

## I Choices

You, your joys and your sorrows, your memories and your ambition,  
your sense of personal identity and free will, are no more than the  
behaviour of a vast assembly of nerve cells and their associated  
molecules.

Francis Crick, *The Astonishing Hypothesis*, 1995

We have a pump in our kitchen at home, connected to a deep well outside the back door. It is a relic of the time the house was built, two hundred or so years ago, when mains water did not exist. We don't use the pump. Mains water reached here in the 1880s and it is much easier and more convenient simply to turn a tap. But it serves as a reminder of a time when we had no option but to spend much time and effort coping with our environment. Most of those reading this book will take for granted piped water, easily available energy, warm houses, readily accessible transport and so on, giving only intermittent thought to the many millions without these benefits, never mind those who have voluntarily or involuntarily left their homes for squalid shanty towns or refugee camps. Notwithstanding, it seems fair to assume that a key aspiration – usually, perhaps unrecognized – of people everywhere is to cushion themselves as much as possible from the inconveniences and challenges of their surroundings, thereby effectively ignoring their environment. Is such independence from the environment a universal 'good'? We are urged to 'get out' and take exercise, told that viewing (even in pictures) the natural world may contribute to well-being – to the extent of healing from some sicknesses, both mental and physical (p. 198). What does – or should – our environment mean to us? Is it just a scenic background for our existence, a nuisance to be avoided as much as possible, or something more?

**BOX 1.1 The common good**

Philosophers down the ages have debated as to whether there is a ‘common good’ shared by and beneficial to all members of a community. Such a common good would suggest that society shares benefits by being more than a collection of individuals – that there is such a thing as ‘society’. It implies that the common good of all citizens is the proper aim of government. It is a concept which lends itself to political speculation and assertions about the organization of society; it is an idea much beloved by economists, particularly in terms of their calculations of ‘welfare’.

Notions of the common good are relevant to environmental actions and behaviour because of the all-too-common pursuit of what has been called ‘market fundamentalism’ (i.e. an unmitigated drive for growth of profits). This may lead to false accounting and endanger the ‘natural capital’ of the planet – the geology, soil, air, water and living things upon which we depend and from which we derive a wide range of benefits (Box 9.4 ‘Ecosystem services’, p. 201) and which make life possible. This bias is exacerbated by the convention of measuring economic health solely in terms of gross domestic product (GDP), a metric which came into use in the 1930s and was intended as a convenient measure of economic activity. It was popularized by Maynard Keynes, among others. The problem is that GDP measures a nation’s flow of income, expenditure and assets from year to year, but not its assets or balance sheet. It takes no account of any loss of natural capital nor of inequalities between or within countries. International attention is increasingly focused on the crucial significance of natural capital (see the later chapters of this work).<sup>1</sup> Inevitably, GDP distorts assessments if it is used as the authentic measure of financial health or social sustainability. We need to recognize from the outset that we risk both ourselves and our fellows if we concentrate on the flow of services or money and ignore the ‘goods’ of our environment.

<sup>1</sup> See also, for example, the statement ‘Sustainable humanity, sustainable nature – our responsibility’ produced by the Pontifical Academy in 2014 (*Science*, **345**: 1457–8). Following a policy set out in a Natural Environment

White Paper in 2011 (*The Natural Choice: Securing the Value of Nature*), the British Government receives advice on protecting and improving natural capital from a Natural Capital Committee, which reports directly to the Cabinet. Its ethos has been set out by Dieter Helm in *Natural Capital: Valuing the Planet* (2015) New Haven, CT and London: Yale University Press.

A key but neglected realization is that it is impossible to detach ourselves completely from our (multiple) environments. The most important factor is our need for energy. All energy comes from the Sun and is captured by plants; all our food comes from plants, even if it is processed through animals. Or we may get it via pickled sunlight as 'fossil fuel'. On top of that, we are born into an environment of a family after three-quarters of a year in a womb; however much we may reject social conventions, we depend on and learn from other members of our species. 'Nature versus nurture' debates rumble on interminably in various guises; the truth is that we are the product of both nature and nurture. Try as we might, we cannot simply ignore our environment.

What determines our attitudes to the environment? Do we choose them, or are determined reductionists like Francis Crick right in claiming that we are so 'hard-wired' that our choices are imaginary – nothing more than inevitable responses to stimuli conditioned by our evolutionary history (see the epigraph to this chapter)? It seems intuitively unlikely that any normal person is completely unable to make decisions for themselves; in other words, we are influenced by both environment and history. Does 'nature' or 'nurture' ultimately control our success – and decide our doom? In what sense can we make 'good' decisions – be altruistic? Are our concerns for pandas or polar bears truly meaningful, or are they merely a sort of overflow from a subliminal need for order in our surroundings?

This book is about attitudes to the environment: how they are formed and what influence they may have – or could have – for us, either as individuals or as a group. Perhaps this is a stupid quest. Only

4 ENVIRONMENTAL ATTITUDES THROUGH TIME

in a very few cases, where a survey has been carried out for some particular purpose, can attitudes be unequivocally ascertained. However, it seems fair to assume that an attitude manifests itself in behaviour; or, put the other way around, a person's behaviour illustrates their attitudes. Charles Darwin spent eight years devotedly studying barnacles. His commitment to barnacles was a reaction to a chance comment by his friend Joseph Hooker (p. 91). His determination to be honest with himself and his science influenced his attitude to his understanding of a particular (and very focused) part of the natural world. Behaviour showed attitude. Darwin's eight years of barnacle study may be attributed to some sort of cussedness on his part, but it seems somewhat obtuse to argue that it was predetermined by either his neurones or his DNA.

**BOX 1.2 Highland Clearances**

The eviction of farmers from tracts of the Scottish Highlands and Islands in the late eighteenth and early nineteenth century is commonly portrayed as a series of inhuman and callous acts imposed by tyrant landlords on innocent tenants (Figure 1.1). It has been condemned as racism and even genocide.

While not in any way justifying the undoubted brutality of some of those involved, historians increasingly stress that this is not the full story. Many landowners were concerned for the welfare of their people as well as for the profitability of their estates. Some bankrupted themselves in attempting to support the inexorably growing population on their territory, and in such cases their estates fell into the hands of new owners with fewer scruples or, if entailed, came to be administered by distant lawyers whose legal duty was to maximize estate income even if it meant clearing the population.<sup>1</sup>

The worst of the horror stories about the 'Clearances' are repeated and generalized from a handful of primary accounts. The motive of one of the most reviled landowners, the Duke of Sutherland, was not simple greed. He hoped to restructure his estate by moving



*From the Painting by J. Watson Nicol*

*In the Collection of Eli Lees, Esq.*

LOCHABER NO MORE.

FIGURE 1.1A Persisting attitudes. Forced evictions from parts of the Scottish Highlands and Islands by landowners converting small tenancies into large sheep farms have left an indelible prejudice to the present day. Many of those forced from their land were moved to unsuitable coastal sites or decided to emigrate.  
Photo: Universal History Archive/Getty Images.

6 ENVIRONMENTAL ATTITUDES THROUGH TIME



FIGURE 1.1B Ruined croft houses on Vuia Mhor.  
 Photo © Sarah Egan (cc-by-sa/2.0).

his tenants from their unproductive hill farms to the coast, where they could pursue fishing or weaving, or work at the coal mine, salt pans or brick works in which he had invested. His plans, however, were ill thought-out, with no immediate provision of suitable accommodation for the displaced people, and took no account of the difficulty of impoverished subsistence farmers becoming successful fishermen. The worst cruelties on his estate were not perpetrated by the Duke himself but by his overambitious agent, Patrick Sellar, who stood to gain personally from the evictions by taking over some of the vacated land for himself.<sup>2</sup> The Duke's plans failed badly; they have been described as a 'typical example of social engineering which met neither the hopes of the benefactors nor the needs of the beneficiaries, but produced social disaster'.

Much of the Scottish Highlands is wet blanket bog. It used to be thought that the area was a 'man-made wet desert' produced by forest clearances in medieval times, followed by subsequent overgrazing. This is wrong. Blanket bog is the normal climax vegetation for the area. Woody remains in the bogs are of trees dated to around



4000 years ago when the bogs were forming at a time of climate change in the Bronze Age. There is no clear evidence of damage by humans in the Middle Ages, although heavy grazing since the eighteenth century by cattle and then by sheep has prevented natural regeneration in the drier areas.<sup>3</sup>

The human population in much of the Highland area more than doubled in a generation from the middle of the eighteenth century, largely because the introduction of potatoes increased the yield of poor land and allowed better survival of the inhabitants, albeit with a low standard of living. At first, the lairds welcomed this population increase because it helped their recruitment for the Highland regiments and their own rank as officers in the army itself, but this ended in 1846 with the failure of the potato crop and the consequent famine. How were the lairds to 'improve' the lot of their people? The population density was well above the carrying capacity of the land. The rate of bankruptcies among the lairds themselves was increasing. Some of the more compassionate landowners sought to provide for their people by helping them to emigrate. In other cases, the subsistence farmers were displaced from their traditional homes, and resettled in marginal land around the coast. A few ended up in model fishing towns like Wick, Ullapool or Bowmore, but the episode has left an abiding bitterness and angst. There were certainly instances of extremely cruel behaviour by those with power, but the impact of the Clearances has been much overstated. Many landowners did their best for their people, some of them paying the costs of emigration to North America. The population in the Highlands fell by a similar amount to that in many parts of the rural Lowlands and only by a third of that in Ireland during the same period (without including the deaths of a million people who starved in the famine in Ireland). By 1880, Clearances were illegal, but they had largely ceased by then.

The legacy of the Clearances is a strong folk memory of maltreatment, a memory which still dominates and rankles, and determines attitudes to authority and land ownership in the Highland area. They precipitated an evolution in agricultural practices which had been taking place for more than a century in England, with greater landlord control, professionalization of management, shorter

8 ENVIRONMENTAL ATTITUDES THROUGH TIME

leases, extension of enclosures and the erosion of small farms. The unrest from these changes was magnified because they came all at once in the Highlands. Environmental attitudes in this episode have been more shaped and fixed by emotion than by historical fact. There is a proper and understandable passion for place, but belief in an illusory golden age has been fostered by memories of hardship and starvation.

<sup>1</sup> Richards, E. (2016). *The Highland Estate Factor in the Age of Clearances*. Lewis: Islands Book Trust.  
<sup>2</sup> Grimble, I. (1962). *The Trial of Patrick Sellar*. London: Routledge and Kegan Paul.  
<sup>3</sup> Smout, T.C. (2000). *Nature Contested: Environmental History in Scotland and Northern England Since 1600*. Edinburgh: Edinburgh University Press.

**BOX 1.3 Building the railways**

When the railway network was spreading in the mid-nineteenth century, there was much local opposition ('Not in my backyard'). William Wordsworth did his utmost to prevent the building of the line between Kendal and Windermere. He contrasted nature with the world of materialism; he wrote 'Because we are insensitive to the richness of Nature, we may be forfeiting our souls.' He condemned the proposed line as 'Utilitarianism, serving as a mask for cupidity and gambling speculations.'<sup>1</sup>

In 1863 the Midland Railway was widely criticized for despoiling the natural beauty of the Peak District with the line it was building between Derby and Manchester, in particular a five-span 91 m long viaduct at Monsal Head over the River Wye. John Ruskin wrote:

There was a rocky valley between Buxton and Bakewell once upon a time divine as the Vale of Tempe... You Enterprised a Railroad through the valley – you blasted its rocks away, heaped thousands of tons of shale into its lovely stream. The valley is gone, and the Gods with it; and now every fool in Buxton can be in Bakewell in half an hour, and every fool in Bakewell in Buxton.<sup>2</sup>

The line closed in 1968 as part of the Beeching era cuts (Figure 1.2).





FIGURE 1.2 A change in attitude. The 91 m (300 feet) long Monsal Head Viaduct built in 1863 to carry the railway from Matlock to Buxton and Manchester. It was reviled by contemporary environmentalists. After the rail line was shut in 1968, the intention was to demolish the viaduct – but it was ‘saved’ by the vehement protests of walkers and scenery lovers who argued that it significantly enhanced the view; it is now a Grade II listed monument. Photo © Eleanor Scriven.

There were proposals to demolish the viaduct, but as a result of a public outcry, it was acquired by the Peak National Park Authority and is now a listed structure. It is now generally regarded as a thing of beauty; attitudes towards it have changed radically.

<sup>1</sup> Wordsworth, W. (1844). Kendal and Windermere Railway: two letters reprinted from *The Morning Post*. In: *The Prose Works of William Wordsworth, Volume 2*. London: Edward Moxon, Son and Co.

<sup>2</sup> Ruskin, J. (1871). *Fors Clavigera: Letters to the Workmen and Labourers of Great Britain*. Orpington: George Allen.

Reading attitudes from behaviour may be questioned, but one thing is certain about attitudes: they have changed radically over time. Put crudely, we have moved from a wholly animal existence

## 10 ENVIRONMENTAL ATTITUDES THROUGH TIME

to a much more sophisticated one. Not many people nowadays have to live in constant fear of being eaten by a lion or a bear. Food shortages still exist, but there are agencies to note and alleviate them. The factors which determine or change our attitude are complex. Sometimes they are the result of a catastrophe (drought, tsunami, pollution, disease, earthquake), or legislation conceived for whatever reason (disease control, safety, animal welfare, planning constraints, vested interest), or technological innovation (efficient sanitation, easily available transport, user-friendly identification guides, satellite imagery). At other times a lever of change may be the influence of a particular person (John Locke, Samuel Taylor Coleridge, John Muir, Teddy Roosevelt, Charles Darwin, Rachel Carson, Julian Huxley, David Attenborough – the list is long). This book explores these levers and how they are perceived. It is necessarily ‘broad-brush’ and therefore ludicrously incomplete. Only a complete history of human-kind would reveal all the controls, and this book does not pretend to be a history. Indeed, it may infuriate by deviating from a formal time-line. By being selective, I am giving a hostage to critics who will always be able to find influences I have not included and are important in their judgement.

One other caveat: my starting point is the nature of things (their ontology) – science and the effects of scientific thinking. I make no apology for this: I am a natural scientist. My expertise, such as it is, is in studying the structure and functioning of the natural world, particularly its living animals and plants. My defence is that our place in this world is a logical starting point: our being and surroundings are ultimately determined by the interactions of physical realities – animal, vegetable and mineral – stretching from molecules and chromosomes to meteorology and cosmology. These interactions are the building blocks for us as individuals but also for society and its behaviours, and our understanding of them. Although we will have to stray into philosophy, emotion and religion, we need to accept that these disciplines are dependent on and secondary to the underlying mechanisms.