

# **The Foundations of Flourishing and Our Responsibility to Infants**

*An Ethical and Evidence-Based Case to  
Challenge the Societal Acceptance of  
Childcare*

By

**Gillian Joiner**

# **The Foundations of Flourishing and Our Responsibility to Infants: An Ethical and Evidence-Based Case to Challenge the Societal Acceptance of Childcare**

**By Gillian Joiner**

**This book first published 2022**

**Ethics International Press Ltd, UK**

**British Library Cataloguing in Publication Data**

**A catalogue record for this book is available from the British Library**

**Copyright © 2022 by Gillian Joiner**

**All rights for this book reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical photocopying, recording or otherwise, without the prior permission of the copyright owner.**

**Print Book ISBN: 978-1-80441-006-6**

**eBook ISBN: 978-1-80441-007-3**

# Table of Contents

Acknowledgements

Introduction..... 1

Chapter 1 The Evidence..... 13

Attachment Theory ..... 13

Neuroscientific Evidence..... 19

Chapter 2 Childcare, and Mothers and Fathers ..... 30

Childcare..... 30

Mothers and Fathers ..... 36

Chapter 3 Obligations to Children and Ourselves ..... 48

Obligations to Children ..... 48

Autonomy..... 55

Chapter 4 Love..... 60

What Love Confers..... 61

Duty to Love..... 64

The Components of Love ..... 68

Expansiveness of Love..... 74

Chapter 5 Flourishing ..... 79

Flourishing ..... 79

Attributes of Flourishers..... 82

Chapter 6 Liberalism .....	90
The Liberal State and its Role Regarding Children.....	90
Public and Private Spheres .....	94
Nozick's Liberalism .....	97
Kant.....	100
Mill.....	101
Capitalism.....	107
Chapter 7 Feminism and Motherhood .....	111
Feminism .....	111
Difference Feminism .....	116
Motherhood.....	120
Background.....	120
Motherhood Today.....	124
Chapter 8 An Ethics of Social, Emotional, and Moral Wellbeing .	131
Ethics of Care.....	132
Slote's Ethics of Care and Empathy.....	137
Gilligan's Reframing of the Ethics of Care .....	140
An Alternative Autonomy.....	143
The Ethics of Social, Emotional, and Moral Wellbeing .....	146
Families .....	148
Chapter 9 Policy Issues .....	153

The State .....	154
Practical Problems .....	160
Career .....	160
Remuneration.....	161
Superannuation.....	163
Education.....	163
Lack of Status and Respect .....	164
Developing Solutions Through Policy.....	166
Career .....	167
Remuneration.....	168
Family.....	171
Value of Motherhood .....	171
Superannuation.....	172
Education.....	173
Supporting Families .....	174
Communities .....	178
Conclusion.....	181
Bibliography.....	193
Index.....	212

## ACKNOWLEDGEMENTS

*I would like to acknowledge the guidance, support, and encouragement I received from Dr Richard Corry who provided a pathway to complete my PhD on which this project is based. Thanks also to Leila and David for getting me started on the journey. I am also grateful to my friends, family, and colleagues, particularly Rose, who have been great sounding boards for me on the varied content of this endeavour.*

# INTRODUCTION

*'... the Republic ... begins from the premise that philosophers should not ignore the problems of the imperfect world around them; they should become aware of them and do something to solve them' (Annas 1981, p. 18).*

Neuroscientists are screaming from the rafters, or at least would be if they had a public platform to speak from: 'the use of **childcare** for the under threes, and some parenting styles, can cause children major long-term emotional harms!' Analogous to the strength of climate change evidence that many are ignoring and for which emerging generations may be the unfortunate inheritors of shocking consequences unless we act, so too is the evidence that we are seemingly ignoring the ever-accumulating evidence of harms to the most vulnerable and voiceless in our society. We cannot/should not morally ignore this evidence. Infants are at the mercy of their parents and society; if we do not act on their behalf there is no-one else who will. Naturally, many questions arise from this ever-growing neuroscientific data, such as, what are the negative outcomes of the use of childcare for the under threes? What can we do to support better parenting practices? Ought we stop using childcare as the mechanism for enabling women to return to work after childbirth? Where would doing such a thing leave women and their recent forays into autonomy and independence after parenthood? Navigating life after the birth of children is difficult enough, so taking away the only apparent option for a return to work appears to be problematic in the extreme.

I suggest that neither the neuroscientific data, nor the problem it identifies for infants, women, and men, can be ignored; it represents a formidable and largely unexplored issue. This project tackles this dilemma, taking the reader on a thought-provoking journey. It calls for a stringent approach, one which not only examines attachment theory, infant neuroscience, and psychological research, but also navigates its way through the methodology that ethics provides, exploring liberalism, feminism, and moral theory along the way. While finding a solution is not easy, the issue being so complex, it is not impossible.

At the heart of this journey is the assumption that we all want the same things for the next generation, whether we are parents of children or not. We want children to flourish, for their own sakes but also because we want

our society to be full of others who thrive. Children represent the building blocks of our future society. When some do not thrive, indeed may languish, fewer of the thriving are left in our society; it becomes more and more difficult for us to navigate life well and all of our lives are constrained.

And while it is easy to say that we want children to grow up to become flourishing individuals who can fully participate in society, research shows that around 40% of children develop insecure attachment schemas which greatly impinge on their later ability to flourish. This would indicate that there is something wrong with some of our parenting practices and choices, and perhaps with society in general. It also signifies that growing a healthy population with high levels of wellbeing is not as straightforward as we generally imagine. Nonetheless, we are now blessed with more accurate scientific knowledge which can show us how we **ought** to act toward our children. Of course, we could continue to do what we have in the West for most of our history, that is, overlook the fact that infants may have discrete needs that require our attention, needs that mean we cannot simply barge through life on our own paths, but require that we think about children separately from ourselves, as thinking, developing, and dependent individuals. We may indeed have to rethink the way we manage infant caring arrangements. While it may be news to some, indeed many, that evidence suggests there is something inherently wrong with the use of childcare during the infancy period, and thus is not the right solution for enabling our return to work, other research suggests that staying at home to raise children is not a guarantee of wellbeing for infants. What we do know is that there is plenty of evidence which signals that something is not right. In Australia, for instance, one in four young people aged 16-24 have a mental disorder (Australian-Government 2007b). Around the same number of five year olds have been measured in the Australian Early Development Census 2015 as being either developmentally at risk or developmentally vulnerable on social and emotional scores (Australian-Government 2016a, p. 15). Disturbing statistics about children's mental wellbeing are not exclusive to Australia, however. Belfer (2008) reports that:

Current global epidemiological data consistently reports that up to 20% of children and adolescents suffer from a disabling mental illness; that suicide is the third leading cause of death among adolescents; and that up to 50% of all adult mental disorders have their onset in adolescence (p. 226).

These statistics are alarming. Given the sadness this represents for many of our young people, and its indictment of our society as a whole, we also surely



need to ask what can be done to improve such statistics? Neuroscientific investigations can shed the best light yet on what may be driving such data.

Prior to detailing the data and the contents of the chapters, however, I need to qualify some of the things I will go on to say. First, although I will describe the kinds of nurturing which neuroscientists argue support the best outcomes for infants, I want to acknowledge that it will not always be possible for a parent to deliver optimal nurturing. Rarely does anyone achieve the ideal in the goals they pursue, so I do not mean to imply that anyone who does not attain such an ideal is failing; rather, I propose the ideal as an aspirational goal, knowing that we all fall short on occasion.

I also want to say why I refer to mothers as opposed to caregivers or parents, both gender-neutral terms. It is mothers who have, for all human history, carried pregnancies, given birth, breastfed, and in most cases undertaken the primary nurturing of their infants, and this remains the case. Referring to mothers is an acknowledgment of this. Mother is a term which signifies an intimate relationship generally associated with loving warmth, unlike cooler terms such as attachment figure or carer. This is not to say that others such as fathers, grandparents, foster carers, and parents of the same gender cannot also provide a relationship which support infants to become flourishing individuals. In most cases I argue that what they are delivering is mothering 'per se'. Indeed, I will argue that the single most important requirement for infants is that the adults who take of the primary care of them have developed an attachment relationship with the child and can convey to the infant a sense of security by loving them unconditionally and being responsive to their needs, resulting in the infant feeling contentment most of the time. Such a thing can be provided in the absence of the biological mother. I also acknowledge that in some instances and for any number of reasons the mother is sometimes unable to provide the essential care that infants need.

I'll also add that, while the position I take in this project does rest on empirical data, I acknowledge this is largely a philosophical document and therefore not a forum where the veracity of empirical evidence is generally tested; however, I believe that philosophical enquiry needs to be receptive to scientific evidence, where applicable, so that philosophers can integrate new information into their philosophical deliberations.

I will also frequently refer to a collective 'we'. I use this term not to assume that the reader is always in agreement with what I am saying, but rather because it reflects my view that we as reader and writer are sharing the

ideas I am presenting. Such a term is also reflective of my stance on human interdependence, which I will later clarify.

There will be objections to several issues I raise; these will be addressed as each topic arises. Some may challenge my interpretation of the evidence which shows that at least one primary attachment figure ought always to be accessible to the infant. Others may question whether the neuroscientific data I present proves that women are best placed to nurture and to spend the majority of their time with babies during their infancy. Some will rightly argue that the brain remains flexible, and that therefore any problems that may develop through negative nurturing experiences can be ameliorated later in childhood and into adulthood. Others still will reject my suggestion that, despite the many and varied arguments that make up different moral theories, none have recognised the significance of our early life experience and its relevance to the way our moral character forms. There will also be objections to my support of Gilligan (1993, 2014), Held (2006), and Slote's (2007) claims that moral theories have not adequately taken account of the concept of human interdependence, instead placing emphasis on independence and self-sufficiency. Their argument, that morality must also incorporate our need for human caring, provides a valuable baseline from which I develop my point of view. Further objections may arise to my argument that the nuclear family offers inadequate support to those who undertake parenting full-time and to their partners.

I assert that within the many debates in moral philosophy there is a relatively untenanted space in relation to infants and their specific care requirements. While many philosophers from Plato (380BC/1992) through to very recent writers such as Blustein (1982), Austin (2007), and Archard (2015b) have pointed to the importance of parental influence in shaping the minds of the young, what has not been apparent in the philosophical literature on obligations and duties to children is an understanding of the long-term influence that nurturing *during infancy* has on later social, emotional, and moral wellbeing. This, I argue, is important to examine. In this project I set out two major ideas. The first concerns the ideal circumstances for infant wellbeing, and the second the pathway to making that ideal a tangible reality. Below I briefly outline the content of each of the chapters.

To begin addressing the dilemma which places the needs of infants in direct opposition to the needs of parents, I first discuss attachment theory in

Chapter One, a theory developed in the 1950s by John Bowlby and Mary Ainsworth. Tasked with researching and reporting on why so many homeless children became involved in criminal behaviour following WW2, Bowlby posited that our original attachment figure provided a sense of security and belonging; when this was not available children were left frightened and disaffected, often causing them to react negatively. Later, the theory detailed children's needs, hypothesising that bonding positively with a loved attachment figure takes consistency of loving care and develops within the infant a sense of belonging and wellbeing, vital to conducting themselves well in the world.

I then show how subsequent neuroscientific research was able to lend weight to the notion that the way we become bonded to our attachment figure during infancy creates a **template** on which our later social and emotional wellbeing is patterned. I outline how infancy is the time when our brain is growing faster than at any other time in our lives (indeed, 101% in the first year of life), growing in response to the stimulus in its immediate environment, causing development to head in a positive or negative direction. This neuroscientific evidence strongly suggests that the infancy period is more critical to our later social and emotional wellbeing than we have previously recognised, more critical than at any other time of life. Yet parents, the deliverers of the experiences that determine their infants' social and emotional template, are under-resourced and unsupported. I discuss the inequities of this situation given that all later educative experiences in a child's life are delivered by specifically-educated people who are monetarily resourced by the state.

Investigating the neuroscientific data also reveals the problematic nature of childcare for the under threes which I detail in Chapter Two. Much of this research consists of data on stress levels measurable in infants while they are in childcare. Stress is known to be highly toxic to the brain, particularly so when the brain is in its most critical phase of development, during infancy. I argue that while in most instances paid child carers do deliver good and in many instances loving care to the infants in their care, they nonetheless do not have a pre-existing loving bond or attachment schema with the infant, a bond which we now know is critically important to the infant's developing neural template. I also discuss how infant-to-carer ratios are too high to enable carers to deliver optimal nurturing. It is postulated that childcare centres are inherently stressful environments. I detail the impact continued stress levels have on the developing brain.

In Chapter Two, I also investigate the difference that the biology of mothers as opposed to fathers has on nurturing. I argue that mothers are the preferred candidates for the role of primary attachment figures and for undertaking the predominant caring role for at least the first eighteen months of an infant's life. This is a controversial claim, but I show in this chapter that the empirical evidence for it is strong. Indeed, I make a normative claim that the state ought to ensure that mothers undertake the primary, full-time caring role for at least the first eighteen months of their infants' lives, and thereafter that an attachment figure assumes the role until children reach the age of three. There are problems that emerge from such a controversial argument that require additional analysis and explanation; these inform some of the content of the remaining chapters.

In Chapter Three I shift gears, moving away from empirical evidence, to evaluating what the philosophical literature has to say about our obligations to children. While philosophical discussions tend to rest in the idea that there is a need to provide well for our children, authors such as Archard (2003, 2010b, 2015a) and Blustein (1982, 2012) take the view that we are only obligated to supply *adequate* parenting goods to children, their reticence stemming from the fear that parental autonomy may be compromised if *optimal* parental care is provided.

As there is an inherent concern for the autonomy of parents, and particularly that of mothers when rejecting childcare, it became necessary to examine the nature of autonomy as it exists in a Western liberal society, as well as why we consider it to be of such value. Examination showed that it remains highly valued, and with no other answer seemingly evident, the utilisation of childcare as the solution to the loss of parental autonomy persists. Thus, at this stage of the project parental autonomy remains incompatible with the parental obligation to ensure children are equipped to become flourishing adults.

Curiously, as I embarked on this journey, I was astounded that the word **love** was noticeable by its absence in the parent/child literature in each of the areas I investigated. The topic of Chapter Four, love, has been absent, I suggest, because there is a lack of clarity surrounding its meaning, usage, and characteristics, and because of its strong association with romantic love, particularly within philosophy.

I argue that this omission requires examination, with the giving of love being arguably the most necessary aspect of parenting well. Though I did

find three philosophers who had written articles on the topic of love in conjunction with children, they largely discussed love in terms of parental duties to love. Their use of the word seemed to assume that love was a static item that was present or not present, and was left unassessed. While one philosopher argues, for instance, that parents do have a duty to love their children, another argues that love cannot be commanded and therefore cannot be required as a duty. Yet another suggests that if parents cannot love their children they should be required to at least 'try' to love their children. I contend that such arguments are wrongly premised, with these philosophers tending to hold the view that a lack of love towards a child is caused by a parent's lack of love for the child. I suggest however that in almost all instances the parent does in fact love the child but is unable to **convey** their love to the child.

With an absence of general philosophical literature on how love functions, I briefly turn to Fromm (1961) and populist philosopher Alain de Botton (2016) who argue that love is a skill. I suggest this is the right explanation, borne out by attachment theory and neuroscientific understandings. Many parents, most likely because of limited experience in their own childhoods, have not developed the skills required to convey love successfully to their children despite experiencing feelings of love for them. I therefore assert that there are two components of love that can be separated, the emotional feeling of love, and the activity of expressing love. Perceiving love as a skill supports the view that parents may need to be coached in providing security of attachment for their child. I argue that when love is delivered in such a way that it is felt by the child, the rewards for the parent as well as the child are high. Such deep connected love is absent in long duration childcare as it requires an attachment figure to deliver it.

Building on the idea that love is central in enabling a child to flourish, I move on to I examine the term 'flourishing' In Chapter Five. I show how this neatly ties in with the previous discussion, with findings from infant neuroscience, and with my claims about love. I begin by examining the nature of 'flourishing' as understood in some ancient conceptions, and then turn to some current philosophers' ideas. I then compare and contrast these ideas with Abraham Maslow's (1950/1973) exploration of those he termed 'self-actualizers', and with research on flourishing undertaken by Barbara Fredrickson (2009). I argue that a synthesis of these philosophical and psychological ideas offers the most fitting description of what it means to flourish. Additionally, I suggest that this evidence supports the notion that

the antecedents of flourishing are the same as those for wellbeing and happiness as detailed by philosophers and psychologists. It is universally agreed, I claim, that to flourish is to possess something of great internal and external value. It is a life outcome that people not only wish for themselves but also for their children.

And while it may be claimed that people can develop the attributes of flourishing needed to become flourishing adults later in life, with research showing that this is possible, it is only possible through months and years of dedicated effort to modify problematic patterns of thinking. I argue therefore that the much more direct way of developing the inner resources needed to flourish – the receipt of *responsive nurturing* delivered during infancy - provides the most efficient route to the attainment of a flourishing state, circumventing the need for a great many ameliorative programs later in life. The provision of responsive nurturing, however, nurturing that is responsive and loving with an enduring other, is still in apparent conflict with the active pursuit of parental autonomy.

So where to from here? I suggest it is prudent to examine two schools of thought which have heavily influenced many of the ideas we live by, and to discuss how they are manifest in society, with a view to seeing whether they can resolve our dilemma. First, in Chapter Six I examine liberalism, then feminism in Chapter Seven. At the outset I review a brief history of the liberal state's role in the care and protection of its citizens and, importantly, their children. I then discuss liberalism's influence on societal beliefs and expectations and how they inform many of our everyday rituals and observances, including the idea that children will simply fit into their families' priorities. I ask whether liberalism does indeed offer the right framework to live by and whether its original ethos has been corrupted by capitalist ideology. With these enquiries in mind, I consider whether liberalism can offer the answer to the overriding dilemma of this thesis: how we navigate between two competing moral conventions, the need for parental autonomy, family income, and wealth creation, and the needs infants have for their attachment figures' time. I conclude that liberalism is not able to usefully resolve the dilemma at hand.

In Chapter Seven, I argue that, at a time in Western history when women are actively pursuing their own autonomy to a greater degree than was previously possible, to suggest that it is women who ought to spend the preponderance of their time with their infants, conflicts with prevailing

expectations. It is therefore appropriate that I investigate this tension through a feminist lens and ask if feminism can offer a workable solution to the dilemma at hand.

I first detail some historical factors which contributed to women being viewed as inferior, arguing that the development of feminism has rightly focused on the need to improve women's status and autonomy. I also argue that feminists have generally accepted the liberal ideals of individualism and autonomy, assuming that they offered the correct goals for which to strive in life. These ideals were generally linked to the kinds of activities men typically undertook – working and earning – and similarly linked to the gaining of status and respect. Rightly wanting these things, women gradually turned away from their traditional roles, including motherhood, in favour of activities that attracted status and respect: earning and working for wages. I argue that negative evaluations of women in general have resulted in women wanting to de-identify from womanhood and reject their former gender-associated roles.

I also investigate difference feminism which argues that women should not have to fit into a male-defined framework to gain status and respect. Difference feminism as a theory gained little ground however, with the assumption persisting that paid work offered the recipe for gaining status, respect, autonomy, and independence. Two assumptions emanated from this, I argue. The first was that the way men conducted their lives was the *only* way to gain status and respect. The second was that nurturing was of little value and that the relationship of the carer to the child was inconsequential.

I finally argue that, as a consequence of women's focus essentially turning them away from their children's needs towards their own autonomy, neither women nor men considered the possible consequences of no longer nurturing their own children and placing them instead into childcare.

In Chapter Eight, I look briefly to moral theories to see if they can offer a possible pathway through the primary dilemma of this thesis. I argue that the *ethics of care* can be of most use here, though it has had little prominence among moral theories. I first discuss its development, examining Held's (2006) work which provides a thorough explanation of the ethic. I then turn to Slote (2007) who argues for a broader discussion around the concepts of empathy and respect within the ethics of care, then outline Gilligan's (2014)

most recent claims that, according to contemporary scientific data, the factors previously identified as markers of healthy maturation, such as independence, are actually signs of moral injury. I argue that each of these authors contributes to a growing expansion of the study of care ethics, and that together they offer useful insights and good starting points for resolving the dilemma at hand.

In this chapter I also examine an alternative view of autonomy. Influenced by concepts which emanate from the ethics of care, this version of autonomy is based on the premise that we are not primarily independent beings; rather, we are **interdependent**. I argue that there are still some limitations to this notion of alternative autonomy but, with the addition of Millsian notions of morality as discussed in Chapter Six, it supports the view that the way we conduct ourselves autonomously needs to reflect our social attitude toward others in order to develop our authentic and self-guided natures. I call this *social autonomy*.

These discussions provide a foundation for bringing together the findings of each of the previous chapters. I claim that psychological research confirms the view that fostering our empathetic, accepting, and social nature supports our wellbeing, whereas an encouragement to strive for individualism and self-sufficiency diminishes us. Maturation is not therefore found in independence and self-sufficiency but in our ability to deeply embrace our interdependence. I argue that together these ideas naturally expand the ethics of care into an **ethics of social, emotional, and moral wellbeing**. This, I argue, represents an holistic ethical framework for the whole of society to live by as it addresses the most expedient way to support human flourishing. In view of the project at hand and these findings, I show that social autonomy directs us in two ways. It suggests that we ought to briefly take time out of our working lives to embed ourselves in the opportunity of being full-time parents so that we can provide responsive nurturing to our infants, and that engaging in this positive activity provides a unique opportunity to further our own wellbeing. In this way the dilemma at hand is resolved as there is no conflict between social autonomy and responsive parenting.

In addition, I argue that this is the first time an ethical structure has been able to encompass a complete moral system, and outline how human beings can find the most expedient and natural way to become flourishing people. The idea that human beings have the capacity to become flourishing individuals is no longer confined to theory and vague notions



of how it may be attained. I contend that taking a synthesis of ideas from the varying disciplines I have outlined shows that there is a systematic way to advance the wellbeing of the future offspring of society. Embracing an ethics of social, emotional, and moral wellbeing means we would no longer adhere to erroneous notions that pervade our liberal paradigms and which do not offer the happiness or wellbeing that we seek. We would instead adopt values inherent in responsive nurturing and appreciate that staying home to nurture infants full-time does not diminish our autonomy; rather, it enhances it through deeply embedding us in a rich, unique, and time-limited role. While the adoption of the ethics of social, emotional, and moral wellbeing resolves our dilemma, however, it does not solve the financial problems some would experience with that adoption, and I argue that this requires support from the state – a matter I address in the next chapter.

In Chapter Nine I turn to the practical implications that arise from responding to the normative implications of this project – that childcare ought not be utilised during infancy and that mothers ought to raise their children for the first 18 months of their children's lives, with either mothers or another attachment figure nurturing children until the age of three. The first implication, and my main point in Chapter Six, is that the state has certain responsibilities. I argue that it is the state's responsibility to respond to the claims I have made, and that it is important to offer recommendations that may usefully prompt further discussion and exploration of the issues at hand. I argue that the state must adjust to new research showing that monetary policies alone cannot improve the wellbeing of citizens. I argue that the state needs to orient more public policy toward the psychological needs of its people, because, as the evidence shows, the wellbeing of citizens can be considerably facilitated, or considerably impaired, by the way they are nurtured during infancy. The state therefore needs to implement policies that will facilitate the responsive nurturing of infants. Unless the state does address such issues, it will continue to inadequately attend to the long-term wellbeing of its citizens.

I also describe each of the central issues which represent barriers to mothers undertaking the nurturing of their infants full-time, explaining why each of these issues are a problem. They include: the negative effects associated with taking time out of the workforce; the lack of remuneration and superannuation; the lack of access to good information about what best supports infants' psychological wellbeing; the lack of value and status

accorded to motherhood; and the lack of supports for mothers within the nuclear family.

I then propose solutions to each of these issues, arguing that the state ought to directly financially support mothers/families as well as provide the social and emotional supports they require. These social and emotional supports, I suggest, ought to be delivered to parents through community centres or neighbourhood houses rather than directly through the state so that parents may connect with and be supported by those who live close to them, and so that parents can also have the support they need in order to appropriately nurture their infants.

# CHAPTER 1

## THE EVIDENCE

*‘A central tenet of attachment theory and developmental interpersonal neurobiology dictates that the emotional bond between the primary caregiver and her infant will have long-term effects, for better or worse, on the developing right brain, and thereby on both socioemotional and physical health over the entire lifespan’ (Schore 2013, p. 55).*

In the introduction I described a discord that is now evident between the needs of parents and those of their infant offspring. I stated that this tension arises in the light of evidence accumulating from infant neuroscience studies, attachment theory, our knowledge of psychological wellbeing, and how a flourishing state most readily develops in humans. In this chapter I will offer the empirical evidence to support these claims, explaining precisely what it is that infants require from their parents in order to lay the foundation for flourishing. I will first investigate attachment theory which hypothesises that bonding positively with a loved attachment figure provides the infant with a sense of security. I will argue that such bonding is extremely important to an infant’s later wellbeing. I will then present the neuroscientific evidence that has both confirmed and extended attachment theory. This will show that what is taking place in an infant’s brain is far more complex and experience-dependent, with much longer-term outcomes than previously realised.

What is the evidence of which neuroscientists speak? Before I begin to discuss it, it is best to place it in some historical context, so I will first explore attachment theory. It is a theory which seeks to explain some basic and formative human drivers that underly our need to belong – our need to feel secure in the world when we first enter it.

### **Attachment Theory**

Attachment theory was first proposed by psychotherapist John Bowlby in the 1950s. Bowlby (1988) reported that the explanations provided within his own profession of psychotherapy for the dysfunctional behaviours he had witnessed and studied in children were inadequate. Investigating other disciplines, he took from ethology the idea that attachment was not primarily linked to feeding but to safety and protection (p. 27).

Bowlby's early work and various studies had revealed that when a child is removed from their 'mother-figure' that they experienced a commonly shown 'predictable sequence of behaviour' that of 'protest, despair, and detachment' (1969, p. 27). He observed that the long-term 'effects of these separations could be disastrous, leading to neurosis or delinquency in children' (Holmes 1993, p. 62). His new work sought to explain the nature of the bond between the parent and child and when disrupted, had a serious impact on children.

Bowlby (1988) says his investigations led him to the notion that the absence of a warm, intimate, and continuous relationship in infancy caused infants and children to feel unsafe and unprotected, which in turn resulted in deficits in emotional wellbeing (p. 21). Bowlby (1988) came to call the behaviour flowing from the human need to seek safety and protection 'attachment behaviour'. He described it as:

... any form of behaviour that results in a person attaining or maintaining proximity to some other clearly identified individual who is conceived as better able to cope with the world. It is most obvious whenever the person is frightened, fatigued, or sick, and is assuaged by comforting and caregiving. At other times the behaviour is less in evidence (pp. 26-27).

The idea that the primary attachment figure represents a safe environment for the infant became the principal idea behind attachment theory. Bowlby believed that having access to a safe environment was vital to the development of a child's inner sense of wellbeing, arguing that data showed 'so long as the child is in the unchallenged presence of a principal attachment-figure, or within easy reach, he feels secure. A threat of loss [however] creates anxiety' (Bowlby 1969, p. 209).

Bowlby and his colleague Mary Ainsworth found that not all infants displayed what they had come to believe was a sense of security when in the presence of their parent. Ainsworth undertook long-term behavioural studies of mothers and their babies first in Africa and later in the US, starting her 'first longitudinal study... with 28 infants and their mothers in semi acculturated villages near Kampala, Uganda' (1985, p. 774). She says it was during this study she formulated the idea that there were 'several phases of the development of attachment' (p. 774). A subsequent study confirmed Ainsworth's (1985) idea:

The second study was begun nearly 10 years later with a sample of 26 mother-infant dyads in white, middle-class families in Baltimore – obviously

differing from the Uganda sample culturally and racially. The attachment behaviors previously identified were essentially identical in the Baltimore sample, and so were the phases of development (p. 774).

While Ainsworth found that attachment behaviours in the two different countries and cultures were identical, both also showed that the same parental styles in maternal nurturing produced differences in the way infants reacted to stimuli, resulting in differences in security. To test which kind of attachment infants had developed, Ainsworth created an experiment she called the Infant Stranger Situation (ISS) (Ainsworth, MDS et al. 1978). The experiment was devised to place the infant under stress and to trigger their attachment schema, which could then be observed. This was achieved by having the mother leave her happily-playing infant in a room alone, introducing a stranger, and then reuniting the infant with its mother. Siegel (1999) explains the thinking behind Ainsworth's ISS:

The idea is that an infant who has developed an internal working model of secure attachment will be able to use the parent to soothe himself quickly and return to his childhood task of exploration and play. If the infant has an insecure attachment model, then the return of the parent will not facilitate such an emotional regulatory function or allow the child to use the parent to return to playing (p. 73).

While the securely-attached infants displayed marked distress at being left alone during the ISS, on the return of their mother and being once again in close proximity to her they were quickly soothed and readily resumed exploring again (Ainsworth 1979, p. 778). It was the reconnection with the attachment figure that was identified as the most important part of this cycle, enabling self-soothing, with the infant gradually becoming confident that repair is attainable. Contrary to many Western theories at the time, Ainsworth found parental responsiveness was a key aspect of secure attachment. Ainsworth (1985) states that:

A mother's prompt responsiveness to infant crying early on led an infant to cry less in later months rather than reinforcing a tendency to cry. Giving the baby close bodily contact when he signalled for it was associated both with secure attachment and the growth of self-reliance rather than making for a clingy dependence. Sensitive responsiveness to infant signals fostered cooperative compliance with commands, whereas emphasis on training the child to obey fostered noncompliance (p. 775).

So, security of attachment was shown to be fostered by sensitive responsiveness of the parent to the infant to produce self-reliance rather

than by compliance and training, as had previously been believed. In the experiment it was also shown that infants who had not readily been soothed by the mother's return and were thus labelled insecure, were identified as infants whose mothers had generally been unresponsive to them during their first year of life (Ainsworth 1985). Ainsworth (1979) believed that infants responded insecurely because, in contrast to babies with secure attachment:

... babies whose mothers have disregarded their signals, or have responded to them belatedly or in a grossly inappropriate fashion, have no basis for believing the mother to be accessible and responsive; consequently they are anxious, not knowing what to expect of her (p. 933).

Ainsworth could show that the unpredictability of some mothers' responsiveness caused infants to develop insecure attachment and anxiety. While infants may survive and even physically appear to thrive, Ainsworth found that underneath this exterior some infants experienced high levels of anxiety and lacked a sense of security.

Several insecure attachment styles were identified by Ainsworth and later by Mary Main. Each corresponded with differing nurturing styles and matched specific mental health and behavioural outcomes (Main 2000). I will not detail each of these styles here as I feel it is sufficient for the purposes of this discussion to refer to the differing insecure styles under the one umbrella: insecure. What is of importance, however, is that Ainsworth's and Main's studies demonstrated that insecure styles of attachment were found to lead to lower levels of emotional wellbeing, with resultant adverse behaviours. In contrast, Ainsworth (1979) described attributes which were apparent in securely-attached infants:

In comparison with anxiously attached infants [insecure], those who are securely attached as 1-year-olds are later more cooperative with and affectively more positive as well as less aggressive and/or avoidant toward their mothers and other less familiar adults. Later on, they emerge as more competent and more sympathetic in interaction with peers. In free-play situations they have longer bouts of exploration and display more intense exploratory interest, and in problem solving situations they are more enthusiastic, more persistent, and better able to elicit and accept their mothers' help. They are more curious, more self-directed, more ego-resilient – and they usually tend to achieve better scores on both developmental tests and measures of language development (p. 936).

These positive attributes, including high levels of self-esteem, confidence and social competence (Ainsworth, MD 1985; Bowlby 1969; Howe 2005), are significant to my later investigation on the topic of flourishing which I will address in Chapter Five. Bowlby (1988) found that these attributes were essential to the development of social competence which evidence increasingly showed was being developed at a very young age. He states that:

When a mother and her infant of two or three weeks are facing one another, phases of lively social interaction occur, alternating with phases of disengagement. Each phase of interaction begins with initiation and mutual greeting, builds up to an animated interchange comprising facial expressions and vocalisation, during which the infant orients towards his mother with excited movements of arms and legs; then his activities gradually subside and end with the baby looking away for a spell before the next phase of interaction begins (p. 7).

These observations revealed that long before language is established the infant is learning through cyclical interactions (with the mother in this case) of engagement and disengagement. In these interactions the infant begins to learn the characteristics of social interaction. When our social experiences have developed in the company of a responsive, loving other, respectful overtones are a natural part of the turn-taking rhythmic communication which, I suggest, carries empathy in its patterning. Certainly, such an idea is supported by observations showing that ‘Children whose mothers respond sensitively to their signals and provide comforting bodily contact are those who respond most readily and appropriately to the distress of others’ (Bowlby 1988, p. 15). While Plato, who I shall discuss further later in this book, and many philosophers since have advocated that the young be schooled in the virtues, so that they become good, ethical individuals, it now seems that such learning is absorbed much earlier via the repeated pattern of interactions with a loved and trusted other during infancy.

Though I have cited Bowlby’s research at length, it must be pointed out that he has not been without his critics. Margaret Mead (1962) for instance was highly critical of what she called Bowlby’s argument for exclusivity of the mother-infant relationship. She said his assumption is that:

... there is a biologically given need for continuity in this mother-child relationship, that it is a pair relationship which cannot be safely distributed among several figures, and that all attempts to diffuse or divide it and all

interruptions are necessarily harmful in character, emotionally damaging, if not completely lethal (p. 55).

Mead's view, that Bowlby stipulated that the attachment relationship should be exclusive to all others and without support, was rejected by Bowlby. He answered such criticism in his book, *A Secure Base* (1988):

I want also to emphasize that despite voices to the contrary, looking after babies and young children is no job for a single person. If the job is to be well done and the child's principal caregiver is not to be too exhausted, the caregiver herself (or himself) needs a great deal of assistance. From whom that help comes will vary: very often it is the other parent; in many societies, including more often than is realized our own, it comes from a grandmother. Others to be drawn in to help are adolescent girls and young women. ... Paradoxically it has taken the world's richest societies to ignore these basic facts (p. 2).

So, while Bowlby does advocate the need for a primary attachment figure, he does not envisage that this is a solo endeavour; rather, Bowlby advocates that there should always be support for the primary attachment figure in order that they may have the resources to deliver the care their infant needs.

Anthropologist Sarah Blaffer Hrdy (2009) also criticised Bowlby's theory for reasons similar to Mead's, stating that she wanted '*to correct an underlying assumption about universality of exclusive maternal care*' (authors emphasis) (p. 82). Hrdy (2009) argued that 'there is nothing evolutionarily out of the ordinary about mothers cutting corners or relying on shared care' (p. 85). Hrdy said that 'alloparents' - persons who provided the 'care and provisioning of young by group members other than parents' - were usually available to mothers of the groups she studied (p. 22). Hrdy (2009) referred to the way the Efe tribe passed around new babies, stating that 'Efe babies average 14 different caretakers in the first days of life' (p. 79). It could be argued that this is not unlike Western parents. Typically, after a baby is born in the West, visitors arrive to view the new baby, most asking if they can hold the baby for a time. Most parents readily allow others to hold and introduce themselves to the new infant.

While some may argue that Hrdy's discussion of alloparents seems to repudiate the universality of a primary attachment figure, there are several reasons why this is not the case. First, even though babies in the communities to which Hrdy refers may spend more time with others than



do infants in the West, generally these others are living in extended families with the infant, and thus may also constitute attachment figures – that is, familiar others with whom the infant is in constant contact and who also provide a sense of security to the infant. Second, although the infant may spend time with others, the mother is usually the principal figure who breastfeeds the infant, into the fourth year of life in many societies (Hrdy 2009, p. 283). Maintaining a breast milk supply requires frequent feeding of the infant, particularly prior to the introduction of solid food; therefore, the younger the infant the more time the infant must actually spend with their own mother, who is, because of the frequency of contact in most cases, likely to be their primary attachment figure.

A possible criticism of attachment theory could be that its development in the West raises doubts about its cross-cultural validity; yet one of the first studies by Mary Ainsworth (as previously outlined) was undertaken in Africa. Cassidy and Shaver (2010) collated and analysed a number of cross-cultural studies (from China, Africa, Japan, Indonesia, and Israel) which attempted to evaluate attachment theory. They stated that, ‘Even in a childrearing environment in which mothers share their caregiving responsibilities with several other adults and older children, infants nevertheless become attached to their mothers and use them as a secure base to explore the world’ (p. 2765). Cassidy and Shaver (2010) concluded that although the number of countries which had data on attachment were small, ‘... taken as a whole, the studies are remarkably consistent with the theory. Attachment theory may therefore claim cross-cultural validity’ (p. 2817). Nonetheless, Western families and cultures are my central concern in this book. I will now examine the neuroscientific evidence which corroborates and extends the framework beneath attachment theory.

## **Neuroscientific Evidence**

Here I examine some of the research that has been undertaken since the 1980s which provides greater detail about the mechanisms that underpin attachment theory, and, as neuroscientists explain, expands the theory into one of emotional regulation.

While neuroscience will assist us to investigate the deeper nuances of infant/parent relations, I will first provide some statistical data about the infant brain. While these statistics may mean little on their own, when

coupled with other research they support attachment theory's claim that the environment in which infants develop has long-term implications for the future wellbeing of the infant.

Neuroscientists Knickmeyer et al (2008), for instance, report that the brain grows by over 101% in the first year of life, compared to just 15% in the second, the cerebellum itself growing by 240% in the first year (p. 12178). They also state that we have 80-90% of total adult brain volume by the age of two (p. 12176). Rapid increases in brain size alone cannot tell us exactly what processes are operating, but Knickmeyer et al argue that, although MRIs are not currently capable of identifying the neurodevelopmental processes which underlie observed brain volume growth during infancy, 'postmortem human and nonhuman primate studies reveal likely candidates', claiming it is 'likely that the gray matter volume increase reflects changes in neuropil, which is composed of dendrites, axons, and glia' (p. 12180). Knickmeyer et al conclude, as follows:

... we observed rapid growth of the entire brain during the first year of life, with slower growth during the second year of life. Compared with the cortical hemispheres, the cerebellum showed disproportionate enlargement in this period. Within the cortical hemispheres, gray matter volume increased significantly more than white matter volume and the proportion of gray to white matter changed markedly. Unique growth patterns were also observed in the ventricles, caudate, and hippocampus. These findings can provide insight into pathologies of development such as autism and schizophrenia and may ultimately allow us to define structural correlates of critical periods in human cognitive development (p. 12181).

Knickmeyer et al (2008) also speculated that this large amount of cerebellar growth may underpin the rapid motor development of infancy, as well as development of cognitive abilities, including planning, language, abstract reasoning, visual-spatial organisation, and memory (p. 12180). Knickmeyer et al (2008) suggested that the rapid growth of the brain predisposes infants to be vulnerable to both positive and negative stimulation. They state that:

The large increase in total brain volume in the first year of life suggests that this is a critical period in which disruption of developmental processes, as the result of innate genetic abnormalities or as a consequence of environmental insults, may have long-lasting or permanent effects on brain structure and function (p. 12179).

As Knickmeyer et al pointed out, early and unprecedented brain growth during the first year of life highlights the probability that environmental factors can influence infants' neural development. Certainly, evidence appears to show that what takes place in the first year of life does create long-term foundational patterning. Waters et al (2000) measured attachment status at 12 months of age and retested for attachment status again at 20 years of age. The results showed a 72% correlation between the tests, despite the passage of 19 further years of development (Waters et al. 2000, p. 686). While the study could not conclusively show that the durability of attachment was entirely due to the parenting infants had received up until one year of age, as the effect may have been cumulative over the whole of the subjects' childhoods, the fact that attachment status is measurable at one year, and has robust correlations with measures taken at 20 years, shows that attachment status has already become strongly measurable at one year of age and may well be foundational to later measures of attachment. The stability of early patterning is further supported by studies undertaken by Mary Main. She was able to show that parents' own attachment schema, measured prior to the birth of their infant, were able to predict, with 75% accuracy, the attachment schema their infant would develop (Main 2000, p. 1091). Main's findings point to three things. First, that the type of interactive style the parent is likely to have with a new infant is highly predictable when based on the parent's own attachment status. Second, that the parent's attachment style is readily measurable in the parent's infant attachment status. The third of Main's findings was that attachment schemas readily become part of our familial intergenerational patterning. While it may be argued that this could be a function of genetics, there is increasing agreement that whether genes are expressed or not depends on the influence of 'epigenetics, developmental plasticity, basic needs, the microbiome, and local and macro ecological heritages' (Narvaez 2014, p. 37). So, even a genetic predisposition for attachment requires an appropriate upbringing for it to be expressed.

Arguing that there is such a thing as intergenerational patterning seems to imply that parenting is a matter of giving in one direction; however, Narvaez (2013b) says that infants demonstrate expectation, displaying seeking and interactive behaviours that they believe are helpful in eliciting nurturance from their carers (p. 15). A study conducted on human infants in the first 3 to 96 hours of life found that neonates had an already existing imitative system (Schorre 2009, p. 8). Trevarthen's (2011) research into neonatal responsiveness led him to state that:

As thinking adults depend upon years of practical experience, reasoning about facts and causes, and language to sustain their knowledge, beliefs and memories, and to understand one another, it seems quite absurd to suggest that a newborn infant has intersubjective mental capacities. But detailed research on how neonatal selves coordinate the rhythms of their movements and senses, and how they engage in intimate and seductive precision with other person's movements, sensing their purposes and feelings, gives evidence that it is so (p. 119).

This kind of research debunks the idea that babies simply need a person to care for them; rather, they seek a particular type of interaction. It seems infants are sensing others' intentions and feelings, and are trying to elicit interaction. This happens at the same time the birth parent's body is flooded with neurochemicals to facilitate her bonding with her infant (Feldman et al. 2007, p. 969). This combination of systems is believed to ignite the intimate interaction and developing relationship that generally ensures bonding between the mother and her infant. Often referred to as the dyad, their relationship consists of many intimate interactions which effectively ensure there are many opportunities for neural practising. As described by Bowlby above, these are believed to form a subconscious working model of interactive style, 'built up over thousands of interactions' (Steele 2013, p. 423). Schore (1994) explains how this works:

In sustained mutual gaze transactions, the mother's facial expression stimulates and amplifies positive affect in the infant. The child's internally pleasurable state is communicated back to the mother, and in this interactive system of reciprocal stimulation both members of the dyad enter into a symbiotic state of heightened positive affect (p. 71).

This to-and-fro pre-verbal interaction between infant and adult is characterised by the mimicking of each other's facial expressions, helping the infant to learn the various cues associated with the expression of emotions, while also helping convey how the mother feels about the infant (Siegel 2009, pp. 59-60). This is thought to be one of the most critical elements in the attachment process. The infant's perception of its attachment figure's feelings about them engenders either a sense of inner wellbeing or inner distress. It is the infant's inner perception of whether they 'feel felt' or not, as Siegel describes it, that comes to determine whether the infant is emotionally nourished or not (2001, p. 78). It is this idea that has moved attachment theory from one which focuses on the attachment relationship to one that is more heavily focused on how this relationship enables the infant to develop emotionally. Siegel (2001) explains that:

Relationships that are “connecting” and allow for collaboration appear to offer children a wealth of interpersonal closeness that supports the development of many domains, including social, emotional, and cognitive functioning. Such collaboration may be essential in the creation of a coherent core and autobiographical sense of self (p. 78).

It is this self, the self that is learning to connect with others, learning to read and express emotions while developing cognitive functioning, that is important to my assertion that this is a critical age at which we develop the tools for our future wellbeing. Siegel (2012a) calls the process of learning to regulate and modify emotions as ‘emotional regulation’ or ‘the general ability of the mind to alter the various components of emotional processing’ (p. 273). What is so critical about this research is that it shows that our social and emotional development is dependent on having a number of factors present for development to head in a positive direction. Positive growth requires responsive, loving, and enduring attachment figures to be with us and guide us through our infancy period. This dependable, responsive other assists us to ‘modify the flow of arousal’, which is another way of explaining emotional regulation and is key to ‘how we experience the world, relate to others, and find meaning in life’ (Siegel 2012a, p. 273). Good early neural patterning therefore includes short periods of dysregulation or becoming highly emotionally aroused followed by self-soothing and finding equilibrium again. Learning to self-soothe or manage our emotions becomes key to the way we navigate our world successfully. As Siegel (2012a) points out:

Emotion reflects the fundamental way in which the mind assigns value to external and internal events and then directs the allocation of attentional resources to further the processing of these representations. ... With this perspective, emotional regulation can be seen at the center of the self-organization of the mind (p. 273).

This means that how the self-organisation of the mind is enabled in each infant is heavily influenced by whether they have a responsive, loving, and enduring other to nurture them well. Our early experiences strongly influence whether we navigate the world in a state of wellbeing or dysfunctionality.

This is not to say that there ought to be an absence of stressors in an infant’s life. Some stress quickly followed by reconnection with their mother for instance, in a cycle of disruption and reconnection, is believed to provide the foundation for emotional regulation and wellbeing (Siegel 2012a, p.

142). Siegel (2012b) explains how the process of responsive caregiving following some stress promotes a feeling of security within the infant, and how, through repetition, the infant learns to self-soothe:

When a child experiences a break in the attuned, contingent communication – as will inevitably happen – the sensitive caregiver mindfully takes note of that rupture and then engages in the crucial process of interactive repair to re-establish the attuned connection. No parent is perfect, and no relationship is without challenging moments. The key to security is not perfect attunement, but the intention for connection and the repair when our human lives encounter the unavoidable miscommunications. When a rupture occurs, an intensification of emotion ensues that interrupts closely aligned connections even further. The result is a tumbling out of alignment, a feeling of disconnection and despair, and a longing for reconnection. ... After a disconnection, equilibrium is established through dyadic realignment at the heart of repair. This is the cycle of connection, disconnection, dysregulation, reconnection, and repair (p. 20-23).

While this explains the ‘normal’ positive process of repair which, after some repetition, supports emotional regulation, long duration stress without repair can be toxic, resulting in the expectant infant developing ‘a maladaptive stress response’ (Narvaez & Gleason 2013, p. 310). Repeated early stressful experiences can, according to Narvaez (2014), lead ‘to neurotoxicity and cell death and shrinking’, influencing memory and causing ‘growth inhibiting effects on the nervous system’ (Narvaez 2014, p. 140). Buss et al (2012) further explains that the stress hormone cortisol:

... is one of the primary biomarkers of the physiologically stressed state because its production, bioavailability, and activity is altered by all adverse conditions that have been shown to program the developing brain. Thus, although glucocorticoids [cortisol in humans] play an essential role in normal brain development, abnormal or inappropriate levels, particularly during sensitive periods, may induce neurotoxicity with detrimental long-term consequences (p. E1312).

These detrimental, long-term consequences are expressed in reduced emotional wellbeing and are ‘related to depression, violent behaviour, and stimulus seeking’ (Narvaez et al. 2013a, p. 457). Such evidence helps explain why infants are so vulnerable to their environment and in particular to stress produced when they endure frequent and ongoing periods of disrepair in the absence of responsive, loving care from an enduring attachment figure to enable rapid repair. Over time, if stress is