

OPINION ENVIRONMENT CONSERVATION ETHICAL LIVING

What the economy really needs more of: trees

By [Ross Gittins](#)

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I think the first economist must have been named Horatio. He's the one who had to be reminded there were more things in heaven and earth than dreamt of in his model.

I try to keep my horizons wide by regularly consulting my second-favourite website, *The Conversation* (with academics who know a lot of interesting things about a lot of topics), to which I'm indebted for most of what follows.



Illustration: Simon Letch

We're meant to know all about photosynthesis, but did you realise it means that, "with a bit of sun, a tree uses the natural miracle of photosynthesis to combine a little water with carbon dioxide from the air to produce the building blocks for its own growth, as well as oxygen," [according to](#) Associate Professor Cris Brack, of forest measurement and management at the Australian National University?

So, to oversimplify a little, we breathe in oxygen and breathe out carbon dioxide, whereas trees breathe in carbon dioxide and breathe out oxygen – making them useful things to have around when we have a problem with excess carbon emissions.

But trees do far more for us than help with our greenhouse problem. For a start, they cheer us up. Academics at the universities of Melbourne and Tasmania examined 2.2 million messages on Twitter and [found](#) that tweets made from parks contained more positive content - and less negativity - than tweets coming from built-up areas.

Why are people in parks likely to be happier? Because parks help them to recover from the stress and mental strain of living in cities, and provide a place to exercise, meet other people or attend special events.



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The world is becoming more urbanised. There's now more than half the world's population living in cities. In Australia, two-thirds of us live in capital cities and nine out of 10 of us live in urban environments.

There are sound economic reasons why so many of us are piling into big cities, but it seems there also health and social problems. According to the experts, cities are becoming the epicentres for chronic, non-communicable physical and mental health conditions.

But there's growing recognition of the crucial role of urban green spaces in helping reduce these health problems. More than 40 years of research shows that experiences of nature are linked to a remarkable breadth of positive health outcomes, including improved physical health (such as reduced blood pressure and allergies, less death from cardio-vascular disease, and improved self-perceived general health), improved mental wellbeing (such as reduced stress and better restoration), greater social wellbeing and promotion of positive health behaviours (such as physical activity).

Our cities are getting hotter, more crowded and noisier, while climate change is bringing more heatwaves, [according to](#) environmental planners at Griffith University. The obvious answer is more air-conditioning, but this brings more carbon emissions, so a better answer is more infrastructure – “green infrastructure”, otherwise known as street trees, green roofs, vegetated surfaces and green walls. In reality, however, vegetation cover in cities is declining, not increasing.

Planting trees in parks, gardens or streets has many benefits, helping to cool cities, slowing stormwater run-off, filtering air pollution, providing habitat for some animals, making people happier and encouraging walking.

According to those environmental planners, shading from strategically placed street trees can lower surrounding temperatures by up to 6 degrees – or up to 20 degrees over roads. Green roofs and walls can naturally cool buildings, substantially lowering demand for air-conditioning.

By contrast, hard surfaces – including concrete, asphalt and stone – increase urban temperature by absorbing heat and radiating it back into the air.

But though scientists have much evidence that trees and other greenery improve our mood and health, they know less about the actual mechanisms by which this occurs. Japanese research, however, [suggests](#) that when we walk through bushland we breathe in three substances: beneficial bacteria, plant-derived essential oils and negatively-charged ions.

We live our lives surrounded by beneficial bacteria, breathing them in and sharing our bodies with them. Gut-dwelling bacteria break down the food we can't digest and produce substances that benefit us physically and mentally.

Plants and the bacteria living on them produce essential oils that fight off harmful micro-organisms when we ingest them.

And despite the nonsense talked about negative-ion generating machines, there's evidence that negative air ions may influence our mental outlook in beneficial ways.

This may sound very new and scientific to some (or pseudo-scientific to others) but, as Hugh Mackay observes in his latest book, *Australia Reimagined*, being connected to nature is a *traditional* source of relief from anxiety: gardening, bushwalking, strolling in a park, walking the dog, climbing a tree, swimming in the sea or sailing on it, picnicking in a tranquil and beautiful setting, playing games that take you outdoors and into a natural environment.

We know instinctively that “grass time” – running on it, rolling in it, throwing and catching a ball across it – is vital for the health and wellbeing of children. Particularly if they've been cooped up indoors, glued to a screen. But adults are no different, the wise man says.

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