op dinsdag 17 april 2018 klokke 11:15 uur door

#### **Esther Heckendorf**

geboren te Andernach, Duitsland, in 1989

#### *Promotores:*

Prof. dr. M.J. Bakermans-Kranenburg Prof. dr. M. H. van IJzendoorn

#### Copromotor:

Dr. R. Huffmeijer

#### Promotiecommissie:

Prof. dr. E.A.M. Crone

Prof. dr. C. Kemner (Universiteit Utrecht)

Dr. M.J. Peltola (University of Tampere)

This research was supported by the Leiden Consortium on Individual Development, which is funded through the Gravitation program of the Dutch Ministry of Education, Culture, and Science and the Netherlands Organization for Scientific Research (NWO grant no. 024.001.003; MJB-K: VICI grant no. 453-09-003; MHvIJ: SPINOZA prize) and the European Research Council (MJB-K: ERC AdG 669249).

## **Contents**

Chapter 1	General introduction	7
Chapter 2	Neural processing of familiar and unfamiliar children's faces: Effects of experienced love withdrawal, but no effects of neutral and threatening primes	23
Chapter 3	Brain activity and love withdrawal moderate effects of suggested kinship on negative appraisal	57
Chapter 4	Neural responses to children's faces: Test-retest reliability of structural and functional MRI	85
Chapter 5	General discussion	113
Chapter 6	Supplementary material Supplementary material Chapter 2 Supplementary material Chapter 4	127 129 130
Chapter 7	Appendices Nederlandse samenvatting (Summary in Dutch) Acknowledgments Curriculum Vitae Publications	137 139 151 153 155