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The Biology of Masculinity

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Masculine and feminine roles are not biologically fixed but socially constructed

—*Judith Butler, philosopher*

Human biology and physiology is an incredibly complex subject, and this isn't a book that's going to explore that in depth. But to understand what men are coming up against, it's critical that we have a top-level understanding of our biology. Too often we treat masculinity as a fixed concept, a singular blueprint that's rigid and immovable, suggesting there is only one path down which a man is fated to travel: he's either 'masculine' or he's not. This isn't the case.

Nature and Nurture

At the risk of sounding simplistic, there are clear distinctions in the biological makeups between males and females, with a string of genetic, structural, chemical, and hormonal differences. For example, men generally produce higher levels of testosterone while women tend to produce more estrogen. At a very basic level, some studies suggest that men's higher level of

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testosterone may be one reason they have an increased sex drive or engage in more risk-taking behaviour.

Our immunological structure can be another difference. Women tend to have stronger immune responses and so are better at fighting off infections, but this can also make them more susceptible to developing autoimmune conditions. Men, on the other hand, show stronger early immune responses, which can lead to more severe symptoms. This means that man flu really is a thing!

These are only two examples which provide a small snapshot, but I use them to highlight the fact that there *are* biological differences between males and females which may have influenced, to some degree, the ways in which we've drawn up our definitions of masculinity and femininity.

What muddies the water somewhat, and this is crucial, is that biology and sex isn't clear cut and binary, but instead operates more on a continuum. The differences discussed, among many others, exist as *averages*. If you took every single man and woman on the planet, you would, for example, find that *some* women will have higher levels of testosterone than *some* men. This is important to note because with this alone, assuming that all men fit into one singular box of what it means to 'be a man' is scientifically and biologically inaccurate.

And yet in some ways, this is how we've oversimplified our approach to masculinity and femininity, making them binary opposites rather than part of the same continuum. As humans, we like to use socially constructed labels to simplify things. It can help us understand concepts and bring order to our world-view. Sometimes this is useful, but sometimes labels can be

incredibly reductive, limiting our understanding and perpetuating unnecessary stereotypes.

Labels can often develop into cultural generalisations and status quo, ones that we accept at face value without questioning them too much. And so we have created neat little boxes labelled ‘masculine’ and ‘feminine’, with separate, clearly defined characteristics being applied to each box. It’s a binary process, where boys and men are placed into one box, girls and women into another, with both needing to fit the characteristics of their predefined label. Generally, they look like this:

Masculine:

- Strong
- Tough
- Resilient
- Independent
- Rational
- Protective
- Providing

Feminine:

- Emotional
- Sensitive
- Dependent
- Submissive
- Domestic
- Compassionate
- Caregiving/nurturing

We’ve already established that there are biological reasonings that have influenced how these traits may have been separated

out, and science does help to tell part of the story. For example, where we know that men tend to be naturally stronger than women, it can make sense to see why ‘strength’ is labelled as ‘masculine’. It might help to explain why more men get sent to wars or undertake more manual labour jobs. If men historically and primarily assumed the role of the hunter, it may explain why ‘providing’ is seen as a man’s role.

But how well do these things hold up in the modern age? If men were the only providers, then why do women work too? If you were to lock the majority of men in a cage with a female kickboxer, I’d love to see them argue that strength isn’t for women. This is an extreme example and one that’s a little facetious, but if we can have even one instance of men or women exhibiting traits from the opposing ‘box’, then doesn’t it make these neat opposing boxes a little confining?

And so the trouble arises when we can’t see past this separation, ignoring all nuance and unique humanness, and forcing people into these boxes rather than seeing them on a continuum of averages. For example, how often do you hear a man called a ‘girl’ for showing emotion, or a muscular woman called ‘butch’? Men are told to ‘get back to work’ and women are told to ‘get back to the kitchen’.

We do this because if we see a man or woman exhibiting traits from the ‘other’ box, it’s easier for us to label it, rather than just taking it for what it is: something that person enjoys doing or is a natural part of their personality or identity that might be different to our own. *Rather than understand them for who they are, we understand them through our bias, experience, and eyes.*

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It can also give rise to harmful stereotypes about men where they can be seen as simple and lazy, stupid even; emotionally inept, angry, and nothing more than a ‘brain below the belt’. These stereotypes and labels rob men of their agency to change or be anything other than what we assume they ‘should be’. It’s often the people that sit at the extremes of the continuum that we see, where we hear in the media about the most violent men, and so it becomes easy to associate men with violence and aggression, missing the fact that there are a great deal of men who sit much farther away from that on the continuum.

And sometimes we take these stereotypes as fact, perpetuating and sharing faulty life lessons and knowledge, men assuming they *must* operate a certain way in order to fit a certain perception. Take the ‘alpha male’, an idea originating from studies on wolves, which argued that there is an aggressive, dominant leader, one who battles for control of the group. Many human males today do what they can to align with being ‘alpha’, while rejecting ‘beta’ qualities of weakness, passivity, and submissiveness.

However, this study was conducted on captive wolves, not wild ones, and so the basis of the study was flawed as it wasn’t natural behaviour being examined. The researchers and primatologists who inadvertently helped popularise the term ‘alpha male’, later stressed for a different interpretation of the phrase.

In studying other animal groups, such as wild wolves and chimpanzees, they found that many groups operated as family-led units who rose to leadership positions through a mix of both dominance *and* strategic and deliberate social bonding and empathy. They used this compassion to help maintain their

position. Clearly, these animals have a good grip on the need to find flexibility between ‘masculine’ and ‘feminine’ traits, realising there is balance in both. This isn’t to suggest that there is *no* existence of dominant males, but in many species the term ‘alpha male’ is overly simplistic and doesn’t reflect the true nature of fluid hierarchies.

Everything discussed here serves as an interesting debate around masculine and feminine traits. Perhaps they’re not as easily separated as we once believed, and perhaps what we’re simply talking about are ‘human’ traits, a spectrum along which you will find averages and extremes, but not polar opposites between the sexes. Different countries and cultures recognise a different number of genders and, particularly in recent years, we’ve seen a growing visibility of people identifying as transgender, whose gender identity is different to the one they were assigned at birth. These are reminders that the boundaries between ‘masculine’ and ‘feminine’ aren’t always as clear-cut as we often assume, and people experience them more fluidly and to different degrees. Whatever people’s personal beliefs on gender roles and gender identities, the very fact that there is such fierce debate, a multitude of beliefs and viewpoints, and no singular agreement around the world, surely shows that this is all far less simple than we sometimes make it.

I highlight all of this to show that masculinity isn’t a fixed concept, but rather something people experience differently. Averages, extremes, and continuums aside, the piece I’m most interested in is to what extent these traits are biological certainties, and what level of influence do human-made, cultural possibilities have? Is there a neatly painted line between them? What are men destined to be and do, and what are they moulded into? And, importantly, what can be changed?

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I spoke with Dr Dan Nicolau, a mathematician, engineer, and physician at King's College London, about this very subject as I attempted to unpick the complicated boundaries around sex, gender, biology, and culture. For example, I put it to Dr Nicolau that maybe men take more risks not because of biology, but because of culturally enforced emotional suppression, where this spills out into riskier behaviours. 'Maybe it's our job to take more risks', he replied. It took me back a bit, but he continued:

in other animals, that's their job. Someone has to take risks, if we didn't we'd still be living in trees. And it may be that the cost for that is that you lose a lot of males to things like violence. So it could be baked into our DNA. I'm not saying we shouldn't combat it, and as a doctor it's my job to combat it, but it may be that there's a very strong evolutionary reason for it.

For example, there's a species of underground Somalian mole rat, who split the boys in half; builders, and then soldiers who protect the queen for life so, clearly, the naked mole rat genome has decided it's okay to sacrifice half the guys who become soldiers. And genetically we're not miles apart from mole rats, we're one evolutionary step away, so perhaps human males are more predisposed to this too.

While this example is illustrative, Dr Nicolau raises an interesting point: you only have to turn back the dial a hundred years or so where we *were* operating under remarkably similar circumstances. Generally, men went off to war and died, while protecting their women back home who nurtured the offspring. While there is a lot of nuance as to the reasons why, perhaps it's only our ability to engage in debates on equality and morality

that has moved us further away from those underground Somalian mole rats.

Clearly, there isn't a neatly painted line between biology and social constructs and if I'd hoped to find one, I'd be disappointed. But the very fact that it *is* so murky shows why our rigid approach to masculinity is faulty.

Dr Louann Brizendine, in her book *The Male Brain*, wrote:

*our understanding of essential gender differences is crucial because biology does not tell the whole story. While the distinction between boy and girl brains begins biologically, recent research shows that this is only the beginning. The brain's architecture is not set in stone at birth or by the end of childhood, as was once believed, but continues to change throughout life . . . our brains are more plastic and changeable than scientists believed a decade ago.*¹⁷

What this tells us is that biology does lay strong groundwork for humans and creates natural predisposed leanings towards certain behaviours. We can't dismiss this, and it tells an important part of the story. However, much of this isn't fixed or binary, and it's often society, conditioning, and tradition that shapes us and builds the rest of the house on biology's foundations. This means that our gender identity and roles are much more flexible and fluid. Judith Butler, an American philosopher and gender studies scholar and author of the book, *Gender Trouble*, argues that masculine and feminine roles are not biologically fixed but socially constructed.¹⁸

The piece that I'm most concerned with is emotional expression in men or, rather, the lack of it. Emotional *suppression* seems to be a bedrock of traditional masculinity, and one which I believe plays a huge role in many of the devastating statistics around men. We tell men to be strong, to be resilient, to 'man up' and to avoid vulnerability. So how much of the trait 'emotional suppression' is a biological certainty, and how much of it is cultural and human-made?

Bottled Up: Emotional Suppression Versus Emotional Expression

Neurologically, studies and science have shown that there is little evidence to suggest that men are any less emotional than women,¹⁹ and that both women *and* men experience emotions intensely. The differences between men and women tend to lie in the expression of these emotions, not the capacity to experience them.

There's evidence to show that the positive emotional expression gap between boys and girls is much smaller at a younger age, and this gap widens as children grow,²⁰ with it seeming to get stamped out of boys around puberty, due to a mixture of hormones *and* social conditioning. But still, both have similar emotional processing systems within the brain and feel the same emotions. In its simplest terms, what this means is that our insistence for men to reject their emotions is telling them to reject a normal part of their human experience.

And this is where we often go wrong with masculinity and men. We tell men to control their emotions and to be more

‘stoic’, but the modern use of stoicism in popular culture seems to have been bent out of shape to fit more traditional masculine ideals.

The original philosophy of Stoicism, founded in roughly 300 BCE was built on *emotional control* as a bedrock, not suppression. Suppression is to ignore something, to push it to one side, down somewhere deep to never be explored. But *control* is something entirely different; in order to control something, we have to understand it, and have the mental tools and models to take an appropriate response. Stoicism does value calmness and composure, but not at the expense of feeling, rather as the destination to arrive at only by understanding our feelings. To know what an incredible meal tastes like, we have to have experienced a bad one. To understand true joy, we need an understanding of grief or suffering.

Crying becomes the ultimate act which sits in the crosshairs of those who value rigid traditional masculine values. At its most basic level, crying is a natural human response. It’s a human capability, not a sex-specific one, and if men had no need for crying at all, it’s highly likely it would have been stamped out of us from an evolutionary standpoint. It’s actually good for us, with evidence showing it acts like a natural painkiller and mood booster to the body, and some researchers argue that it’s crucial for our social and moral functioning.²¹

There is some suggestion that differing levels of hormones between the sexes may influence the expression of emotions, and this may be evolutionary. For example, one argument is that perhaps men who, primarily assumed the role of hunters, needed better emotional control when out in the wild. But this is more speculative than scientific.

And, importantly, our hormones don't inhibit our capacity to *feel* these emotions, instead impacting intensity, thresholds, and expression. For example, it's thought that testosterone doesn't cause emotional suppression itself, but modulates responses, particularly influenced by the environment and social situation. In his research on crying, most notably his work *Why Only Humans Weep*, Ad Vingerhoets argues that our expression of crying can be heavily influenced by social norms and learnt behaviours, which often dictate frequency and appropriateness of the act.²²

As we have already examined, much of the case with 'masculine' and 'feminine' traits can be explained through biology, but this alone doesn't tell the whole story. It may set thresholds and foundations, but these are often shaped by human-made cultural conditioning, and influenced by our environment into a learned and taught behaviour. And this is just the same with emotional suppression, where boys and men are conditioned out of expression and are told 'that's the way you're meant to be'.

The biggest tragedy for me is that our emotions are there to help us feel the things we experience in life. When we lose someone, we grieve and cry because we cared, because we loved. In some ways, the harder we grieve, the more we loved. And so crying can be considered an act of love, and to suppress that is to suppress the meaning that someone or something held in your life.

Men have the capacity to both show and feel compassion, to love, to have purpose and to feel things just as deeply and strongly as their female counterparts. But their inner struggle, passion, desire, ability to feel empathy, and so on, is often lost and squashed down by the weight of social constructs and

stereotypes which we falsely label as the biological natural order to things.

What we fail to see is that emotions, just like crying, are neither ‘good’ nor ‘bad’, they’re simply sources of information, a way for our bodies to process things. Humans have labelled them positively and negatively, missing the valuable role that they play for humans, regardless of gender. They act as our internal compass, and to disregard them is like going on a thousand-mile road trip and throwing away your map.

Men become desperate to dissociate from emotions they perceive as weak and to sweep their problems under a rug. What most don’t realise is that this acts like a pressure cooker, slowly building, that pressure having to release eventually, as steam hisses out of the cracks and nuts and bolts begin to ping off.

The Body Keeps the Score, a groundbreaking book from author Bessel van der Kolk, shows how memories, experiences, and emotions, when not properly processed, can leave lasting imprints on both the brain and the body.²³ If we don’t process and resolve things, they don’t disappear. They store and build. Cultural norms might tell you that pushing your problems to one side will solve them, but you can bet your body is keeping score of everything, silently, subtly. Carl Jung, the Swiss psychotherapist, famously said ‘what you resist, not only persists, but will grow in size’.

If we don’t release this pressure safely and in a healthy way, then it will find its own way of coming out. It’s not a leap to suggest that this pressure comes out into many of the devastating health and life issues we see with men: addiction,

homelessness, violence, premature deaths from things like cancer and cardiovascular disease due to avoidance of health-care pathways, or suicides even.

Men have been taught for so long to not turn inward and to reject their natural, biological emotions. In short, it's often not biology killing men, it's pride and emotional suppression, masks that have been strapped onto them. We tell men to 'man up', often not realising that all we're doing is bringing them down.

Someone that I spoke to for this book told me that their brother has lost five best friends to suicide. *Five*. But he has never spoken about it, and when she tries to get him to talk about it, he shuts down and withdraws. He has one best friend left, who's in and out of hospital with substance abuse. She said that 'he just sees it as part of life. He's absolute tunnel vision, he won't talk about it. It's just the norm'.

The emotion that many men do seem most comfortable with is anger. Why? There are biological reasons for this. For example, higher testosterone levels in boys can influence how they respond to a perceived threat or challenge, although it doesn't cause violence in and of itself. Men may like how anger feels, as their muscles tighten and toughen, versus anxiety or crying where we feel physically more vulnerable. For other men, it's the emotion they most understand or know, and where other emotions can feel alien, anger may bring a sense of safety and comfort.

Many tend to agree that boys are taught from a young age to suppress their emotions of sadness and vulnerability, whereas strength, on the other hand, equals social status. And so the one emotion they may be taught to express is anger. Is it any

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surprise that once boys grow into men, many of them end up in pointless brawls after a few beers at the pub? Most believe that strong communication comes from the fist, primal and animalistic, not the mouth.

A group of people I knew back home discovered this the hard way. Two best friends got into a scrap over nothing after a night at the pub. One threw a punch, and his best mate fell to the curb, cracked his head and died instantly. The one who threw the punch ended up with a prison sentence for manslaughter. A friendship group ripped apart in an instant, all because of one punch. All because those boys who became men had been taught it was better to settle their differences with aggression and anger, rather than communication.

We see this play out in the world of sports. This is how a lot of men connect, it may remind them of their childhood, it's how many bond with their fathers, and it leans into traditional masculine values of strength, physicality, and competition. Where many men perhaps are unable to process and voice emotions, I believe that sport is a vehicle for this.

For anybody saying men can't do emotion, you only have to see men engaging with sports to know this isn't true. They'll cry, shout, scream, hug. . . you name it. But this is likely because it's become culturally accepted for men to show emotion in these places, while it isn't elsewhere.

And perhaps it's this pent-up nature of emotion that can see an overly tribalistic, angry nature arise in sports. Opposing sets of fans threatening each other, fighting each other, for no other reason than simply supporting a different team. Homophobic

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and racist chants around the crowds, the raucous mob mentality taking over. There's even a link between sports teams losing and an increase in domestic abuse.

Some will say 'this is just what men do'. But I come back to the point that the brain is mouldable. I've never thrown a punch in my life because I've been taught that violence and aggression isn't the solution to problems. This behaviour is learnt and socialised, not ingrained in us, even if we may be more predisposed to it. Men may have a more natural leaning towards aggression or anger, and we have to learn this is something we need to help men to channel, regulate, and sometimes even celebrate, otherwise it can have nasty, potentially violent, consequences.

The trouble, as I see it, is that we too often conflate biological certainties with human-made cultural constructs and male tradition, and often don't have or apply the right level of education, critical thinking or awareness to be able to distinguish the two. We make 'man' or 'woman' into two opposing, binary fields, trying to neatly squeeze each and every human into one. But it's clear that much of what we assume to be a predetermined certainty often isn't this black and white and the reality is that the human experience is much more flexible than we allow it to be. Our insistence on putting things into two neat boxes is no more dangerous for men than with culturally conditioned emotional suppression.

So this is what is helpful to understand about men and vulnerability if we want to start to work back some of the terrible statistics around men. A path forward is in helping men to understand that humanity isn't fixed and to understand the

range of emotions that they can experience. To understand that these emotions are natural human responses and can be channelled into positive pursuits. To help men understand why these emotions present themselves, which situations trigger what for them, and give them better language and vocabulary in describing them. All to help them to overcome the shame, fear, and stigma that will be puppeteering their bodies and their emotions. Only *then* will we get men to talk more openly. Much easier said than done, of course. But that's what we're up against.

Professor Paul Gilbert OBE, a clinical psychologist and founder of Compassion-Focused Therapy (CFT), has a career in psychology spanning over 50 years and has been cited almost 80,000 times. So he knows more about human emotions and the brain than most! There was a line he said to me that summarised the entire challenge we face with masculinity. One of his clients, a military veteran, saw a close friend die after stepping on a landmine. He suppressed the emotion of that experience for years, eventually telling Professor Gilbert in one of their sessions, 'I've always had the courage to die, but never to cry'.

Key Summary

- **Nothing is absolute:** There are biological differences between sexes which explain certain behaviours, but these exist as averages, not absolutes. Biology is complex, and there are many factors at play, but what we do know is that biology alone doesn't tell the entire story and social conditioning plays a huge role.

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- **Not so distinctive:** There is less obvious distinction between ‘masculine’ and ‘feminine’ traits than we like to think, with science showing men can feel emotions just as intensely as women.
- **Neither ‘good’ nor ‘bad’:** Emotions are natural human responses and information to the body. Rejecting these simply stores them in the body, which builds like a pressure cooker.

