

## Love, Neuro-Parenting and Autism: from Individual to Collective Responsibility towards Parents and Children

**Delphine JACOBS**

*KU Leuven*

[delphine.jacobs@kuleuven.be](mailto:delphine.jacobs@kuleuven.be)

**Kristien HENS**

*University of Antwerp*

[Kristien.Hens@uantwerpen.be](mailto:Kristien.Hens@uantwerpen.be)

**Abstract:** That parents should love their children is generally considered self-evident. But what this love should entail is still a topic of discussion. In this paper, we demonstrate that there is currently a trend towards biologizing and even neurologizing parental love - that is, the claim that loving parental relationships are required for the brain development of the child - and that this trend has important repercussions for how we conceive of responsibility for children. Parental love, we will argue, is increasingly being conceptualized in reductionist biological and neurological terms. For example, parenting experts often stress the importance of loving parental relationships for the healthy brain development of the child. Moreover, this trend affects mothers and fathers differently. We will demonstrate this by, firstly, looking into the brain-based parenting discourse in general and secondly, by reviewing the discussion surrounding the diagnosis of autism in particular. We will use the arguments of Jan Macvarish regarding neuro-parenting to demonstrate that parental love is increasingly thought of in reductionist biological and neurological terms. Here, we will discuss three issues. Firstly, we will look at how the neuro-parenting discourse primarily focuses on mothers and their responsibilities. Secondly, we will show how the current discourse on parental love defers child-raising to the realm of individual rather than collective responsibility. Thirdly, we will analyse the discourse on the biological effects of love insofar as it suggests that parents have a duty to love, since their attachment and commitment are deemed biologically necessary for the child's healthy development. Later on, we use our own qualitative research on how clinicians and parents experience a child's autism diagnosis to further demonstrate the complex relationship between neuro-discourse and responsibility. When parents are confronted with a diagnosis of autism in their child, seeking the advice of experts in neurodevelopmental



disorders is seen as the obvious path for developing their parental love. The neurodevelopmental diagnosis of autism has an exculpatory effect that might be necessary to safeguard parental love, as it relieves parents of some of the responsibility they feel for the child's challenging behavior. We will demonstrate that parents are considered to have a duty to know a child's neurological status and a responsibility to act upon this status. Finally, we will point out the relevance of gender for autism and neuro-parenting. We conclude that research into the biology of parental love is a worthwhile endeavor, but that such work requires a less simplistic view of biology than is currently the case. In the current climate regarding the parents' (and specifically mothers') duty to love their children in a particular way, we will make a case in this paper for liberating both mothers and fathers from fixed parental roles. We will conclude by arguing for more collective responsibility to lovingly raise children.

**Keywords:** parental love, mother, father, autism, responsibility

## Introduction

In their book *Neuro. The New Brain Sciences and the Management of the Mind*, Nikolas Rose and Joelle Abi-Rached have described how brain sciences are influencing our understanding and management of human behavior as never before: the brain is increasingly considered to be what makes human beings human. Today, the individual brain has become the *target* in the aspiration to shape and improve oneself (Rose and Abi-Rached 2013). But in contrast with the argument that in neuroscience “determinism still reigns” (Gazzaniga 2011 in Sankey & Kim in (Joldersma 2016)), Rose and Abi-Rachid claim that such *neurologizing* does not mean that we are determined by our neurobiology. With the discourse about brains and plasticity, human beings are encouraged even more to assume responsibility for their own brain and to improve themselves by understanding and acting on their brain (Rose and Abi-Rached 2013). This call and the associated urge to improve our neurology are especially apparent in the discourse about parental love and parental responsibilities.

The love of a parent for her child is often taken to be the most self-evident type of love in the Western world (Bretherton 2013). However, the way in which parental love is perceived is

dependent on time and context. In Western societies today, parents are expected to carry out spontaneously particular acts of love and care-taking, singing, playing, counting, cuddling, relaxing, or reading, and raising children is said to be the most vital of human tasks (Macvarish 2016). In other times and places, people have expressed and understood parental love in very different ways. For example, until some decades ago, Western infants were not that intensively mothered (Faircloth 2017). In some non-Westernised societies such as Ghana, a mother still rarely holds her infant facing her and rarely talks to her (Lancy 2007).

There are also cultural and historical differences as regards the role that gender plays in parenting. Today, the role of the mother continues to be given greater attention than the role of fathers, let alone other types of family carers. For example, John Bowlby, the founder of attachment theory, argued that babies are naturally desirous of maternal care and that mothers are naturally equipped to deliver it (Bowlby 1969; Macvarish 2016). However, the emphasis on the role of the mother cannot be generalized throughout time. In the Western world during the early modern period, the child's socialization and education were the father's responsibility, while a woman was merely expected to run the household (Furedi 2001, 2008). Maternal nurture only became viewed as 'natural' in the nineteenth century (Gillis 1996). At this time, the theory of evolution was increasingly understood to give a biological explanation for the development of human society (Burman 2008; Macvarish, 2016). Maternal nurture of children, from an evolutionary perspective, was becoming 'naturalized'. It was considered to be an essential and biological part of what it means to be a woman (Badinter 1981). In this way, evolutionary theory contributed to the current, deeply embedded ideology regarding the proper ('natural') role of women; cultural beliefs about the naturalness of maternal instinct, natural mother love and exclusive motherhood have become deep-seated, although they are fairly recent (Wall 2001). Hence, the current parental love discourse can largely be equated to a discourse on motherly love<sup>1,2</sup>. Indeed, in most literature on parental care that does not take *fathers* as its explicit target, it

---

<sup>1</sup> At the same time, while affirming the - so-called 'naturally' - disproportionate mother's share in parenting, current Western understandings of parenting (mothering) carry a strong child-centered focus (Wall 2001). The rights and responsibilities of mothers have been defined increasingly in terms of the child's interests. Moreover, the mother is expected to put aside her own needs in order to accommodate the child's needs (Macvarish 2016; Richardson 2014).

<sup>2</sup> Accordingly, in cultures around the world, *care in general* is currently being viewed overwhelmingly through a gendered lens: care is seen as women's work – although men have recently made some inroads into this area (Tronto 2013).

is *mothers* whose responsibilities and attributions are discussed (Kasovac, WAIMH congress, 2018)<sup>3</sup>.

## Neuro-parenting

We start our actual argument on biological interpretations of parental love with a historical situation and definition of neuro-parenting, as described by Jan Macvarish in her book *Neuroparenting. The Expert Invasion of Family Life*. The societal focus on children and on parenting has a history of some 150 years, and the view on parental love in Western culture has been profoundly shaped by the ‘child saving movement’ in the late 19<sup>th</sup> century. This movement was intended to mitigate the roots of child delinquency and change the treatment of juveniles under the justice system with the aim of social ‘amelioration’ and the prevention of social disorder (Macvarish 2016). Consecutively, this view was shaped by developmental psychology from the 1950s onward (Burman 2008) and by neuroscience from the 1990s on (Macvarish 2016). At the family and policy level, the character formation of the child became a source of anxiety, as suboptimal practices were thought to lead to badly behaved and delinquent children. But children are also increasingly depicted as a source of hope, as Cunningham states: “we are constantly reminded that children are the future” (Cunningham 2012). As a consequence, in recent years, the quality and quantity of parental love and care are being *scrutinized* by developmental psychology and neuroscience, which are combined in what Jan Macvarish has called *neuro-parenting* (Burman 2008). Macvarish summarizes the requirements of *neuro-parenting* as follows: the parent should try to emotionally ‘attune’ herself to her baby, already starting in utero. The parent should follow the child’s lead in attuning herself with the child and is expected to respond continually to the visual and auditory cues of the infant. And the child’s development process requires active, conscious and educated nurturing. This is required to optimize the child’s neurological development (Macvarish 2016; Newman, Sivaratnam, and Komiti 2015). This advice is backed up by scientific claims. For example, it has been argued that children whose parents speak less to

---

<sup>3</sup> However, a review of six empirical studies suggests that the influence of *paternal* love on a child's social, emotional and cognitive development is as great as, and occasionally greater than, the influence of *maternal* love: paternal love appears to be as heavily implicated as maternal love in a child’s psychological wellbeing (Rohner and Veneziano 2001).

them during a critical period in brain development will lag behind on language tests by up to six months at age two (Sample 2014). In Western society, such neuro-parenting discourse necessarily and profoundly shapes the parent-child bond. Macvarish suggests that intuitive, spontaneous and transgenerationally transmitted parental expertise and confidence become less valued, as neuro-parenting experts promise to make the quality and quantity of parental love not only measurable, but more importantly, improvable. In order to do so, parents must seek help and advice from neuroscience in order to improve their parenting (Macvarish 2016).

Although there are certainly benefits to a scientific and neurological understanding of the effects of parental love, such discourse also entails several dangers, such as a risk that it encourages unequal distribution of parental responsibilities. In the following sections, we will discuss three issues in neuro-parenting: (a) gender; (b) parenting politicized; and (c) a duty to love.

### ***Gender in neuro-parenting***

The neuro-parenting discourse reinforces the idea that the bulk of parental responsibility lies with the mother. While using the gender-neutral term of *neuro-parenting*, Macvarish underscores the discipline's particular focus on *mothers*. She describes how neuro-parenting encourages a particular way of raising children that is intensive ("doing more and doing it earlier") and anxious. Mothers in particular are placed under considerable pressure to conform to this new idea of parenting (Macvarish, 2016). Parents' child-raising practice is scrutinized from the outside, by so-called parenting experts, but also from within. Parents (especially mothers) are expected to become educated 'experts' themselves by appropriating the scientific discourse surrounding parenting. Not following the rules in force on child-rearing practice is almost immoral, as parents are then made to feel that they would risk causing developmental and brain impairments in their child (Macvarish 2016). Indeed, the *individual* love between parent (mother) and child is sometimes considered to be responsible for the child's cognitive and socio-emotional development, as more and more evidence regarding the molecular and neurological effects of deprivation of love is uncovered (Hens 2017). Hence, the need for love in the relationship between parent and child is considered self-evident, and important for healthy neurological development. But love alone is not found sufficient to help the child become a psychologically and neurologically healthy adult. Since there appears to be little faith in the so-called 'maternal instinct', a fundamental characteristic of neuro-

parenting is that the ‘natural’ needs of the human infant cannot be reliably met by their parents and their communities without special training (Suissa 2017). Neuro-parenting makes parental expertise less trustworthy than the expertise of the parenting expert (Macvarish 2016). For example, in one of the theoretical pillars of neuro-parenting, *attachment theory*, some ‘maternal instinct’ is considered evident, while at the same time the theory conveys the duty to offer specifically ‘sensitive’ maternal care in order to bring the next generation to healthy adulthood (Ainsworth 1972 in Bretherton 2013). Therefore, according to the tenets of this theory on relational-emotional development, mothering is understood to be too difficult to be left to mothers without expert advice. Moreover, in the 1980s, one decade after the attachment theory was formulated, a warning against the use of day care was issued, as this would endanger “the affective ties within the family” (Quinn 1982). With hindsight, this warning has to be seen in relation to the background of major societal changes at that time in the position between the sexes. For example, the popular US pediatrician Berry Brazelton seemed to almost ‘market’ the baby to the mother in order to try to put motherhood on a par with a professional career when it comes to stimulation and status: “We must be careful to provide environmental supports that reinforce the strength and rewards of reciprocal affective ties within the family!” (Macvarish 2016; Brazelton 1988). It is undeniable that such talk about the need for tight affective bonds between the baby and her family affects primarily the mother, who is given the choice between giving up a career or giving up the optimal neurological development of her child.

### ***Parenting politicized***

The scientific account of parenting has led to an instrumentalization of love: love is no longer valued purely for itself, but as a way of improving the brain of one’s child. Moreover, this may promote the view that parents are responsible for creating a certain kind of child, one that is a good fit within a given society (Suissa 2017). Macvarish therefore warns against expert advice instrumentalizing love and care within the family: the ultimate goal might not be to create healthier children, but to create better citizens out of children (Macvarish 2016). In this respect, Joan Tronto discusses how in a neoliberal society being productive and being financially independent are valued most (Tronto 2013). But this goal can be different from what parents want for their child. Some parents, for example, say they attribute more importance to the child’s well-being than high-

status careers, although they seem to appropriate the discourse in which the child's educational achievement and independency are seen as measures of success - as a 'good citizen' (Hodge 2006; Jacobs et al. under review).

Also, the possibility that parental love is deficient is extended from extreme problem cases (for example, children placed in a succession of foster homes) to all family situations (Macvarish 2016). As such, moral and social problems are biologized. That is, the cause of - and the solution to - the problems of deprivation in underprivileged families are located within the parental nurture of the children's brain: the responsibility for this deprivation is individualized as poor-quality parenting. Macvarish therefore argues that neuro-parenting is politicized: "the idea of a parenting deficit has taken hold of policy-makers' imaginations, and parent training has become increasingly normalized through new institutional structures and government programmes" (Macvarish 2016). In this respect, sociologists Rose and Abi-Rached argue that within these programmes the child is governed through the family in order to reduce social ills like criminal and antisocial behaviors<sup>4</sup>. They add: "Social justice lies not in tackling the causes of structural inequality, poverty, poor housing, unemployment, but in managing parents in the name of the formation of good citizens" (Rose and Abi-Rached 2013). Likewise, philosopher of education Judith Suissa shows that many British politicians repeatedly declared that 'feckless parents' and a lack of discipline in the home (and children's faulty character because of these) are the main reasons behind anti-social behavior: bad parenting is at the root of our social problems (Suissa 2017; Lexmond et al. 2011). Thus, the current discourse on parental love is being politically phrased with the effect of deferring child-rearing to the realm of individual (and more specifically parental) responsibility. But in doing so, the question of the extent to which there is a collective responsibility to enable better parenting environments is being sidestepped.

### *A duty to love*

The current discourse about the biological effects of love suggests that parents have a duty to love, since their attachment and commitment are shown to be biologically necessary for the child's healthy development. As such, the duty to love one's children becomes equivalent with the

---

<sup>4</sup> These goals are very similar to the 'child saving movement' in the late 19<sup>th</sup> century, see above.

duty to clothe and feed them, as a direct route to wellbeing. But Macvarish warns that “neuro-parenting instrumentalizes the everyday acts of love that parents spontaneously carry out - talking, singing, playing, counting, cuddling, relaxing, reading - not because they want to build their baby’s brain, but because they find them intrinsically rewarding”. She adds that neuro-parenting advice has the potential to interfere with the “intimate practices, rituals and pleasures of family life” (Macvarish 2016). Indeed, a scientific discourse on the biology both of the parental love – operationalized as the parent-child relationship - and of the effect of a particular kind of love on the child’s health, has the effect of transforming parental love into a duty. The philosophical debate on the duty to love has a long history. In 1797, Kant wrote: “Love is a matter of feeling, not of willing, and I cannot love because I will to, still less because I ought to (I cannot be constrained to love); so a duty to love is an absurdity.” (Kant 1996). More recently however, philosopher Matthew Liao argues that duty and love are compatible, because being motivated for the sake of duty and being motivated for the sake of the other person are not necessarily distinct (Liao 2006). Philosopher Lotte Spreeuwenberg claims that such a duty feels “chilly” and that love is generally experienced as a slippery and uncontrollable phenomenon. From a moral point of view, she argues, only a duty *to try* to love appears to make sense, while a mother cannot be held accountable for not loving her child (Spreeuwenberg 2017). However, within attachment theory, in stressing the essential role of maternal sensitivity in a child’s development, Mary Ainsworth considered maternal delight in the baby - and the capacity to express it verbally - to be a vital aspect. So, in her influential view on the parent-child relationship, the (verbalized) delight of the mother in the child is argued to be necessary in a child’s development (Bretherton 2013; Bell and Ainsworth 1972). It is arguably incompatible to *not* love a child and yet to experience delight in her, so she appears to be claiming that parents have a duty to love their child. In the same vein, Joan Tronto argues that people currently experience a lot of pressure and uncertainty due to an overload of responsibilities - in this case a duty, especially for mothers, to love their child in a particular way. The result of this pressure and uncertainty, she continues, is that people simplify things by judging and blaming individuals if something goes wrong: “it’s your own fault”. Tronto claims that the simplistic conviction of attributing all responsibility of care (for a child in this case) to a single individual (the parent or mother in this case) could be countered by viewing care as a collective rather than an individual responsibility (Tronto 2013). We will come back to this later.

In summary, we have shown that parenting experts currently base their authoritative advice to parents on biological and neurological research findings about the parent-child relationship. This has three effects. First, mothers are primarily targeted (and possibly negatively affected) by the neuro-parenting discourse. Second, the neuro-parenting discourse appears to be made use of in politics in order to justify a focus on the individual responsibility of parents for raising their children rather than a collective responsibility to create an enabling environment for loving families. Third, this neurologized parental love is presented to parents by parenting experts as constituting a duty to love one's child: parental love is considered to be necessary for the child's health. More specifically, a particular kind of parental love is deemed necessary: active, conscious and educated love (Macvarish 2016).

### **Neurologizing parental love: autism and parental responsibility**

In the above, we described the concept of neuro-parenting as an illustration of *neurologizing parental love*. In the following, we apply this to the discourse surrounding autism. We discuss our own qualitative research in order to illustrate the influence of the neuro-parenting discourse on the use of the diagnosis of autism.

Autism Spectrum Disorder (ASD) is generally understood as a developmental disorder which is predominantly neurologically and genetically determined (Lai, Lombardo, and Baron-Cohen 2014). It is diagnosed clinically based on quite generally and globally accepted criteria<sup>5</sup>: an assessment is made as to whether a child is impaired in her social relations and communication and displays repetitive behaviors and limited interests. Moreover, such behavior has to lead to significant challenges in the everyday functioning of the person involved in order to warrant a diagnosis (American Psychiatric Association 2013). ASD is diagnosed in the US in roughly 1 out of 59 children, and 4 times more frequently in boys than in girls (CDC, 2018).

---

<sup>5</sup> The most used criteria are enumerated in the Diagnostic and Statistical Manual of mental disorders (DSM) and the International Classification of Diseases (ICD), and both sets of criteria are similar.

We investigated the ways in which parents and physicians conceptualize and experience autism<sup>6</sup> by performing a literature review and an interview study (Jacobs et al. forthcoming). We found that a child’s autism diagnosis strongly influences the parent-child relationship. In the following, we will show how neuro-parenting experts can also have a strong influence on parent-child relationships when the child is diagnosed with autism, and engender new levels of responsibilities. Then, we will demonstrate how an autism diagnosis as a neurological explanation of the child’s difficult or different behavior may lift blame and responsibilities from both parents and child. This exculpation may be a valuable contribution to a good relationship between parents and child. Also, we discuss the fact that parents are considered to be responsible for knowing the neurological make-up of their child and for acting upon it. And finally, we will show how gender relates to autism and neuro-parenting.

### *Autism and the neuro-parenting experts*

In the neuro-parenting discourse, raising children requires the input of experts. This requirement is specifically apparent when parenting becomes difficult, and parents search for additional help, specifically when they start the process of having their child assessed for autism. For example, Rossi describes how one becomes an ‘autism parent’ - the parent of a child who has been given an autism diagnosis by experts – not through instinct but through “education” by experts (Rossi 2012; Jacobs et al. under review). In this way, a parent is *taught* to become an ‘autism parent’. However, an autism diagnosis can at the same time lessen parents’ confidence in their expertise in relation to their child, as it suggests that their educational practices have been to some extent not well adapted to this child (Hodge 2006). Moreover, the influence of experts risks negatively shaping the relationship between parent and child. That is, an autism diagnosis - given by an expert - can be a “shaping lens” for parents towards their child, making the parent-child relationship “ambivalent” or “never the same again” (Hodge 2006; Lilley 2011; Avdi, Griffin, and Brough 2000). For example, Lilley quotes mothers who perceived having lost a normal mother-child relationship after their child was diagnosed with autism, and who interpreted their child’s

---

<sup>6</sup> Like many other authors, we use autism as an abbreviation of ASD. Moreover, it is impossible to neatly distinguish ASD and an ASD diagnosis, since the influential DSM explicitly defines what is ASD by enumerating the criteria that have to be fulfilled in order for a person to merit an ASD diagnosis. Thus, the two concepts are inseparable.

special behaviors by wording the autism diagnostic criteria quite pejoratively (Lilley 2011). Moreover, an autism diagnosis has been described as robbing the interviewed parents of the joy and spontaneity of parenting: influenced by professional input, parenting styles can become more directive and intensive (Hodge 2006). Accordingly, some parents of children with an autism diagnosis have the feeling that they are teaching and curing all the time (Avdi 2000; Hodge 2006). Parents may feel they have to become experts themselves, by applying the professional expertise in their parenting practices themselves (Edwards et al. 2018). Hence, parental responsibilities are reconceptualized as also encompassing the duty to become an expert educator of the autistic child.

### *The exculpatory function of an autism diagnosis*

A diagnosis of autism serves different purposes. It helps parents understand their child's behavior better and get access to services specifically designed to help autistic children. In our empirical research, we ascertained that understanding the child in neurological terms can have an important *exculpatory* function: the process of neurologization can actually contribute to a sound parent-child relationship after the diagnosis, as the diagnosis can help to safeguard the self-confidence of the parent in her love towards the child and to safeguard the love between parent and child. In the following, we present preliminary findings of two qualitative empirical studies that are currently ongoing. In these studies, we found that both parents and physicians believe that the de-blaming function is one of the most important effects of the ASD diagnosis: it leads to parents no longer being viewed as responsible for their child's problem. The physicians we interviewed find that parents in general (i.e. also beyond autism) are not to blame for their children's behavioral problems. But very often, parents tell physicians that they are being blamed by people for their child's behavior (autism-related or not). This is clear in the following quote by one of the interviewees, a child neurologist:

*Parents very often say that people think they are to blame. Even teachers regularly say, 'But these parents really aren't directive enough'.*

Many of the physicians we interviewed see exculpation as of the utmost importance in the sense of removing blame from parents and the way they raise their child, but also in the sense of removing blame from the child. These physicians think it is extremely important to persuade consulting parents that their child is not 'bad' or behaving 'badly', and this is achieved by a

diagnosis that is conceived as firmly entrenched in neurology. They want to convey to parents that their child has no naughty intention in performing her unusual or challenging behavior but cannot help it: it is how her brain works. Another physician (a child psychiatrist) even considers this as the “essence” of her work:

*The essence of my work is making parents understand: your child is willing to, but is not always able to, cannot always handle it.*

The physicians report that, in this respect, a diagnosis of ASD is useful, and even necessary, to effectively convey the exculpatory message about the child, and a diagnosis makes it possible for them to do their work with parents and schools. As this physician (a child psychiatrist) says:

*The naughty child becomes the child with a problem who is not responsible for his behavior. And for a great lot of teachers that is a big difference, and so the interactions of the child are much more positive.*

Also, this mother explains:

*People say: ‘She cannot handle her child, she doesn’t know how to raise her child, the child is being spoiled.’ [...] If you can tell people ‘He has ASD’, people will readily say ‘Oh yes, he cannot help it’, you know. Then maybe they will judge him less easily, and also us, you know.*

Thus, both the parents and the physicians we interviewed feel that, if a child has an autism diagnosis, parents are offered a way out of parental accountability and blame for their child’s behavior. Indeed, the parents as well as the physicians have the experience that the general view on parental love carries a strong emphasis on parental accountability towards the behavior of a child. Moreover, the physicians believe that the exculpatory function of the ASD diagnosis is important not only to give parents psychological relief in that respect, that is, in order to remain self-confident in their relationship and love towards their child. But they also feel that this exculpatory function may enhance the loving relationship between the child and her parents. The parents we interviewed, despite the initial devastation when their child receives an ASD diagnosis, appreciate its usefulness mainly for two related reasons. First, parents (and also other adults around them) feel that the parents’ attitude towards the child is not blameworthy anymore, since there is now a biological explanation for their child’s problem. Biologizing the difficulties in a child’s behavior may absolve parents from personal accountability, rendering them free of responsibility

and blame (Goffman 1990; Hacking 2006). Before the ASD diagnosis, parents were considered in some way not to have done their utmost, and hence to be lacking in parental investment. Second, the child herself is viewed by her parents (and also by other adults around them) as not responsible for her different or difficult behaviors, since these behaviors have a biological cause. So, not only the physicians but also the parents feel that a diagnosis can help to safeguard the self-confidence and love in their relationship to their child. At the same time, many parents are devastated when their child receives an ASD diagnosis, because they believe that it is a life-long handicap, and they fear the social reactions of stereotyping and stigmatizing the child.

In our general discussion of the neuro-parenting discourse, we have stated that through this discourse, a huge burden of individual responsibility is imposed on parents, and especially on mothers: their love is seen as responsible for the child's cognitive and socio-emotional development (Hens 2017). This is for example visible in the way that neuro-parenting is politically recuperated: moral and social problems are being biologized and thus individualized. In our discussion on autism, we have shown that the diagnosis of a biological problem can reduce the responsibility that parents feel in their interactions with the child: the behavior of the child is due to a neurological difference, not to a problem in her education. Moreover, such a biological diagnosis can convince parents that their child is not responsible for her different or difficult behavior. Thus, both parents and child may experience an exculpatory effect thanks to an autism diagnosis. Against the background of the general neuro-parenting discourse, the diagnosis of a biological problem in the child contributes to the preservation (or development) of a sound parent-child relationship. Hence, the example of autism demonstrates that the relationship between neurological discourse, blame and responsibility is complex and multifaceted.

***Autism: a duty to know in order to act upon it neurologically***

Autism experts used to say that it was important to *diagnose* autism (in order to adapt the environment to the affected person); today, they advocate diagnosing autism as *early* as possible. An early diagnosis can lead to early therapy. The conviction is that an autism brain is malleable when it is behaviorally tackled very early on for at least two reasons: autism is generally viewed

as a purely biological condition requiring behavioral therapy<sup>7</sup>; and the infant’s brain is biologically understood as being extremely plastic in the first three years of life (Bruer 1999). As a matter of fact, Bruer argues forcefully that this early “critical period” or “window of opportunity” is only very modestly evidence-based, leading to his provocative statement of “the myth of the first three years” (Bruer 1999). Still, influenced by the current discourse on early diagnosis and therapy, parents say they feel strongly encouraged to get both a diagnosis and therapy as early as possible. They may feel pressure to “get as much therapy as they can” for their child (Rossi 2012). According to this mother of an almost 2-year-old child:

*They [the professionals] told me that it is better to do the testing early, especially since he is not yet attending school, that we would be able to prevent a lot of problems.*

She continues, however, by saying that lay people very often tell her:

*Well, you only have to get this [the ASD diagnostic assessment] done when he is 5 or 6 years.*

The father of the child adds:

*Yes, I first thought so too ... not too quickly because maybe they would not be able to see things accurately enough, because he cannot say a lot himself etcetera, but yes, apparently it is possible nevertheless.*

So, experts tell people it is important to start testing and therapy early, while both parents and other lay people may initially have doubts and need to be persuaded by the experts. In this respect, Nikolas Rose says about the current neurological understanding of the human being: “This is not a biology of fate or destiny, but a biology that is open for intervention and improvement, malleable and plastic, and for which we have responsibility to nurture and optimize.” There is an *obligation to take care* of our brain. He links this emphasis on plastic, flexible brains, to socio-political demands for individual flexibility across the life span and for a constant effort of self-improvement by citizens (Rose and Abi-Rached 2013). In this respect, it has already been shown that parents may experience a sense of responsibility towards their child’s development (Singh 2016). It is

---

<sup>7</sup> In the current brain-based understanding of human beings, the enhancement of the brain is preferably biological, genetic and neurological - for example, with drugs or genetic manipulation. Behavioral modification is considered a second best, since studies consistently suggest that behavioral change is linked to changes in the brain (Kobayashi et al. 2005; Straube et al. 2006).

interesting that both in the neuro-parenting discourse and in the discourse on autism, this plasticity is conceived as only occurring in the first few years of development. Accordingly, it has been found that parents' sense of responsibility can be paired with a frightening "sense of urgency" (Hodge 2006). Hence, although we have argued that the diagnosis of autism, through its biological interpretation of the child's behavior, helps to exculpate parents and children by suggesting that they cannot help it, it is "in the child's brain", such a diagnosis also engenders a duty to act upon this knowledge, by acknowledging the diagnosis as early as possible, in order to intervene while it is still possible.

### ***Autism and gender***

Neuro-parenting discourse forces us to assess the attributions of responsibilities on different levels. We have shown that *mothers* are predominantly targeted in parenting discourses in general. Also with respect to the research on autism, the experiences of mothers caring for a child with an autism diagnosis have been investigated much more than those of fathers (DePape and Lindsay 2015). Researchers have rarely empirically investigated the experiences of *fathers* (Timimi, Gardner, and McCabe 2011) with regard to caring for a child with an autism diagnosis, or fathers' views on autism and an autism diagnosis (Jacobs et al. under review). Such studies are necessary for at least two reasons (in addition to the obvious reason that fathers are children's parents too). The first reason is that ASD is diagnosed four times more often in boys than in girls (CDC 2018). So men may feel more implicated whenever it concerns autism. The second reason for investigating fathers' experiences is that, according to one well-known theory, the "extreme male brain theory" (Baron-Cohen 2002), autism is considered an extreme of the normal male profile<sup>8</sup>. Thus, it is useful to get a grasp of what it means to be the father of a child with an autism diagnosis when autism is not only linked to your particular sex but also to a rather deterministic view on your sex's brain. In particular, research is also needed to establish how the duty to know a child's neurological status might influence fathers. Indeed, hearing the current findings on the relationship between autism and a person's sex, fathers might in some way feel more personally involved than their child's mother when it comes to the child's neurological make-up. Hence, research on the

---

<sup>8</sup> The proponents of this theory claim that a male brain is significantly better in systemising than empathising. At the same time, they define the female brain as showing the opposite cognitive profile.

implication of concepts of (gendered) neurology on paternal love and responsibility is urgently needed.

With respect to the exculpatory function of an autism diagnosis, the focus on mothers is twofold. Previously, mothers have been found on the one hand to be *targeted* more often in the comments of people in their environment – i.e. enacted stigma – and on the other hand, to *feel affected* more often by what other people might think of them – i.e. felt stigma (Gray 2002), in this case comments (spoken out loud or suspected by mothers) on their responsibility and their child-rearing methods. For example, in our interview study with parents of recently diagnosed children, this mother of a 1-year-old child states that:

*I get a lot of contradictory messages from the people around me, these messages touch me more than they affect him [points to the father].*

According to the mother of a 4-year-old child:

*It is often in the street like that, if a child starts screaming or is lying on the ground... I have children, I know how this goes, I am not going to judge that mother, and also other mothers they understand this. But yes, people sometimes really give such a particular glance or remark, yes.*

Moreover, a biological explanation of a child's autism seems to be especially relevant for mothers. Indeed, the relationship between a mother's parenting behavior and a child's autistic behavior has a long and problematic history. Some decades ago, the prevailing theory on autism attributed it to the detached and cold parenting by so-called "refrigerator mothers" (Verhoeff 2013). The search for genes and biological causes of autism can partly be explained by the need to remove the blame from mothers (Hens and Van Goidsenhoven 2017; Nadesan 2005). As is apparent from qualitative research, these mechanisms are still at work on a micro level (Avdi, Griffin, and Brough 2000; Jacobs et al. 2018). Also, when it comes to the discourses both on the need to involve experts and on the duty to know your child's neurological status and to act upon it accordingly, we can expect that mothers are more receptive. Indeed, we have shown that parenting discourses are predominantly directed at mothers, and mothers have been found to be more affected by what other people might think of them. If a neurological problem is suspected, the mothers may be the first ones to be held responsible to act on this information.

## **The complex relationship between neurology and responsibility**

In this paper, we have sketched some of the implications that findings from neuroscience can have for responsibility. Although we acknowledge the importance of acquiring biological knowledge on issues related to parental love and the parent-child relationship, we have pointed out that neurologizing parenthood is not without its challenges. Moreover, we have shown that a neurological explanation of behavioral challenges can exculpate parents (“refrigerator mothers”) and children and thus ameliorate familial relationships. Nevertheless, we raise some concerns regarding the neurologization of parental love, and we call for a more nuanced way of thinking about parental responsibility, based on the work of Joan Tronto.

We have argued that in the current dominant Western discourse on parenting in general and in the understanding of a child’s ASD diagnosis in particular, biologization and neurologization are prominent. We have demonstrated that biologizing parental love, with its emphasis on motherly duties, risks biologizing and ‘naturalizing’ the still prevalent gendered positions in parental love. Both fathers and mothers can feel pressed to adhere to fixed parental roles that are - once again - being attributed to them, this time with the (neuro)scientifically sustained argument of being ‘natural’.

Also, such biologization often seems to be closely linked to medicalization and the location of challenges solely in an individual’s neurological (or genetic) makeup, as distinct from the psychosocial context. Related to disabilities such as autism, this is often described as the *medical model of disability*: a person’s disability is exclusively attributed to her impaired body or mind. Alternatives are possible: in the *social model of disability*, the environment is viewed as responsible for disabling or enabling the individual (Kafer 2013). But one need not give up biological interpretations of challenges in favor of psychological interpretations. In fact, the challenges we have described above seem to be linked to a deterministic and atomistic interpretation of brains and biology. Both in the neuro-parenting discourse on attachment and early development of the brain as well as in the call for early detection of autism, the possibility is sketched that brains are flexible and can be improved. However, this discourse reflects a very limited view on plasticity. The brain is only plastic for a limited period in a person’s life (in utero, and in the first 3 years). But recent theories, such as epigenetics and enactivism, suggest a more dynamic view on genes and brains respectively: both genes and brains are strongly influenced in

their activity by the *environment*, and these influences extend over a lifetime (Dupras, Ravitsky, and Williams-Jones 2014; Fuchs and Jaegher 2009; Hens and Van Goidsenhoven 2017). Hence, the continuous interaction of biology (epigenetics) and brain (enactivism) with the environment challenges a simplistic, individualized view on biology. So even in a biologized understanding of parental love and of behavioral difficulties, a purely biological discourse does not justify individualizing these difficulties. Indeed, viewing both the love for a child and the child's difficulties mostly or only as the circumscribed responsibility of parents is not supported by recent scientific research - since this research points to the importance of more dynamic views on biology. Not only are many of the interpretations of the implications of neuroscience for parenting unscientific, they also have problematic ethical implications. For example, the stress on individual and parental responsibility also paints a dire picture of what happens if a parent is not able to fulfil the individual duty to care for her child during the presumed "window of opportunity". Imagine a mother suffering from postnatal depression who is too tired to provide the prescribed stimulating environment. Surely we can do better than attribute the responsibility solely to her.

In her work on care ethics Joan Tronto reports that the societal view on *caring in general* is both deeply gendered and individualized. She shows how in a neoliberal society the "work ethic" model suggests that "what people deserve is what they have worked to obtain". She argues that this model is widely endorsed and taken for granted (Tronto 2013). We contend that the Western dominant discourse on parenting is in line with Tronto's "work ethic" model. In this discourse, the child-rearing efforts made by the individual parent (especially the mother) are viewed as responsible for the (brain) development of the child. Tronto instead argues that care in a "caring democracy" should be a collectively shared responsibility and the highest value that shapes the economy, politics and institutions such as schools and families (Tronto 2013).

In this paper, we have only sketched the ramifications of simplistic interpretations of neuro-discourse for how parental responsibility is perceived. We have shown that these ramifications are both complex, because they can take away old and impose new responsibilities, and too simplistic, as they situate responsibility on a gendered and individual level. We suggest that, taking all the promises and challenges of neuro-discourse into account, more work is needed on how as a society we can non-judgmentally help parents, both mothers and fathers, to lovingly bring up their children.

**Acknowledgment:** We would like to thank Daniela Cutaş, guest editor of this special issue, and our anonymous reviewer, for their valuable and extensive comments and suggestions on the penultimate version of this paper.

**Contributorship statement:** DJ and KH were both involved in the design of this study. DJ performed the data collection and primary analysis of the empirical studies. Both DJ and KH participated in further analysis and fine-tuning of the themes emerging from the analysis of the empirical data. DJ wrote the consecutive drafts of this paper, to which at every turn KH commented and made additions. Both authors have read and approved the final version of the paper.

## **Bibliography**

- American Psychiatric Association. 2013. *Diagnostic and Statistical Manual of Mental Disorders, 5th Ed.* 4th ed. Vol. 1. Washington, DC: American Psychiatric Association. <http://www.psychiatryonline.com/resourceTOC.aspx?resourceID=1>.
- Avdi, Evrinomy, Christine Griffin, and Susan Brough. 2000. "Parents' Constructions of the 'Problem' during Assessment and Diagnosis of Their Child for an Autistic Spectrum Disorder." *Journal of Health Psychology* 5 (2): 241–54.
- Badinter, Elisabeth. 1981. *Mother Love: Myth and Reality: Motherhood in Modern History*. 1st edition. New York: Macmillan.
- Baron-Cohen, Simon. 2002. "The Extreme Male Brain Theory of Autism" 6 (6): 248–54.
- Bell, Silvia M., and Mary D. Salter Ainsworth. 1972. "Infant Crying and Maternal Responsiveness." *Child Development* 43: 1171–1190.
- Bowlby, John. 1969. *Attachment and Loss: Attachment; John Bowlby*. Basic Books.
- Brazelton, T. Berry. 1988. "Stress for Families Today." *Infant Mental Health Journal* 9 (1): 65–71. [https://doi.org/10.1002/1097-0355\(198821\)9:1<65::AID-IMHJ2280090109>3.0.CO;2-K](https://doi.org/10.1002/1097-0355(198821)9:1<65::AID-IMHJ2280090109>3.0.CO;2-K).
- Bretherton, Inge. 2013. "Revisiting Mary Ainsworth's Conceptualization and Assessments of Maternal Sensitivity-Insensitivity." *Attachment & Human Development* 15 (5–6): 460–84. <https://doi.org/10.1080/14616734.2013.835128>.

- Bruer, John T. 1999. *The Myth of the First Three Years: A New Understanding of Early Brain Development and Lifelong Learning*. Simon and Schuster.
- Burman, Erica. 2008. *Deconstructing Developmental Psychology*. Routledge.
- CDC. 2018. “Data and Statistics | Autism Spectrum Disorder (ASD) | NCBDDD | CDC.” Centers for Disease Control and Prevention. April 26, 2018. <https://www.cdc.gov/ncbddd/autism/data.html>.
- Cunningham, Hugh. 2012. *The Invention of Childhood*. Random House.
- De Vos, Jan. 2012. *Psychologisation in Times of Globalisation*. Routledge.
- DePape, Anne-Marie, and Sally Lindsay. 2015. “Parents’ Experiences of Caring for a Child with Autism Spectrum Disorder.” *Qualitative Health Research* 25 (4): 569–83. <https://doi.org/10.1177/1049732314552455>.
- Dupras, Charles, Vardit Ravitsky, and Bryn Williams-Jones. 2014. “Epigenetics and the Environment in Bioethics.” *Bioethics* 28 (7): 327–34. <https://doi.org/10.1111/j.1467-8519.2012.02007.x>.
- Edwards, Amelia G., Chris M. Brebner, Paul F. McCormack, and Colin J. MacDougall. 2018. “From ‘Parent’ to ‘Expert’: How Parents of Children with Autism Spectrum Disorder Make Decisions About Which Intervention Approaches to Access.” *Journal of Autism and Developmental Disorders*, February, 1–17. <https://doi.org/10.1007/s10803-018-3473-5>.
- Faircloth, Charlotte. 2017. “‘Natural’ Breastfeeding in Comparative Perspective: Feminism, Morality, and Adaptive Accountability.” *Ethnos* 82 (1): 19–43. <https://doi.org/10.1080/00141844.2015.1028562>.
- Fuchs, Thomas, and Hanne De Jaegher. 2009. “Enactive Intersubjectivity: Participatory Sense-Making and Mutual Incorporation.” *Phenomenology and the Cognitive Sciences* 8 (4): 465–86. <https://doi.org/10.1007/s11097-009-9136-4>.
- Goffman, Erving. 1990. *Stigma: Notes on the Management of Spoiled Identity*. New Ed edition. London: Penguin.
- Gray, David E. 2002. “‘Everybody Just Freezes. Everybody Is Just Embarrassed’: Felt and Enacted Stigma among Parents of Children with High Functioning Autism.” *Sociology of Health & Illness* 24 (6): 734–49. <https://doi.org/10.1111/1467-9566.00316>.
- Hacking, Ian. 2006. “Making Up People.” *London Review of Books*, August 17, 2006.

- Hens, Kristien. 2017. "The Ethics of Postponed Fatherhood." *IJFAB: International Journal of Feminist Approaches to Bioethics*, March. <https://doi.org/10.3138/ijfab.10.1.103>.
- Hens, Kristien, and Leni Van Goidsenhoven. 2017. "Autism, Genetics and Epigenetics. Why the Lived Experience Matters," no. 929.
- Hodge, Nick. 2006. "Disabling Families: How Parents Experience the Process of Diagnosing Autism Spectrum Disorders." Sheffield Hallam University.
- Jacobs, Delphine, Kristien Hens, Kris Dierickx, and Jean Steyaert. (under review). "The Conceptualisation of Autism by Parents and Clinicians – a Review of Empirical Qualitative Studies." *Ethical Perspectives*.
- Jacobs, Delphine, Jean Steyaert, Kris Dierickx, and Kristien Hens. 2018. "Implications of an Autism Spectrum Disorder Diagnosis: An Interview Study of How Physicians Experience the Diagnosis in a Young Child." *Journal of Clinical Medicine* 7 (10): 348. <https://doi.org/doi:10.3390/jcm7100348>.
- Joldersma, Clarence W. 2016. *Neuroscience and Education: A Philosophical Appraisal*. Routledge.
- Kafer, Alison. 2013. *Feminist, Queer, Crip*. Indiana University Press.
- Kant, Immanuel. 1996. *The Metaphysics of Morals, Trans. Mary Gregor*. Cambridge University Press.
- Kobayashi, Keisuke, Eiji Shimizu, Kenji Hashimoto, Makoto Mitsumori, Kaori Koike, Naoe Okamura, Hiroki Koizumi, et al. 2005. "Serum Brain-Derived Neurotrophic Factor (BDNF) Levels in Patients with Panic Disorder: As a Biological Predictor of Response to Group Cognitive Behavioral Therapy." *Progress in Neuro-Psychopharmacology and Biological Psychiatry* 29 (5): 658–63. <https://doi.org/10.1016/j.pnpbp.2005.04.010>.
- Lai, Meng-Chuan, Michael V Lombardo, and Simon Baron-Cohen. 2014. "Autism." *The Lancet* 383 (9920): 896–910. [https://doi.org/10.1016/S0140-6736\(13\)61539-1](https://doi.org/10.1016/S0140-6736(13)61539-1).
- Lancy, David F. 2007. "Accounting for Variability in Mother–Child Play." *American Anthropologist* 109 (2): 273–84. <https://doi.org/10.1525/aa.2007.109.2.273>.
- Lexmond, Lex, Matt Grist, Anthony Seldom, Camila Batmanghelidjh, Ed Mayo, Emma-Jane Cross, and James Arthur. 2011. "The Character Inquiry: 'Character Should Be at the Heart of Our Responses to Social Problems...'" Demos.
- Liao, S. Matthew. 2006. "The Idea of a Duty to Love." *The Journal of Value Inquiry* 40 (1): 1–22.

- Lilley, Rozanna. 2011. "Maternal Intimacies" 26 (68): 207–24.
- Macvarish, Jan. 2016. *Neuroparenting: The Expert Invasion of Family Life*. Springer.
- Nadesan, Maija Holmer. 2005. *Constructing Autism*. Routledge.
- Newman, Louise, Carmel Sivaratnam, and Angela Komiti. 2015. "Attachment and Early Brain Development – Neuroprotective Interventions in Infant–Caregiver Therapy." *Translational Developmental Psychiatry* 3 (1): 28647. <https://doi.org/10.3402/tdp.v3.28647>.
- Perry, Bruce D. 2002. "Childhood Experience and the Expression of Genetic Potential: What Childhood Neglect Tells Us About Nature and Nurture." *Brain and Mind* 3 (1): 79–100. <https://doi.org/10.1023/A:1016557824657>.
- Quinn, Susan. 1982. "The Competence of Babies." *The Atlantic*. January 1, 1982. <https://www.theatlantic.com/magazine/archive/1982/01/the-competence-of-babies/305128/>.
- Richardson, Hannah. 2014. "Parenting Scheme Dubbed a 'flop' by Labour." BBC News Online. April 4, 2014. <https://www.bbc.com/news/education-26875470>.
- Rohner, Ronald, and Robert Veneziano. 2001. "The Importance of Father Love: History and Contemporary Evidence." 5 (4): 382–405.
- Rose, Nikolas, and Joelle M. Abi-Rached. 2013. *Neuro: The New Brain Sciences and the Management of the Mind*. Princeton University Press. <https://www.amazon.com/Neuro-Brain-Sciences-Management-Mind/dp/0691149615>.
- Rossi, Natasha. 2012. "The Production of Autism Diagnoses within an Institutional Network: Towards a Theory of Diagnosis." Unpublished PhD Dissertation, Columbia University.
- Sample, Ian. 2014. "Talking to Babies Boosts Their Brain Power, Studies Show." *The Guardian*. February 14, 2014. <https://www.theguardian.com/science/2014/feb/14/talking-to-babies-brain-power-language>.
- Singh, Jennifer S. 2016. "Parenting Work and Autism Trajectories of Care." *Sociology of Health & Illness* 38 (7): 1106–20. <https://doi.org/10.1111/1467-9566.12437>.
- Spreeuwenberg, Lotte. 2017. "Verplichte Liefde: Is Zoiets Mogelijk?" *Bij Nader Inzien*. April 20, 2017. <https://bijnaderinzien.org/2017/04/20/verplichte-liefde-is-zoiets-mogelijk/>.

- Straube, Thomas, Madlen Glauer, Stefan Dilger, Hans-Joachim Mentzel, and Wolfgang H. R. Miltner. 2006. "Effects of Cognitive-Behavioral Therapy on Brain Activation in Specific Phobia." *NeuroImage* 29 (1): 125–35. <https://doi.org/10.1016/j.neuroimage.2005.07.007>.
- Suissa, Judith. 2017. "Tough Love and Character Education. Reflections on Some Contemporary Notions of Good Parenting." *Pedagogical Culture* 1 (1): 115–31.
- Timimi, Sami, N. Gardner, and B. McCabe. 2011. *The Myth of Autism: Medicalising Men's and Boys' Social and Emotional Competence*. Palgrave Macmillan. <http://dx.doi.org/10.1080/09687599.2012.674766>.
- Tronto, Joan C. 2013. *Caring Democracy: Markets, Equality, and Justice*. New York: New York University Press.
- Verhoeff, Berend. 2013. "Autism in Flux: A History of the Concept from Leo Kanner to DSM-5." *History of Psychiatry* 24 (4): 442–58. <https://doi.org/10.1177/0957154X13500584>.
- Wall, Glenda. 2001. "Moral Constructions of Motherhood in Breastfeeding discourse." *Gender & Society* 15 (4): 592–610. <https://doi.org/10.1177/089124301015004006>.