



The Gulbenkian Música in Lisbon. Photograph: The Gulbenkian Foundation.

The Wood from the Trees

How musicians can influence the future of the planet.

- [Benedict Schlepper-Connolly](#)

‘We have at most two decades to save the world,’ said former Irish president Mary Robinson on RTÉ’s *Morning Ireland* last April. Robinson was [speaking in response](#) to the UN Intergovernmental Panel on Climate Change’s latest report, which warned that countries should cut their carbon emissions by half before 2050 to limit dangerous climate change.

The following day the Irish government published the heads of its long awaited, if mislabelled Climate Action Bill. The proposed bill is actually regressive, in that it removes previously included targets and deadlines for carbon emission reduction. This, the government’s sole contribution to a climate change strategy in three years of office was surely a response lacking in awareness, ambition, imagination.

The life of a forest

On the previous weekend in Paris, the composer Nick Roth was putting the finishing touches to a new work for string orchestra. The culmination of a three-month residency at the Centre Culturel Irlandais, as well as many months of research and correspondence prior to that, *Woodland Heights* is described by its composer as a study of forest canopy ecology.

Roth’s new work is a deep engagement with the patterns of a forest’s development. The form of the piece is mapped to 720 years in the life of a forest, where one crotchet in the score is equal to one year of ecological time. Each string of the orchestra corresponds to a species of tree: silver birch, laurel, holly, rowan, beech and oak. A seventh species, wild apple, is introduced by a viola solo.

Woodland Heights is divided into three sections divided by various kinds of radical change — ‘increase the bow pressure until the sound becomes distorted’ is an instruction at one such point. In his introductory notes to the piece, Roth writes that he followed the principle that such radical change is an essential part of a forest’s growth and survival. When Roth quotes the biologist Simon Levin, it’s not hard to see how the forest ecology can be a metaphor for all manner of ecologies, including musical ones:

‘Local disturbances not only maintain the character of the system by maintaining the species that are early colonists but poor competitors; they also maintain the resiliency of the system, preserving the opportunistic species that thrive under the conditions accompanying the unpredictable but inevitable environmental changes that occur at broader spatial scales, such as windthrows or fire.’

This is the latest in a line of works by Roth that deal with phenomena of nature. Earlier works include *Flocking III*, which studies the movement of birds, and pieces from the Water Project, where ‘the character and voices of water are made evident to an audience’

through the performance of graphic scores. Roth's method produces works that are more than an impressionistic view or Romantic reverie on his subject: they also serve to express how, in the case of *Woodland Heights*, a forest functions, amplifying the concept of 'art imitating nature in her manner of operation', a favourite idea of John Cage.

A sense of the vast and the infinite

Woodland Heights is a work that removes some of the distinction between science and art, evoking a pre-modern attitude in which the disciplines are more porous. Again, Roth finds parallels to his own field in the words of scientists. He quotes Margaret Lowman and Bruce Rinker, two pioneers of canopy ecology, who write that their ultimate goal is 'to produce a sense of the vast and the infinite and to promote our sense of wonder, a curiosity that needs to be fed by experience to be long-lived.'

This applies equally to the objective of an artist, says Roth, adding that music offers many ways of enquiry into sources of inspiration such as a forest ecology. 'Numerous great minds throughout human history have proved a constant reminder that in reality there is no separation between these two great fields of discipline,' he writes, 'and that just as two hands work together in playing an instrument, so these two aspects of human nature form part of a single integrated response to the questions of our environment.'

Roth's thirteen-minute work includes one of the more unusual directions to appear in an orchestral score: *si pianti un albero*, or 'plant a tree'. The notes in the score include extensive instructions on where and how the tree should be planted, depending on the hemisphere in which the performance is taking place. The piece has no firm premiere yet, but it occurs to me that the Gulbenkian Música in Lisbon, whose glass back wall overlooks the trees of the Gulbenkian gardens, was almost purpose-built for a performance of this piece.

An experience of the ocean

On the same day that Mary Robinson was calling for us to respond more vigorously to the challenge of climate change, it was announced that John Luther Adams had won the Pulitzer Prize for Music for his orchestral work *Become Ocean*. While Adams' work is very much intended as a recreation of the experience of the ocean, rather than being explicitly constructed according to scientific study of the ocean's behaviour, the music of both Roth and Adams share an expression of awe at natural phenomena.

Become Ocean, [writes the New York Times](#), 'submerges the listener in a swirling, churning wash of sound' and is scored for an orchestra divided into three groups that play recurrent undulating patterns evoking waves. The dynamic peaks of these waves gradually rise and fall; at key moments the motion of the three groups synchronises to create giant crests of sound.' The work will be released on Cantaloupe Records later in the year.

Adams says his work is inspired by his concerns about climate change, but remains 'suspicious' about political art. Neither *Woodland Heights* or *Become Ocean* are expressly political works, but they do contribute to our understanding and awareness of parts of the natural world, and implicitly offer a plea for their protection. Adams is keen to point out that his work is neither propaganda nor a didactic exercise, and the same could be said of Roth's *Woodland Heights*, even if it structurally imitates the patterns of ecology.

In addition to an aesthetic experience, these works also form articulate and alternative perspectives on the need for ecological conservation. As Roth writes in his introductory notes to the score of *Woodland Heights*, 'our greatest priority at this moment in the history of our planet should be to conserve and protect the spectral magnificence of life in all of its many forms, preserving and protecting the unknown as well as the known will provide a future for our planet and its wealth of expression in form.'

When our political acts lack vision and understanding, perhaps we could do worse than look for inspiration in the work of our musicians.

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