

# How to Build a Human

What Science Knows About Childhood

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# Introduction: The Only Advice You Need

I spent the first couple of weeks of my daughter's life waiting for the grown-ups to arrive.

Not many generations ago, I'd have been part of an extended family. I'd be among multiple generations, from siblings near my own age, aunts and uncles a little older than me, and possibly a full set of parents and grandparents who were still young enough to be actively raising children. There would have been this unbroken chain of experience, a whole team of people ready to pitch in with ideas and practical help, and whose own kids I would probably have already helped to raise. A bunch of people would owe me babysitting favours, a tribe of curious kids would have wanted to spend time with this baby, someone would have been cooking for us, and everyone – and I mean *everyone* – would have an opinion on parenting.

That's not how many of us live now. Some 50 per cent of the world's population lives in towns and cities. In the US and Northern Europe, around 10 per cent of us will have moved house in the previous twelve months, and the vast majority of us live at least an hour's travel from our parents. With the cost of living in major cities skyrocketing, generations are spread out in space. With people starting their families ever later, we're getting more spaced out in time too. We're surrounded by comparative strangers by the time we start families.

When my daughter was born I spent a subjective eternity feeling dangerously incompetent. That's not a comfortable feeling for someone like me. It's probably not a comfortable feeling for you either. Forgive me for leaping to conclusions about you on such scant data but, if you've picked up a book about science and parenting I'm going to infer that a) you like to know stuff, and b) you're either about to be, already are, or know someone who is a parent. If you've picked this up and you're currently mid-panic, red-eyed from weeping or sleep deprivation, wondering why the hell they let you come home from the hospital with this utterly dependent thing who you just can't seem to make happy for more than a few minutes at a time, allow me to give you the only useful bit of parenting advice ever committed to print. Take a deep breath, and memorise it ... Ready ...?

DON'T  
PANIC

I confess to plagiarising that from *The Hitchhiker's Guide to the Galaxy*. Any time you're tempted to pick up a parenting book I strongly suggest that you put it down, and pick up a copy of *Hitchhiker's Guide* instead. In all honesty, it's about as scientific as most of the baby 'manuals' out there, and has the added benefit of being funny.

But if you *do* have the energy for something that's factual, that's focused on raising children and also has the added benefit of occasionally being funny, then read on.

### **The art of parenting like a scientist**

What we used to have, when we had an extended family instead of Amazon Prime, was a variety of voices, with a variety of experiences, all weighing in. New parents soon learned to try all these different things and then to keep doing whatever seemed to work for a specific child. Contrast that with the often evangelical fanaticism some parenting manuals provoke – to the point where parents, discovering that sleep training or baby-led weaning or phonics just doesn't seem to work for their particular child, assume that the book knows best, and double down on their efforts, making everyone miserable.

Thankfully, by the time I'd become a parent, I'd had the perfect training for feeling like I hadn't got the faintest bloody clue what was going on, for incessantly trying things I felt sure would work only to see them fail, for meticulously preparing for hours only to see things go wrong in an instant. In short: if you want to learn what it's like to feel stupid, frustrated, baffled, stressed *and* bored at the same time, please can I recommend a career in scientific research?

Because science *as it is done* is very different from science *as it is written*. That's the dirty little secret that gets distilled away: first when cleaning up the narrative for journals, then when telling that story through the press. Science looks like a neat rack of answers when actually it's a writhing mass of questions. Science is less about control and more about curiosity. Science isn't pristine

lab coats, exact measures, predictable outcomes. Science, and scientific parenting, is about asking why.

Or more often it's about asking 'WHYYYYYYYYYYYYYYYYYYYYYYY?'

So here's the most important thing I want to share about the art of parenting like a scientist: it's mainly the art of getting comfortable with uncertainty. Of learning to not panic. And that's not easy, because the stakes are so high! What we *want* is to be *certain* we're doing the right thing by this tiny, dependent creature (or this gangling, awkward creature, depending on the stage you've reached). But parenting is all about uncertainty – you're learning as you go. Even if you've parented before, or have been parenting for years, this child in front of you *right now* is unique and unknown. In the face of the unknown, there's an art to staying calm, creative and above all *curious* about the children in our lives.

Whenever we're disappointed, scared or confused, there's money to be made. Parenting manuals are clutched like lifebelts, NCT WhatsApp groups light up with 'Is anyone else's baby grinding their gums/banging their head/eating pebbles?' The first few months can become a frenetic charting exercise of sleep and feeding intervals, Wonder Weeks, regressions and milestones. There is a sense that out there, somewhere, there's a key to it all: a routine or trick or a secret that will elevate you to being a Good Parent of a Perfect Little Baby.

Here's something you need to know: babies aren't born to be content. They're born to *need*. They need food, comfort, connection and safety, and they cry. That's not a bug – it's a feature. The same way that fussy toddlers, argumentative tweens and sullen, withdrawn teenagers are all stereotypes for a reason. Babies who didn't raise hell when they were hungry, afraid or cold were not babies who lived long enough to become your ancestors.

I felt insecure in the earliest days of my daughter's life even when she wasn't crying. I once ran into the nearest clothes shop to try to find a fleece all-in-one for my three-week-old because a total stranger commented that it looked like she had a cold

neck. In retrospect I realise that it was a warm spring day, she was under a blanket and – oh yes – *we were inside a café at the time*. But anxious parents are phenomenally vulnerable. There's a double whammy of fear: first, of failing this person you're responsible for, and second, of shame that other people seem to know better than you do. Faced with broken sleep, fussy eating, tantrums, bed-wetting, withdrawal, risk-taking and rebellion, it's easy to feel like a failure, rather than seeing these things as natural consequences of a child's brain in an adult-designed world.

It's little wonder that we so often look for certainty when it comes to raising children. We want an authority to tell us how to do it right. If there's an allegedly 'scientifically proven' method, whether it involves controlled crying or self-control in the face of marshmallows, we can't be judged for doing it wrong, right? Science made us do it.

### **Why all parenting manuals are wrong**

There's a joke (it's a long one and not brilliant, so please hang in there), and it goes like this.

A theoretical physicist gets caught in a terrible storm while she's driving home across the Pennines. The roads become impassable so she abandons her car and sets off on foot towards a farmhouse she can see in the distance. She knocks at the door, and a woman answers.

'Aye, love?' says the woman in the house.

The physicist explains that she's stranded and needs a place to stay for the night.

'Aye, cummon in lass,' says the woman, 'but tha'll have to take us as tha finds us. It's lambing season an one on t'ewes is breech. Tha dun't know aught abaht lambing, does tha?'

The physicist says she doesn't but that she's happy to try to help.

'Cummon dahn to t'barn, then,' says the sheep farmer.

In the barn, the sound of the ewe's bleating is frantic. The



farmer is elbow-deep, trying to turn the lamb, while the physicist gets out a pad and pencil and starts making complex calculations.

‘What’s tha doin’, lass?’ asks the farmer. ‘I thought tha was going help?’

‘I’ve got an idea,’ says the physicist, ‘but it only works with a spherical sheep in a vacuum.’

If you want a bigger joke than that – and who wouldn’t? – try any book that pretends to give you the formula for potty training without tears, or the secret for getting your one-year-old to eat like a Parisian toddler, or the recipe for a considerate and responsible teen. By their very nature, parenting manuals assume a perfectly abstract child – a spherical baby in a vacuum.\* It is astronomically improbable that your particular child at any given moment in their first two decades bears more than a surface resemblance to the kids in those books. Those kids are fictions.

### **Distinctly not average**

Remember when you were taught about averages in school and how they’d been designed to smooth out scientific observations? That’s not untrue, but it’s not the whole truth either. When you have a single object or phenomenon to observe – a star, say, or the boiling point of water – and a range of variably accurate instruments, taking the average of their measurements should get you closer to the ‘truth’ that is being observed. At least assuming that the error is normally distributed – some thermometers measure a little hot and some a little cold, for example. Adding together lots of noisy measures lets you get a good idea of the underlying signal.

But humans are most definitely not a single, stable phenomenon. We’re not trying to discover the ‘true’ nature of ‘Baby’ in the way we might determine the ‘true’ boiling point of water.† There is no

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\*Sorry for that horrifying image.

† Why am I still using scare quotes around ‘true’? Because the pedantic among you will already be pointing out that the boiling point of water

single Platonic Baby against which all others should be measured but research is often reported this way. What you'll see with your child is the *variance* – all the ways in which your child is unique. In this book I've tried to uncover as much as I can about the variety of experiences of parenting, of growing up, and of becoming human as I can. But there is no one way to get things right. You just need to keep trying, to stay calm, curious, and creative in the face of all this uncertainty. Because the research on parenting is pretty WEIRD.

### **Blame it on the WEIRDMOMS**

There's a famous experiment on the link between a child's ability to delay gratification and their future success.<sup>1</sup> The researchers in this 1970s study reported that the kids who could wait a few minutes to receive a second marshmallow, rather than eating the one marshmallow they already had in front of them, seemed to be more successful, do better at school, and even have better health outcomes than those who found it hard to wait for the larger reward. But the study was small, and recruited only those kids at the nursery at Stanford University: not exactly a representative cross section of society. That didn't stop a 2014 book based on the research (*The Marshmallow Test* by Walter Mischel) from spawning a slew of parenting blog posts, TED talks and educational approaches.

But it's the spherical baby in a vacuum problem again. Compared to *your* child, compared to *your* family, compared to the circumstances you're in *right at this moment*, what happened in a baby lab in Stanford may have only the slightest relevance. Not only is your child unique, the children in these studies tend to be drawn from a fairly limited sample that has its own specific quirks. The kids in most of these studies are WEIRD.

It's a long-standing issue that almost all psychological studies

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changes at different atmospheric pressures. The truth is rarely pure and never simple.

are carried out on WEIRD populations – that’s to say, groups of people from societies that are western, educated, industrialised, rich and democratic. Almost all the studies that we know of relate to a way of living that is experienced by only 12 per cent of the world’s population. In child development studies, the sample gets narrower again. The subjects of these experiments tend to be kids whose caregivers a) know people in university labs, and b) have the time and motivation to participate in these experiments. As a result we’re really looking at kids in WEIRD societies with parents who happen to be motivated, open-minded, and scientific – or WEIRDMOMS. The kids who were volunteered for these sorts of experiments were a pretty homogeneous lot. And even if your child happens to have a WEIRDMOM, as mine does, these studies aren’t likely to be that much help in your day-to-day life.

That’s because the reductionist processing of these kids’ behaviour into a simple correlation between the number of seconds they can wait for a treat and their eventual IQ vastly oversimplifies whatever mechanisms may be at work. Trying to get your kids to have a better life by focusing on teaching them to resist sugary treats, as if you were obedience-training a dog, is never going to work. In these studies, it’s likely that the kids who were privileged enough to have learned that delayed gratification paid off were also those whose parents were privileged enough to have the time and resources to consistently fulfil promises they’d made. Kids who grab the first marshmallow may have learned that promises can’t always be kept.

As far as we can tell, babies don’t emerge into the world as inveterate marshmallow scoffers or marshmallow savers. There might have been a propensity one way or another, but the marshmallow savers in the study are likely to have had an average of five years of experience of kept promises and consistent rewards. In contrast, marshmallow scoffers may have learned that life is full of disappointments, that rewards aren’t always fair, and that a guaranteed marshmallow now is worth more than the hope that a total stranger will *maybe* give up the goods. Being able to

delay gratification is a useful skill, but it's also likely to be a proxy for all kinds of things: trust, security, parental resources. Those factors will be more relevant in terms of helping kids to grow into successful adults than the ability to delay gratification. And it is by no means foredoomed that marshmallow grabbers *will* be unsuccessful. Is it likely that the future Elon Musks of the world are the kind of kids who are patiently waiting for a reward? Though the prospect of guiding an Elon Musk type through puberty is probably not that reassuring ...

This marshmallow test is just one example of a too-pat conclusion built on too-scant data from a too-limited data set. There's also one important variable in children's lives that is *consistently* neglected by the research. The biggest blind spot in child development studies of the last eighty years is the almost complete erasure of the role of dads in the development of their children.

### **If it's not one thing, it's your mother**

So many of the hundreds of papers that I've read for this book have 'mother' in the title. 'Mothers' impact on sleeping' or 'Maternal attitudes influence diet' or 'Mothers' language changes emotional processing'. Very few include dads or other non-parturient parents. Almost none look at other caregivers exclusively.

So when you see a paper that says something like 'maternal attitudes to infant sleep may be causing sleep deficits', dig a little deeper. Quite often dads weren't included. If most science suffers from an 'invisible women' problem, developmental science struggles with disappearing dads. So much research completely erases the idea that dedicated fathers, mothers by marriage or adoption, or other members of an extended family have an influence. The spotlight is turned on women who have given birth. And it's not a particularly flattering spotlight at that.

In WEIRD settings, mothers are far more likely to be criticised for their parenting choices than men. For example, 60 per cent

of women who responded to a survey at the C.S. Mott Children's Hospital in Michigan said that they'd been criticised for their parenting choices – most commonly by their parents, in-laws or partner. New mothers are more likely to be on the receiving end of critical behaviours than new fathers, particularly when it comes to sleeping habits, feeding, going back to work, how they dress their child, and that perennial favourite, breast vs bottle. Even the *manner* in which women give birth is regularly judged.

Humanity would not exist without the input of male caregivers. According to Dr Anna Machin, an evolutionary anthropologist who has spent a decade researching fathers at the University of Oxford, our ancestor *Homo heidelbergensis* certainly shared the childrearing. Until this point in our evolution, the amount of time a baby was nutritionally dependent on its mother was short enough that our earlier ancestors could have offspring at a rate that more than guaranteed a replacement of the population. But for *Homo heidelbergensis*, their upright gait – and the resulting narrowing of the birth canal – together with the eventual size of their mature brains, meant that juveniles were dependent on their parents for food for months and years, rather than mere weeks. If the women were left to do all the childrearing, the time lag between children would have become too great, and the population would have dwindled as the birth rate fell behind the death rate. It was in this ancestor that proto-human-building dads stepped up, using the knowledge of fire to make food that immature offspring could eat, then teaching the skills required to eventually become nutritionally independent, while mothers could breastfeed for longer.<sup>2</sup> The involvement of the male parent in childrearing meant that families could get bigger, faster. And that teamwork still helps today: feeding a toddler and caring for a newborn solo is no picnic. Though it shares with picnics the following similarities: it's messy, there's an elevated chance of spillage, and it's nowhere near as relaxing as a meal in a nice restaurant.

## **If I don't have the answers why the hell should you read this book?**

Well, it does say 'Don't Panic' in large friendly letters. But I admit that I'm not going to give you the scientifically proven way to get your kid to sleep/to eat their vegetables/into a top university. That's because there isn't one. Science is about exploration. This book will tell you about the explorations that others have carried out, the variance that we find in all psychology and neuroscience, the range of things that have been tried, and the reasons why parenting books from Dr Spock to Nurse Gina Ford contradict each other.

It's because science isn't a product: a neat set of correlations and laws. Science is a process based on observation, curiosity and openness. It also involves a lot of hope and resilience that this experiment, this set-up, this attempt will finally be the one that demystifies things.

This is a book about science as a verb; about sciencing the shit out of your own relationships with the kids in your life. Of course, the first step in any study is to look at what the prior research shows, and I'll provide a review of plenty of literature, but science proceeds by observation. If the results you see don't look like the literature, then you don't deny the evidence of your own eyes. You figure out what's going on right in front of you.\*

For example, as an infant, our daughter cried when she was hungry but she screamed when she was full. Nothing prepared me for this. The literature – the parenting books – all said that a baby's day should consist of multiple cycles of 'wake, feed, change, play, sleep'. Our routine was sleep, feed, cry, change, scream, repeat ad nauseam. It felt like unremitting hell. The studies weren't wrong per se, but the approach didn't apply to our daughter at all. So I turned to what I know: observe, record, infer, repeat (ad nauseam).

I think I've thrown away the spiral-bound notebooks that my

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\* I'm talking specifically about psychology and behaviour here. The physiology of measles is significantly simpler than the psychology of your child. Vaccines work.

husband and I recorded every feed, every sleep, every activity in. I reread them when our daughter was about eighteen months old and they were dismal. Her weight was dropping, she wasn't getting on with breastfeeding, and bottle feeding only seemed to work contingently. A pattern emerged – upright feeding or feeding on her right side: fine. Feeding on her left side: disaster. Lying down for a change after feeding: disaster. Lying down on the play mat after feeding: utter disaster. I have a video from when she was about ten days old, lying on her back, flailing her legs at the dangling toys hanging above the play mat for about forty-five seconds, then she hiccups, and just *screams*. I drop the phone but I can hear myself saying 'sorry, sorry, sorry' over and over again as she wails inconsolably.

It seemed like everyone else in the NCT group had 'wake, feed, change, play, sleep' sorted, and their babies were thriving, while the only thing our daughter excelled at was the volume and persistence of her cries. Between the sleep deprivation, her obvious distress and my fear for her well-being, I was a wreck. I wanted my daughter's first few weeks to look like the photos they'd shown us in the NCT class – her cosy in a sling while we went hiking through sun-dappled woods, me popping out a boob when she was hungry, her being soothed to contented sleep. I nearly lost my mind trying to get our reality to look like the theoretical version.

When I finally regained my sanity enough to trust my observations, I started to realise that everything we observed fitted with a pattern of acid reflux. Any time we let our daughter lie down after eating, she'd end up with a burning throat. We ditched the play mat in favour of a bouncing chair, took turns letting her sleep upright on us, finally wangled a prescription for infant Gaviscon and at last our life began to look – if not exactly like the parenting manual – more like a version of success in which our daughter was thriving.

I can't stress enough the effect of that first ten days or so of feeling like a total failure, mixed with sleep deprivation and hormones. I was very lucky to get the diagnosis and treatment for

postnatal depression in pretty rapid order, but when it came to getting help to figure out what was wrong with my daughter I just ran into the same standardised advice again and again. I had to re-learn to be scientific.

As a caregiver, one of the most important things you can be is a scientist. I don't mean a passive consumer of other people's findings. Instead you have to be curious, you have to wade through confusion and self-doubt; you will feel desperately lonely sometimes. Most of all you have to follow where your observations lead. Studies report on aggregates – and sometimes not very representative ones at that – whereas this child in front of you is unique.

This book will tell you what we know about what is *probably* happening neurologically and physiologically in your child. It will talk about the order in which things *tend* to develop. It will review some of the more interesting findings and talk about what these *suggest*. But it won't tell you how to raise your child. That is entirely up to you. Sorry!

This book will reassure you that, like all good scientists, you're going to screw up along the way. Not everything you try will work. You'll reach dead ends, you'll wrack your brains for new approaches, but if you stay creative, and stay calm as you watch what's *really* happening with your children, and your family, you will figure this out. Just in time for everything to change once again.

This book will look at results from studies done on babies still *in utero* through to young people at the end of adolescence, as late as the early twenties. It will look at how kids are kinder than we think, why social risk drives teenagers to do the stupidest-seeming things, why being a parent changes your brain for ever, why sleeping and eating can be such battlegrounds, and much more.

But most of all it will look at the variety, the uncertainty and the possibilities that exist, given that each child is different, each family is different, and that nothing in a child's life stays the same from one month to the next. It'll remind you not to be swayed by the latest headline or fashionable parenting 'method' but instead



to stay curious about the kids you love, and follow wherever that data might lead.

### **This is your brain on parenthood**

It's not just your kids' brains that are changing. Becoming a caregiver changes you. Not just in the lifestyle-related 'I used to be able to stay up later than 10 p.m. and own dry-clean-only clothing' kind of way, but also right up there in the workings of your brain.

While 'mummy brain' might be nauseating shorthand for the sleep-deprivation-induced memory loss that many new parents experience, the brains of new caregivers are indeed distinct from the brains of other adults. Male or female, the neural structures and signalling chemicals that drive your behaviour change drastically in the first few days and weeks of becoming responsible for a child. This holds true even if you became the parent of your child by adoption – what changes your brain is not the act of giving birth, but your sense of responsibility.<sup>3</sup> The same circuits that are active during parenting also get to work whenever we care for others, be they children or adults.<sup>4</sup> It's just that parenting – especially for very small children – is high-intensity interval training for the caring parts of our brains.

Because of these intense workouts, the brains of all committed caregivers grow, adding more volume in the prefrontal cortex, parietal lobes, midbrain, hypothalamus, substantia nigra and amygdala. All of this points to a period of learning new, complex, emotionally driven behaviours when we become parents.<sup>5</sup>

Irritatingly, we run into the scientific blind spot about fathers here. In humans, the vast majority of participants in the experiments that look at the changes in the parental brain have been mothers. But wherever dads have been studied, similar changes in brain volume and structure are found. What's more, in studies of other mammals, where male test subjects are used more often, fathers in all biparental species show strong parenting-induced brain changes.

Take prolactin, the hormone that helps promote breast milk production in nursing mothers (hence the name). Like ‘tumour necrosis factor’, which we will encounter in the chapter on sleep, the name is an anachronism, because it’s responsible for far more than lactation. For example, prolactin is also found in the vast majority of mammalian dads. Regardless of sex, prolactin drives some drastic changes in the brain. In particular, it prompts a huge growth of new, generalised neural structures, ready to be connected up and pruned into shape as you get to know your child. In all mammals, parents of both sexes grow lots of new neurons in the time around their offspring’s birth. In the months afterwards they start trimming those connections in order to imprint the sight, smell or sound of their babies, as well as all the new behaviour that parenting demands. ‘Bonding’ with a child is a process of neural topiary that takes place as we learn the unique features of a child, and prolactin acts as the fertiliser that causes the branches to grow.

For example, when you block or damage the secretion of prolactin in male rats, these new dads never learn to recognise their own pups. Normally, rats are biparental, but prolactin-deprived dads neglect their litter.<sup>6</sup> Damage to the hippocampus – the part of the brain where these new prolactin-induced memories are processed – also makes female rats neglectful. If you can’t learn what makes your offspring unique, it’s hard to summon up the extra effort needed in parenting.

In fact, the way we respond to children’s emotional cues changes when we become parents. Non-parents’ brains are more motivated by the sound of a laughing child. In contrast, other parts of the brain become hugely active when someone who has parented hears a child in distress. What used to be a sound you’d go out of your way to avoid becomes a sound you just can’t ignore once you’ve spent time as a committed caregiver.<sup>7</sup>

The process in the brain responsible for teaching us to get out of our nice warm bed in favour of comforting the noisy, tiny human is an interaction between the thalamus and the cingulate cortex. This

circuit takes signals from the thalamus, which essentially acts as a junction box that jolts parents into alertness or action when we sense a problem, to the cingulate cortex, which promotes learning and memory. The currently available data suggests that a child in distress jolts us into action. A child who is no longer in distress makes us feel really good. The thalamus gathers the data on the emotional states of the child, and on what we did, and the cingulate cortex sifts out and allows us to store patterns like ‘Lying her on her back makes the screaming worse!’ or ‘He likes the sound of the vacuum cleaner!’ Over time the sound of a child’s cry leads straight to the action that previously got the quickest results.

For several decades it’s been known that new parents who are given extra testosterone respond much more intensely to the sound of their child crying and act faster and for longer in order to care for them. Professor Peter Bos of Leiden University recruited sixteen mothers who were willing to listen to recordings of their child crying while lying in an fMRI scanner and being injected with either testosterone or a placebo. The thalamocortical circuit of each mother was far more active when given the real hormone than when they were in the control condition.<sup>8</sup> Testosterone helps all caregivers learn to move heaven and earth to help their child.

And the motivations for caring for a child are strong. When a child that we care for rewards us with a smile, humans and other mammals alike get a huge hit in the opiate receptors.<sup>9</sup> Tiring as it is, successful caregiving is extremely rewarding. And it does get easier over time, partly as a baby’s needs get less intense, and partly as you get used to what works and what doesn’t – at least for the time being.

When you become a parent – no matter how it happens – you’re embarking on an apprenticeship. You might give birth, adopt, foster, or blend your families, but the very act of caring for a child trains you to care for a child. Your brain is having to grow new connections, produce and process greater volumes of neurotransmitters, and respond to new sensory inputs while mastering new behaviours. Your child isn’t the only one with

growing to do. When it comes to building a human, you also need to spend some time upgrading yourself. It's tough work, so accept all the help that is offered. You've got this, but you don't have to do it alone.

### **Why this isn't a 'mummy book'**

Here's a little aside to all my fellow female parents raising kids in a heterosexual couple. Yeah, I'm talking to you, fellow mummy.

It's heady, isn't it? After years of being patronised by plumbers and condescended to by colleagues, the power of the 'motherhood' is a potent drug. Suddenly we have our own websites. Things cost a premium because they're 'approved by mums'. We get invited to special 'mummy and me' sessions. 'Speaking as a mother' we somehow assume a respect we never commanded before. Not universally, of course. There's definitely a particular type of medical professional who pronounces 'mum' so that it rhymes with 'cretin'. Contrast the connotations of the verbs 'to mother' and 'to father' though. For the most part we get the credit (and the blame) for parenting, as if 'daddy' was just a bumbling figure who donated some genetic material then dropped out of the picture.

I'm not saying that there *aren't* 'fathers' who do just that but I know – and I hope you do too – lots of committed male parents who show love, respect, patience and ingenuity. So I'm arguing that it's time we went cold turkey on the power of the m-word. Ask your 'mummy and me' group to change its name to something more inclusive so that fathers know they're welcome too. Let the brands you use know that you *and* your partner get to approve what you feed your kid (and what products you use for the inevitable clean-up). In the UK, shared parental leave is still pretty new, and overwhelmingly taken by women, but if we want to truly share parenting, we have to *say* parenting and leave the baggage of 'mothering' and 'fathering' behind. And we need to lobby for jobs for all people that are flexible enough to allow

for any kind of caregiving. That means more part-time work and more job-sharing, and more of the kind of flexibility that benefits employees rather than employers. And more efforts to welcome men into the role of active parenting.

Firefighters, postal delivery workers, police officers, and business people have all changed their titles in the last few decades. Mums, we can do it too. And here's the upside – maybe we'll stop being *blamed* for all our children's struggles too. While plenty of studies show that men in heterosexual couples do far less of the domestic work, and take home far more of the wages available, there's no reason why this should still be the case. Sharing the recognition and the responsibility is long overdue.

So now it's time to meet the subject of our book. The human child in all its glorious, frustrating complexity.