National Trust

Natural Childhood

By Stephen Moss

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Executive summary

This report presents compelling evidence that we as a nation, and especially our children, are exhibiting the symptoms of a modern phenomenon known as 'Nature Deficit Disorder'. We look at what this disorder is costing us, why it's proving so difficult to reverse, and gather current thinking on what we must do to eliminate it, before opening up the question to the nation for consideration.

It is important to state from the beginning that this is not an anachronistic lament on modernity. The benefits of modern technology are many; and to cry out for the return of some mythical golden age would be as ineffective as it would be misguided.

Instead, this report is a call to arms to ensure that as we move forward, we do so while retaining what is most precious and gives life most meaning. As Octavia Hill, one of the founders of the National Trust, observed over 100 years ago, 'the sight of sky and things growing are fundamental needs, common to all men.' The lengthening shadow of what has been termed Nature Deficit Disorder threatens the fulfilment of that need; we must turn the tide.

The report's **Foreword** presents the issues in more detail, confronting head-on perceptions that Nature Deficit Disorder is either peripheral to society or simply an inevitable consequence of modernity. It also demonstrates the widespread consensus that something needs to be done to change the current situation, to enable our children to reconnect with the natural world.

Part 1

Nature Deficit Disorder: Causes and Consequences focuses on the lives of Britain's children, particularly with regard to their lack of engagement with nature. It presents statistics, and the results of numerous surveys and studies, to confirm the dramatic and worrying consequences of the current situation. Three specific categories are examined: physical health problems including obesity, mental health problems, and children's growing inability to assess risks to themselves and others.

Part 2

The Value of Connection: Benefits of Natural Childhood looks at the hard benefits for society from reversing the generational decline in connection with the natural world, in four categories:
(i) Health
(ii) Education
(iii) Communities
(iv) Environment

Part 3

Fear and Complexity: Barriers to Natural Childhood examines what stands in the way of achieving these aims, including:

- The danger from traffic, and how this severely limits children's ability to venture outside their homes.
- The issue of Health and Safety, and how an obsession with trying to achieve a 'zero-risk' world is severely limiting children's freedom.
- Parental fears of 'stranger danger', and its consequences for children's freedom to roam in the wider environment.
- The negative attitudes of some authority figures, who regard children's natural play as something to be stopped rather than encouraged.
- The past and sometimes present role of nature conservation organisations which should now know better.

Part 4

Join the Debate: Towards Solutions brings this report to a conclusion with an appeal: to find out what measures the people of Britain think need to be put in place to begin to ensure that every child has the chance to develop a personal connection with the natural world.

The National Trust

The **National Trust** was founded in 1895 with a mission to promote the preservation of places of historic interest and natural beauty for the benefit of the nation. Over the decades, this has required the Trust to take a stand on many different issues – from safeguarding country estates in the post-war years to protecting over 700 miles of coastline through the Neptune campaign. Today, it is Europe's largest conservation organisation with more than four million members, many of them families with children – and today Nature Deficit Disorder demands a response from the Trust. With the publication of this report, the National Trust is opening the conversation and showing the willingness to play a leading role on this vital issue.

The report's author

A lifelong naturalist, **Stephen Moss** is one of Britain's leading nature writers. As the original producer of the BBC series *Springwatch*, author of numerous books including *The Bumper Book of Nature*, and father of five, he has a longstanding personal commitment to ensuring all children have the chance to form a connection with nature. Building on a national online conversation, Outdoor Nation, the Trust has invited him to review the latest literature to frame this independent challenge and call to action on Nature Deficit Disorder.

Foreword

In his seminal book *Last Child in the Woods*, published in 2005, California-based author Richard Louv coined the phrase that has come to define the problem we are now trying to solve:

> Nature Deficit Disorder describes the human costs of alienation from nature, among them: diminished use of the senses, attention difficulties, and higher rates of physical and emotional illnesses.[1]

As we shall see, there is now a critical weight of evidence that our nation is no longer the Outdoor Nation we pride ourselves on: instead, generation by generation, we are increasingly suffering from Nature Deficit Disorder. Although this is not a recognised medical condition, it is nevertheless a useful shorthand term for the situation we currently face, and therefore will be used throughout this report.

Our nation's children are also missing out on the pure joy of connection with the natural world; and as a result, as adults they lack an understanding of the importance of nature to human society.

If we do not reverse this trend towards a sedentary, indoor childhood – and soon – we risk storing up social, medical and environmental problems for the future.

The reasons for this are not all as they may seem. There is an instinctive reaction, when first discussed, that Nature Deficit Disorder is about two things: poverty and technology.

There is some truth in both of these. The problem *is* more pronounced in low-income urban areas; and when asked why they do not go out and explore the natural world, computer games and TV are on the list of reasons children offer.

But this is not the end of the story. Nature Deficit Disorder is society-wide. And while nature does have more competition for the attention of today's children (and frankly, Playstations and Wiis are good fun), there's significant evidence that children would really like to spend more time outdoors. At some level, they would recognise the sentiment behind the observation of TV presenter and naturalist Nick Baker:

> You'll never forget your first badger – just as you'll never remember your highest score on a computer game – no matter how important it seemed at the time.[2]

A child playing in the woodland at Clumber Park, Nottinghamshire
© National Trust Images/ David Levenson

There is too much at stake here simply to accept the situation as an inevitable consequence of modernity. We must dig deeper, and look at issues such as traffic, 'stranger danger' and the resulting modern phenomenon of 'helicopter parents', who watch and direct their children's every move, denying them the freedom they themselves enjoyed when they were growing up.[3] We must look at the role of the natural world in our education and health systems, and be prepared to think big.

So what can we do to combat the problem of Nature Deficit Disorder, to ensure that today's children can discover the natural world for themselves, and reap the benefits?

Unusually, perhaps uniquely amongst today's political and social concerns, there is a great deal of consensus around this subject. Parents, teachers, doctors, journalists, social workers, conservationists – and

Children on a 'bug safari' funday, at Wicken Fen, Cambridgeshire

© National Trust Images/ David Levenson

the children themselves – are all united in their belief that children would benefit from greater freedom to explore outdoors. Politicians of all colours want change too: after all, no political party ever lost votes campaigning for children to be more in touch with nature.

Our nation's newspapers – from the *Mail* and *Telegraph* on one side of the political spectrum to the *Observer* and *Guardian* on the other – have run campaigns, written editorials and printed readers' letters bemoaning the current state of Britain's children. According to their headlines, we are raising a generation of 'couch-potato children', leading ultimately to 'the erosion of childhood'.[4] Parents agree: one recent survey revealed that two out of three now believe that their children have less freedom to roam than free-range chickens.[5]

And yet despite all the heat generated by this debate, in some ways little has actually been achieved. For while we may all agree that 'something needs to be done', there has been a conspicuous lack of coordinated action to reverse the trend and reconnect our children with nature once again.

But we are now at a tipping point. We have the evidence: both of the harm done by this state of affairs, and the many benefits of allowing children between the ages of seven and 12 the freedom to explore the natural world. We have the support: from virtually everyone who is involved with children, either from a professional standpoint or as a parent, or both. And we have the opportunity: not least because nature is more or less a free resource, which offers many low-cost benefits for children and families, an important factor at this time of economic stress.

So we have the means, motive and opportunity. Now we need the will. Things cannot be changed overnight, but we must start somewhere. This report is a first step, attempting to raise the level of the debate on this issue, and providing the commitment to help resolve it. The goal is nothing less than to kick-start the creation of a new way of life for our nation's children.

Part One

Nature Deficit Disorder: Causes and Consquences

'For a new generation, nature is more abstraction than reality. Increasingly, nature is something to watch, to consume, to wear – to ignore.'

Richard Louv, *Last Child in the Woods.*[6]

Until quite recently, if a child was sent to their bedroom during daylight hours, it was because they had been behaving badly.

Today, things are very different. The average child's bedroom is no longer a place of punishment, but an entertainment hub: the epicentre of their social lives. Here they can access the outside world via their mobile phone, TV or computer screen; or immerse themselves in a beguiling fantasy world of computer games, whose scenarios are so convincing that children sometimes have difficulty distinguishing between this 'virtual reality' and the real world. Why would they ever need to venture outdoors again?

Statistics confirm the widespread perception that our nation's children have a largely screen-based lifestyle:

- On average, Britain's children watch more than 17 hours of television a week: that's almost two-and-a-half hours per day, every single day of the year. Despite the rival attractions of the Internet, this is up by 12% since 2007.[7]
- British children are also spending more than 20 hours a week online, mostly on social networking sites.[8]
- As children grow older, their 'electronic addictions' increase. Britain's 11–15-year-olds spend about half their waking lives in front of a screen: 7.5 hours a day, an increase of 40% in a decade.[9]

The growth of virtual, as opposed to reality-based, play is, not surprisingly, having a profound effect on children's lives; indeed, it has been called 'the extinction of experience'.[10] (Pyle)

When looking for the reasons why today's children no longer engage with the natural world, many people pin the blame firmly on this screen-based lifestyle. But we must not forget that technology brings many benefits to children, not least the ability to access information about the natural world. And while it would be easy to draw the conclusion that the lure of this screen-based entertainment is the main reason why children rarely go outdoors, it may be a symptom of what Richard Louv refers to as 'well-meaning, protective house arrest'.[11]

To find out the true causes of the current situation, we must examine the many other ways in which our children's freedom to venture outdoors has been eroded.

Children playing in the garden at Little Moreton Hall, Cheshire

© National Trust Images/ Paul Harris

'Climbing a tree – working out how to start, testing for strength, feeling how the breeze in your face also sways the branches underfoot, glimpsing the changing vista through the leaves, dreaming about being king or queen of the jungle, shouting to your friends below once you've got as high as you dare – is an immersive, 360-degree experience that virtual or indoor settings simply cannot compare with.'

Tim Gill
Child play expert

So are our children really prisoners in their own homes? The statistics would appear to support this view. In a single generation since the 1970s, children's 'radius of activity' – the area around their home where they are allowed to roam unsupervised – has declined by almost 90%.[12] In 1971, 80% of seven- and eight-year-olds walked to school, often alone or with their friends, whereas two decades later fewer than 10% did so – almost all accompanied by their parents.[13]

Running errands used to be a way of life; yet today, two out of three ten-year-olds have never been to a shop or park by themselves.[14] A poll commissioned by the Children's Society revealed that almost half of all adults questioned thought the earliest age that a child should be allowed out unsupervised was 14 – a far cry from just a generation ago, when ten-year-olds would have had more freedom than a teenager does nowadays.[15]

If most of today's children are not even allowed down the street by themselves, the chances of them exploring the natural world are even more remote, as survey after survey has shown:

- Fewer than a quarter of children regularly use their local 'patch of nature', compared to over half of all adults when they were children.[16]
- Fewer than one in ten children regularly play in wild places; compared to almost half a generation ago.[17]
- Children spend so little time outdoors that they are unfamiliar with some of our commonest wild creatures. According to a 2008 National Trust survey, one in three could not identify a magpie; half could not tell the difference between a bee and a wasp; yet nine out of ten could recognise a Dalek.[18]

There is evidence to suggest that this sedentary, indoor lifestyle is having profound consequences for our children's health, especially with regard to what has been called the 'modern epidemic' of obesity:

- Around three in ten children in England aged between two and 15 are either overweight or obese.[19]
- The proportion classified as obese increased dramatically from 1995 to 2008: rising from 11% to almost 17% in boys, and from 12% to 15% in girls.[20]
- If current trends continue, by 2050 more than half of all adults and a quarter of all children will be obese.[21]

Other physical health problems on the increase include vitamin D deficiency, leading to a major rise in the childhood disease rickets;[22] short-sightedness;[23] and asthma.[24] There has also been a reduction in children's ability to do physical tasks such as sit-ups, producing 'a generation of weaklings';[25] and a major decline in children's cardiorespiratory (heart and lung) fitness, of almost 10% in just one decade.[26] All these health problems have been, at least in part, attributed by the researchers involved to a decrease in the time children spend outdoors compared with previous generations.

But physical problems are only part of the story. The Good Childhood Inquiry found that our children are suffering an 'epidemic of mental

Children sitting in a tree at Stourhead, Wiltshire

© National Trust Images/ Nick Daly

illness', with significant increases between 1974 and 1999 in the number of children suffering from conduct, behavioural and emotional problems:[27]

- One in ten children aged between five and 16 have a clinically diagnosed mental health disorder.[28]
- One in 12 adolescents are self-harming.[29]
- About 35,000 children in England are being prescribed anti-depressants.[30]

'For many people, the countryside is alien territory.'

Birmingham Vox Pops

Physical and mental health problems are the most obvious consequences of a lack of engagement with nature, but there are others which are less tangible, though equally important.

Principal among these are declining emotional resilience and the declining ability to assess risk, both vital life-skills in the development of which outdoor experience is vital, as child psychologist Professor Tanya Byron has noted:

> The less children play outdoors, the less they learn to cope with the risks and challenges they will go on to face as adults… Nothing can replace what children gain from the freedom and independence of thought they have when trying new things out in the open.[31]

A potential impact is that children who don't take risks become adults who don't take risks. In the current global economy this, too, is a price we cannot afford to pay, as pointed out by Lord Digby Jones, former chairman of the CBI:

> If we never took a risk our children would not learn to walk, climb stairs, ride a bicycle or swim; business would not develop innovative new products… scientists would not experiment and discover, we would not have great art, literature, music and architecture.[32]

Part Two

The Value of Connection: Benefits of Natural Childhood

> **The natural world is vital to our existence, providing us with essentials such as food, water and clean air, but also other cultural and health benefits not always fully appreciated because we get them for free.**[33]
>
> **Caroline Spelman MP**
> Secretary of State for Environment, Food and Rural Affairs

'People need to understand what they're missing out on – something really fundamental, a connection with the rest of life.'

Dr William Bird
Outdoor Nation Interview

So far this has been a story of unrelenting gloom: how a generation of children appears to be suffering from a lack of contact with the natural world, with serious consequences both for themselves and for society as a whole. It is now time to look on the brighter side: what would be the benefits of reconnecting our nation's children with the great outdoors?

Fundamentally these benefits all stem from one important characteristic of the natural world, compared with the virtual alternatives. Unlike them, nature doesn't come with an instruction manual, or a set range of possible outcomes; instead it holds infinite possibilities.

There is also compelling evidence that human beings have an innate need for nature: a concept known as 'biophilia'. Originally coined by the psychologist Erich Fromm,[34] and later popularised by biologist Edward O. Wilson,[35] biophilia refers to our primal urge to connect with the natural world; and although we lead very different lives compared with our prehistoric ancestors, this remains central to our lives today:

> Just as children need good nutrition and adequate sleep, they may very well need contact with nature…[36] [Louv]

Tim Gill, one of the UK's leading commentators on childhood, expands on the significance of this:

> Natural places are singularly engaging, stimulating, life-enhancing environments where children can reach new depths of understanding about themselves, their abilities and their relationship with the world around them.[37]

This depth of understanding leads to development opportunities that in turn lead to a range of benefits at the level of wider society. These fall into four categories: health, education, communities and environment.

A: Health Benefits

If we want to improve our children's physical fitness through increased activity, and begin to reduce the epidemic of childhood obesity, an important thing we can do is to get them to play outside.[38] As one children's playworker has observed:

> If you watch a child playing outside they're just doing so many physical tasks – they run for hours, dig, climb. If you told them to do it they wouldn't, but they want to because they're playing. You won't get that level of physical activity with anything else.[39] (Penny Wilson)

A child climbing trees in the Lime Avenue at The Argory, County Armagh

© National Trust Images/ Arnhel de Serra

Moreover, the benefits of regular outdoor play continue into later life. There is clear evidence to show that a child's attitude towards exercise lays the foundation for their habits as an adult.[40]

Exposure to the natural world can even enable people to live longer. In 2009 researchers at the University of Essex published a report into nature, childhood, health and life pathways.[41] On one pathway, where children are 'free-range', people's lifespan increases; on the other, where they are kept indoors and have little or no connection with nature, they die earlier.

But if outdoor play itself is so good for children, why do they need to leave the playground and explore beyond its boundaries? Because unlike playgrounds created by a human designer, natural environments allow children to play in far more varied and imaginative ways.

Compared with man-made playgrounds, the natural world is highly complex, with lots of places to hide and explore; it is untidy, which may be off-putting for adults, but adds to its attraction for children; and above all it is dynamic, varying from day to day, season to season and year to year.

Of course being outdoors can also confront children with less enjoyable experiences: being frightened, getting cold and wet, and even sometimes being hurt. But consider the alternative: that our children grow up without ever encountering these 'difficult' things, and enter the adult world unprepared for the challenges it might bring.

'The outdoors is bursting with health benefits – it takes away stress, it increases physical activity, and it gets people meeting each other…'

Dr William Bird
Outdoor Nation Interview

This is why the mental health benefits of connection are just as important, if not more so, than the physical, although the two are of course inextricably linked: greater physical activity promotes better mental health, and a sedentary childhood leads to more mental health problems.[42]

Specifically, a high proportion of children suffering from the medical condition Attention Deficit Hyperactivity Disorder (ADHD) benefit from increased contact with nature. In one study, exposure to nature reduced symptoms of ADHD in children threefold compared with staying indoors.[43]

But it is not only children with a specific diagnosis who benefit from increased contact with nature. Exposure to the natural environment can reduce stress and aggressive behaviour in all children, and give them a greater sense of self-worth.[44]

In the longer term, continued regular contact with nature brings an increased level of satisfaction with life in general. A recent National Trust survey revealed that 80% of the happiest people in the UK said that they have a strong connection with the natural world, compared with less than 40% of the unhappiest.[45]

Even short-term 'doses' of nature can make a marked impact on mental health – indeed, as little as five minutes of 'green exercise' can improve mood and self-esteem by a significant margin.[46] So clear is the link between increased contact with nature and better mental health that in 2007 the charity MIND launched a campaign to incorporate nature into mainstream NHS treatments, under the banner *Ecotherapy: The green agenda for mental health*.[47]

Recent research for Natural England has shown that where people have good access to green space they are 24% more likely to be physically active. The research concludes that if the population were afforded equitable good access to green space, the estimated saving to the health

service could be in the order of £2.1 billion per annum in England alone.[48] As Dr William Bird, GP and medical advisor to Natural England and the RSPB, puts it:

> The outdoors can be seen as a great outpatient department whose therapeutic value is yet to be fully realised. [49]

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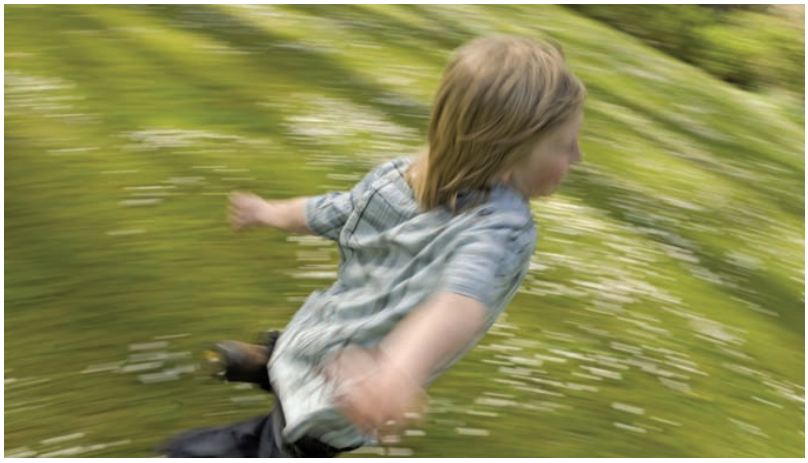

B: Educational Benefits

Increased contact with nature also improves the way children learn, both formally and informally. Outdoor learning gives them direct experience of the subject, making it more interesting and enhancing their understanding.[50] It also enables them to develop the vital connections between the outside world and what educationalists call children's 'interior, hidden, affective world'.[51] (Robin Moore)

The evidence for improvement, which child psychologist Aric Sigman calls the 'countryside effect', is considerable. He found that children exposed to nature scored higher on concentration and self-discipline; improved their awareness, reasoning and observational skills; did better in reading, writing, maths, science and social studies; were better at working in teams; and showed improved behaviour overall.[52]

But children don't simply learn more, or learn better, when freed from their desks. They also learn differently, experiencing improvements in four specific ways:

- Cognitive Impacts (greater knowledge and understanding)
- Affective Impacts (attitudes, values, beliefs and self-perceptions)
- Interpersonal and Social Impacts (communication skills, leadership and teamwork)
- Physical and Behavioural Impacts (fitness, personal behaviours and social actions.[53]

So children who learn outdoors know more, understand more, feel better, behave better, work more cooperatively and are physically healthier. Not a bad result from simply changing the location where they are being taught. Importantly, this is not just for able and motivated pupils: under-achievers also do better in a natural environment, especially when exposed to high-quality, stimulating activities.[54]

'Children who don't connect with nature before the age of 12 are less likely as adults to connect with nature. They therefore lose out on the resilience nature provides when you're really stressed.'

Dr William Bird
Outdoor Nation Interview

The economic benefits up for grabs here are again significant: even a tiny improvement of just one-tenth of one per cent in children's educational attainment and behaviour would save between £10 and £20 million per annum.[55]

Now that we know what works, it is time to implement it across the country for the benefit of all our children. The *Natural Connections* programme, coordinated by Natural England, which aims to enable the majority of schoolchildren to learn outdoors, is exactly the kind of sector-wide initiative needed to achieve real and lasting change.[56]

But the profile of this project and others like it is not high enough within the sector it seeks to affect. More needs to be done: until every teacher in the country embraces this way of teaching and learning, the trend to disconnection with nature is likely to continue.

C: Community Benefits

Reconnecting children with nature is not just for their advantage. There are also positive outcomes for communities and society as a whole.

In 2011, a cross-cultural ethnographic study by UNICEF, comparing childhood in the UK, Spain and Sweden, found that British parents are trapping their children in a cycle of 'compulsive consumerism'.[57] The study, triggered by an earlier quantitative study which placed the UK bottom for childhood well-being out of all 21 nations surveyed,[58] heard remarkably constant feedback from children in all three countries:

> Children in all three countries told researchers that their happiness is dependent on having time with a stable family and plenty of things to do, *especially outdoors*, rather than on owning technology or branded clothes. Despite this, one of the most striking findings is that parents in the UK said they felt tremendous pressure from society to buy material goods for their children; this pressure was felt most acutely in low-income homes. [My italics]

As Sue Palmer, author of the book *Toxic Childhood*,[59] commented:

> We are teaching our children, practically from the moment they are born, that the one thing that matters is getting more stuff.[60]

We can observe strong evidence that even the lightest contact with nature makes for stronger communities; studies have shown that even in cases where the only variable is the view of green space from a window, incidences of crime are reduced by as much as 50%.[61]

This makes intuitive sense. In a world where children play in their local green space and are welcomed and expected to do so, those children become part of the community. Perhaps the days of 'I know your mother!' are past, but the benefits of such ties for the strength of Britain's communities would be pronounced.

D: Environmental Benefits

However important the short-term economic arguments may be, we must not lose sight of those that refer to the longer term.

With the recent publication of the *National Ecosystem Assessment*,[62] we are starting to recognise the extent to which we depend on the natural world for the viability of our economy. But rebuilding the connections

between children and nature will be vital to ensuring we continue to reap the economic benefits of the natural world. This is because, in the words of David Attenborough:

> No one will protect what they don't care about; and no one will care about what they have never experienced. [63]

For all the logical economic arguments for our dependence on nature, we will not maintain our two-way relationship with the natural world unless we develop those connections at a young age.

This is partly because only adults who experience nature as children are likely to be motivated to protect the environment, as Dr William Bird notes in his work for the RSPB:

> The critical age of influence appears to be before 12 years. Before this age contact with nature in all its forms, but in particular wild nature, appears to strongly influence a positive behaviour towards the environment.[64]

A child with a snail on the beach at Portstewart Strand, Co. Londonderry

© National Trust Images/ Rod Edwards

But it is also partly because in order to continue to harness the services of our ecosystems, we will need to continue to develop our understanding of them – for which we will need to continue the strong British tradition of cohorts of naturalists, both amateur and professional.

Today there are thousands of these men and women in the UK, many of whom contribute their observations to national wildlife surveys such as the British Trust for Ornithology's *Atlas*,[65] or the RSPB's Big Garden Birdwatch.[66] No other country in the world has such a strong tradition of 'citizen science', adding hugely to our knowledge and understanding of our natural heritage, and enabling us to safeguard it for the future.[67]

But sadly, these amateur naturalists are now an endangered species. The vast majority of those active in, for example, BTO surveys, are more than 40 years old; most are over 60.[68] As time goes by, we look in vain for their successors. Young people are still studying biology and zoology degrees, and many have a keen interest in environmental issues; but according to ecologist Roger Key, few have the practical, hands-on field knowledge of their predecessors.[69] Indeed, a study by Anne Bebbington found that most A-level biology students could not identify more than three wild plants.[70]

In an internal report for Natural England, Key demonstrated that the decline in young people's natural history knowledge is at all educational levels, from primary school to postgraduate studies. Paradoxically, as he points out, the huge rise in awareness of environmental issues has coincided with a decrease in people's specific knowledge of the wildlife they wish to save.

If we want to create a better environment – for wildlife and people alike – this expertise and knowledge is an essential building block. As Richard Louv concludes:

> If we are going to save environmentalism and the environment, we must also save an endangered species: the child in nature.[71]

It is not just children who need nature; nature needs children too.

Part Three

Fear and Complexity: Barriers to Natural Childhood

Childhood is being undermined by adults' increasing aversion to risk and by the intrusion of that fear into every aspect of their lives.

Tim Gill, Author of *No Fear: Growing Up in a Risk-averse Society* [72]

The weight of evidence for the benefits of getting children back to nature is, as we have seen, overwhelming. The consensus that 'something must be done' is also there, right across the social and political spectrum. We even have a government White Paper, *The Natural Choice*,[73] which makes several recommendations explicitly designed to reconnect our nation's children with the natural world, including:

- A recognition that we need to exploit 'nature's health service', in particular relating to children's physical and mental health.
- A specific pledge to increase outdoor learning, by offering practical support to schools and reducing 'red tape'.
- Creating better neighbourhood access to nature, both locally and in the wider countryside, in order to allow children (and adults) to experience its benefits.

'I think children are born with an inherent love of the outdoors… but as parents we stop letting them have their freedom, and we work that love of nature out of them…'

Kate Macrae
Education Consultant and Teacher

And yet the stream continues to flow in the wrong direction. So what is stopping us?

The answer is that there are a whole host of barriers – some justified, others less so; some functional, and others more deep-seated and psychological – which stand in the way of excellent ideas being turned into effective actions.

These barriers may be very hard to break down, not least because they have become ingrained in our daily lives, as Richard Louv points out:

> Some of these obstacles are cultural or institutional – growing litigation, educational trends that marginalise direct experience in nature; some are structural – the way cities are shaped. Other barriers are more personal or familial – time pressures and fear, for example. A shared characteristic of these institutional and personal barriers is that those of us who have erected them have usually done so with the best of intentions.[74]

The fundamental truth is that it is these misplaced good intentions that we must target – but it will not be easy to do so. For the true scale of the challenge is that we will need to convince the nation's parents and teachers, conservationists and politicians, journalists and legislators, that the way we treat our children is – at least in this regard – at best counterproductive, and at worst utterly wrong.

A: Traffic

First of all, though, there is one barrier that is largely functional, and concern about which is entirely rational – though the picture is not what it might at first seem.

Successive governments, and motoring organisations, would have us believe that the story of children's road safety in recent years has been one of unqualified success. The statistics appear to bear this out:

the number of children killed on our roads has fallen dramatically, from almost 700 deaths in 1976 to just 81 in 2009.[75]

But these raw figures conceal the true reason behind the drop in deaths: that nowadays children are rarely allowed to venture outdoors. In 2007, the *Daily Mail* reported on a single Sheffield family who neatly demonstrated this.[76] Great grandfather George, brought up in the 1920s, had almost unlimited freedom as an eight-year-old, regularly walking six miles to go fishing on his own. But 80 years later, his great-grandson Edward enjoyed none of this freedom: he was taken to and from school by car, and was only allowed to roam within a radius of 300 yards from his home.

Indeed, Mayer Hillman's study *One False Move* found that in 1971, 80% of seven- and eight-year-old children went to school on their own; by 1990 only 9% were making the journey unaccompanied.[77] Hillman et al concluded that road accidents involving children have declined not because the roads have become safer, but because children are no longer exposed to the dangers they pose.

'You can't get outdoors – the traffic is everywhere. You try to go somewhere and you're stuck in queues – you just give up!'

Bristol Vox Pops

In 2004, the children's charity Barnardo's joined forces with the pressure group Transport 2000 (now Campaign for Better Transport) to produce a report: *Stop, look and listen: children talk about traffic*.[78] This contained powerful first-hand testimony from children on the way traffic has limited their freedoms.

In a hard-hitting conclusion, the authors called on the government to make our streets safer, so that children could play outdoors again. Children of all ages wanted to be able to play outside, walk and cycle more safely, but said that speeding, bad driving and a lack of safe play spaces made them feel unsafe when outside their homes.

Almost a decade later, the situation has not improved. Car use remains at historically high levels. If things do not change, the danger from traffic will remain a primary reason why children do not play outdoors. This is a fundamental barrier to be overcome if we are to reinstate our children's 'right to roam': both on the streets where they live, and in the wider natural environment.

B: Attitudes to risk

Traffic represents a physical risk to children that should never be understated. But there are other forms of risk that are worth taking.

Giving children the freedom to explore natural environments inevitably incurs an element of danger. Yet we should put this in perspective: three times as many children are taken to hospital each year after falling out of bed, as from falling out of trees.[79] Indeed ironically, by far the most dangerous place for a child to be is at home:

- Every year, one million children aged 14 or under go to A&E departments: 30,000 with symptoms of poisoning, mostly from domestic cleaning products, and 50,000 with burns or scalds.
- Half a million babies and toddlers are injured each year at home, 35,000 from falling down stairs.
- On average, ten children die each year from falling through a window or off a balcony, while house fires cause almost half of all fatal accidents to children.[80]

A child climbing a tree at Nymans, West Sussex
© National Trust Images/ John Millar

Yet despite these horrific statistics, we continue to assume that all dangers lie outside the home, and that by keeping our children indoors we are somehow removing them from all risk. Clearly the statistics above show that is not the case.

Of course no natural environment is completely free from risk either. But these risks are a fundamental part of childhood: by gradually learning what is safe and what is dangerous, especially with regard to their own actions and behaviours, children develop their own 'risk thermostat'.[81]

Climbing a tree is a good example: it may be easy to climb up, but the child may then realise that getting down is rather trickier. The experience has taught them an important lesson about their own limits, and the risks they are prepared to take. But if children are shielded from any possibility of being in a risky situation, how will they ever know what their safe limits are? In the words of Fiona Danks and Jo Schofield, authors of *Nature's Playground*:

> Life is full of risk, so the best way to prepare children for life is to ensure they know how to judge risk for themselves.[82]

Tim Gill has called for 'the wholesale rejection of the philosophy of protection'. In its place, he argues, we should embrace risk, uncertainty and challenge – even danger – as essential ingredients of a rounded childhood.[83]

Fortunately those in charge of health and safety legislation seem to agree. Launching its 'Get a Life' campaign in August 2006, the Health and Safety Executive chairman Bill Callaghan accused over-zealous 'pedants' of using health and safety as an excuse to ban perfectly normal activities, including playing conkers, and urged those in authority to allow 'sensible risks'.[84]

In July 2011 his successor Judith Hackett reinforced this message: what she calls 'the creeping culture of risk aversion' is, she believes, harming children's preparation for adult life.[85]

When activities like playing conkers are banned or restricted, it is not at the call of the Health and Safety Executive; indeed, it is explicitly against their recommendations. The inevitable conclusion is that it is a cultural norm that has become deeply rooted in our national psyche: risk is bad, and must be avoided at all costs.

This will not be easy to overcome. But we must do so. The work of consultants Tim Gill and Bernard Spiegal with organisations including the National Trust on the concept of Risk/Benefit Assessments, whereby both risks and benefits are assessed and decisions made as a result of weighing up both factors, is a ground-breaking approach, and one completely consistent with Health and Safety Executive advice. Efforts like these need a greater profile in our society – they strike at the core of finding a solution to the issue of Nature Deficit Disorder.

C: Stranger danger

While we're on the subject of risk, we must also take on the most emotive and controversial aspect of this question. There can be no doubt that most parents' greatest fear is stranger danger. Fear of strangers is likely to be hard-wired into our consciousness,[86] having evolved as a strategy for survival amongst our distant ancestors. But Richard Louv suggests 'the bogeyman syndrome' may have become counter-productive today:

> Fear is the most potent force that prevents parents from allowing their children the freedom they themselves enjoyed when they were young.[87]

This is a result of what social psychologists would refer to as an availability heuristic: a phenomenon in which people predict the frequency of an event, or how many people it will affect within a population, based on how easily an example can be brought to mind.

In other words, as a result of news coverage of attacks on children, it is easy for people to recall horrendous, tragic examples – Madeleine McCann, Holly Wells and Jessica Chapman, and so on. And as a result of that, they significantly and systematically overestimate the likelihood of something happening to their own children.

As a result, a significant minority of parents are becoming so concerned about safeguarding their children that they are resorting to extreme measures, such as GPS tracker devices that allow them to monitor their child's every move.[88] Superficially this may seem rational, but there may be damaging consequences for the children involved.

A 2008 Channel Four documentary, *Cotton Wool Kids*,[89] highlighted the growing tendency for some parents to become obsessively over-protective. One pre-school girl was bombarded with her mother's increasingly hysterical warnings about stranger danger; a teenage boy was not even allowed to walk to the bus stop on his own; and a working mother used a webcam constantly to monitor her child at nursery.

Yet ironically, the greatest dangers facing Britain's children are not outside in the woods and fields, but in the very place their parents regard as a safe haven: their bedrooms. The vast majority of sexual abuse is carried out by relatives of the victim: parents or step-parents, uncles or 'family friends'.

Even when a stranger is involved, they often initially approach their victim via Internet chatrooms, posing as teenagers themselves. With three out of four 8–11-year-olds, and two out of three 5–7-year-olds, now regularly using the Internet, more – and younger – children may be inadvertently putting themselves at risk.[90]

When it comes to the most serious cases of all, involving the abduction and murder of a child, the statistics are revealing. On average 55 children in England and Wales are unlawfully killed each year. But eight out of nine victims are less than one year old, two out of three are under

five, and the vast majority are killed by either a parent or step-parent – mostly in the family home.[91]

The statistics do not reveal the exact number of children abducted and killed by strangers, but it can be inferred that it is likely to be in very low single figures. To put this in context, more than 200 children die each year from accidental injury or poisoning.[92]

But these figures are irrelevant when compared to the readiness with which the name of the tragic victims of these rarest of crimes can be brought to mind; names like James Bulger and Sarah Payne, which are etched in our collective memory.

So are our children any safer in their bedrooms than if they were out and about with a group of friends? Statistics, experience and common sense suggest not; yet persuading parents of the real dangers indoors, compared to the imaginary ones outside, will be very hard to do.

D: Authority Attitudes

We can all empathise with the dilemma faced by parents fearful of the risks posed by traffic or stranger danger, even if we may not agree that these fears are always justified. But there is another barrier preventing our children reconnecting with nature: figures of authority. These include teachers, police and other officials who, often with the best of intentions, are eroding our children's freedom.[93] And while most professionals take a more balanced view, it only takes a small minority to discourage children from engaging with the natural world.

According to a 2008 study by Play England,[94] half of all children have been stopped from climbing trees, one in five banned from playing conkers, and almost the same number told they cannot play games of tag. As Tim Gill observes, activities that earlier generations of children enjoyed as part of growing up are now being relabelled as 'troubling' or 'dangerous'.[95] And remember, the Health and Safety Executive is an active advocate of sensible risk.

In addition, because children are no longer allowed to venture outdoors, any who do stand out from the crowd. So whereas their behaviour would once have been accepted, it is increasingly regarded as abnormal and delinquent, leading to what Richard Louv has called 'the criminalisation of natural play'.[96]

Children on an Easter egg hunt, hiding in an old tree trunk at Dyrham Park, Gloucestershire

© National Trust Images/ Jennie Woodcock

Cases include a family with three young daughters being reprimanded by police for picking daffodils;[97] a group of youngsters being given anti-social behaviour warnings for 'making too much noise' while playing in a park;[98] and a mother fined £75 because her little boy had thrown bread to ducks on their local park pond – a fine that was, after a storm of protest, withdrawn.[99]

In July 2006, three 12-year-olds who built a den in a cherry tree were arrested, DNA tested and locked up in police cells, accused of criminal damage. They were later reprimanded and released, but their details will be kept on file for five years. The children's parents accused the police of over-reacting, and were backed up by the chairman of the Youth Justice Board for England and Wales. But the police defended their actions, and described the children's behaviour as 'anti-social' and 'low-level crime'.[100]

An even more disturbing example occurred two years later, when Dorothy Judd took her five-year-old grandson Max into the local woods to build a den. But when they returned the next day a uniformed police officer approached them, took their personal details and escorted them out of the woods, following two complaints about their 'suspicious behaviour'.[101]

We now, it seems, live in a world in which even the most innocent childhood actions are sometimes regarded as unacceptable, with all the consequences for children's freedom this entails.

E: Arms-closed Conservation

'Take only photographs, leave only footprints…' For environmentalists and conservationists the world over, this mantra has become the equivalent of one of the Ten Commandments.

But it has had exactly the opposite effect of what was originally intended. If conservation organisations and their wardens ban hands-on experiences, then instead of children's passion for nature being nurtured and encouraged, they may simply be put off. One expert commentator, Martin Maudsley of the National Children's Bureau, has pointed to the importance of children taking a hands-on approach: touching, picking and collecting, and occasionally being bitten or stung!

> Widespread evidence suggests that the strongest environmental sensibilities in adulthood stem from childhood experiences of unstructured play in natural environments, *including interactive (potentially damaging)* activities.[102] [my italics]

'What we've done is we've put Nature over there – we've put a fence around it and said 'That's Nature' – this is why we're now strangers to each other.'

Dr William Bird
Outdoor Nation Interview

We should also be wary of the tendency to turn every encounter with nature into some kind of 'interactive experience'. Nature reserves were once indistinguishable from the wider countryside; today they have so many signs, exhibits and organised activities that many visitors may never actually get to look at the wildlife they have come to see.

Also, by turning what should be a spontaneous experience into an organised one, there is a real danger that people assume they need special skills and equipment to take part. As Nick Baker points out:

> Even nature itself has become a commodity. Many believe they cannot experience it unless they are in a nature reserve, have the right pair of binoculars, or are wearing the correctly endorsed clothes… So often nature is seen as something to travel to – not something we are immersed in all the time and dependent upon for our physical, emotional and spiritual health.[103]

Conservation organisations including the National Trust are now taking on board these criticisms, and a new era of 'arms open' conservation is very definitely dawning; but there is more – much more – to be done.

A child taking a close look at wildlife in the garden at Quarry Bank Mill, Cheshire
© National Trust Images/ John Millar

Part Four

Join the Debate: Towards Solutions

The tipping point is the moment of critical mass, the threshold, the boiling point.

Malcolm Gladwell, *The Tipping Point* [104]

Anyone involved with children – as a parent, as a professional, or both – knows that there is no 'magic bullet', which can instantly reconnect our nation's children with the natural world. Reaching this goal will require long-term changes across the whole of society, in three broad spheres: individual, collective and political.

Achieving effective and permanent changes in behaviour, attitudes and policies will need a holistic approach, involving all interested parties. These range from politicians and policymakers at the top, through teachers, health practitioners, journalists and conservationists in the centre, to families, parents and children at the point of delivery.

Individuals and families – including grandparents and godparents as well as the parents themselves – have a crucial role in kick-starting their children's process of engagement with the natural world. But to keep the momentum going, community groups, local and national organisations, and internet-based special interest groups, also need to get involved.

These groups – from school PTAs to Parish Councils, the Scout and Guide Movement to Mumsnet, and the Women's Institute to Neighbourhood Watch, have a vital part to play: in practical ways, such as organising outdoor events or campaigning for children's play areas and safe access routes; but also by helping to promote changes in attitudes and practices. One effective approach would be to set up Family Nature Clubs, a model that has already had great success in the USA and Australia.[105] These are groups of people who get outside in nature on a frequent basis, gathering children, friends and community members to share outdoor adventures and experience the benefits of time spent together outside.

The conservation bodies must also continue to lead the way in promoting the importance of getting children back to nature. They have already put in an enormous amount of groundwork, in the form of the many popular initiatives and authoritative reports already cited, and their continued good work with children and young people.

Alongside this report, the National Trust is launching its next contribution: a campaign called '50 things to do before you're 11¾',[106] rooted in the studies that show the importance of developing a connection with nature before the age of 12. Devised by staff and volunteers from across the Trust, it is a call-to-arms throughout the organisation to ensure that its commitment to 'arms open' conservation extends to the nation's children.

But individuals, community groups and conservation organisations, however loud they shout, and however hard they work, can only go so far. Even government policy – as has been proposed in the 2011 Natural Environment White Paper [107] – will not be enough.

This needs to be something we all decide to do together. At a time when our nation faces some of the greatest challenges in its history, from

climate change to economic meltdown, it may seem naïve to think that reconnecting children with nature should be placed at the top of the agenda.

But consider the social, economic and political advantages of achieving such a goal. Imagine a world where our children are physically and mentally healthier, communities more cohesive and connected, and everyone enjoys a closer relationship with the natural world, and all the benefits this brings.

Reduced costs to the NHS, higher educational attainment in our schools, and happier, more fulfilled families are just the start. Ultimately, this would help produce generations of children with a more balanced approach to risk-taking, deeper bonds with their peers, and a genuine self-awareness and perspective on the wider world – ready to take their place in adult society.

Previous social changes have shown that once the majority of stakeholders identify a shared goal, and agree on what needs to be achieved, things gradually begin to move forward. Progress happens slowly at first, but eventually reaches what journalist and social commentator Malcolm Gladwell memorably called the 'tipping point'.[108]

At this stage, new norms are established, and what was once the status quo rapidly gives way to new attitudes, behaviours and practices. The huge reduction in drink-driving and smoking habits during the past few decades are just two examples of such change.

So we are now at a crossroads. Having identified the issue, and formed a consensus of opinion on what we wish to achieve, we must now agree on a strategic, long-term plan.

This is where you come in. With this report, the National Trust is launching a major consultation process, asking individuals and institutions to come up with practical, workable and effective solutions to reconnect Britain's children with the natural world.

If you are a parent or grandparent, or work with children in a professional or voluntary capacity, we want to hear from you. And especially if you are in a position of influence – a journalist or broadcaster, teacher or conservationist, politician or author – we also need you to spread the word. Only then will real change begin to happen.

There will be some who will consider the aims of this report and its associated campaign impossible to accomplish. They will argue that society has changed since the days when children roamed free, and that it is now too late to reverse the trends of the past few decades.

But we are not trying to put back the clock to some nostalgic, rose-tinted image from the past, like something out of Enid Blyton's Famous Five books. This is all about looking forward, and creating a new world: where the sight of children playing outdoors, without parental supervision, is the norm rather than the exception.

This will not be easy to achieve. But ultimately it comes down to one question: should we ensure that every child has the opportunity to develop a personal connection with the natural world, with all the benefits this will bring… or not?

You decide.

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