

# Reflections on Autism

## Ethical Perspectives on Autism Spectrum Disorder in Health Care and Education

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*To Tiny, Wietse en Yue*

*"If I could snap my fingers and be nonautistic,*

*I would not – because then I wouldn't be me.*

*Autism is part of who I am."*

Temple Grandin



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**Paper I**

**Paper II**

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**Paper IV**

# ABSTRACT

In the four papers presented in this dissertation I analyze and discuss various value statements and moral stances, which I regard as unjustifiably harmful for persons with Autism and obstacles for the creation of an Autism-friendly society. In the papers I try to show that the positions underpinning the Autism-phobic moral stances are not warranted and cannot be defended in a good way. In doing so, I hope to transform the harmful moral intuitions underlying these positions into autism-friendly ones. The first paper investigates the Neurodiversity claim that ‘Autism is a natural variation’. The claim is interpreted and investigated and an argument is given that, contrary to Low-Functioning Autism, High-Functioning Autism can indeed be seen as a natural variation, without necessarily being seen as a disability. The second paper focuses on the problem for persons with Autism to adapt to prosocial lying, which is saying something not true but socially acceptable in a situation. By comparing a Kantian approach and a care ethics approach, the paper ends up recommending teaching persons with Autism to lie in a rule based and empathic way. The third paper deals with the morality of embryo selection in IVF. Based on a widely shared intuition of natural capabilities, arguments are given that it is morally legitimate to choose an Autistic embryo instead of a ‘normal’ one, contrary to arguments given by proponents of ‘every child should have the best chance of the best life’. The fourth paper deals with moral education. An argument is given that due to problems with cognitive empathy children with Autism should be taught pro-social behavior in a rule based way.

# LIST OF PAPERS

- I. Pier Jaarsma and Stellan Welin. Autism as a Natural Human Variation: Reflections on the Claims of the Neurodiversity Movement. *Health Care Analysis* (2012) 20(1):20–30.  
DOI: 10.1007/s10728-011-0169-9.
- II. Pier Jaarsma, Petra Gelhaus, and Stellan Welin. Living the Categorical Imperative: Autistic Perspectives on Lying and Truth Telling—Between Kant and Care Ethics. *Medicine, Health Care and Philosophy* (2012) 15(3):271–277.  
DOI: 10.1007/s11019-011-9363-7.
- III. Pier Jaarsma and Stellan Welin. Human Capabilities, Mild Autism, Deafness and the Morality of Embryo Selection. *Medicine, Health Care and Philosophy* (2013) 16(4):817-824.  
DOI: 10.1007/s11019-013-9464-6.
- IV. Pier Jaarsma. Cultivation of Empathy in Individuals with High-Functioning Autism Spectrum Disorder. *Ethics and Education* (Published online: 20 Jan 2014).  
DOI: 10.1080/17449642.2013.878514.

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# PREFACE

My motivation for this project is partly personal and partly professional. The personal part of my motivation is related to the fact that I am the father of a child with Autism. I (like all parents) have the wish that my child (and of course also all other people with Autism) will be treated ethically correct. This brings me directly to the professional part which is related to my studies in philosophy and my special interest in the ethics of Autism. The result of these motivations is this dissertation.

Reflecting a little more on my personal motivation I can share that when my son was still very young, he was very fond of Thomas the Tank Engine, a TV series about the adventures of a locomotive with human features. Remarkably, a lot of children with Autism have a special interest for trains (or dinosaurs). But at the same time such an interest is not particularly strange so that one would directly suspect one's child to be 'different'. However, when my son went to kindergarten, we learned from the teachers that he would not allow other children to play with him while he was playing with toy trains. His familiar trains seemed to be his safety to cope with an unpredictable world with its jungle of social rules and expectations. My wife and I were told that maybe his 'different' behaviors, which we initially thought were quite normal, were a consequence of Autism and a year later the diagnosis 'Classical Autism' was made.

Growing up, several challenges arose. For example, how to learn to socialize with family and friends, or how to behave if his mother proudly showed her new hairdo and he did not like it, or what to say if he did not like to play with a friend, while this person wanted to play with you. He went to a regular primary school and managed to fulfill it at a 'normal' level with only some extra help for the teachers. After lessons in religion he once asked us if God could heal all people, would God then also take away his Autism and ADHD, which he really did not want to miss, since: who would I then be?'

One sunny morning, my -then fifteen-year old son- came into the kitchen where we were going to have breakfast. Nothing unusual, except for the fact that he was wearing sunglasses. I thought he might be oversensitive to the light, so I made a remark about it: 'Is the light hurting your eyes?' His then 13-year old sister intervened and said: 'no, he just wants to look cool' I

found this hard to believe, so I asked him: ‘or is it because you want to look cool?’ He replied assertively: ‘Deal with it’ and started eating his cereals.

Then I started thinking: *‘Deal with it’*... These three words could very well be the essence of what it is I am trying to convey with my work about the moral aspects of Autism. The first associations of ‘Deal with it’ are: ‘I don’t care what you think, I am doing it anyway’ or ‘it’s your problem, not mine’. Furthermore, it could mean: ‘tolerate it’ or ‘accept it and give it a place in your life’, ‘work with it’, ‘care for it’. All these associations can be applied to Autism. The first association refers to the right of persons with Autism to be who they are, as they are: it’s not their problem, it’s our problem. The other associations have to do with the following. Persons with Autism have difficulty to understand how other people think or feel. This may result in social interaction in inappropriate ways or in avoiding social contact. If one doesn’t know better, one could easily think their social withdrawal is because of indifference, commonly thought to be a bad character trait.

We have to deal with the aloofness<sup>1</sup> of (some) persons with Autism. Out of practical necessity and out of a sense of moral obligation. Not to ignore them, and treating them as if persons with Autism are acting out of indifference. We have to deal with the ‘different’ ways of trying to connect of (some) persons with Autism, and not reject them beforehand because of their odd behavior. We have to deal with the passivity of (some) persons with Autism, even if this means putting in energy and not getting in return what we might have expected. And they have to deal with us, whether they want to or not. But why should we and why should they? The answer is simple: because they need us, and we need them.

Pier Jaarsma, Linköping, Jan. 9<sup>th</sup> 2014

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<sup>1</sup> Some persons with Autism are aloof, others are merely passive, or even actively sociable in a peculiar fashion (Happé, 1994, p. 16).

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First and foremost I would like to acknowledge the contribution made by my main supervisor and co-author on three of my papers, Professor Stellan Welin. When I first presented my research idea about the ethics of Autism he immediately enthusiastically engaged in discussing this topic with me and agreed to be my main supervisor. He was never tired of reading and commenting yet another version of a paper, even if there were dozens of them. In all these four years he never had a negative impact on my self-confidence, even when seriously criticizing. This is one of the characteristics of a good educator. His helicopter view of the field of ethics always was helpful in showing new possibilities of thinking through a certain problem. Furthermore, his social engagement with the moral treatment of vulnerable groups always was inspirational for me to carry on with the ‘good’ work. In short, he was for me the perfect mentor, tutor and supervisor. *Tack så hemskt mycket!*

Secondly, I would like to acknowledge the contribution made by my second supervisor, Professor Lars-Christer Hydén. After helping me to get started with my project, he remained, as a good second supervisor should, in the background. At the seminars he gave me valuable comments about my papers. He often came up with useful suggestions about which books to read for a paper I was working on, which I much appreciated. Furthermore, his commitment to read and comment on the psychological background of the dissertation made me confident that I, not being a psychologist myself, did not write too much non-sense about the psychology of Autism. *Ett stort tack!*

Thirdly, I would like to thank Doctor Petra Gelhaus for taking the time to act as a co-author on my second paper. Without her - I am not prosocially lying here - the paper would have been much less interesting. *Vielen Dank!*

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Fifthly, I would like to thank ‘Heit’ and ‘Mem†’ for teaching me human dignity, justice, caring and many other values. As a good son I try to live up to these values, but of course there is always (a lot of) room for improvement. Thank you also dear family members (no one excluded), for sharing good times and bad times with me during all these years. Unfortunately, (or rather I should say ‘fortunately’) you are too many to enumerate. *Tige tank! & Heel erg bedankt!*

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Last but not least, I would like to thank Tiny for being my role-model, first as a nurse and later as a researcher, but most of all for being my ever present loving partner in life for almost 28 years now. Together we are in the process of raising two wonderful children for which I am eternally grateful. *Heel erg bedankt, vanuit de grond van mijn hart!*

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# 1. INTRODUCTORY REFLECTIONS ON TERMS

In my first paper I mention the ‘person-first’ controversy. Proponents of the Neurodiversity movement claim that ‘person with Autism’ is objectionable because Autism cannot be separated from the person, and ‘person-first’ language (e.g. ‘person with measles’) implies that the condition following ‘with’ is something intrinsically bad and needs to be cured. Instead, they would like to be referred to as ‘Autistic persons’ or ‘Autists’, which is honored in this first paper.

However, I now believe it is not necessarily so that ‘person-first’ language implies something bad. We can meaningfully say: a person with a high IQ, without implying that a high IQ is something bad. Moreover, person-first language has the effect of counteracting stigmatization and calls for respect. An example of this is the abandonment of the stigmatizing term ‘cripple’ and the acceptance of the term ‘a person with physical disability’. So, to counteract stigmatization and to morally appeal for respect, homosexuals need to be referred to as ‘persons’ first. If there is a necessary reason for it, the qualification ‘with homosexual preference’ may be used secondly. Similarly, ‘Autistics’ or ‘Autists’ need to be referred to as ‘persons’ first, and if there is a necessary reason to use that qualification, ‘with Autism’ second. Therefore, I stick to the commonly accepted notion of ‘persons with Autism’. However, I use a capital letter in ‘Autism’ to show respect for Autism and acknowledge it as a normal and natural human variation.

One of the most pressing issues about Autism<sup>2</sup> seems to be the stigma<sup>3</sup> of ‘disability’<sup>4</sup>. The discrediting effect of the stigma makes persons with Autism disqualified from full social

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<sup>2</sup> With Autism I mean Autism Spectrum Disorder. See DSM-5 of the American Psychiatric Association (2013) for the diagnostic criteria of Autism Spectrum Disorder. I use Autism Spectrum Disorder and Autism Spectrum Conditions interchangeably, with a slight preference for the latter.

<sup>3</sup> Stigma is defined as ‘a mark of disgrace associated with a particular circumstance, quality, or person.’ Cited from: <http://oxforddictionaries.com/definition/english/stigma?q=stigma>.

<sup>4</sup> According to the *medical model of disability*, disability is ‘a loss or restriction of functional ability or activity as a result of impairment of the body or mind.’ Cited from: <http://www.oxfordreference.com/view/10.1093/acref/9780199557141.001.0001/acref-9780199557141-e-2755?rskey=Aav6jO&result=4>

According to the *social model of disability*, disability is ‘a disadvantage that is caused for the physically impaired by particular forms of social organization. An impairment is a loss or lack of functioning [...] which, unlike illness, is usually permanent. [D]isability consists of a failure on the part of a society to provide appropriate services and facilities that meet the needs of those with particular impairments. This often involves stigmatizing the

acceptance (Goffman, 1963, p. 9, p. 13). Psychologist Simon Baron-Cohen tries to evade the stigma by pointing out that the term ‘difference’ in relation to Asperger’s Syndrome<sup>5</sup> is a more neutral, value-free, and fair description, than the term ‘disability’ and that the latter term better applies to the lower functioning cases of Autism (Baron-Cohen, 2002). Choosing ‘difference’ instead of ‘disability’ to refer to Asperger’s Syndrome is more in line with the idea of Autism as a natural variation. This idea originates from the Neurodiversity<sup>6</sup> movement, a movement strongly influenced by persons with High-Functioning Autism. In my *first* paper I will reflect on the claims of this movement.

There are at least two ways of dealing with persons with Autism, and persons in general for that matter: considerate<sup>7</sup> and less considerate. An example of a scientific formulation that is less considerate for the feelings of the group under study is taken from Kathrin Glüer’s and Peter Pagin’s study from 2003 called ‘Meaning theory and autistic speakers’. In a footnote they refer to subjects with Autism in the following way: “[...] convention does not require that each and every member of a [language] community has the required higher-order thought capacities. Some members could be allowed a kind of parasitic membership, while core members would still need the capacities”. On the face of it, to refer to persons with Autism as parasitic members of a language community is a very rude remark. However, as this remark appears in a footnote and the study as a whole is a very thoughtful analysis of Autism in relation to the use of language, the authors should be forgiven for this ‘faux pas’. Obviously, science and truth ought to go hand in hand.<sup>8</sup> Science can have a cathartic effect in erasing all kinds of misconceptions about some kind

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impairment.’ Cited from: <http://www.oxfordreference.com/view/10.1093/acref/9780199533008.001.0001/acref-9780199533008-e-598?rskey=Aav6jO&result=3>

<sup>5</sup> Asperger’s Syndrome is a form of High-Functioning Autism. See DSM-IV-TR for the diagnostic criteria of Asperger’s syndrome. In DSM-5 of the American Psychiatric Association (2013) Asperger’s Syndrome is no longer included as a separate diagnosis.

<sup>6</sup> Neurodiversity is the idea that atypical neurological development is a normal human difference that should be tolerated and respected in the same way as other human differences.

<sup>7</sup> ‘careful not to cause inconvenience or hurt to others’

([http://www.oxfordreference.com/view/10.1093/acref/9780195392883.001.0001/m\\_en\\_us1235478?rskey=X1eq68&result=9](http://www.oxfordreference.com/view/10.1093/acref/9780195392883.001.0001/m_en_us1235478?rskey=X1eq68&result=9)).

<sup>8</sup> There are several theories of truth, which are the subject of continuing debate within philosophy. This debate lies far beyond the scope of this dissertation. However, my theoretical intuition is that Popper’s fallibilist epistemological realism (which presupposes ontological realism) is most plausible: ‘what makes a view scientific is that it is falsifiable, i.e., that it can be shown to be false (Johansson and Lynøe, 2008, p. 76).’ Furthermore, I find his notion of truthlikeness most appealing. Roughly, truthfulness means that ‘a statement can be more or less true (which is not the same as “probably being true”) (Johansson and Lynøe, 2008, p. 77). An assertion can have a higher (or lower) degree of truthlikeness and can be a better (or worse) approximation of the truth than another

of phenomenon, like Autism. However, sometimes scientific truthfulness is offensive for some groups of people as the ‘parasitic membership’ example shows.

Another example is the quite common reference to Autism as an epidemic (e.g. Gillberg et al., 2006; Eyal et al., 2010) or as a disease (e.g. Jepson, 2007). The obvious connotation is the outbreak of a contagious disease. Such science resembles Autism a bit, because also very often persons with Autism find it hard to refrain from communicating truthfully<sup>9</sup>, even when this will amount to making a rude or hurtful remark. In some Autistic biographies we can find instances of this phenomenon. Temple Grandin writes: ‘Even though honesty is the best policy, my opinion about other people’s appearance was usually not welcome [...]. Through many specific examples, I developed a category of “rude honesty” when I needed to keep my mouth shut [...].’ Caiseal Mór, another autobiographer with Autism, writes: ‘Then I began saying things that offended people. I said what was on my mind. I didn’t hold back. I was impolite. I was brutally honest. I was rude.’ The ethical aspects of this phenomenon are the subject of my *second* paper.

An example of a scientific formulation that appears to be inconsiderate for the feelings of the group under study is Simon Baron-Cohen’s empathizing-systemizing<sup>10</sup> theory of Autism. A person with Autism may experience Baron-Cohen’s assertion that they lack empathy as extremely hurtful (personal communication by a colleague with Autism). However, Baron-Cohen emphasizes in the empathizing-systemizing theory of Autism that Autism is not only a matter of deficit, but also, a matter of richness. According to Baron-Cohen persons with Autism may have a deficit in empathizing, but they have a surplus of systemizing. Calling the latter a matter of richness is an instance of being respectful towards the feelings of persons with Autism in Baron-Cohen’s theorizing about Autism.

In his latest book ‘the science of evil’, he compares High Functioning Autism with a couple of personality disorders: narcissism, borderline and psychopathy. The greatest common divisor between these groups is, as he frames it, ‘zero degrees of empathy’. In contradistinction to

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assertion. ‘The idea of truthlikeness belongs to a correspondence theory of truth. Such theories say that the truth of an assertion (truthbearer) rests upon a relation (correspondence) that the assertion has to facts (truthmakers) (Johansson and Lynøe, 2008, p. 78).’ In my view there should be *coherence* relations between an assertion X and its evidence *and* a relation of *correspondence* of X to the world. This view is called reflective fallibilism (Johansson and Lynøe, 2008, p. 78).

<sup>9</sup> See Baron-Cohen, 2008a.

<sup>10</sup> See p. 23.

narcissism, borderline and psychopathy, where there is zero degrees of empathy in a strictly negative way, there is something positive about High-Functioning Autism, namely the fact that they are strong systemizers. In my *third* paper I will discuss the question whether the positive aspects of High-Functioning Autism are sufficient to justify choosing an Autistic embryo in a hypothetical Pre-implantation Genetic Diagnostic (PGD) situation<sup>11</sup>.

Instances of ‘rude honesty’ or ‘hurtful truths’ are abundant in the scientific literature about Autism. What to think of the extreme male brain theory of Autism in the context of vulnerable adolescent girls just diagnosed with Autism? The hurt these girls may feel when they learn from the experts that they have an extreme male brain, can easily be imagined. Moreover, what to think of the ascription ‘zero degrees of empathy’ to persons with ‘mild’ Autism. ‘Zero degrees of empathy’ as a metaphor refers to something very cold, namely ‘ice’ and to cold heartedness. I am sure persons with ‘mild’ Autism will not like being stigmatized as ‘cold hearted’ persons. ‘Zero degrees of empathy’ appears to be a quite careless qualification.<sup>12</sup> Moreover, as persons with ‘mild’ Autism are also characterized as ‘supermoral’ by Simon Baron-Cohen, the term ‘zero degrees of empathy’ does not do justice to them. In fact, it is counterintuitive. A rather common moral intuition is: How can one be moral without being empathic? I will touch upon this question and its implications for moral education in my *fourth* paper.

In this dissertation I limit myself to non-intellectually disabled persons with Autism, also called High-Functioning persons with Autism or persons with ‘mild’ Autism. However this latter term is debatable because a person with High-Functioning Autism may not experience his or her Autism as mild at all. The reason for my limitation to High-Functioning Autism is not because nothing can be said about the ethical aspects surrounding intellectually disabled persons with Autism, on the contrary, but because I want to be able to say something about the ethical aspects of Autism *per se*. If I include intellectually disabled (IQ < 70) persons with Autism (Low-Functioning persons with Autism) in my deliberations, it might be the case that the moral issue at

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<sup>11</sup>In the third paper we explained PGD (which appears in an IVF situation outside the body): ‘in a fertilized human egg (an early embryo) consisting of up to eight cells, one of the cells can be removed for genetic investigation. That cell is destroyed in the process, but the rest of the embryo develops in a normal way’.

<sup>12</sup>“‘Zero degrees of empathy’ is also a careless and empirically unsound description of persons with borderline personality disorder, who are hypersensitive to other persons’ reactions and feelings (Tatja Hirvikoski (personal communication (02-10-2013)).’



hand is predominantly determined by the moral questions surrounding intellectual disability<sup>13</sup> rather than those surrounding Autism *per se*. This would cloak the issues surrounding Autism *per se* too much.

By no means am I implying that the moral issues surrounding intellectual disability are less important to the moral issues surrounding Autism *per se*. On the contrary, they are equally, if not more, important but go beyond the aim and scope of this dissertation.

It is in no way my intention to imply a value judgment about intellectually disabled persons with Autism. Although perhaps some readers interpret the distinction between High and Low Functioning Autism as a value judgment, I want to make clear that I distance myself from this interpretation. However, I do grant that ‘high’ and ‘low’, in this context, carry with them stigmatizing valuing connotations. ‘High’ connotes something good, while ‘low’ connotes something bad. An example of this connotation is when students get high or low grades at school. High grades are mostly experienced as something good and low grades as something bad. Therefore, it would be better to abandon the use of High-Functioning and Low-Functioning Autism, and to adopt more neutral terms that do not ascribe value (explicitly or implicitly). However, in the absence of a better term to make the distinction between individuals with Autism Spectrum Disorder who also have Intellectual Impairment and those who have not, I use High and Low-Functioning while stressing my intention not to ascribe value.

Another source of confusion in the use of High and Low Functioning Autism is the following. According to Nicolaidis (2012, p. 503) the Autism Spectrum cannot be thought of as a linear continuum. There are several dimensions (social, communicative, imaginative and sensitive) that need to be assessed. In this view, a person with Autism may be High-Functioning in the communicative dimension but Low-functioning in the imaginative dimension. Therefore, she claims it is problematic to qualify a person with Autism as ‘High-Functioning’ or ‘Low-Functioning’ (Nicolaidis, 2012, p. 507).

These reservations complicate the use of the concepts ‘High’ and ‘Low’ Functioning Autism. However, in this dissertation, and in line with the partial consensus about the meaning of

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<sup>13</sup> The World Health Organization defines disability as ‘an umbrella term for impairments, activity limitations, and participation restrictions, denoting the negative aspects of the interaction between an individual (with a health condition) and that individual’s contextual factors (environmental and personal factors)’ (WHO, 2011, p. 303).

High-Functioning Autism in the literature (Baron-Cohen, 2002), I will take ‘persons with High-Functioning Autism’ and ‘persons with mild Autism’ simply to mean ‘non-intellectually disabled persons with Autism’ who are able to communicate using language.

## 2. BACKGROUND

This chapter discusses the interdisciplinary background of the papers that make up this dissertation. In five paragraphs background knowledge is introduced in order to provide the papers with the necessary context. The first paragraph starts with the history of Autism. I proceed in the next three paragraphs with explanations of Autism on different levels: the behavioral level, the cognitive level and the biological level. Autism is believed to be a disorder with several different behavioral manifestations, a single defining cognitive deficit, and multiple biological causes (Happé, 1994, p.2). The second paragraph discusses the prevalence of Autism and its alleged epidemic character. The third paragraph (the behavioral level) gives a brief description of Autism Spectrum Disorder derived from the DSM<sup>14</sup>-IV-TR and the very recent DSM-5. The fourth paragraph (the cognitive level) and the fifth paragraph are about the most influential contemporary psychological explanations of Autism. The sixth paragraph (the biological level) describes the etiology of Autism. The seventh paragraph gives a short overview of the medical and other interventions for Autism. The eighth paragraph summarizes research on the quality of life of High-Functioning persons with Autism.

### 2.1. HISTORY OF AUTISM

Autism was first identified by Leo Kanner in 1943 as a childhood syndrome characterized by ‘autistic aloneness,’ obsession with routine and profound problems with communication. Asperger’s Syndrome (AS), first introduced by Hans Asperger in 1944, differs from ‘classic’ Autism in that those diagnosed with Asperger’s do not show evidence of intellectual deficiency or language delay. Since the first descriptions of Autism by Leo Kanner and Hans Asperger, a lot of ideas about the causes of Autism have been held with conviction, but which proved to be unfounded (Wolff, 2004, p. 205). A very malignant idea was that Autism is caused by poor parenting. Especially the psycho-analytical psychiatrist Bruno Bettelheim is infamous for

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<sup>14</sup> Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association). Another diagnostic manual is the ICD-10 (International Classification of Diseases) of the World Health Organization (WHO). The Swedish version of the ICD-10 (ICD-10-SE) is officially in use in Sweden (see: <http://www.socialstyrelsen.se/klassificeringochkoder/diagnoskoder#3>).

blaming the parents of children with Autism. His view that mothers caused their child's Autism through their rejection (he used the term 'refrigerator mothers') has done a lot of damage to good-willing parents, especially mothers, of children with Autism (Feinstein, 2010, p. 54-75). Another unfounded idea is that Autism is among the group of schizophrenias. A third idea that lacks all grounding is that Autistic symptoms are secondary to a developmental language disorder (Wolff, 2004, p. 205).

The concept of the Autism Spectrum Disorder was developed in the early 1990s by Lorna Wing. Autism Spectrum Disorder is an umbrella term for a group of mental disorders ranging from Asperger's disorder at the 'mild' end to Autistic disorder at the 'severe' end. It consists of 'a group of disorders of development with life-long effects and that have in common a triad of impairments<sup>15</sup> in: social interaction, communication, imagination, and behaviour (narrow, and repetitive pattern of behaviour)' (Wing, 1997, p. 1761).

Crane, Goddard and Pring found that sensory abnormalities are prevalent in Autism Spectrum Disorder: 'Individuals with ASD can experience very different, yet similarly severe, sensory processing abnormalities. [...] in relation to sound, vision, touch, taste and smell and include hypersensitivity (acute, heightened or excessive sensitivity), hyposensitivity (below normal sensitivity) and general sensory overload' (Crane, Goddard and Pring 2009, p. 215). However, this symptom (unusual sensory processing) has been withdrawn from the diagnostic criteria for Autism Spectrum Disorder (Crane, Goddard and Pring, 2009, p. 225).

## 2.2. THE PREVALENCE OF AUTISM

The CDC (Centers for Disease Control and Prevention (USA)) estimated in 2012 that about 1 in 88 children (=1.1 %) has Autism Spectrum Disorder.<sup>16</sup> Although this figure is valid only for the USA, 'Autism is found throughout the world, and is not more common in any one society than in others' (Happé, 1994, p. 25). A significantly greater number boys than girls have Autism

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<sup>15</sup> The World Health Organization (WHO, 2011) defines impairment as 'loss or abnormality in body structure or physiological function (including mental functions), where abnormality means significant variation from established statistical norms' (p. 305).

<sup>16</sup> [http://www.cdc.gov/media/releases/2012/p0329\\_Autism\\_disorder.html](http://www.cdc.gov/media/releases/2012/p0329_Autism_disorder.html)

Spectrum Conditions. The overrepresentation of males is 5.5:1 (Fombonne, 2011, p. 62). According to psychologist Simon Baron-Cohen the male to female ratio is as high as 11:1 for Asperger's syndrome. This male bias 'occurs because ASC [Autism Spectrum Conditions] is an extreme manifestation of the male brain'. [...] The mechanism that mediates the systemizing behaviors, according to Baron-Cohen et al., is fetal testosterone: 'One possible biological mechanism to account for the male bias [overrepresentation of males in ASC] is the effect of fetal testosterone' (Baron-Cohen et al., 2011, p1). Put simply, more fetal testosterone gives more systemizing in the brain and less gives more empathizing in the brain. Baron-Cohen has presented some support for the male-brain theory of Autism, but this theory has also met some criticisms, which I will discuss in paragraph 4 of this chapter.

The prevalence rates of Autism Spectrum Conditions have markedly gone up in previous decades, triggering the question 'whether there is an epidemic of ASC (i.e., truly more affected individuals) or rather an "epidemic" of diagnosing ASC (i.e., simply more people receiving the diagnosis)'. Although there is no conclusive evidence ASC experts believe there is no ASC epidemic. The main causes of the higher prevalence data appear to be: 'changes in diagnostic practices (broadening the definition of ASC), public and expert awareness, and availability of professional help' (Bölte and Hallmayer, 2011, p. 64-65).

### **2.3. PSYCHIATRY OF AUTISM (AT THE BEHAVIORAL LEVEL)**

At the time of writing of this dissertation the DSM-IV-TR, the fourth edition (Text Revised) of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders<sup>17</sup>, psychiatry's principal diagnostic manual, was still the authority on Autism. According to the DSM-IV-TR Autistic disorder, Rett's disorder, Childhood Disintegrative Disorder, Asperger's disorder and Pervasive Developmental Disorder- Not Otherwise Specified, are disorders usually first diagnosed in infancy, childhood, or adolescence and they are instances of Pervasive Developmental Disorders.

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<sup>17</sup> In DSM-IV-TR, 'mental disorder' is conceptualized as 'a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom' (DSM-IV-TR, 2000).

At the severe end of the Autism Spectrum: Autistic Disorder. It can be diagnosed when the following criteria are present (from DSM-IV-TR):

1. qualitative impairments in reciprocal social interaction.
2. qualitative impairments in communication: delay, or lack of, development of spoken language.
3. restricted, repetitive, and stereotyped patterns of behavior, interests, or activities.

At the mild end of the Autism Spectrum: Asperger's Disorder. The diagnostic criteria for Asperger's Disorder are (from DSM-IV-TR):

- A. Qualitative impairment in social interaction.
- B. Restricted repetitive and stereotyped patterns of behaviour, interests, and activities.
- C. The disturbance causes clinically significant impairment in social, occupational, or other important areas of functioning.
- D. There is no clinically significant general delay in language (e.g., single words used by age 2 years, communicative phrases used by age 3 years).
- E. There is no clinically significant delay in cognitive development or in the development of age-appropriate self-help skills, adaptive behaviour (other than in social interaction), and curiosity about the environment in childhood.
- F. Criteria are not met for another specific Pervasive Developmental Disorder or Schizophrenia.

The diagnosis is often carried out by a multidisciplinary team (child psychiatrists, clinical or educational psychologists, paediatricians and other health<sup>18</sup> professionals) based on interview and

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<sup>18</sup> The World Health Organization defines health as 'a state of well-being, achieved through the interaction of an individual's physical, mental, emotional, and social states' (WHO, 2011, p. 304). According to Nordenfelt (2007) a person is completely healthy if, and only if, the organic structure of A is such that it enables A to achieve all his or her vital goals, given circumstances that are considered to be standard in a particular cultural context. I understand 'health' slightly differently as the ability to reach all vital goals under *reasonable* circumstances. This means that if a person with Autism is able to reach all his or her vital goals, regardless whether the circumstances are reasonable or not, then that person with Autism is healthy. If a person with Autism is not able to reach all his or her vital goals and the circumstances are reasonable, then that person with Autism is not healthy. However, if a person with

observation (Baron-Cohen, 2008b, p. 37-38). This introduces ‘some subjective elements’ (Baron-Cohen, 2008b, p. 41). A more objective way for diagnosing Autism could be the use of biological markers. However, ‘such a set of biological markers for Autism or Asperger syndrome is not yet available’ (Baron-Cohen, 2008b, p. 41).

The difference between Autistic Disorder and Asperger’s Disorder is ambiguous, and some researchers have argued that Asperger’s Disorder does not exist as a discrete condition (Farrugia, 2009). Asperger’s syndrome is just a mild form of High-Functioning Autism. Most researchers use it as a label for (a mild form of) High-Functioning (or less typical) Autistic individuals (Happé, 1994, p. 95-97). Incidentally, ‘a mild form of High-Functioning Autism’ is not necessarily Asperger’s syndrome- one may have a relatively mild handicap and be Autistic without conforming to the Asperger’s syndrome subtype (Happé, 1994, p. 97).

In the final phase of writing this dissertation, the DSM 5 (Diagnostic and Statistical Manual of Mental Disorders-5 of the American Psychiatric Association) was released (may 2013)<sup>19</sup>. In DSM-5 Asperger Disorder, Pervasive Developmental Disorder—Not Otherwise Specified (PDD-NOS), and Autistic Disorder are merged together into the new diagnosis of Autism Spectrum Disorder (American Psychiatric Association, 2013). This change was necessary because the previous division into separate diagnostic categories was not valid.

The main diagnostic criteria for Autism Spectrum Disorder in DSM-5 are as follows: ‘A. Persistent deficits in social communication and social interaction across multiple contexts [...]’; ‘B. Restricted, repetitive patterns of behavior, interests, or activities [...]’; ‘C. Symptoms must be present in the early developmental period [...]’; ‘D. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning’; ‘E. These disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay [...]’ (American Psychiatric Association, 2013).

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Autism is not able to reach all his or her vital goals and the circumstances are not reasonable, then it is wrong to call that person with Autism ‘not healthy’.

<sup>19</sup> <http://www.dsm5.org/Pages/Default.aspx>. Accessed 31-05-2013.

## 2.4. PSYCHOLOGY OF AUTISM (AT THE COGNITIVE LEVEL)

In this section I will briefly sketch the most influential (but controversial) psychological explanations of Autism of the past decades at the cognitive level. This level is about the workings of the mind, including thoughts and feelings. It concerns the theory of mind hypothesis, the executive function hypothesis, the central coherence hypothesis and the empathizing-systemizing theory or (by extension) the male brain hypothesis. There are ‘three commonly accepted criteria for assessing the primacy of a deficit’ in a disorder: universality (is the deficit universal among the sufferers of the disorder?), specificity (is the deficit specific for the disorder?) and causal precedence (is the deficit the primary cause or secondary?) (Happé, 1994, p. 52). Furthermore, besides the impairments, the theories also have to be able to explain the ‘islets of unimpaired or even superior skills’ (Happé, 1994, p. 53).

The Theory of Mind hypothesis is that ‘the core deficits found in Autism can be explained by the fact that persons with Autism are not able to recognize that other persons have minds. This phenomenon is also called ‘mindblindness’ (Baron-Cohen, 1995). To recognize that another person has a mind is to recognize that person as someone who has a mental life independent of your own, with beliefs, preferences, desires, and the whole range of intentional attitudes’ (Barnbaum, 2008, p. 21). Persons with Autism are impaired in the fundamental human ability to ‘mind-read’ or to ‘mentalize’ (Happé, 1994, p. 38, p. 40). They are ‘delayed in developing a Theory of Mind’, which is ‘the ability to imagine someone else’s thoughts and feelings, so as to be able to make sense of and predict their behavior’ (Baron-Cohen, 2008b, p. 57).<sup>20</sup>

The Weak Executive Function explanation of Autism is that ‘persons with Autism have weak executive function. Executive function is ‘the ability to maintain an appropriate problem-solving set for attainment of a future goal’ (Happé, 1994, p. 59). It ‘allows for planning and organization, as well as for keeping several tasks going at the same time and switching between them’ (Barnbaum, 2008, p.28). Four major ‘executive functions’ of the brain are essential to effective self-regulation: working memory, internalized speech, motivational appraisal, and reconstitution or behavioral synthesis (Cooper, 2008, p. 460). Perseverative, inflexible problem-

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<sup>20</sup> The scientific theories in this paragraph are all theories from a ‘third-person perspective’. There also exist phenomenological ‘first-person perspectives’, e.g. the one articulated by Shaun Gallagher (2004). See also § 5.4 and footnotes 22 and 42.



solving strategies are characteristic of executive function impairment (Ozonoff, Pennington and Rogers 1991, p. 1099). Typical executive function deficits are perseveration, planning difficulties and impulsivity (Ozonoff, Pennington and Rogers, 1991, p. 1100). Persons with Autism ‘often seem to lack executive functions; autistic individuals do not appear future-oriented, do not anticipate long-term consequences of behavior well, and have great difficulty self-reflecting and self-monitoring. They frequently appear impulsive, as if unable to delay or inhibit responses (Ozonoff, Pennington and Rogers, 1991, 1083).’

The Weak Central Coherence explanation of Autism is that persons with Autism are lacking in Central Coherence, which is ‘the tendency to draw together diverse information to construct higher-level meaning in context’ (Happé, 1994, p.116) or ‘the ability to see not merely parts, but wholes—the ability to draw together details so as to recognize the meaning of the entire picture’ (Barnbaum, 2008, p. 27). ‘Normal subjects appear to be constrained in their interpretation of information by the context in which stimuli are presented [...] autistic subjects are peculiarly free from such contextual restraints’ (Happé, 1994, p. 117). Persons with Autism ‘show above average performance on embedded figures tasks (e.g., seeing a triangle in the line drawing of a baby-carriage)’ (McGeer, 2004, p. 250). This is because persons with typical neurological development are overwhelmed by the predominance of the whole (e.g. the baby-carriage), while persons with Autism specifically are able to see parts over wholes (Happé, 1994, p. 119). However, the other side of the coin of the ‘advantage’ of being able to see details is the ‘disadvantage’ of the relative inability (compared with persons with neurotypical development) to see the whole or to see things in context.

The Theory of Mind hypothesis has met a lot of criticisms,<sup>21</sup> e.g. the criticisms of Weak Central Coherence and Weak Executive Function theorists.<sup>22</sup> After these criticisms, Simon

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<sup>21</sup> Helen Tager-Flusberg evaluated the Theory-of-Mind Hypothesis of Autism. She wrote: ‘The past two decades of research on theory of mind in autism has taught us that no single hypothesis can explain the full range of symptoms that define autism (Tager-Flusberg, 2007, p. 314).’

<sup>22</sup> Phenomenological philosopher Shaun Gallagher also criticized ‘Theory of Mind’ promoting ‘body reading’ instead of ‘mind reading’ (Gallagher, 2004; Gallagher, 2005, p. 206-236). However, this criticism does not contribute to the reasoning in this dissertation (see § 5.4). Recently, Jill Boucher (2012) reviewed criticisms on ‘Theory of Mind’. Despite her assessment that these criticisms make sense, she confirmed the importance of the work done by Baron-Cohen in the field of Autism: ‘The demonstration of impaired mindreading constituted a major advance in understanding some of the most consistent socio-communicative impairments characteristic of people with ASD (Boucher, 2012, p. 237).’ Regardless the criticisms about the ‘Theory of Mind’ Hypothesis, and even regardless the plausibility of its successor, the Empathizing-Systemizing theory, ‘the universal and persistent difficulties that

Baron-Cohen evolved the Theory of Mind hypothesis into that of the Empathizing-Systemizing hypothesis of Autism which can explain almost all features of Autistic behaviour.<sup>23</sup>

The Empathizing-Systemizing theory of Autism ‘explains the social and communication difficulties [...] by reference to delays and deficits in *empathy*, whilst explaining the areas of strength by reference to intact or even superior skill in *systemizing*’ (Baron-Cohen, 2008b, p. 62). This theory has empathizing and systemizing as its core concepts and is an elaboration of the Theory of Mind hypothesis:

‘Empathizing’ is the drive to identify another person’s emotions and thoughts, and to respond to these with an appropriate emotion. Empathizing allows you to predict a person’s behavior, and to care about how others feel. ‘Systemizing’ is the drive to analyze the variables in a system, to derive the underlying rules that govern the behavior of a system. Systemizing also refers to the drive to construct systems. Systemizing allows you to predict the behavior of a system, and to control it (Baron-Cohen, 2002, p. 248).

Systemizing is roughly the drive to analyze or construct systems. A person with High-Functioning Autism may, for example, be challenged when it comes to empathizing, but able to rapidly calculate prime numbers (numerical systemizing), or insist on the same foods each day (sensory systemizing), or make lists and catalogues (collectible systemizing), or insist on other people following social rules (moral systemizing), or learning the Latin names of every plant and their optimal growing conditions (natural systemizing) (Baron-Cohen, 2008b, p. 67, 68).

According to Baron-Cohen, individuals *regardless of gender* have a Type S brain when their systemizing is better than their empathizing and a Type E brain when it is the other way around. Individuals whose empathizing is as good (or as bad) as their systemizing are called Type B (for balanced). Individuals with Autism, who are hyper-systemizers and hypo-empathizers, can be considered as having an ‘extreme male brain’ and are referred to as Extreme Type S (Baron-Cohen, 2002; 2008b, p. 71-75). *On average*, males have a brain of Type S, females have a brain of Type E, and persons with Autism have an Extreme Type S (Baron-Cohen, 2008b, p. 72).

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people with ASD, including the most able, have in understanding other minds (Boucher, 2012, 233)’ remain. This basic insight into Autism underlies the reasoning in this dissertation, in particular the reasoning in papers II and IV.

<sup>23</sup> See Baron-Cohen, 2008b, p. 77-83.

Morsanyi et al. maintain that, ‘so far there is no single theory which could explain all of the typical symptoms of autism (Morsanyi et al., 2012, p. 491)’. The empathizing-systemizing theory, e.g., cannot explain dyspraxia (Baron-Cohen, 2008b, p. 77). However, given the fact that the empathizing-systemizing theory explains most of the symptoms of Autism together with the fact that there is (some) scientific support for this theory, justify my choice to take this theory as one of the empirical scientific points of departure for my ethical reflection. In the next paragraph I will summarize this scientific support for the empathizing-systemizing theory of Autism, together with some criticisms on it.

## **2.5. SCIENTIFIC SUPPORT FOR THE EMPATHIZING-SYSTEMIZING THEORY**

Lai (2012) found that, using structural magnetic resonance imaging, ‘for male adults, the discrepancy between empathizing and systemizing is related to distinct individual differences in brain structure. Men with a stronger drive to systemize than to empathize have increasingly larger midline cingulate and prefrontal structures, whereas those with a stronger drive to empathize than to systemize have an increasingly larger ventral basal ganglia and hypothalamus (Lai, 2102, p. 1354).

Another brain imaging study by Takeuchi et al. revealed that ‘WM (white matter) structures involving the default mode network and the mirror neuron system support empathizing, and that a WM structure relating to the external attention system supports systemizing (Takeuchi et al., 2013, p. 222).’ Furthermore, some evidence has been provided supporting the claim that empathizing and systemizing are competing “neurally in the brain” (Takeuchi et al., 2013). Roughly, this means that whenever there is more systemizing in the brain, there will be less empathizing and vice versa.

Teatero and Netley (2013) and Lai (2013) yielded (some) support for the Extreme Male Brain Theory. Teatero and Netley suggest, although the evidence is weak, that ‘2D:4D and autistic-like traits such as high systemizing are related (Teatero and Netley, 2013, p. 2673).’ Lai

et al. found, in a structural magnetic resonance imaging study, that ‘the neuroanatomy of autism differed between adult males and females (Lai, 2013, p. 2799)’. They concluded that biological sex affects the neurobiology of autism. However, in this study ‘the brain-level predictions of the extreme male brain theory of autism were observed in females but not in males (Lai et al., 2013, p. 2809).’

Bejerot et al. challenge the view that Autism is an extreme version of typical male systemizing. They found that ‘somewhat paradoxically, many individuals with ASD display androgynous physical features regardless of gender (Bejerot et al, 2012, p. 116).’ They concluded that ‘[their] present findings provide some support for the clinical observations that prompted this study, i.e. that women with ASD often display less feminine characteristics than women without ASD, and that men with ASD often display less masculine characteristics than men without ASD (Bejerot et al., 2012, p. 119).’

Psychologist Cordelia Fine warns about possible gender bias in neuroimaging sex differences in the brain: ‘The possibility of neuroimaging “facts” about male and female brains—that may be spurious, overinterpreted, misinterpreted, or even fabricated—influencing public attitudes about gender raises ethical concerns. The imaginative reader will not have too much difficulty envisaging how, by *reinforcing stereotypes*<sup>24</sup>, such claims may affect people’s social attitudes in ways that oppose progress toward greater gender equality [...] (Fine, 2010, 282-283).’<sup>25</sup>

Morsanyi et al. warn that ‘many of the claims of the E[mpathizing]-S[ytemizing] theory have not been tested empirically, [and therefore] the ideas advanced by the theory should be regarded with extreme caution, especially by professionals who work with individuals with autism (Morsanyi et al., 2012, p. 491).’

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<sup>24</sup> My emphasis.

<sup>25</sup> Cordelia Fine wrote a book ‘Delusions of Gender: How Our Minds, Society, and Neurosexism Create Difference’ to counteract the assertions in Baron-Cohen’s book ‘The essential difference’. There has been a short but vehement response from Baron Cohen in which he dismissed Fine’s book as an attempt to abolish all sex differences, to which Cordelia Fine replied: ‘It is interesting that Baron-Cohen presents my criticisms of the newborn study as a politically motivated “last-ditch attempt to make sex differences go away.” Some might regard his response as a last-ditch attempt to save them (see: [http://www.cordeliafine.com/Fine\\_Response\\_Psychologist\\_December\\_2010.pdf](http://www.cordeliafine.com/Fine_Response_Psychologist_December_2010.pdf)). Although this is an extremely interesting debate, I will not take a stand in it, but will suffice to assert that the empathizing-systemizing theory of Autism, but not necessarily the extension of it (i.e. the extreme male brain theory of Autism), is a powerful psychological explanation of Autism.

Despite these criticisms, it appears that, so far, there have been no knock down arguments against the empathizing-systemizing theory of the brain.

## 2.6. ETIOLOGY OF AUTISM (AT THE BIOLOGICAL LEVEL)

The cause for Autism is believed to be biological and can be situated at the level of the brain (Happé, 1994, p. 3, p. 29). Biological markers to diagnose Autism Spectrum Disorder have as yet not been found (Baron-Cohen, 2008b, p. 85). Autism is a heritable condition: ‘genes inherited from one or both parents play a role in the development of the autistic brain’ (Baron-Cohen, 2008b, p. 92). However, the heritability is not 100 per cent, so there must be some (as yet unknown) environmental component interacting with the risk genes for Autism (Baron-Cohen, 2008b, p. 85). Evidence for genetic causation can be found in twin studies<sup>26</sup>, in the fact that Autism runs in families, in the fact that related conditions run in families, in the existence of the Broader Autism Phenotype, in chromosomal abnormalities, and in mutations or variations in candidate genes (Baron-Cohen, 2008b, p. 92-93). The Broader Autism Phenotype (BAP) can be seen in ‘genetic relatives of people with Autism [who] often show milder expression of traits characteristic for Autism’ (Sucksmith, Roth and Hoekstra, 2011). It appears to be the case that High-Functioning Autism is the extreme (or severe) end of a continuously distributed personality trait<sup>27</sup> (with respect to reciprocal social behavior)’ (Constantino, 2011, p. 25; Bölte et al, 2011, p. 66).

A number of review articles have discussed the etiology of Autism (Abrahams and Geschwind, 2008, p.1; Moy and Nadler, 2008, p.4; Sutcliffe, 2008, p.208; Strathearn, 2009, p.3; Weiss and Arking, 2009, p. 802). The most salient about them is the heritability, heterogeneity, multigenicity, multifactoriality, but above all the complexity of the etiology of Autism. The most recent formulation of the etiology of Autism: ‘Autism spectrum disorders are highly genetic and multifactorial, with many risk factors acting together. Genes that affect synaptic maturation are

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<sup>26</sup> See e.g. Ronald and Hoekstra (2011).

<sup>27</sup> Personality traits can be defined as: ‘enduring styles of interpersonal behavior that are largely (though not completely) inherited and that predict the quality of an individual’s relationships with other people’ (Constantino, 2011, p. 25).

implicated, resulting in neurobiological theories focusing on connectivity and neural effects of gene expression' (Levy, Mandell and Schultz, 2009, p. 1627).

In the past, it has been suggested that the MMR (measles mumps, rubella) vaccine causes Autism. However, 'there is now a scientific consensus that the evidence favors rejection of a causal relationship between thimerosal-containing vaccines and autism (Chaste and Leboyer, 2012, p.287).' According to Chaste and Leboyer, other environmental factors are likely to contribute to a significant proportion of Autism Spectrum Disorder risk. Among them are prenatal and perinatal factors (e.g. 'maternal gestational diabetes and maternal bleeding during pregnancy'), socioeconomic status (e.g. 'Autism risk was found to be significantly increased for the offspring of mothers born abroad (i.e. outside Sweden) [...] The risk for low-functioning autism peaked when migration occurred around the time of pregnancy') and drugs and toxic exposure (e.g. 'Prenatal exposure to valproate is a recognized risk factor for ASD, especially in the first trimester of pregnancy')(Chaste and Leboyer, 2012, p.287-288). Recently, another candidate for an environmental component appeared: 'Exposure to traffic-related air pollution, nitrogen dioxide, PM<sup>2.5</sup>, and PM10 during pregnancy and during the first year of life was associated with autism (Volk et al., 2013, p.71).'

Moreover, there may be interactions between genetic background and environmental factors in Autism: 'individuals with autism may react differently to the same environmental stimuli and may have less tolerance to the prenatal experience compared with their siblings [with neurotypical development](Chaste and Leboyer, 2012, p. 288).' So, in short, Autism risk factors appear to be a matter of genes, environment, and gene-environment interactions.

## 2.7. INTERVENTIONS IN AUTISM

No cure for Autism is available (Happé, 1994, p. 109; Chen, Miller and Rosenstein, 2003, p. 49; Clarke and Van Ameron 2008, p. 97; Giarelli et al., 2005, p. 390; Levy, Mandell and Schultz, 2009, p. 1635; McGeer, 2009, p. 517). Social scientist Charlotte Brownlow even states that 'the fundamental neurological condition underlying Autism is untreatable and hence unchangeable'

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<sup>28</sup> I.e. Particulate Matter.

(Brownlow, 2007, p. 211). Most children with Autism make progress as they grow older (Happé, 1994, p. 111).

Although Autism is not a condition that can be eliminated from a person, some therapies can be used to ‘improve’ people with Autism. One of these therapies is the use of oxytocin. Oxytocin, a hormone known to promote mother-infant bonds, may be implicated in the social deficit of Autism. Andari et al. found that after oxytocin inhalation, the subjects (with High-Functioning Autism) exhibited stronger social interactions and enhanced feelings of trust and preference. Also, oxytocin increased patients’ gazing time on the eyes. Thus, under oxytocin, the subjects responded more strongly to others and exhibit more appropriate social behavior and affect, suggesting a therapeutic potential of oxytocin (Andari et al., 2010). However, according to Research Autism<sup>29</sup>, an institution for the scientific evaluation of treatments and therapies for Autism, there is insufficient or mixed evidence for oxytocin treatment: ‘At this stage, we do not know whether oxytocin will have any benefits nor whether there are any risks involved. For this reason we do not feel that oxytocin can be considered a valid treatment for Autism’.<sup>30</sup>

Behavioral interventions that were rated ‘(very) strong positive evidence’ by Research Autism are: Early Intensive Behavioral Intervention (UCLA Model), Picture Exchange Communication System (PECS), Cognitive Behavioral Therapy, Pivotal Response Training, and Music therapy.<sup>31</sup>

McPheeters et al. (2011) conducted a systematic review of medical treatments for children with Autism Spectrum Disorder. They found that ‘although many children with ASD are currently treated with medical interventions, strikingly little evidence exists to support benefit for most treatments (e1312)’. Only a few medications (risperidone and aripiprazole) have shown benefit for challenging or repetitive behaviors in children aged 12 years and younger with Autism. Significant adverse effects (weight gain, sedation and extrapyramidal effects (tremor, dyskinesia and rigidity (McPheeters et al., 2011, e1315-e1316))) show that ‘caution is warranted regarding their use in patients without severe impairments or risk of injury’ (McPheeters et al., 2011, e1319). With respect to medications for adolescents and young adults with Autism, Dove et al. (2012, p. 725) maintain: ‘Given the number of individuals affected by ASD, there is a

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<sup>29</sup> [http://researchAutism.net/Autism\\_treatments\\_therapies\\_interventions.ikml](http://researchAutism.net/Autism_treatments_therapies_interventions.ikml). Accessed 24-05-2013.

<sup>30</sup> [http://researchAutism.net/Autism\\_treatments\\_therapies\\_intervention.ikml?ra=106](http://researchAutism.net/Autism_treatments_therapies_intervention.ikml?ra=106). Accessed 24-05-2013.

<sup>31</sup> [http://researchAutism.net/Autism\\_treatments\\_therapies\\_interventions.ikml](http://researchAutism.net/Autism_treatments_therapies_interventions.ikml). Accessed 24-05-2013.

dramatic lack of evidence on best approaches to therapies for adolescents and young adults with these conditions. Little evidence supports the use of medication treatments in the adolescent and young adult population’.

According to Ingersoll (2011) ‘there is growing consensus that the most effective interventions for children with ASD target core deficits (i.e., social communication); focus on individualized child goals; actively engage the child in multiple, planned learning opportunities throughout the day; incorporate the child’s interests; and involve multiple social-interaction partners, including parents (Ingersoll, 2011, p. 338).’ Moreover, Ingersoll found that early identification and treatment of Autism is important: ‘specifically targeting early social-communication behaviors, such as imitation and joint attention, in young children with ASD is beneficial (Ingersoll, 2011, p. 338).’

## **2.8. QUALITY OF LIFE OF PERSONS WITH HIGH-FUNCTIONING AUTISM**

In this section I will briefly summarize research on the quality of life<sup>32</sup> of persons with HF-ASC. Quality of life can be defined as ‘a concept that reflects a person’s desired conditions of living related to eight core dimensions of one’s life: emotional well-being, interpersonal relationships, material well-being, personal development, physical well-being, self-determination, social inclusion, and rights’ (Graetz, 2010, p. 34). There is a broad international consensus about these dimensions of personal well-being (Renty and Roeyers, 2006, p. 512). However, it should be kept in mind that ‘as non-autistic people, we have no method of accurately judging another human being’s quality of life without that judgment’s being colored by our own experiences, value systems, and the value systems of the society in which we live’ (Krcek, 2013, p. 13).

Jennes-Coussens, Magill-Evans and Koning (2006, p. 412) found that a group of young men with Asperger syndrome ‘reported a significantly lower social and physical quality of life’.

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<sup>32</sup> The World Health Organization defines ‘quality of life’ as: ‘an individual’s perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns’ (WHO, 2011, p. 307).



She concluded that '[t]he physical and the social domain should be addressed to enhance quality of life and allow individuals to successfully participate in meaningful, age appropriate activities'.

Renty and Roeyers (2006, p. 520) found that for High-Functioning adults with Autism Spectrum Disorder 'quality of life is most strongly [negatively] associated with an unmet formal support need regarding accommodation, interpersonal relationships, daytime activities and ASD-specific information'. They conclude that 'given the significant association of quality of life with the number of unmet formal support needs, professional supporters should strive to meet all individual needs that persons with ASD report (Renty and Roeyers, 2006, p. 521).'

According to Nicolaidis (2012, p. 506) even proponents of the Neurodiversity movement, although they may oppose a cure for Autism, accept the improvement of quality of life of persons with Autism: 'They advocate for increased acceptance, accommodations, and supports and are very welcoming of research, therapies, and services that help them improve their quality of life'. Steven Kapp et al. argue that some deficits of High-Functioning Autism need interventions to ameliorate them, other 'deficits' like avoiding eye contact or repetitive body movements, are unusual but harmless (they may even be useful as coping mechanisms), and therefore interventions to eliminate them are not necessary (Kapp et al., 2013, p. 59). Nicolaidis claims that health care professionals are responsible 'to advocate for access to services, therapies, and accommodations that may help improve quality of life [of persons with Autism]' (Nicolaidis, 2012, p. 506).

A minority of adults diagnosed with Autism Spectrum Conditions in childhood achieves relatively good outcome such as 'employment, independent or mostly independent housing, and one or more reciprocal relationships, such as a spouse, partner, or friend (McMahon and Farley, 2011, p. 84).'

### 3. AIM

My aim is to transform more or less widely held moral intuitions, which are both wrong and harmful for individuals with Autism. The moral intuitions that I disagree with and aim to render harmless are described in §5.1.

I, together with my co-authors, compare harmful moral intuitions with respect to Autism with, for instance, harmful moral intuitions with respect to homosexuality. These latter intuitions underlie so called homophobic stances. Just as homophobic stances can be criticized for creating the harmful social conditions that threaten self-respect and well-being of vulnerable homosexuals, e.g. the social condition of not being able to marry somebody of the same sex, Autism-phobic stances (i.e. opposing Autism-friendly stances) can be criticized for creating the harmful social conditions and practices that threaten self-respect and well-being of vulnerable persons with Autism, e.g. the social condition of having extreme difficulty finding a job, or holding on to one, in a world that favors Neurotypical ways of communicating and socially interacting.<sup>33</sup> These social conditions and practices can be called harmful towards persons with Autism because they unjustifiably limit their opportunities to live the good life.

In the four papers presented in this dissertation I analyze and discuss, together with co-authors, various value statements (moral beliefs) and moral stances, which I regard as harmful for persons with Autism and which are obstacles for the creation of an Autism-friendly society and ultimately for the well-being of individuals with Autism. These debatable value statements and moral stances are by no means exhaustive. In the papers I try to show that the positions underpinning the Autism-phobic moral stances are not warranted and cannot be defended in a good way. In doing so, I hope to transform the harmful moral intuitions underlying these positions into harmless ones. How I intend to do that will be explained more in the following methodological discussion.

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<sup>33</sup> E.g. the Neurotypical expectation to have eye contact during a conversation. When it is not there, or at least not as much as expected, the Neurotypical may lose interest in continuing the conversation, falsely believing the Autistic person is not interested.

## **4. METHODOLOGICAL DISCUSSION**

This dissertation is an interdisciplinary work in the area of Health and Society relying heavily on applied ethics. Ethics is about ‘understanding and examining the moral life’. It is ‘a general term referring both to morality and ethical theory’. Morality refers to widely shared social conventions about right and wrong human conduct. Ethical theory refers to the fundamental and systematic philosophical reflection on morality. Philosophical reflection, in this context, refers to the ‘study of justification (Hospers, 1997, p.6) of our moral beliefs – that is, trying to find good reasons for them. ‘Applied ethics’, or its synonym ‘practical ethics’ (Beauchamp, 2003, p.1), refers to the use of ethical theory and methods of analysis to examine moral problems, practices and policies (Beauchamp and Childress, 1994, p. 4-5).

In the first paragraph I will discuss the applied ethical theoretical background of the papers, which is mostly about my reliance on a version of the method of wide reflective equilibrium. In the second paragraph I will explain the steps of my ‘journey’ of ethical reflection. In the third and final paragraph of this chapter I will give a ‘tour’ through the reasoning of the papers, summarizing the result of this methodology.

### **4.1. APPLIED ETHICAL THEORETICAL BACKGROUND OF THE PAPERS**

I will now say a little bit about the theoretical background of the papers. In particular I will say something about which (implicit) method I (together with my co-authors) relied on in order to arrive at a justification of my moral beliefs.

My first assumption is that (my) ‘moral beliefs can be more or less well founded and that we can therefore argue reasonably about them (Malmqvist, 2008, p. 33).’ I understand moral foundation or justification to be just as much a matter of induction as it is a matter of deduction (Beauchamp and Childress, (1994). It moves both in a bottom-up direction and in a top-down

direction trying to reach coherence between particular and general judgments. It is neither a unilateral abstraction from particular case judgments nor a unilateral application of general norms (DeGrazia and Beauchamp, 2010, p. 47). It ‘refuses to assign priority to either a top-down or a bottom-up strategy (Beauchamp, 2003, p. 7). I agree with Beauchamp that “‘the top’ (principles, theories) and ‘the bottom’ (cases, particular judgments) [are] insufficient resources for applied ethics (Beauchamp, 2003, p. 10).’ I strive to reach a form of ‘wide reflective equilibrium’, which has its origins in John Rawls’ ‘reflective equilibrium’: ‘the process of mutual adjustment of principles and considered judgments (Rawls, 1971, p. 20).’ Norman Daniels (1979) developed this method further by introducing an extra element into reflective equilibrium, namely, a set of relevant background theories:

‘The method of wide reflective equilibrium is an attempt to produce coherence in an ordered triple of sets of beliefs held by a particular person, namely, (a) a set of considered moral judgments, (b) a set of moral principles, and (c) a set of relevant background theories (Daniels, 1979, p. 258).’

The variant of the method of wide reflective equilibrium I rely on in this dissertation is in the spirit of Norman Daniels’ method. I start with widely held more or less considered moral judgments or moral intuitions that I take to be wrong and harmful for individuals with Autism. Starting from these moral intuitions, I evaluate the strengths and weaknesses of plausible moral judgments, principles, relevant background theories (both ethical theories and theories from other disciplines, e.g. psychological theories about moral development) and relevant formative experience. Moral justification is ‘a matter of the mutual support of many considerations, of everything fitting together into one coherent whole’ (Beauchamp and Childress, 1994, p. 20-23). ‘The question how to understand a particular part can be decided only against a very broad background of considerations (Herrmann, 1998, p. 113).’

The philosopher Jürgen Habermas criticized the procedures of Rawls and Daniels as ‘monological’ and introduced ‘discourse ethics’. In discourse ethics *dialogue* is required as a condition for an impartial [universalized] moral outlook. Habermas articulated a dialogical principle of universalization: ‘A [moral norm] is valid just in case the foreseeable consequences and side-effects of its general observance for the interests and value-orientations of each individual could be jointly accepted by all concerned without coercion [i.e. consensus] (i.e., in a

sufficiently reasonable discourse)(Bohman and Rehg, 2011).’ However, Thompson makes the point that: ‘Discourse ethics is compatible with, [...], the procedures advocated by Rawls and Daniels [...] [Discourse] corrects [an individual’s] mistakes, points out her prejudices, supplies her with information and hypotheses that can only come from contact with others. But in the end it is up to the individual to determine for herself what is true or false, right or wrong. Reaching consensus [Habermas is a proponent of the ‘consensus theory of truth’] would simply mean that each individual is able to arrive at the same judgment (Thompson, 1998, p. 44-45).’

The goal of the method of wide reflective equilibrium is to test, modify or reject moral norms (including moral principles) in order to form ‘a coherent moral outlook’ (DeGrazia and Beauchamp, 2010, p. 47). Such a ‘coherent moral outlook’ should not be regarded as ‘a finished product’. Instead, ‘we should assume in applied ethics that we face a never-ending search for incoherence and for novel situations that challenge our current moral framework (Beauchamp, 2003, p. 11).’ My model of moral justification, which is an application of the method of wide reflective equilibrium, is implicit in my papers; it can only be read ‘between the lines’.

## **4.2. STEP-BY-STEP: A JOURNEY THROUGH A LANDSCAPE OF ETHICAL REFLECTION**

The very first step in my ethical reflections is to doubt certain value statements or moral stances regarding Autism. The range of these value statements or moral stances is very broad. They may relate to how individuals with Autism fare (i.e. their well-being) within health care, within families, within education or within society in general. Then I start reflecting upon this doubt (e.g. doubting whether Autism is a disease) in a systematic and fundamental way, most often by making comparisons and analogies (e.g. the analogy of homosexuality in paper I). This ethical thinking<sup>34</sup> can be visualised as a ‘journey through a landscape of ethical reflection’: I wander through this landscape in search of a place where I can enjoy an unobstructed panoramic view of

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<sup>34</sup> Some would call this way of thinking, pejoratively, ‘armchair philosophy’.

the surroundings (i.e. a coherent moral outlook on the moral issue at hand). The itinerary of my journey shows the following destinations<sup>35</sup>:

1. identification of some widely held factual beliefs and moral intuitions, which are both wrong and harmful for individuals with Autism
2. formulation of a relevant moral question and formulation of a moral position which I will argue for
3. identification of morally relevant facts from natural scientific and social scientific theories<sup>36</sup>
4. identification of morally relevant formative experiences (e.g. in Autistic autobiographical reports)
5. identification of relevant moral arguments (e.g. analogies) and relevant moral theories
6. weighing the arguments: accept, modify or reject moral norms (including moral principles)
7. forming 'a coherent moral outlook'<sup>37</sup>

Facts, according to non-cognitivists,<sup>38</sup> are very different from values: 'The facts are determined by the way the world is. We can find out what the facts are by observation and experiment. [...] Values are not determined by the way the world is. [...] Our moral evaluations, are not beliefs about the way the world is, rather, they are affective responses to the way we take things to be. As such they cannot be true or false, for there is nothing for them to be true or false of (McNaughton, 1988, p. 17).' My arguments depend partly upon factual information. This does not violate the fact/value distinction: 'good ethics depends upon good facts' (Sulmasy and Sugarman, 2010, p. 12). Morality needs and uses scientific knowledge and facts. Indeed, many moral questions are partially turned into empirical ones, for instance: 'did this act produce the most happiness in the world?' One can attempt to measure this by using instruments that measure happiness (i.e. quality of life). But the validity of morality cannot be tested by comparing to facts

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<sup>35</sup> The 'destinations' do not occur in a fixed order. I move to and fro in my 'landscape of ethical reflection'.

<sup>36</sup> Literature from the following (empirical) sciences has been used in this dissertation (in varying degrees of prevalence): criminology \* disability studies \* educational sciences \* genetics \* history \* neurology \* pediatrics \* pathology \* philosophy \* psychiatry \* psychology \* social and cultural geography \* social psychology \* sociology.

<sup>37</sup> This 'coherent moral outlook' could also be called an 'examined moral intuition'. Such an intuition is never a static endpoint; it is always open for revision, as long as there is no consensus. This is the essence of wide reflective equilibrium.

<sup>38</sup> In the chapter on 'material' I will touch upon the moral realism-non-cognitivism debate.

directly. The premises in ethical arguments are moral and factual, not simply factual, nor simply moral.

### **4.3. A SUMMARY OF THE REASONING WITHIN THE PAPERS**

I will now roughly sketch, in retrospect and from paper to paper, the reasoning from the initial moral intuitions to the ultimate moral positions.

#### **4.3.1. PAPER I (Autism as a Natural Human Variation: Reflections on the Claims of the Neurodiversity Movement)**

The Neurodiversity movement claims that all atypical neurological development is natural and good, even as something to be celebrated. The Neurodiverse do not need a cure, according to this movement, not even amelioration of problematic behaviours. Instead of letting the Neurodiverse adapt to the needs of society, the adherents of the Neurodiversity movement expect society to adapt to the needs of the Neurodiverse. Intuitively, and *prima facie*, this claim does not sound right, because it might be detrimental to the well-being of some Neurodiverse if it was actually followed through in society. Therefore, we can justifiably ask ourselves whether these claims of the Neurodiversity movement are ethically coherent. My research question therefore is: Should we accept the Neurodiversity claim (from a moral point of view)?

I, together with my co-author, argue for the following moral position in paper I: ‘We should accept the narrow version of the Neurodiversity claim.’ The reasoning relies on two very common ways to argue in ethical discussions. Firstly, we argue that Autism is a natural variation on par with homosexuality. Secondly, we apply the principle that ‘similar cases should be treated ethically similar.’

Autism resembles homosexuality in some respects. We should expect that many individuals with Autism have psychological problems due to the ‘Autismphobic’ character of society in a similar way as homosexuals have psychological problems due to the ‘homophobic’ character of society. The ‘cure’ for these problems of homosexuals is simply a wider acceptance of homosexuality. Similarly, a wider acceptance of Autism, i.e. less ignorance about and more tolerance for Autism might prevent or at least reduce psychological problems with individuals with Autism.

#### **4.3.2. PAPER II (Living the Categorical Imperative: Autistic Perspectives on Lying and Truth Telling—Between Kant and Care Ethics)**

Individuals with Autism tend to be not so skilled in prosocial lying. Among psychologists prosocial lying is considered to be a necessary skill for normal and healthy functioning. Individuals with Autism, however, according to psychologists and also by their own accounts, are more prone to be ‘rudely honest’ than individuals with Neurotypical Development. Obviously, by being ‘rudely honest’ they will hurt the feelings of the one(s) they address. This is wrong, both from a moral point of view (based on the principle of ‘do not harm’) and from a prudential point of view for the individual with Autism him- or herself (he/she does not contribute in a positive way to building a relationship by being rudely honest). Therefore it may be useful for the well-being of the individual with Autism to teach him/her the skill of prosocial (or empathic) lying or at least to sometimes refrain from telling the truth. However, it is a widely held belief that it is wrong to teach children to lie. Moreover, as some philosophers have maintained, it is absolutely forbidden to lie (e.g. Immanuel Kant). Therefore, it may be ethically problematic to teach them to lie, even if it only concerns prosocial lying. Considering all of this, I, together with my co-authors, come to the following research question: Is it morally allowed to teach persons with High-Functioning Autism the social skill of lying?

We argue for the following moral position in paper II: ‘It is morally allowed to teach persons with High-Functioning Autism the social skill of lying.’ The main reasons for this are twofold. First, individuals with High-Functioning Autism can use their cognitive capabilities, especially



their systemizing skills, to learn to lie, or to refrain from being truthful, in a rule-based way. They can use Temple Grandin's categorisation of when it is allowed to break rules as a shining example. Secondly, prosocial lying is beneficial for the relationship building capability of individuals with Autism, because in general healthy relationships have a healthy balance between being truthful and prosocial lying.

### **4.3.3. PAPER III (Human Capabilities, Mild Autism, Deafness and the Morality of Embryo Selection)**

The philosophers Julian Savulescu and Guy Kahane articulated the intuition 'It is wrong to choose an Autistic embryo if it is possible to choose a healthy non-Autistic embryo' in a slightly different way by writing: 'we believe that reproducers [...] have strong reasons to seek to prevent [...] the severe impairment in social skills associated with Asperger's syndrome (Savulescu and Kahane, 2009, p. 281).' I immediately sensed aversion towards this claim and the underlying intuition, based on my experiences with Autism (including Asperger's syndrome), my collection of empirical facts about Autism, and my horizon of values. However, my moral counter-intuition was unexamined and therefore it lacked moral authority. That is why I, together with my co-authors, formulated my moral research question: Is it morally allowed to choose an embryo with the genetic make-up of High-Functioning Autism in the context of PGD?

We argue for the following moral position in paper III: 'It is morally allowed to choose an embryo with the genetic make-up of High-Functioning Autism in the context of PGD.' The main reasons for this are twofold. First, we believe that it is morally wrong to knowingly and willingly bring into the world a human being severely lacking a basic central human functional capability if a human being who has a sufficient level of each and every basic central human functional capability could be brought into the world. Secondly, we do not believe that individuals with High-Functioning Autism are severely *intrinsically* lacking a basic central human functional capability. They can have a good quality of life, provided they have a social environment that recognizes and acts sufficiently on their specific social and emotional needs. The case of the

‘High-Functioning Autistic’ embryo is judged morally similar to a ‘Neurotypical’ one. Subsequently, the principle of treating similar cases similarly is applied.

#### **4.3.4. PAPER IV (Cultivation of Empathy in Individuals with High-Functioning Autism Spectrum Disorder)**

Moral educators Amie Senland and Ann Higgins-D’Alessandro wrote a pioneering article about the moral education of individuals with High-Functioning Autism. After reading it I felt something was missing in this paper. The authors had merely written about empathy development (on average: a weakness of individuals with Autism) in the context of moral education. It seemed as if they started their reasoning from the intuition that one should rely on empathy in the moral education of children. My experience with Autism and my understanding of empirical knowledge about the psychology of Autism suggested that maybe also the development of systemizing (on average: a strength of individuals with Autism) could play a constructive role in moral education. Furthermore, I felt that it is wrong to emphasize a child’s weakness and to neglect its strengths, both from an efficacy point of view and from a moral point of view. It is more effective for the development of a child to also use its strengths and not just focus on its weaknesses. Moreover, it is my firm belief that children have a right to the full development of their potential. From this intuition of mine it was a small step to the more specified (but still unexamined) intuition that it is wrong to confirm empathizing weaknesses and to neglect systemizing strengths of individuals with Autism in their moral education. And from this specified intuition it was another small step to the moral research question: What is the proper place of empathy in moral education suitable for individuals with neurotypical development as well as for individuals with HF-ASD?

I argue for the following moral position in paper IV: ‘We should not rely solely on an empathy-based moral education for individuals with High-Functioning Autism.’ The main reason for this is that an empathy-based moral education that ignores the limits of empathy and the preference for rules of persons with High-Functioning Autism may be less effective for the moral development of individuals with High-Functioning Autism.

## 5. MATERIAL AND POINTS OF DEPARTURE

The papers in this dissertation are essentially dialogical in nature, in the sense that my ethical reflections and ultimately my ethical beliefs are informed by moral intuitions about Autism, by empirical scientific beliefs about Autism, by my experiences with Autism, and by normative ethical and meta-ethical beliefs, which I will discuss successively in separate paragraphs. Moral intuitions with respect to Autism, empirical scientific beliefs about Autism, experiences with Autism and normative ethical and meta-ethical beliefs are the *material* on which I (together with my co-authors) reflect in order to arrive at the ethical positions as stated in this dissertation.

### 5.1. INTUITIVE POINTS OF DEPARTURE FOR APPLIED ETHICAL REFLECTION

The moral intuitions, to recapitulate, that I disagree with and aim to transform, are:

1. (paper I) It is wrong to refer to Autism as natural and good.
2. (paper II) It is wrong to be ‘rudely honest’ and it is wrong to teach children to lie.
3. (paper III) It is wrong to choose an Autistic embryo if it is possible to choose a healthy non-Autistic embryo.
4. (paper IV) One should rely on empathy in the moral education of children.

What is the nature of these moral intuitions? They are pre-reflective (or automatic) judgments about what is right and wrong (Sandberg and Juth, 2011, p. 213). They are what may be called partly ‘ideological’ in the sense that they contain both factual assertions (‘individuals with Autism are not like us’; ‘they have no empathy at all’; ‘they are different’) and values/moral judgments (‘Autistic life is not as valuable as our [neurotypical] life’; ‘we should pity them’). I aim to transform these ‘ideological (Autism-ignorant or Autism-phobic) assumptions’ both by looking at morally relevant facts and also by discussing values and moral judgments.

The ‘ideological’ assumption in paper IV is that one should rely on empathy in the moral education of children. Neglecting the strengths of children with Autism in their education could be a matter of Autism-ignorance or of Autism-intolerance. In the latter case it would amount to Autism-phobia. The intuitions formulated above are (more or less) widely held intuitions and moral value judgments about Autism, which I think are both wrong and harmful (detrimental for their well-being) for individuals with Autism.

Being widely held is obviously no guarantee for the moral authority of this intuition. A belief could be widely held, yet demonstrably false; like the widely held belief in the seventeenth century in the western hemisphere that the earth was created about 4000<sup>39</sup> years BC. If we automatically would grant moral intuitions moral authority, we would not have the possibility to condemn, for instance, the homophobic intuition against homosexuality or the racist intuition against interracial sexual relationships.<sup>40</sup> These counterexamples show that there are good reasons to condemn such intuitions (on the basis of the principle of equality). Therefore, we cannot allow intuitions to have *a priori* moral authority. Also Peter Singer did not trust moral intuitions: ‘If [...] moral intuitions are the biological residue of our evolutionary history, it is not clear why we should regard them as having any normative force (Singer, 2005, p. 331).’ In accordance with Peter Singer, I believe that moral intuitions do not have any *a priori* moral authority. They need to be examined, and if there are good reasons for them they may be granted *a posteriori*<sup>41</sup> moral authority.

But what are good reasons? According to philosopher Derek Parfit, good reasons in morality are objective-given value-based. Parfit wrote: ‘we have such reasons even if we would *not* be moved or motivated to act upon them (Parfit, 2011, p. 110).’ Object-given value-based reasons (e.g. equality, justice, autonomy, etc.) are what matters in morality. Subject-given desire-based reasons do not matter.

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<sup>39</sup> James Ussher, Bishop in the Church of Ireland, from 1625 to 1656 established the first day of creation as Sunday 23 October 4004 BC (see: <http://www.lhup.edu/~dsimanek/usshe.htm>).

<sup>40</sup> Compare the intuitive repulsion a lot of white American in the fifties of the 20<sup>th</sup> century felt at the idea of interracial marriage. An important reason not to rely on moral intuitions is that they may simply be wrong or unjust (Macklin, 2006, p. 38).

<sup>41</sup> I.e. after adequate examination via the method of wide reflective equilibrium.

## 5.2. EMPIRICAL SCIENTIFIC POINTS OF DEPARTURE FOR APPLIED ETHICAL REFLECTION

The first section of this paragraph discusses my point of departure with respect to psychological theory about Autism. The second section discusses the role of empathy in the moral agency of individuals with Autism. The third and final section is about the role of moral rules in the moral agency of individuals with Autism.

### 5.2.1. PSYCHOLOGICAL THEORY ABOUT AUTISM

The first point of departure is that the Theory of Mind hypothesis and other cognitive psychological explanations,<sup>42</sup> such as the Weak Central Coherence hypothesis and the Weak Executive Function hypothesis complement each other in giving an explanation of Autism on a cognitive level. The three hypotheses just mentioned appear to be consistent with each other, i.e. they appear not to contradict each other. However, the Theory of Mind hypothesis could not explain the systemizing behaviors of individuals with Autism. Therefore, an adaptation of this theory was formulated, called the Empathizing-Systemizing or the Extreme Male Brain theory of Autism: ‘Stronger systemizing and weaker empathizing are believed to explain or underlie a wide range of characteristics associated with males and subjects with Autism Spectrum Conditions (ASCs), such as Asperger’s Syndrome, compared with females and subjects without ASCs (Takeuchi et al., 2013, p.222).’

The Empathizing-Systemizing or the Extreme Male Brain theory of Autism, is extraordinarily morally relevant for two reasons. The first reason is that *empathy* is said to play a major role in the moral development of children and some philosophers (e.g. Michael Slote) even give empathy a central role in their ethical theory. The second reason is the fact that *moral rules* and

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<sup>42</sup> The impact of phenomenological theories of Autism (e.g. Shaun Gallagher (2005) in the (main stream) scientific and professional field of Autism is marginal. For instance, they are not mentioned in a recent handbook by Bölte and Hallmayer (2011) about Autism Spectrum Conditions. Irrespective of whether Bölte and Hallmayer’s omission is justified or not, phenomenological (‘embodiment’) theories of Autism, at least in this dissertation, are not necessary for answering the research questions (as explained in § 5.4) and therefore remain untreated.

systems of moral rules are expressions of human systemizing capabilities. The empathizing-systemizing theory of the brain has had some recent scientific support (e.g. Takeuchi et al., 2013).<sup>43</sup> I therefore take as a starting point for my ethical reasoning, that ‘the core features of ASC can be explained by a deficit in empathizing alongside intact or superior systemizing; the drive to understand and derive rules about a system (Grove et al., 2013, p. 600).’ The fact that the empathizing-systemizing theory explains most of the symptoms of Autism together with the fact that there is some scientific support for this theory, are justifications for my choice to take this theory as one of the empirical scientific points of departure for my ethical reflection.

### 5.2.2. THE ROLE OF EMPATHY IN THE MORAL AGENCY OF INDIVIDUALS WITH AUTISM

The second starting point is that I emphatically distance myself from the idea that individuals with Autism lack empathy altogether. We have to distinguish between emotional (or affective) and cognitive empathy. The former is ‘an emotional response in an individual that stems from and parallels the emotional state of another individual’ (Smith, 2009, p. 490). The latter is the ability to infer mental states such as beliefs, desires and intentions, also known as ‘Theory of Mind’ and ‘mentalizing’. The idea that individuals with Autism lack cognitive empathy has been very influential in the past decades. For instance, Baron-Cohen et al. claim that cognitive empathy is ‘*a core and, possibly, universal deficit*’<sup>44</sup> among individuals with Autism (Baron-Cohen et al., 2011).’ They also see a deficit in affective (emotional) empathy (Baron-Cohen et al., 2011).

However, Blair found that ‘while individuals with autism have clear impairment in “cognitive” empathy, it is considerably less certain whether they have impairment in “emotional” empathy (Blair, 2008, p. 158). Dziobek et al found that although ‘individuals with AS (Asperger’s Syndrome) are impaired in cognitive empathy, they do not differ from controls in

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<sup>43</sup> See Chapter 2 Background, § 4. Psychology of Autism (at the cognitive level). However, this does not mean that these theories

<sup>44</sup> Italicized by the author.

emotional empathy (Dziobek et al., 2008, p. 464).’ Additionally, Rogers et al. (2007) found that individuals with Asperger’s Syndrome scored higher than controls on personal distress.

According to psychologist Adam Smith, individuals with HF-ASC even have a surfeit of emotional empathy (but a deficit of cognitive empathy) (Smith, 2009, p. 489). However, this surfeit in emotional empathy can also result in impairment as it may be the cause of social retreat of the person with HF-Autism; Smith indicates that ‘children with autism may find it difficult to engage emotionally with others because their capacity for EE [emotional empathy] is excessive and not complemented by commensurate CE [cognitive empathy]’ (p. 494). Also Markram, Rinaldi and Markram (2007, p. 87) claim that ‘the lack of social interaction in autism [may be because] a subset of [social and emotional] cues are overly intense, compulsively attended to, excessively processed and remembered with frightening clarity and intensity.’ The world may be painfully intense for persons with Autism and therefore Markham et al (2007) propose Autism as an ‘intense world syndrome’: ‘the autistic person may perceive its surroundings not only as overwhelming intense due to hyperreactivity of primary sensory areas, but also as aversive and highly stressful due to a hyperreactive amygdala, which also makes quick and powerful fear associations with usually neutral stimuli. The autistic person may well try to cope with the intense and aversive world by avoidance (Markram, Rinaldi and Markram, 2007).’ However, contrary to Markham’s suggestion, this hypersensitivity and excessive fear reactions are not contradicting the relative inability of persons with Autism to read other people’s minds or to put oneself into someone else’s position or to, in general, attribute mental states to oneself and others (i.e. a cognitive empathy deficit or hypoempathizing). On the contrary, the hypersensitivity and excessive fear reactions may explain cognitive empathy impairment, which in turn explains impaired social interactions and withdrawal.

Philosopher David Shoemaker is one of the writers who claim that although individuals with Autism are relatively incapable of cognitive empathy, they nevertheless are capable of emotional empathy<sup>45</sup>. He explains this in the following way:

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<sup>45</sup> Philosopher Jeanette Kennett, however, warns against too readily assuming that individuals with High Functioning Autism have no emotional empathy deficit (Kennett, 2011). I agree with Kennett in the sense that there also exist Autistic psychopaths (see Fitzgerald, 2010) who are both lacking in cognitive as well as emotional empathy.

‘The person with HFA [High-Functioning Autism ] [...] while incapable of projective imagination [i.e. cognitive empathy], is still capable of the kind of emotional exchange constitutive of moral agency [i.e. emotional empathy]; it’s just that the process of getting to the exchange is much more indirect (Shoemaker, 2007, p. 100).’ Shoemaker explains ‘the kind of emotional exchange constitutive of moral agency’ as: ‘one shares the cares of the object of empathy [...], that is, one is emotionally vulnerable with respect to the fortunes of the items the person with whom one empathizes cares about and vulnerable in a roughly similar way to the person with whom one empathizes (Shoemaker, 2007, p. 98).’

Moral education researchers Ann Higgins-D’Alessandro and Amy Senland also emphasize that individuals with High-Functioning Autism are not lacking in emotional empathy and that emotional empathy is a valuable source to be used in their moral education (personal communication at the Association for Moral Education (AME) conference, Montréal, 26<sup>th</sup> October 2013). In their pioneering article in the field of moral education of individuals with High-Functioning Autism, they found that adolescents with High-Functioning Autism had similar empathic concern as adolescents with TD (typical development) but that the former had ‘significantly higher personal distress and lower moral reasoning than TD youth (Senland and Higgins-D’Alessandro, 2013, p. 1).’ Furthermore, these authors found that ‘adolescents with HF-ASD perceived themselves as having empathic concern but struggled to use these feelings to support their actions in spontaneous challenging sociomoral situations (Senland and Higgins-D’Alessandro, 2013, p. 1).’

### **5.2.3. THE ROLE OF MORAL RULES IN THE MORAL AGENCY OF INDIVIDUALS WITH AUTISM**

Another point of departure is that individuals with Autism tend to insist on other people following social rules (moral systemizing) (Baron-Cohen, 2008b, p. 67, 68). Individuals with HF-ASC care about not breaking rules (Feinstein, 2010), and they even sometimes give the appearance of being ‘super-moral’ (Baron-Cohen et al., 2011). They are ‘often the most loyal defenders of someone they perceive to be suffering an injustice’ (Baron-Cohen, 2003, p. 137).



Individuals with HF-ASC may be weak with respect to their capacity for empathy, but they seem to thrive with respect to rules.

De Vignemont and Frith (2008, p. 277) suggest that ‘people with ASD are able to detect someone’s distress but are more interested in normative rules than in emotions.’ These authors cite a study about recognition of ‘faux pas’ (i.e. an utterance that hurts someone else’s feelings, comparable to what Temple Grandin called ‘rude honesty’). In that study Asperger individuals ‘referred to violations of rules (e.g., you are not supposed to do that) rather than to the fact that the victim of the faux pas was hurt (De Vignemont and Frith, 2008, p. 276).’ De Vignemont and Frith claim that people with Autism Spectrum Disorder are more likely to give descriptions about how people should behave rather than how they actually behave: ‘they live in a normative social world (De Vignemont and Frith, 2008, p. 279).’ These authors suggest that ‘the so-called moral behaviors in ASD result from *abstract* allocentrism<sup>46</sup>. These individuals thrive on the idea of rules [...]. This is shown whenever autism spectrum individuals talk about rules that other people might follow in their social interactions that they feel they have worked out by logical analysis (De Vignemont and Frith, 2008, p. 279).’

### 5.3. EXPERIENTIAL POINTS OF DEPARTURE FOR APPLIED ETHICAL REFLECTION

From my ‘insider’<sup>47</sup> perspective as a father who has been substantially involved, for sixteen years now, in the nurturing of a non-intellectually disabled child diagnosed with Classical Autism; from my outsider perspective as a nurse who has professionally cared for intellectually disabled persons with Autism Spectrum Conditions; from my experience as a high school teacher who has now and then encountered a student with ASC; and finally from having read autobiographical accounts of Autistic writers, I have collected real-life experiences that have served as an

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<sup>46</sup> ‘When we adopt an egocentric stance the other person is understood in her relationship with the self. [...] When we adopt an allocentric stance, the other person is understood in her relationship with other people independently of the self (De Vignemont and Frith, 2008, p. 278).’

<sup>47</sup> I put ‘insider’ between quotation marks because a real insider would be someone with Autism Spectrum Disorder him- or herself.

inspiration and as input for my applied ethical enquiries. With respect to the Autistic autobiographical writers, especially Temple Grandin, Jesse Saperstein and Gunilla Gerland have been contributing to my ‘wide [ethical] reflective equilibrium’ by sharing with me their real life experiences of Autism. Through reading their experiences I have learned about what it’s like to encounter incomprehension (ignorance) about Autism or what it’s like having to deal with Autism-phobic behaviours (intolerance) in a society characterized by Neurotypical normative expectations. These expectations have been eloquently described by Gunilla Gerland:

‘To be normally polite still requires a constant effort on my part. I never seem to be able to get those standard phrases to come out by themselves. I don’t know what it is that other people do that enables them to answer automatically ‘Thanks the same to you’ when someone wishes them a nice weekend. I have to think all the time and remember what I am expected to say (Gerland, 1997, p. 254).’

An instance of Autism-phobia is the following. Temple Grandin for instance wrote:

‘When I was in high school being teased by the other kids, I was miserable. The only place I was not teased was during horseback riding and model rocket club (Grandin, 2006, p. 162).’

Jesse Saperstein recounts about his encounter with incomprehension; his mild Autism was condemned as a character flaw by his peers (Saperstein, 2010, p. 213). In the epilogue of his autobiographical work he writes:

‘the greatest disabler is being paralyzed by ignorance and intolerance when these realities could be alleviated through making the effort to understand (Saperstein, 2010, p. 220).’

Obviously, no generalized empirical claims can be derived from the autobiographical accounts.<sup>48</sup> Fragments of these accounts are merely used as *illustrative* material, which is explicitly stated in the papers.<sup>49</sup> However, the autobiographies did serve as a source of inspiration for me on an intuitive level, i.e. they played a significant part in the formation of my personal moral intuitions with respect to Autism, as can be gathered from the fragments stated above.

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<sup>48</sup> See footnote 6 on p. 274 in paper II for an explanation.

<sup>49</sup> See paper II (p. 273) and paper IV (p. 8).

But why should we even consider formative experiences in ‘wide reflective equilibrium’? Michael DePaul made clear that ‘wide reflective equilibrium’ is not plausible when a person has a very limited range of formative experience: a so-called naïve person. But also with dogmatic persons, who have ‘systematically avoided formative experiences that regularly lead others to question or abandon the moral beliefs about which he is fanatically certain (DePaul, 1993, p. 147)’ their ‘wide reflective equilibrium’ is not plausible. So formative experiences (one’s own or learning about other people’s experiences) *matter* and that is why I have incorporated them into my version of the model of ‘wide reflective equilibrium’.

#### **5.4. NORMATIVE AND META ETHICAL POINTS OF DEPARTURE FOR APPLIED ETHICAL REFLECTION**

There are three rather independent intellectual communities (Scully, 2008, p. 11) or ‘schools of thought’ contributing in very different ways to the ethics of Autism. The first of these, to which this dissertation owes a lot, is called mainstream bioethics. The second intellectual community is that of disability studies. Both communities think systematically about morally proper stances and behaviour toward disabled people (Scully, 2008, p. 9). A third intellectual community aims at generating particular moral understandings through the *experience*<sup>50</sup> of impairment (Scully, 2008, p. 9). This community is attentive to the experience of being/having a ‘different’ embodiment (Scully, 2008, p. 11). It tries to say what it is like to *be* that embodiment (Scully, 2008, p. 11). This is called a phenomenological or ‘body experiential’ turn in disability theory (Scully, 2008, p. 13). Especially narrative has become a powerful way of giving phenomenological accounts of the experience of disability (Scully, 2008, p. 12). The main criticism from this intellectual community against mainstream bioethicists is that they do not take adequate account of the differences that result from variations in ‘embodiment’ (Scully, 2008, p. 9). A typical phenomenological criticism against traditional moral philosophers (from mainstream bioethics) is that when these philosophers talk about ‘moral agents’, they are more concerned with agential

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<sup>50</sup> My emphasis.

capacities for rational thought, or with emotional or behavioural characteristics, than with their physical ones (Scully, 2008, p. 8-9).

However, disability in persons with Autism is mostly about behavioural characteristics (first and foremost social-communicative impairments) and the question of high- or low-functioning is mostly about agential capacities for rational thought. Disability in persons with Autism is not, in the first place, about physical characteristics. As can be seen by the fact that these characteristics do not appear in DSM 5's diagnostic criteria of Autism Spectrum Disorder.<sup>51</sup> However, they do play a significant role in first-person accounts of Autism. For instance, in Temple Grandin's autobiography sensory phenomena are described (e.g. Temple Grandin's use of a squeeze machine on herself as a means for relaxation). Also hypersensitivity or other sensory difficulties, common in individuals with Autism, can be a trigger to avoid social-communicative activities. Nonetheless, in the case of Autism, the emphasis on physical characteristics of phenomenological ('embodiment') accounts of Autism does not appear to be necessary for the systematic reflection on morally correct ways to behave toward persons with Autism, which is the subject of this dissertation. To keep a focus on the main aim of this dissertation, an emphasis on *behavioural* characteristics of individuals with Autism and behavioural characteristics of individuals with Neurotypical Development, for that matter, is necessary. Also relevant, for any ethical treatise, is an account of ethical theory. To this I now turn.

Ethical theory can be divided into consequentialism, non-consequentialism and virtue ethics. Consequentialism claims that the only things that matter in ethics are the consequences of an action. Non-consequentialism denies that the only things that matter in ethics are the consequences of an action. Virtue ethics, roughly speaking, emphasizes moral character rather than moral actions.

An example of a non-consequentialist ethical theory is the deontological theory of the eighteenth century philosopher Immanuel Kant. He claims that acting according to the good will (i.e. willing to follow the moral law) is the most important thing in ethics. When we act out of fear for consequences (punishment), our good will is no longer there. We have to do what is right according to the moral law, no matter what the consequences. An example of a consequentialist ethical theorist is nineteenth century utilitarian philosopher John Stuart Mill. His main claim is

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<sup>51</sup> (see § 2.3).

that Utility or the Greatest Happiness Principle is the foundation of morals. This principle holds that ‘actions are right in the proportion as they tend to promote happiness, wrong as they tend to promote the reverse of happiness. By happiness is intended pleasure, and the absence of pain; by unhappiness, pain, and the privation of pleasure (Mill, 1861, Ch. 2, § 2, 2-5).’ A rather well-known contemporary (preference) utilitarian philosopher is Peter Singer, to whom I refer in the chapter ‘methodological discussion’ with respect to the question of the moral authority of intuitions.

An influential contemporary non-consequentialist philosopher is John Rawls. He introduced a procedure using ‘a veil of ignorance’ (i.e. ignorance about our own future and about our own social, cultural and genetic background) to fairly establish principles of justice by following the method of reflective equilibrium.<sup>52</sup> The method of (wide) reflective equilibrium allows more than one moral principle, which is contrary to utilitarianism (Welin, 2003, p. 167). Rawls articulated two moral principles: ‘Each person is to have an equal right to the most extensive total system of equal basic liberties compatible with a similar system of liberty for all’ and ‘social and economic inequalities are to be arranged so that they are both: (a) to the greatest benefit of the least advantaged, consistent with the just savings principle, and (b) attached to offices and positions open to all under conditions of fair equality of opportunity (Rawls, 1971, p. 302). These principles are extremely relevant for individuals with Autism and other individuals with disabilities, who are considered to be some of the least advantaged in our society.

In this dissertation several ethical theoretical perspectives, that on a fundamental level may be incommensurable, have contributed to the formation of a coherent moral outlook. For instance, in paper II a Kantian perspective is contrasted with an ethics of care perspective, resulting in a rejection of the Kantian position with respect to lying and adopting a position strongly influenced by the ethics of care. Contrasting in principle incommensurable ethical theories and applying them to a certain practical ethical problem area does not imply ethical relativism, but rather ethical pluralism, which is the acknowledgment of meaningful contributions

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<sup>52</sup> Rawls theory of justice has been widely criticized, for instance by the feminist philosopher Susan Moller Okin. She pointed out that Rawls’ theory of justice neglected gender issues: ‘Families in which roles and responsibilities are equally shared regardless of sex are far more in accord with principles of justice than are typical families today. [...] I claim that the genderless family is more just [...]: it is more just to women; it is more conducive to equal opportunity both for women and for children of both sexes; and it creates a more favorable environment for the rearing of citizens of a just society (Okin, 1989, p. 183).’

of several, perhaps fundamentally incommensurable, ethical theories. In my view, an ethical position should be anti-dogmatic and should take into account principles from several, perhaps fundamentally incommensurable, ethical theories. Therefore, ethical pluralism can be said to be my normative point of departure for applied ethical reflection.

In the chapter on ‘methodological discussion’ I wrote that I strive to get justified moral beliefs (in a coherent moral outlook) in the context of Autism. Someone might ask whether they are justified *true*<sup>53</sup> ethical beliefs and thereby constitute ethical knowledge. There exists an on-going<sup>54</sup> meta-ethical debate about whether ‘moral truth’ is possible in the first place; this is the debate between moral realism and non-cognitivism. Moral realism ‘insists that there is a moral reality which is independent of our moral beliefs and which determines whether or not they are true or false (McNaughton, 1988, p. 7).’ Moral non-cognitivism is the ‘meta-ethical view that moral judgments are essentially different from judgments about facts, either in that they express something else than beliefs, namely feelings or attitudes, or in that they are “speech acts”, such as endorsement or prescription (Malmqvist, 2008, p. 125).’ Moral realism, to which I am particularly drawn, regards moral views as simply beliefs about the way the world is, morally speaking, while moral non-cognitivism regards moral views to contain a non-cognitive emotional element (McNaughton, 1988, p. 9).

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<sup>53</sup> See footnote 8 for a discussion of ‘truth’.

<sup>54</sup> See for instance Tim Cadman’s dissertation: ‘Reflective Equilibrium, Justification and Moral Truth.’ After asserting that cognitivism is a default and compelling position (p. 192), he immediately opens the door ajar for non-cognitivist understanding of reflective equilibrium and moral inquiry on the last page of his thesis. The question of moral truth and truth in general is an age-old question in philosophy and is still widely discussed. These debates are far beyond the scope of this dissertation.

## 6. SUMMARY OF THE PAPERS

In this chapter summaries of the four papers that make up this dissertation will be given. For a summary of the reasoning within the papers, I refer to paragraphs 4.3.1 till 4.3.4. The summaries given here are extended versions of the abstracts that accompany each paper.

### 6.1. PAPER I (Autism as a Natural Human Variation: Reflections on the Claims of the Neurodiversity Movement)

Neurodiversity has remained a controversial concept over the last decade. In its broadest sense the concept of Neurodiversity regards atypical neurological development as a normal human difference that should be tolerated and respected in the same way as other human differences. People with different neurological conditions are just different, not handicapped or pathological. The Neurodiversity claim contains at least two different aspects. The first aspect is that Autism, among other neurological conditions, is first and foremost a natural variation. The other aspect is about conferring rights and in particular value to the Neurodiversity condition, demanding recognition and acceptance.

Autism can be seen as a natural variation on par with for example homosexuality. The broad version of the Neurodiversity claim, covering low-functioning as well as High-Functioning Autism, is problematic. Only a narrow conception of Neurodiversity, referring exclusively to persons with High-Functioning Autism, is reasonable. People with Low-Functioning Autism are extremely vulnerable and their condition justifies the qualification ‘disability’.

We discuss various possible strategies for the Neurodiversity movement to claim extra resources for persons with Autism as members of an underprivileged culture without being labeled disabled or as having a disorder. One of the possible strategies for the Neurodiversity movement is to have persons with High-Functioning Autism recognized as a special group in need of certain ‘group rights’. The core of such claims is often that there is something special to be protected, for example a certain culture in risk of being swallowed by the majority culture. Another strategy is to adhere only to the narrow version of the Neurodiversity claim because the broad version of the Neurodiversity claim is problematic.

We discuss the vulnerable status of persons with High-Functioning Autism as a group and what obligation that confers on the majority of Neurotypicals. Society should not stigmatize these persons as being disabled or as having a disorder or use some other deficit-based language to refer to these people. It is much less morally problematic to refer to the particular vulnerability of these persons.

## **6.2. PAPER II (Living the Categorical Imperative: Autistic Perspectives on Lying and Truth Telling—Between Kant and Care Ethics)**

Lying (i.e. saying something you believe to be false with the intent to deceive about what you say) is a common phenomenon amongst human beings. It seems to play a role in making social interactions run more smoothly. Too much honesty can be regarded as impolite or downright rude. Remarkably, lying is not a common phenomenon amongst normally intelligent human beings who are on the Autism Spectrum. They appear to be ‘attractively morally innocent’ and seem to have an above average moral conscientious objection against deception.

In this paper, the behavior of persons with Autism with regard to deception and truthfulness is discussed in the light of two different ethical theories, illustrated by fragments from autobiographies of persons with Autism (in particular: Jen Birch, Marc Fleisher, Temple Grandin, Caiseal Mór, Jeanette Purkis, and Edgar Schneider). A systemizing ‘Kantian’ and an empathizing ‘ethics of care’ perspective reveal insights on High-Functioning Autism, truthfulness and moral behavior.

Both perspectives are problematic from the point of view of a moral agent with Autism. High-Functioning persons with Autism are, generally speaking, strong systemizers and weak empathizers. Particularly, they lack ‘cognitive empathy’ which would allow them to understand the position of the other person. Instead, some tend to invent a set of rules that makes their behavior compatible with the expectations of others.

From a Kantian point of view, the Autistic tendency to always tell the truth appears praiseworthy and should not be changed, though it creates problems in the social life of persons with Autism. According to Kant lying is an immoral behavior, independent of the consequences in a particular situation. If you undermine this, so he argued, then you undermine morality. In



reaction to Kantian ways of thinking, the ethics of care criticizes moral thinking in terms of rules, laws and duties, and introduces the importance of good caring relationships between human beings as an essential feature of morality.

From a care ethics perspective, a way should be found to allow the High-Functioning persons with Autism to respect the feelings and needs of other persons as sometimes overruling the duty of truthfulness. We suggest this may even entail ‘morally educating’ children and adolescents with Autism to become socially skilled empathic ‘liars’, unless such an education undermines the health and wellbeing of persons with Autism.

### **6.3. PAPER III (Human Capabilities, Mild Autism, Deafness and the Morality of Embryo Selection)**

A pre-implantation genetic test to discriminate between severe and mild Autism Spectrum Disorder might be developed in the foreseeable future. Recently, the philosophers Julian Savulescu and Guy Kahane claimed that there are strong reasons for prospective parents to make use of such a test to prevent the birth of children who are disposed to Autism or Asperger’s disorder. In this paper we criticize this claim.

We discuss the morality of selection for mild Autism in embryo selection in a hypothetical in vitro fertilization (IVF) situation where pre-implantation genetic diagnosis is performed and compare this with a similar selection for congenital deafness. To do this we first discuss relevant human differences: the difference between being homosexual or heterosexual and the difference between being male or female. We then introduce the principle of human capabilities (PC: it is morally wrong to knowingly and willingly bring into the world a human being severely lacking a basic central human functional capability if a human being who has a sufficient level of each and every basic central human functional capability could be brought into the world) and compare this principle with the principle of procreative beneficence (PB: (roughly) it is a moral obligation to create children with the best chance of the best life).

We apply the two principles to selection for mild Autism and selection for congenital deafness. We argue that PC allows for the selection for mild Autism but rules out selection for

congenital deafness. PB will not give clear answers; the ruling of PB depends to a large extent on expected social, cultural and political developments. We argue that PC is preferable to PB.

In parts of the world where women and gays are discriminated against, PB would rule against female and gay embryos. PC neither recommends selecting against a female or a gay embryo, nor against an embryo with mild Autism, because we do not believe that females, gay people or persons with mild Autism are lacking (severely) any basic central human functional capability. Mildly Autistic persons can have a good quality of life, provided they have a social environment that recognizes and acts sufficiently on their specific social and emotional needs.

Neither PC nor PB yields strong reasons for prospective parents to seek to prevent the birth of children who are disposed to mild Autism Spectrum Disorder. So, it is morally permissible for parents to choose a mildly Autistic embryo in a PGD situation if they so wish.

#### **6.4. PAPER IV (Cultivation of Empathy in Individuals with High-Functioning Autism)**

High-Functioning persons with Autism Spectrum Disorder typically lack cognitive empathy, but they are nevertheless capable of exhibiting moral behavior, and sometimes they even show ‘super-moral’ behavior. Recently, in the context of adolescents with High-Functioning Autism, an empathy-based moral education has been advocated. However, the cognitive empathy deficit in persons with High-Functioning Autism poses, in varying degrees, a problem for their moral motivation and moral agency.

Moral motivation and moral agency of these persons relies primarily on the formation and application of moral rules. Super developed moral codes have been observed in persons with High-Functioning Autism. However, a Kantian account of moral motivation and moral agency is problematic for persons with High-Functioning Autism, because of impairments in the ability to ascribe intentionality to others, or, in other words, impairments in cognitive empathy. Such impairments make it harder to see other persons as ends in themselves.

The ethics of care criticizes Kantianism and all moral thinking in terms of principles, and introduces the importance of good caring relationships between human beings as an essential

feature of morality. However, because persons with High-Functioning Autism are weak empathizers and weak relationship builders, the ethics of care perspective is difficult to handle for these persons. More importantly, by centering on empathy and relationships, the ethics of care perspective appears to exclude persons with High-Functioning Autism as potentially full moral agents. So, care ethics, just like all Humean theories that rely on feelings of empathy, is problematic for Autistic individuals.

To conclude, persons with High-Functioning Autism are challenged in their moral motivation and moral agency, from a Humean as well as from a Kantian point of view. This challenge of persons with High-Functioning Autism is an extra complicating factor for moral educationalists in comparison to persons with Neurotypical Development. This calls for highly specific demands in the moral education of persons with High-Functioning Autism. An empathy-based moral education that ignores the limits of empathy and the preference for rules of persons with High-Functioning Autism may be less effective. I conclude that an individualized balance of empathy-based and rule-based strategies in the context of moral education to assist persons with High-Functioning Autism in their challenges in moral motivation and moral agency is called for.

## 7. GENERAL DISCUSSION

In this chapter I will discuss several subjects that were touched upon in the papers. It concerns discussions of: limitations to the moral responsibility of individuals with Autism Spectrum Conditions, High-Functioning Autism as a natural and normal variation, living healthily with Autism in an Autism-friendly society, and finally, the expulsion of deficit-based language in the context of Autism and the introduction of vulnerability-based language in the context of Autism. But first I will say something about whether my Aim distorts my study or not.

### 7.1. DOES MY AIM DISTORT THE STUDY?

Someone might object to this dissertation: ‘your Aim reveals that you have a ‘political’ agenda, which compromises your objectivity.’ I will try to counter this charge as follows. In the first place, methodological clarity demands that I make my value premises explicit.<sup>55</sup> In this dissertation, as can be read in the Aim, I am particularly guided by one value premise: ‘*a person should be free from harmful social conditions that threaten self-respect and well-being*’. This value premise determined the overall approach in this study.

However, I do not think that this aim distorted my study in the sense that it yielded inadmissible subjective opinions. I tried to prevent subjectivity by bringing relevant propositions ‘distilled’ out of three sorts of material (moral intuitions, empirical scientific ‘facts’ and personal experiences with Autism) into a coherent moral outlook, using the method of wide reflective equilibrium. Empirical (social) scientific facts are deployed to the service of progress in moral practices, to which (I believe) we should strive. In this I resemble critical theorists.<sup>56</sup> Being a moral realist and a moral cognitivist, I have tried to generate new (moral) ‘facts’, thus yielding

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<sup>55</sup> See Gunnar Myrdal (1968, p. 53): ‘Most important is that those value premises that have actually determined the approach in a study be made explicit and permitted to fulfill their function. Whatever these value premises are, and however they were reached, this is what methodological clarity demands in the first place.’

<sup>56</sup> Critical theory is a social theory oriented toward critiquing and changing society as a whole, in contrast to traditional theory oriented only to understanding or explaining it. It was first defined by Max Horkheimer and later developed by Jürgen Habermas. See ([http://www.princeton.edu/~achaney/tmve/wiki100k/docs/Critical\\_theory.html](http://www.princeton.edu/~achaney/tmve/wiki100k/docs/Critical_theory.html) ).

new moral knowledge (i.e. new justified true ethical beliefs). This knowledge can, in principle, be falsified by using the same method of wide reflective equilibrium (e.g. by pointing out incoherence between a scientific fact and my moral outlook).

Moreover, the reasons I give (for my moral standpoints) are not subjective but objective. As mentioned before, *good reasons* are object-given value-based (and not subject-given desire-based). All my reasoning is open for revision; this is one of the essential features of the method of wide reflective equilibrium. Whether my reasoning was sufficiently based on objective values is for the reader to decide.

Furthermore, indications that I do not merely follow the political agenda of the Neurodiversity movement are my position in the ‘person-first’ controversy, which I discussed earlier, and my criticism with respect to the Neurodiverse/Neurotypical distinction, which I discuss in the following paragraph. These differences with the Neurodiversity movement make clear that to speak *for them* is not my main aim. Rather, my main aim is, as already stated, to transform more or less widely held but harmful *moral* intuitions with respect to Autism. Objections about the privilege of perspective, the problem of speaking for others, and the right to self-definition do not make sense, because of the feature of *universalizability* of moral intuitions.

A lot of times ‘the Neurodiverse’ oppose themselves to ‘the Neurotypicals’: people are either Neurotypical or Neurodiverse. The reasons I criticize this dualism are strategic: there is an ‘us-versus-them’ mentality inherent in this opposition, which polarizes the discourse the Neurodiversity movement wants to conduct with the rest of society. This polarization may result in alienation from the Neurotypical part of society and this in turn may be counterproductive for the aims of the Neurodiversity movement.

Furthermore, the Neurodiverse/Neurotypical opposition would very rapidly turn the meaning of ‘Neurodiversity’ into ‘abnormality’. Strictly speaking, this is already the case because Neurotypicality literally means Neuro-normality. Neurodiversity, as an opposite of Neurotypicality, therefore can be logically equated with Neuro-atypicality or Neuro-abnormality.

Neurodiversity could also be interpreted Cosmo-politically, meaning that everybody, including what is now known as ‘the Neurotypicals’, are a member of the set of ‘the Neurodiverse’. This will emphasize the fact that everybody is different to a certain degree,

neurologically speaking (including, though marginally different, monozygotic twins). A strategic advantage of this position is that it does not single out ‘the Neurodiverse<sup>57</sup>’, so the term ‘the Neurodiverse’ cannot become just another pejorative term. This may help prevent exclusionary practices in health care, education and other ‘loci’ of society. A disadvantage of this strategy is that the meaning of ‘Neurodiversity’ is diluted too much, so that it no longer will be useful for the emancipatory purpose it was designed for in the first place.

## **7.2. LIMITATIONS TO THE MORAL RESPONSIBILITY OF INDIVIDUALS WITH AUTISM?**

The possession of emotional empathy of individuals with Autism Spectrum Conditions, contrary to psychopaths who lack this, generally safeguards them from acting in an anti-social way. However, the social-communicative impairments of them form a challenge for their ability to behave prosocially. It is a truism that ‘ought’ implies ‘can’. To hold somebody responsible for a lack of prosociality, they should first be able to be prosocial. Neurotypicals are able to be prosocial. However they do not always exhibit prosociality when, morally speaking, they should. For instance, they do not always, and I am grossly understating here, come to the (financial or otherwise) aid of people desperately in need. Or, as Temple Grandin has shown, they do not always refrain from acting antisocially towards sentient animals on their way to the slaughter house.

Contrary to individuals with Autism Spectrum Disorder, neurotypical adults can be held fully morally responsible for a lack of prosociality. Individuals with Autism Spectrum Disorder can only be held morally responsible to the degree of their prosocial ability. When they back away from acting prosocially because of a deficit of cognitive empathy, a surfeit of emotional empathy or an excess of personal distress, the acknowledgment of the cause of this ‘backing away’ (i.e. mainly their natural genetic make-up) may guard them from being held morally responsible for the absence of prosocial behaviour.

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<sup>57</sup>Here interpreted as those with atypical neurological development.

This limitation to the moral responsibility of individuals with Autism Spectrum Conditions should also have implications for legal responsibility. The first thing to notice is that, contrary to popular views, ‘there is insufficient evidence to substantiate [a] relationship between autism and criminality, especially that of a violent nature (Browning and Caulfield, 2011, p. 172).’ However, ‘individuals with ASDs are *seven times*<sup>58</sup> more likely to experience contact with the criminal justice sector than the general population, yet [...] over 90 per cent of police and solicitors have no training to help them to understand autism (Browning and Caulfield, 2011, p. 166).’

Social scientists Ann Browning and Laura Caulfield point to the adverse effects of ‘Autism ignorance’ in the criminal justice system (in the UK): ‘poor professional understanding has implications for any consideration of culpability, fitness to plead, defence or a claim of mitigation (Browning and Caulfield, 2011, p. 177).’ They recommend that ‘all of those who work or volunteer within the criminal justice system [...] should be aware of and have access to training and/or appropriately trained colleagues in order that the needs of this particularly vulnerable group might be more effectively met (Browning and Caulfield, 2011, p. 177).’

### **7.3. HIGH-FUNCTIONING AUTISM AS A NATURAL AND NORMAL VARIATION**

In the first paper I claim (together with my co-author) that Autism should be regarded as a natural and normal variation on par with for example homosexuality. One of the arguments against homosexuality, and one that is unfortunately still being professed, is that it is unnatural and therefore bad. This is wrong for two reasons. The first reason, and this already is a knock down argument, is that it is not necessarily so that something unnatural is also something bad. An example is the use of artificial medication. The second reason, superfluously, is that homosexuality simply is not unnatural. In the following I will explain why homosexuality is *not* unnatural and therefore should be regarded as a natural human variation.

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<sup>58</sup> My emphasis.

One of the first intuitive associations we get when we want to determine whether something is natural or not, is to ask: how long has it been around? With respect to Homosexuality, anecdotal evidence from, for instance, the Bible tells us that it has been around for at least thousands of years. According to so-called essentialists, ‘homosexuality is a specific, *natural*<sup>59</sup> kind rather than a cultural or historical product (Pickett, 2011).’ Contrary to essentialists, social constructionists emphasize the social creation of sexual experience and expression (Pickett, 2011). However, I believe that the social constructionist view of homosexuality is not plausible.

According to a recent review article examining the empirical evidence for both positions in this controversy, the essentialist position can be backed up by evidence from biological theorists, while the social constructivists do not have direct evidence to confirm their position. A proponent of the ‘nature’ side of the controversy formulated the ‘nature’ position as follows: ‘the dynamics of genetic factors influencing homosexuality [...] are a *natural*<sup>60</sup> aspect of human sexual *variability*<sup>61</sup>. These findings further discredit the assumptions that homosexuality is pathological and that it should be cured rather than accepted and respected (Jannini et al., 2010, p. 3250).’ However, although homosexuality is linked to biological factors<sup>62</sup>, not all cases of homosexuality can be explained this way (Jannini et al., 2010, p. 3245).

Nevertheless, there are no good social-constructionist arguments against the claim that the vast majority of cases homosexuality is linked to biological (genetic) factors. Put simply, homosexuality is inborn and therefore a *natural* human variation. I understand ‘natural’ roughly as ‘innate’ or ‘inborn’. More specifically, I use ‘a gene-based conception of naturalness (Lerner, 2011, p. 407)’.

Analogous reasoning, elaborated in the following, shows that High-Functioning Autism is a natural and normal human variation. Autism Spectrum Conditions are now believed to be ‘highly genetic and multifactorial, with many risk factors acting together (Levy, Mandell and Schultz 2009, p. 1627).’ The ‘Autism fact sheet’ of the Center for Autism and Developmental

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<sup>59</sup>My emphasis.

<sup>60</sup>My emphasis.

<sup>61</sup>My emphasis.

<sup>62</sup>E.g. ‘Genetics (twin studies)[:] 100% concordance between homosexual monozygotic twins, and only a 12% concordance for dizygotic twins (Jannini et al., 2010, p. 3246).



Disabilities Epidemiology at Johns Hopkins Bloomberg Public School of Health states that ‘although ASD has been recognized as a medical condition only in modern times, there are many historical accounts pointing to the existence of autism well before the 20th century.’<sup>63</sup> Some even claim that Autism has been around for thousands of years.<sup>64</sup>

So, the fact that there is substantial scientific agreement about Autism’s genetic origins and the intuition that Autism must have been around since prehistorical times give us reason to believe that Autism is natural. Moreover, as we have seen, High-Functioning Autism can be viewed as the extreme end of a continuously distributed personality trait with respect to reciprocal social behavior. This reveals that Autism is part of human social variability (just as homosexuality is part of human sexual variability) and thus a natural variation.

But being a natural variation does not automatically mean it is a good variation. For instance, cystic fibrosis is also a natural variation but it is not a good variation. In other words it is not ‘normal’, understood in an evaluative sense. So, one may justifiably ask ‘can Autism be a natural variation that is good to have?’ In other words, can Autism be an (evaluatively) normal natural human variation?

Autism Spectrum Conditions were first believed to be very rare. However, they are now thought to be quite common with a prevalence rate lying around 1 %. So in a statistical sense an Autism Spectrum Condition is a quite normal human variation. Instead of calling Autism an abnormality one should rather say Autism is marginally normal. Abnormality implies a clear cut between normal and abnormal. However, as we have seen, High-Functioning Autism can be viewed as the extreme end of a *continuously* distributed personality trait with respect to reciprocal social behavior. Therefore, there is no clear cut-off point between ‘normal’ and ‘abnormal’ but rather a continuum with a rather broad margin that melts into Neurotypical behaviour with respect to reciprocal social behavior. We would do better to refrain from referring to the negative notion of ‘abnormal behaviors’, at least in the context of Autism, and instead start using the more neutral notion of ‘marginally normal behaviors.’

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<sup>63</sup> [http://www.jhsph.edu/research/centers-and-institutes/wendy-klag-center-for-autism-and-developmental-disabilities/\\_archive/Facts/autism.html#how\\_long\\_existed](http://www.jhsph.edu/research/centers-and-institutes/wendy-klag-center-for-autism-and-developmental-disabilities/_archive/Facts/autism.html#how_long_existed)

<sup>64</sup> Christopher Gillberg in the foreword to Lynn Waterhouse’s book ‘Rethinking Autism: variation and complexity (2013).’

I (together with my co-author in the first paper) argue contra those that believe Autism is (always) ‘abnormal’. In other words, we argue against those who evaluate Autism negatively. In similarity with the problems homosexuals are experiencing having to live in a homophobic society; the problems High-Functioning persons with Autism are experiencing may be due to adverse social conditions in an Autism-phobic society<sup>65</sup>. Their disability may be sociogenic (i.e. ‘socially’ caused by ignorance of Autism or intolerance for Autistic behaviors). Moreover, ‘normalcy’ is a social construction, but ‘it is a construction with real consequences – denial of opportunity, segregation, doubt of authorship (Ashby and Causton-Theoharis, 2009, p. 509).’

The impairments of High-Functioning Autism Spectrum Conditions, contrary to the impairments of Low-Functioning Autism Spectrum Conditions, do not necessarily lead to disability. Some High-Functioning persons with ASC may even have satisfying levels of quality of life (Renty and Roeyers, 2006).<sup>66</sup> Temple Grandin, for instance, writes: ‘I have been lucky, because my understanding of animals and visual thinking led me to a satisfying career in which my autistic traits don’t impede my progress (Grandin, 2006, p. 111).’ These findings suggest that the claim that ‘autism inevitably makes people miserable and unable to lead a satisfying life’ is a myth (Clarke and Van Ameron 2008, p. 94). Temple Grandin’s case shows that Autism *can* be beneficial. So Autism can be a normal variation in the evaluative sense. We already saw that Autism is a (marginally) normal variation in the statistical sense.

Furthermore, ‘normal’ can also mean ‘expected’. Behaviors that are expected are called ‘normal’ behaviors. Psychologist Sarah Allred is referring to family members and authority figures who understand AS [Asperger’s Syndrome], when she writes: ‘To them AS behaviors and cognitive qualities are often viewed as normal (i.e. expected) for the person who is labeled as having AS. To the extent that one grasps ‘what AS is’, such knowledge enhances smooth social interactions by *rendering the unexpected expected*<sup>67</sup> for a given individual (Allred, 2009, p. 347).’

This means that in order for a society to become an Autism-friendly society, its members should grasp what Autism is, so that the unexpected behavior of persons with Autism is rendered expected and normal. So, in an Autism-friendly society having Autistic behaviors can in principle

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<sup>65</sup> I.e. a society with a socially constructed (more or less) hidden ideology that Autism is bad and the locus of the problems individuals with Autism are experiencing lies with themselves.

<sup>66</sup> Renty and Roeyers (2006) claim a supportive social network is important for these persons. However, this is true for everybody and merely a matter of degree.

<sup>67</sup> My emphasis

be normal (because expected), while labeling Autism ‘abnormal’ can be an expression of Autism-ignorance (one does not know what to expect when confronted with a person with Autism Spectrum Disorder) or on Autism-phobia (one does not tolerate Autistic behaviors).

So far, I have argued that Autism is natural; it is statistically (marginally) normal; and it can be evaluatively normal. But can it also be healthy? To this I now turn.

#### **7.4. AUTISM, HEALTH AND SOCIETY**

In my third paper I wrote (together with my co-author) that High-Functioning Autism is a natural and potentially healthy human variation (on p. 818). Before I go deeper into the matter of living healthy with Autism and the role society plays in reaching this state of affairs, I will first say something more about health and about the definition of health we adopted, as can be read in the second paper. There we say in a footnote: We understand ‘health’ holistically, as the ability to reach vital goals under reasonable circumstances (Nordenfelt 1987). I understand health now in the way Venkatapuram (2013) understands it, which is a hybrid between Nordenfelt’s theory of Health and Nussbaum’s capabilities approach. Venkatapuram replaces Nordenfelt’s ‘empty’ vital goals with Martha Nussbaum’s list of central human functional capabilities. According to Venkatapuram, ‘the health of an individual should be understood as the ability to achieve a basic cluster of beings and doings—or having the overarching capability, a meta-capability, to achieve a set of central or vital inter-related capabilities and functionings (Venkatapuram, 2013, p. 271).’ Venkatapuram’s definition of health is coherent with the principle of human capabilities, which I (together with my co-author) developed in my third paper.

As we argued in the third paper, we do not believe that individuals with High-Functioning Autism are severely intrinsically lacking a basic central human functional capability. Therefore, they are in principle able to lead a *healthy* life (in Venkatapuram’s sense of health), provided they have a social environment that recognizes and acts sufficiently on their specific social and

emotional needs. If the latter is not the case the circumstances are not ‘reasonable’ and it is the circumstances that need to change.<sup>68</sup>

As we have argued, the circumstances are unreasonable whenever Autism-ignorance and Autism-intolerance or Autism-phobia prevails in the society in which individuals with Autism have to live. In short, it is impossible for persons with Autism to lead a healthy life in an Autism-phobic society, because their particular vulnerabilities preclude this. However, as Renty and Roeyers (2006) showed, some High-Functioning persons with Autism may have satisfying levels of quality of life, provided they have a sufficiently supportive social network. Therefore, we may justifiably claim that it *is* possible for some High-Functioning persons with Autism to lead a healthy life in an Autism-friendly society.

## 7.5. AUTISM: ‘DEFICIT’ LANGUAGE OUT, ‘VULNERABILITY’ LANGUAGE IN

In the first paper (on p. 28) I (together with my co-author) concluded, after a discussion of vulnerability, that in the case of High-Functioning persons with Autism, society should not stigmatize these persons as being disabled, or as having a disorder or use some other *deficit-based* language to refer to these people. It is much less morally problematic to refer to the particular *vulnerability*<sup>69</sup> of these persons with Autism.

Neuroscientists Markram and Markram claim that ‘In contrast to other deficit-oriented theories of autism [e.g. the mind-blindness theory, the weak central coherence theory and the weak executive functioning theory], the Intense World Theory points out that *enhanced* brain functioning may lie at the heart of autism (Markram and Markram, 2010, p. 22).’ This theory shows that deficit-based language in the context of Autism is problematic. Therefore, it would be

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<sup>68</sup> Also Nordenfelt (2012) affirms a connection between circumstances and vital goals. A culture may influence a person’s ability to flourish and experience happiness: ‘The person may be so completely accustomed to and tied to a form of life that she cannot really leave it behind and appreciate something completely new (Nordenfelt, 2012, p. 282).’ The latter appears to be the case when a person with Autism is unaware of the unreasonableness of the circumstances in which he or she has to live, effecting the attainment of his or her vital goals negatively.

<sup>69</sup> ‘To be vulnerable means to face a significant probability of incurring an identifiable harm while substantially lacking ability and/or means to protect oneself (Schroeder and Gefenas, 2009, p. 117).’

less controversial, at least for clinicians and lay persons, *not* to refer to deficits in Autism. However, regardless of whether Autism is caused by one or more deficits or one or more excesses, Autism can be impairing and persons with Autism can be vulnerable because of these impairments.

An important thing to notice is the following: ‘impairment’ says nothing about how vulnerable somebody is. I may have a visual impairment but it may be so small or the demands of my environment may be so convenient that I am hardly vulnerable because of it. But then again, if my visual impairment and the demands of my environment are substantial, I become very vulnerable (e.g. in traffic). Therefore, it would be good not merely to refer to impairments, but also always to refer to the vulnerabilities involved. In the case of Autism, it is neither the impairment nor the disability that is most important for persons with Autism, as some of them have shown by being able to reach satisfying levels of quality of life, but the vulnerability caused by the interplay of the impairments and the social environment in which these persons (have to) live.

An additional advantage of the use of ‘vulnerability’ is the fact that it does not stigmatize a group of (disabled) people, because vulnerability is something we all, as humans, experience to a certain degree and during some periods in our lives (e.g. during infancy). Philosopher Eva Kittay has argued that ‘we need to see our dependency and our vulnerability to dependency as species’ typical (Kittay, 2002, p. 248)’ and ‘dependency is not exceptional but integral to human life (Kittay, 2002, p. 237)’. Furthermore, Kittay, and I agree with her, wants us to see disability as sometimes (though not always) resulting in a dependency that is but one variety of a dependency that we have all experienced at some point and to which we are all vulnerable (Kittay, 2002, p. 248).’

In the context of Autism, we can successfully use the language of vulnerability, without necessarily missing anything that was previously covered by the language of deficits. To give an example, we should no longer talk about ‘deficits in cognitive empathy’, but rather talk about ‘cognitive empathy related vulnerability’. Compared to persons with Neurotypical development, the cognitive empathy impairments of persons with Autism and the related lack of communicative and social skills will lead to an increased level of vulnerability, in certain social environments. An example of the consequences of such an increased level of vulnerability is the

fact that the victimization rate of bullying is twice as high for children with Autism as it is for children with neurotypical development (Cappadocia, Weiss and Pepler, 2012, p. 274). Generally, bullying occurs because ‘children with poor social skills and few friends [such as children with Autism] are marginalized and unprotected within the social group and are vulnerable to the abuse of power by peers (Cappadocia, Weiss and Pepler, 2012, p.271).’ These children’s increased level of vulnerability with respect to bullying is ‘associated with various mental health problems (Cappadocia, Weiss and Pepler, 2012, p. 274).’

Analogous to cognitive empathy impairment, the possession of hypersensitivity and excessive fear responses also leads to an increased level of vulnerability of persons with Autism compared to persons with Neurotypical development. So, put simply, regardless Autism is a matter of too little cognitive empathy or a matter of too much sensitivity or fear, the particular vulnerability of Autism remains.

## 8. CONCLUSIONS AND RECOMMENDATIONS

The social model of disability holds society responsible for enabling individuals with a disability to live and exist within the society as disabled people. Also extreme proponents of the Neurodiversity movement emphasize that it is not the individual with atypical neurological development (e.g. High-Functioning Autism) that needs to adapt to society, but the other way around. I believe the social model, including the extreme branch of the Neurodiversity movement, cannot sufficiently guarantee the health and well-being of persons with High-Functioning Autism. In contradistinction to the social model, the medical model of disability targets primarily adaptation difficulties and possibilities of the individual with a disability. The medical model is being applied to persons with High-Functioning Autism from the moment they are being diagnosed by psychiatrists using diagnostic manuals like DSM-IV-TR or, more recently, DSM-5. These manuals are indispensable to recognize individual functioning impairments but they disregard societal pathogenic circumstances. As was concluded in the first article ('Autism as a Natural Human Variation: Reflections on the Claims of the Neurodiversity Movement'): Just as homosexuals in a homo-phobic society, the conditions in which persons with Autism have to live in an Autism-incompatible or even Autism-phobic society are unreasonable. Therefore, it is not fair to place the locus of the problem solely on the Autistic individual. What also is needed is a discourse about the detrimental effects of an Autism-incompatible and Autism-phobic society on the well-being of persons with Autism. For this reason, the medical model, although necessary for the health and well-being of persons with High-Functioning Autism, is insufficient.

So, the only justified position to reach the goal of health and well-being for persons with High-Functioning Autism is a mean between the extremes of the social model and the medical model. I would like to call this position *moderate Neurodiversity*. On the one hand, contrary to the beliefs of extreme proponents of the Neurodiversity movement, some deficits of High-Functioning Autism need interventions to ameliorate them. Other 'deficits' like avoiding eye contact or repetitive body movements, are unusual but they can be harmless, and therefore they do not always need to be eliminated. On the other hand, contrary to the beliefs of extreme proponents of the medical model, we may be able to discover societal 'deficits' that are relevant

for health and well-being of persons with High-Functioning Autism. For instance, I suspect a prejudice exists in society that favours ‘sociable’ applicants over equally qualified ‘unsociable’ applicants, for positions where sociability is irrelevant. It is likely that persons with High-Functioning Autism are even more affected in their health and well-being by this prejudice than ‘unsociable’ persons with typical development (e.g. introverts). I base my suspicion on the similarity bias of empathy (discussed in the fourth article: ‘Cultivation of Empathy in Individuals with High-Functioning Autism Spectrum Disorder’): we feel greater empathy for those who are similar to ourselves.

In such cases of societal prejudicial ‘deficits’ it’s not the individual with Autism that needs to change but society itself. A lot can be done to give persons with High-Functioning Autism the capability to fully participate in society and to use their unique talents. First and foremost there should not be societal prohibitions for the opportunity to exist. As argued in the third article (‘Human Capabilities, Mild Autism, Deafness and the Morality of Embryo Selection’): there are no strong reasons for prospective parents to seek to prevent the birth of children who are disposed to mild Autism Spectrum Disorder. It was concluded: it is morally permissible for parents to choose a mildly Autistic embryo (in a PGD situation) if they so wish. Furthermore, a lot can be done for full participation in society once a person with High-Functioning Autism has become part of it (i.e. is born). As the lowering of sidewalk curbs has shown to be a simple but effective tool to make social participation of physically impaired persons a lot easier, so too can fairly simple but effective measures make an end to the stigmatization, discrimination, marginalisation and exclusion of persons with High-Functioning Autism and raise societal accessibility for them. One of these measures could be raising awareness for Autism (or difference in general) at an early (pre-school) age, so that naturally ‘programmed’ reflexes that result in exclusion (cf. in-group bias) will not prevail. Other measures to improve societal accessibility are affirmative action, the development of appropriate assistive technologies, the creation of enabling environments (e.g. niche construction and personal assistants) and the development of inclusive attitudes. More concretely, the recommendations made in the second and fourth article are instances of societal (especially educational) change that might be beneficial for the health and well-being of persons with High-Functioning Autism. In the second article (‘Living the Categorical Imperative: Autistic Perspectives on Lying and Truth Telling—Between Kant and Care Ethics’) it was recommended that, unless such an



education undermines their health and wellbeing, we ought to teach children and adolescents with Autism the social skill of lying empathically. In the fourth article ('Cultivation of Empathy in Individuals with High-Functioning Autism Spectrum Disorder') the recommendation was made for an individualized balance of empathy-based and rule-based strategies in the context of moral education to assist persons with High-Functioning Autism in their challenges in moral motivation and moral agency.

But also individuals with High-Functioning Autism are partly responsible for change at least to the extent of their natural capabilities. As they are not intellectually disabled there will always be an 'entrance' to learn about the world and their actual or possible role in it. They should make use of this 'entrance' and not blame solely society for the difficulties they may encounter. It is neither solely the individual nor solely the society that needs to change. It is the relationship between the individual with High-Functioning Autism and society that needs to improve and this demands full commitment from both parties. This means that (moral) responsibility for health and well-being of persons with High-Functioning Autism is a matter of reciprocity: care *and* self-care. However, variation in the distribution of (moral) responsibility between the individual and society inevitably will occur due to the unique challenges (as discussed primarily in the second and fourth article) that face the individual person with High-Functioning Autism. Based on the findings of this dissertation, it is my belief that an adequate response to these challenges, both from the part of the person with High-Functioning Autism and from the part of society, will have decisive beneficial consequences with respect to health and well-being of the person with High-Functioning Autism and therefore such a response is the moral thing to do.

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