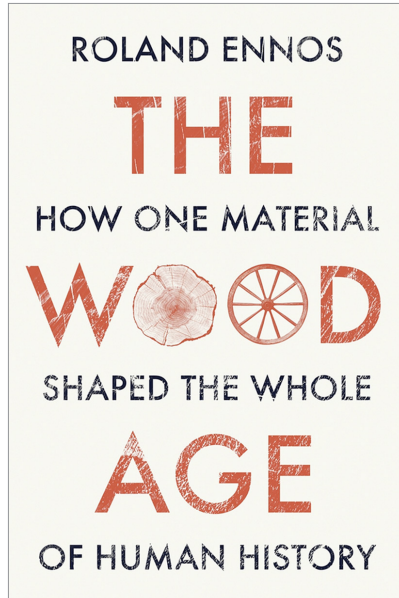


The Wood Age: How One Material Shaped the Whole of Human History

Roland Ennos
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In Ireland, the relationship between humans and the forest goes back at least 12,500 years, although the date keeps shifting. Recent findings suggest that the first hunter gatherers may have arrived here 20,000 years earlier. This lineage pales into insignificance when compared with the findings of Roland Ennos in his remarkable book *The Wood Age: How one Material Shaped the Whole of Human History*.

Ennos's history begins 10 million years ago "when our ancestors developed the attributes, both physical and mental, they would need to succeed on the ground while they were still in the forest canopy". What happens when early hominin species, came down from the trees some seven million years later is the next phase of his fascinating journey. Our ancestors could now walk as anthropologists discovered when they located the skeleton of "Lucy" in 1974 "among the 3.2-million-year-old rocks in Ethiopia". The broken bones of Lucy, who came crashing to earth, from the tree canopy, indicates a dual existence: on the forest floor for scavenging; and in the canopy where Lucy and her community gathered fruit and built their nests to rest and sleep.

It would take a further million years before hominins came down permanently from trees. Being able to retreat to the safety of the canopy at night provided them with protection from predators but this changed when they began using fire, possibly two million years ago. Today, forest fire is associated with the disastrous burning of forests around the world especially in Amazonia, but our distant ancestors' use of fire was a positive influence in their relationship with the forest. Ennos convincingly explains that building up fires at night, "to repel predators" in their camps, provided early hominins with a degree of safety which allowed them "to stay permanently on the ground". Other benefits soon followed. The light of a blazing fire at night provided warmth and a place to socialise as well as extending the time to carry out their daily chores. Now, they could also cook which enabled them "to change their digestive apparatus and behaviour".

What follows, shaped our relationship with the forest – for good and bad. Ennos explores the bond between humans and forests in developing wood for shelter, tools, transport, weapons and musical instruments, from prehistory up to the present time when he reassesses our relationship with the forest.

He devotes the second and longest part of his journey to "Building Civilisation" which includes forest clearance for agriculture, smelting and the use of wood in construction. He demonstrates the structural benefits of wood in large-scale Japanese and Chinese wooden buildings. Some of these extant buildings have withstood massive earthquakes over many centuries. "Tests on models have shown that these buildings can withstand shocks that reach over 10 on the Richter scale, more powerful than any earthquake yet recorded," he explains. While he doesn't make the connection, earthquake resistance is now regarded as a major benefit in contemporary engineered timber medium- to high-rise buildings. For example in New Zealand, University of Canterbury researchers are exploring the use of pre-stressed laminated wood in large-scale buildings. This decision has been influenced by the resilient performance of timber buildings during the disastrous earthquakes in Christchurch in 2010 and 2011. He champions the use of engineered wood in recent structures such as the 85.4-metre-high Mjøstårnet building in Brumunddal, Norway and outlines plans to build even taller structures around the world.

The final part of the book is devoted to two subjects: "Assessing our Impact" and "Mending our Strained Relationship". Foresters would question his criticism of plantation forests, which also contrasts with Sir David Attenborough's view that "natural forests can't provide all the wood required". Sir Attenborough believes "we also have to farm trees, just like we do other crops and create a new generation of plantations" while Ennos despises tree farming and plantation forestry which he says "promotes the growth of huge monocultural stands of a single species".

Few would dispute the negative environmental impact of pure monocultures, but labelling all plantations as monocultures is an incorrect assertion. It is a criticism that Irish foresters and forest owners continuously face even though the average size of new plantations in Ireland is less than eight hectares comprising a species mix of 70% introduced conifers and 30% native species and open areas – hardly a monoculture by any definition. Sir Attenborough’s compromise is to preserve the natural woodlands and establish plantations “that allow wildlife to pass through natural forest corridors”. His approach would also ensure that new forests “are planted on existing cleared land so they don’t replace natural forests”.

Sitka spruce, the central plantation species in Britain – and Ireland – is dismissed by Ennos. He maintains it was planted in Britain only to provide “sturdy mine props”, implying that since the mines have been closed there is no longer a market for Sitka spruce. This is patently incorrect as the species has proved itself as a versatile timber with a huge market in Ireland and Britain for construction, packaging and fencing material while it is an ideal fibre wood for producing added-value panel-based products such as oriented strand board (OSB) and medium density fibreboard (MDF). It is a key species that ensures 80% of Scotland’s houses are now timber frame built. Research carried out by National University Galway shows Sitka spruce cross laminated timber (CLT) is suitable for medium-rise construction.

These criticisms aside, Ennos makes a seamless transition from the ancient world of wood to contemporary usage. His chapter “Wood in the Modern World” provides examples of wood as an alternative to fossil based materials. He dismisses the view that wood is obsolete as he catalogues “a whole new range of [wood] products that compete well with modern metals, concrete, plastic and composites”.

He demonstrates the potential of wood in sustainable living, especially in construction but bemoans our loss of contact with wood. Living in these timber buildings “might make us a bit happier, but we would still not have regained our connection to the forest and our woodworking skills” he maintains. But living in timber buildings surrounded by domestic objects made from wood will surely improve our wellbeing and buy us time in meeting the climate change challenge. It would also improve our relationship with this great natural resource and help us to return to the Wood Age which Ennos passionately believes we need to do, “for the benefit of the environment and our own physical and psychological health”.

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