## Esther Bergsma

# THE BRAIN OF THE HIGHLY SENSITIVE PERSON

Why you shouldn't judge a fish by its ability to climb a tree

b:k light

Copyright © 2020 Esther Bergsma / Booklight Publishing

ISBN: 978 94 92595 300

Translation: Vertaalbureau Textwerk B.V.

Design: Andries Mol, Studio Mol

Illustrations: Henk-Jan Panneman Graphic Design

This book was originally published as *Het hoogsensitieve brein* (2019, ISBN 978 94 92595 12 6, Booklight uitgeverij, The Netherlands)

All rights reserved. No part of this book may be reproduced, transmitted or stored in any form or by any means without written permission of the publisher.

### b:k light



Thank you Esther for your commitment and for all that went into this book. I believe you will change a lot of lives! As a psychotherapist and founder of Sensitive Empowerment, I have specialized in the trait of high sensitivity for years and found that learning information about the trait and understanding our brain differences are life-changing. To have research like this is invaluable. I have been a supporter of Esther's research for a long time, even having her as a guest in my Sensitive Empowerment Community where we all participated in support of more research so I am very excited to see this book available and share it with my community! It's incredibly validating to see research and this book will likely become important for years to come. When we understand ourselves we can support ourselves. I love what she shares and totally agree: "Better insight into the functioning of the highly sensitive brain makes the talents of highly sensitive people more visible." That is how we begin to highlight the many gifts of this trait and help HSPs know their incredible value in the world.

Julie Bjelland, LMFT, founder of Sensitive Empowerment

Esther Bergsma's book, *The Brain Of The Highly Sensitive Person*, belongs on the bookshelf of every sensitive person. Esther lays out all the research on the brain and the highly sensitive person and then offers fresh insights on how the sensitive brain works, the pause-and-check system, and the optimal-option-ambition to illuminate how sensitive people function in the world. Esther offers her own experiences to illuminate the insights she offers so sensitive people who want to get a handle on working effectively with their sensitivity understand how to do so. A must read!

Maria Hill, founder of Sensitive Evolution, the Emerging Sensitive Program, and author of The Emerging Sensitive: A Guide For finding Your Place In The World.

The Brain of the Highly Sensitive Person by Esther Bergsma is a thoroughly investigated piece of work and a true page turner. The author succeeds in translating complicated scientific information – the functioning of the highly sensitive brain – into a language that is easy to read and to understand; at the end of each paragraph I felt eager to continue straight into the next one.

This book, based on personal experience as well as the study of much of the available scientific research, is a must read for those who want to know about the workings of the highly sensitive brain, resulting in different ways of thinking, feeling and re-acting.

Karina Zegers de Beijl, consultant on high sensitivity (ICHS, ICF), author

One in five people are highly sensitive. If you have met more than five people in your life, you should read this book. This book brings the hidden talents of your colleagues, friends and children to light. You'll learn why things which seem easy for you are difficult for them, and strategies to help them thrive. And if you are highly sensitive, you'll

recognize yourself in these pages, and learn about how you can be at your best. Esther provides the most accessible explanation I've read of the neuroscience and genetics of high sensitivity, skillfully brought to life with stories and experiences from HSPs.

**Rosie Raleigh,** founder and CEO of Vantage: Campaigning for equality for highly sensitive people

I have been waiting for this book, more specifically to have a thorough yet accessible assessment of how the highly sensitive brain functions. So many highly sensitive people have similar experiences, as Esther shares through her qualitative research and personal anecdotes throughout the book, but have no explanation of why that experience exists. Using data, illustrations, diagrams, and real-life examples, Esther clearly explains how the highly sensitive brain differs and the talents that result from those differences. This is not only validating but an important reminder of how essential HSP talents are for the survival of our species. *The Brain of the Highly Sensitive Person* is the right balance of relatable and educational, a must-read for every therapist and medical professional.

April Snow, psychotherapist, HSP specialist, author

Esther does a wonderful job synthesizing the latest research on how the highly sensitive person's brain works differently than non-HSPs. Her practical examples from decision making of an HSP at work to how HSP children respond to events illustrate these differences and nuances. If you enjoy in-depth research on the brain, want to understand how HSPs are wired differently and share this knowledge with others, then this book is for you.

**Nicole Burgess**, Licensed Marriage and Family Therapist and Leadership Coach to highly sensitive professional women.

This is the perfect book for everyone who wants to understand the functioning of the highly sensitive brain. You get the scientific information and illustrations told in a simple and understandable way. Esther Bergsma gives us an understanding of how highly sensitive people are different from non-highly sensitive people and how the highly sensitive brain works in a unique way.

Lian Kirksæther, Norway, ICF-DNCF coach, mentor, ICHS-International Consulants on High Sensitivity, author and trainer specialized on women and high sensitivity

This book is an excellent resource for anyone who wants to understand the brain of the highly sensitive person. Drs. Bergsma has done a beautiful job combining science, research, and anecdotal vignettes to provide a comprehensive and readable guide that anyone can understand. The format is clear, comprehensive and easy to understand. The world needs highly sensitive people (HSPs), and Drs. Bergsma clearly demonstrates the strengths and gifts of HSPs.

Patricia Young, LCSW, therapist, coach and creator of the podcast Unapologetically Sensitive, a podcast for the Highly Sensitive Person.

This book is a great resource for HSPs wanting to understand how their brain and body work as a HSP. The more we learn about what we need as a HSP, the better we can adjust our own environment to meet these needs, helping you to identify your own HSP strengths.

Fiona Stevenson, Holistic Counsellor - Psychotherapist

# **Table of contents**

Introduction		13
1.	High Sensitivity	19
	1.1 Elaine Aron	20
	1.2 New situations	22
	1.3 Definition	26
	1.4 High sensitivity gene	27
	1.5 Summary	30
2.	Highly Sensitive People	31
	2.1 Insight into the life of a highly sensitive person	32
	2.2 Talents	39
	2.3 Summary	41
3.	The Brain	43
	3.1 Anatomy	44
	3.2 Brain networks	53
	3.3 How emotions arise	57
	3.4 Summary	64
4.	Visualizing the Highly Sensitive Brain	65
	4.1 Perspective	67
	4.2 Perceiving, processing, reacting, and self-reflection	69

5.	Perception	73
	5.1 Physical stimuli	75
	5.2 Emotional stimuli	80
	5.3 Perceiving details	84
	5.4 Summary	89
6.	Pause-to-check	91
	6.1 Behavior inhibiting system	92
	6.2 The bigger picture	95
	6.3 Sensory integration	97
	6.4 Summary	101
7.	Optimal-option-ambition	103
	7.1 Analysis of risks and chances	105
	7.2 Taking the social context into account	110
	7.3 Choice of action	119
	7.4 Summary	123
8.	Reacting	125
	8.1 More Intense emotions	126
	8.2 More stress	130
	8.3 More impact	132
	8.4 Inimitable	139
	8.5 Self-reflection	140
	8.6 Summary	140
9.	Stress, the Brain, and Emotional Literacy	143
	9.1 Stress	144
	9.2 Predictive brain	148
	9.3 The highly sensitive brain predicts, perceives,	
	and revises	152
	9.4 Emotional literacy	156
	9.5 Summary	159

10. Social Rejection and Self-compassion	161
10.1 Social stress	162
10.2 Social rejection	168
10.3 Shame	175
10.4 Self-compassion	179
10.5 Summary	181
11. Recognizing and Acknowledging Talents	183
11.1 Forgotten talent	184
11.2 Individual balance	186
11.3 Societal balance	187
11.4 Talents	188
11.5 You should not ask a fish to climb a tree	197
Endnotes	201
Bibliography	213
Keyword list	225
Acknowledgements	231
About the author	233

# Introduction

Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid.

Albert Einstein

I failed. That was all I could think of. Fallen through, fallen short, failed in capital letters. Eight months after I first called in sick, and after an extensive reintegration process, I had called in completely sick again. Things didn't go well. Except worrying, that went very well. My head was constantly making lists. Everything I had not done well in my job as a manager. That time when I should have been decisive or should have exercised my authority. That time I should have enforced the rules strictly. Should have made my opinion quite clear. That time I didn't make a decision fast enough or let myself get stampeded. My brain was constantly producing images of my failure.

It was during that time that I first read a book by Elaine Aron. Although it was difficult to concentrate, this book held my attention. I read about myself in a language I wasn't used to, but recognized nonetheless. I kept rereading this sentence: 'We are designed to think carefully before acting, so we are rarely wrong [...]. We are designed to notice the nuances in a situation and weigh them carefully.'

This new language gave me a different perspective. The images of my failure that my brain so willingly produced were given a different color. Indeed, I had not made a quick decision that one time. But this had helped me identify a major problem, which I could then prevent. Indeed, I was not a manager who strictly enforced rules, but this enabled me to really connect with an employee who had felt trapped under the previous manager for years.

I got to know myself again. Slowly, my brain produced different images about my functioning. And a different self-image emerged. Instead of 'I failed', it became 'I am highly sensitive.' A quality with advantages and disadvantages. Eager to learn, as I am, I wanted to find out as much as possible about this trait. But I soon ran into a few problems.

The care providers I consulted to recover from my burnout were barely familiar with high sensitivity. Sometimes they misinterpreted the trait. For example, elements of the trait were misinterpreted as core ('high sensitivity is sensitivity to sounds'), they equated the trait with related aspects ('high sensitivity is spiritual ability') or with effects of the trait ('high sensitivity is overstimulation'). So I started looking for information at the fundamental level: scientific articles. And because so little was known, I launched a number of quantitative studies myself. Every piece of the puzzle gave a little more insight into the bigger picture. The picture is not yet complete. Much more research on high sensitivity is needed. But the picture is clearer than most people are aware of. Some misunderstandings are still rampant, even though enough

The emphasis in this book is on the functioning of the highly sensitive brain. To understand how highly sensitive people differ from non-highly sensitive people, knowledge regarding the neurological differences is important. These differences explain why highly sensitive people sometimes experience a situation very differently from non-highly sensitive

information already exists to refute them. That's why I find it crucial to

make that scientific information accessible.

people, or why something has a completely different impact on them. By choosing this angle, I've left some aspects unexplained. I am aware of this. But I believe that this approach can give us new insights into high sensitivity. And that is necessary. The lack of knowledge regarding high sensitivity has consequences for both the individual and our society. We do not only misinterpret people's issues, but also their talents, because we look at them from one specific perspective.

First of all, talents may be wasted. Albert Einstein's quote reflects this nicely. If we judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid.

We still do not recognize the talents of highly sensitive people enough. On the one hand, because we know little about the highly sensitive brain and the talents it entails. On the other hand, because our society prefers specific talents. In her book *Quiet*, Susan Cain wrote that extroverted talents such as quick decision making, spontaneous action or making easy conversation are highly valued in many Western societies.<sup>2</sup> In families, groups, teams, departments, and relationships this ideal image predominates, and other talents remain unseen.

I like to imagine things in a narrative and imagine that a group of animals has the task of exploring an archipelago. The leader of the team likes to climb trees and knows that this gives him a quick overview of the island and the surrounding waters. He urges his team members to do the same. This way the assignment will be completed quickly. However, to his frustration, not every team member can climb. The non-climbers are therefore given the task of providing food. Including the fish. It provides a large amount of food and both the leader and the fish are satisfied.

At one point, an animal decides that a tree trunk can serve as a bridge to get to the next island. The fish provides helpful clues from his point of view. However, no one considers that the fish can swim around the islands and, in that way, can provide a great deal of valuable information. His real talent isn't utilized.

Secondly, insufficient knowledge of high sensitivity can lead to incorrect interpretations of issues. When a fish complains of a choking sensation and accelerated breathing, a land animal may conclude that the fish has run too fast. He himself experiences these issues when he has run too fast or too long. It does not occur to him that a fish cannot run fast. And he does not consider gill flukes at all, because he is unfamiliar with them himself. Highly sensitive people run this risk of misinterpretation when they talk about their issues.

In her book *Hoogsensitiviteit professioneel gezien* (High sensitivity, professionally speaking), Annek Tol describes that there is a large overlap between issues highly sensitive people experience and symptoms of disorders such as depression, panic disorder, autism spectrum disorder (ASD), ADHD, borderline and chronic fatigue syndrome<sup>3</sup>. If doctors only take these issues into account, an incorrect diagnosis is lurking. Tol illustrates that when people learn to deal with their high sensitivity, a large portion of the issues disappear. This shows that often, it does not entail a disorder, but a temporary inability.

A one-sided framework can therefore lead to incorrect diagnosis. This problem could be bigger than we think. In her book *Psychotherapy and the highly sensitive person*, Elaine Aron writes that although only 20% of people are highly sensitive, probably half of those seeking psychological help are highly sensitive.<sup>4</sup> Highly sensitive people are thus strongly overrepresented in this group. For this reason, knowledge of high sensitivity is indispensable in determining the need for help by professionals.

Thirdly, incorrectly interpreted issues can generate high costs. An incorrect diagnosis in highly sensitive people can lead to inadequate help. Resulting in high costs and years of taking pills, treatments, and therapies that do not contribute to the solution of the actual problem. Moreover, it leads to unnecessarily long absenteeism, with the associated high social costs.<sup>5</sup>

Suppose the fish himself knew that its choking sensation and rapid breathing indicate gill flukes. And perhaps it also knows that water

quality is essential in order to get better. This may be difficult to believe for his parent, teacher, manager, or partner due to different experiences. If he experiences a choking sensation and accelerated breathing, it is because he has run too fast and needs to catch his breath. Take a deep breath of air. He cannot imagine that the problem lies in the water quality. The water looks fine to him. He certainly doesn't want to spend money on this. And so the problem persists.

What does this unawareness mean for a highly sensitive person? He may conclude that he does not see it properly and may try to adapt to the viewpoint and advice of the other. Or come to the conclusion that he, apparently, is 'not normal'. In the coming chapters, I will illustrate that this has an effect on the brain and can increase problems.

If the highly sensitive person remains convinced of his own analysis, then it depends on the willingness of the other, how much energy it takes to make the necessary adjustments. Does he have to challenge everything or is the other willing to seek joint solutions? Hence, both his own conclusions and the reaction of the other are vital.

As long as we do not recognize that there are differences between highly sensitive and non-highly sensitive people, we are missing out on opportunities. Individual talents remain untapped. Issues are not resolved. Moreover, as a social group we miss opportunities because we need the talents of highly sensitive people.

This book is for anyone who wants to learn to recognize highly sensitive talent better. Highly sensitive people, who, like me, have often had negative thoughts about their personality for years and would like to change this. Care providers who want to learn to better interpret people's behavior and/or issues in order to tailor their guidance accordingly. But also (HR) managers who want to use the talents of their highly sensitive employees more effectively.

### Reading guide

In chapter 1, I discuss the definition of high sensitivity and how it came about. In chapter 2, the daily life of highly sensitive adults and children is addressed. Many highly sensitive people experience overstimulation, fear of failure or have low self-esteem. As a result, their talents fail to reach their full potential.

The third chapter provides a brief introduction to the brain. I will discuss the most important areas of the brain to make what is known about the highly sensitive brain more comprehensible. At the back of this book a keyword list can be found where all technical terms are explained once more.

In order to structure all research results, I have visualized the functioning of the highly sensitive brain. In chapter 4, I briefly outline the main elements I distinguish, in order to clarify these one by one in the following chapters. The matter of perception is discussed in chapter 5. Chapter 6 focuses on the pause-and-check-system. This is the tendency of highly sensitive people to take the time to process incoming information. In chapter 7, I discuss the optimal-option-ambition. Here, I show that taking into account the social context is ingrained in the highly sensitive brain. Chapter 8 deals with the more intense reaction highly sensitive people have after processing information. They experience more stress, have more intense emotions and the impact of a situation is greater.

Chapter 9 takes a closer look at the stress system and the reason why the highly sensitive brain is more sensitive to stress. Chapter 10 deals with social stress and rejection. Stress and sensitivity to rejection perpetuate each other. In order to get out of that vicious cycle, it is important to make real connections.

Chapter 11 summarizes all the talents of highly sensitive people and demonstrates that you should not judge a fish by its ability to climb a tree.