FREE RADICALS

ATTUNING TO PLANTS IN CREATIVE PRACTICES

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for the fuzzy ones

INTRODUCTION

SAŞHA STRELCOVÁ

This book is a rehearsal for better futures. Futures in which we, humans, live in co-existence, collaboration, and mutual aid with plants and all other forms of life that inhabit this planet. Futures in which knowledges—whether embodied, empirical, or earthly—are equally recognised, respected, and relished by the multispecies assemblies we, humans, are part of.

Practically, this book reflects on the namesake European research project seeking to subvert the ingrained, extractivist-driven perception that imagines plants as a passive backdrop rather than active participants in the worlds we share. With this in mind, over the period of two years, we've brought together artists, scientists, researchers, and creative practitioners to dialogue on the state of play around thinking-with plants in knowledge production, with the aim of co-creating a set of resources to help shape practices that support plant biodiversity across arts, culture, and design. Through residencies, symposia, living labs, and various other formats—we've assembled practices from across these disciplines that already engage with plant biodiversity and multispecies co-existence in the larger sense. Our intention was to create a *hybrid, collaborative toolkit*—part manifesto, part gathering space—for everyone who seeks to engage more deeply with plants in creative practice and cultural work.

Free Radicals drew together six non-profit organisations and initiatives from across Europe—weaving perspectives from Portugal (Quinta das Relvas), Spain (Fundación Uxío Novoneyra), Armenia (Today Art Initiative), Hungary (Pro Progressione), Germany (Burning Silence), and the Czech Republic (Haenke). Through this alliance, and with the support of our surrounding more-than-human ecosystems, we set out to explore the significance of plant life—its histories, intelligences, and contributions to resilient ecosystems—providing both speculative scenarios and practical guidance on practising plant–human kinships at a time when the ecological, political, and social conditions of life are being radically reshaped both in Europe and beyond.

This book is just one of the project's several tentacular iterations, alongside a digital garden, a travelling exhibition, a reader, academic syllabus, and a set of institution-oriented recommendations attempting to sneak some of those people–plant kinships into notoriously

labyrinthine European policymaking. It's an attempt to infuse both bookshelves and digital repositories with stories that show the inextricable role of plants in shaping our societies. It's an ongoing conversation. It's a Trojan horse exit strategy. Because to discuss human relationships with plants is, after all, to discuss how to find common ground between each other, too.

A toolkit without tools

> A toolkit for plant biodiversity in arts, culture, and design. Fine. But what does that actually mean? Where are the hoes, rakes, and shovels with which one might begin tending the imaginary gardens of multispecies co-existence in Europe and beyond? Of course, no sharp objects are needed—after all, Ursula K. Le Guin reminds us that they've often done more damage than good. By the tools here we mean the essays, interviews, practical tips, recipes, and accounts of encounters that we've gathered over the course of the project. A *carrier bag* in its own right, one that collects stories, speculations, moments, knowledge about—and with—plants themselves. If you read carefully, the tools are hidden between the lines[1]. And so here we are, in our attempts to have difficult conversations about what it means to be human in a postnatural world. We call on our vegetal companions to be our guides in unpacking these very relevant topics of today. After all, we wouldn't be here were it not for them.

The distress that currently shapes (and shakes!) the world produces enormous amounts of rage, grief, and despair. But as Natasha Myers notes, if we are truly to grow liveable worlds for all, apocalyptic thinking is not on the agenda[2]. Rather than turning away from these emotions, we became interested in what happens when they're channelled into critical inquiry, artistic practice, field research, and all the free radical reactions they set in motion when working together. In this foray into the worlds of art and ecology, we are guided by Rosi Braidotti's affirmative ethics[3]:

> 'Negative critique in itself doesn't provide a solution... the ethics of joy does not deny the reality of pain, trauma, and violence, but rather proposes a different way of dealing with them.'

In his talk *Composers as Gardeners*, Brian Eno recalls the notion of generative music: '... essentially, the idea there is that one is making a kind of music in the way that one might make a garden. One is carefully constructing seeds, or finding seeds, carefully planting them,

1 Or, as Donna Haraway writes in *A Cyborg Manifesto*: '... the tools are often stories, retold stories, versions that reverse and displace the hierarchical dualisms of naturalized identities'. Donna Haraway. *Simians, Cyborgs, and Women: The Reinvention of Nature*. Routledge, 1991.

2 Natasha Myers. "How to Grow Liveable Worlds." *MOLD :: Designing the Future of Food*, June 12, 2024. https://thisismold.com/mold-magazine/issue-06-design-for-a-new-earth/natasha-myers-planthroposcenes.

3 Rosi Braidotti and Maria Hlavajova, eds. *Posthuman Glossary*. Bloomsbury Academic, 2018. https://doi.org/10.5040/9781350030275.

and then letting them have their life. And that life isn't necessarily exactly what you'd envisaged for them'[4]. This book was sprouting over time, in much the same way. Our ambition was to make these texts and projects accessible to as many people as possible, across different disciplines and approaches. You will find essays, interviews, reflections, poetry, science fiction, and academic texts. Different registers, vocabularies, and languages offer different points of entry, as each plant finds its way through soil to get the nutrients they need. We aren't attempting to map every practice, every initiative, or every community engaged in this work; after all, a map that becomes as large as the territory itself is of little use[5]. Instead, let us embrace the privilege of partial perspectives[6]. What follows is just one constellation among many, an ongoing conversation to which everyone is invited.

Another timeline is possible

> Scientific phenomena often provide unexpectedly fertile grounds for artistic thinking. In biochemistry, *free radicals* are highly reactive molecules produced naturally by our bodies. Despite their reputation, they're not inherently bad. Problems only arise when they begin to accumulate faster than our bodies can keep them in check. Smoking, drinking, chronic stress, pollution, poor diet, or prolonged exposure to UV radiation can all tip the balance. The result is what's known as oxidative stress, a condition linked to everything from cardiovascular disease to cancer.

To restore that balance, we're often encouraged to eat more antioxidants. Blueberries, dark chocolate, and green tea usually top the list. But some of the richest sources are also plants somehow considered sinister. Japanese knotweed, for instance, one of Europe's most feared "invasive species", contains remarkably high concentrations of resveratrol, a powerful antioxidant. If a plant labelled as a threat can also become medicine, what does that tell us about the categories we've built around it?

> Let's now flip this metaphor and use it as a way of thinking about what's happening to this planet, starting from the premise that somewhere along humanity's trajectory (we can argue exactly when), we got it all mixed up. It's a bit like *Back to the Future* minus the bangers—and the fact that we can't simply go back and switch to the right timeline.

Here, oxidative stress is the accumulation of everything that slowly wears our planet down: extractive capitalism, patriarchy, colonialism, endless economic growth, the obsession with productivity, and the persistent belief that humans somehow exist outside the rest of the living world. Once Planet Earth has had enough of it, the symptoms

4 Brian Eno. "Composers as Gardeners." *Edge*, October 11, 2011. https://www.edge.org/conversation/brian_eno-composers-as-gardeners.

5 See: Jorge Luis Borges' "Del rigor en la ciencia" from *El hacedor* (1960), or on the internet here: https://ciudadseva.com/texto/del-rigor-en-la-ciencia/.

6 Donna Haraway. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14, no. 3 (1988): 575. https://doi.org/10.2307/3178066.

begin to emerge without mercy: climate breakdown, biodiversity loss, exhausted soils, polluted rivers, forests that burn with increasing frequency.

Naturally, we're told we need more antioxidants. But because we've messed with the timeline, we no longer recognise what these look like! So we recycle plastic, calculate carbon footprints, mine lithium for electric cars, patent seedless watermelons, spray herbicides on "invasive" species in the hope that they will somehow disappear, and place our faith in building a Claude skill to optimise our time. However well-intentioned—and, in many cases, undoubtedly impactful—these are largely band-aid solutions designed to *sustain* the status quo without challenging the extractive mindset that underpins them. Often what we celebrate as the cure ends up reinforcing the very logic that produced the disease.

Luckily, the timeline can still be reversed. Instead of band-aid solutions, what if the actual antioxidants were the relational infrastructures that already hold this world together? Seed banks at a community centre or an arts venue holding space for those who prefer heirloom varieties, and with it, chances for improved food security. Traditional ecological knowledge, including that rooted in Indigenous ontologies, which has shaped communities for generations. Agroecological systems built on diversity and long-term soil health rather than maximum short-term yields. Allotment gardens where knowledge is passed through spontaneous conversations rather than curated algorithms. Relationships that value reciprocity over extraction, observation over optimisation, stewardship over management. Everything that is difficult to quantify, hard to scale, and impossible to optimise for quarterly growth. And perhaps that is precisely why it matters.

In biochemistry, increased presence of free radicals can be read as signals that something's not in balance. But rather than asking how to get rid of them, perhaps we should begin by asking what they are trying to tell us about the world we've created.

Here, free radicals are all those living beings that quietly sustain the infrastructures on which life depends, defying the extractive logic of capitalism almost by design. Bacterial cultures passed from one household to another alongside a jar of fermented cucumbers, free of charge, at a neighbourhood gathering. Earthworms turning waste into fertile soil. Weeds finding a way through the pavement. Goats self-medicating on shrubs. Shrubs letting neighbouring shrubs know they're being devoured. Farmers resisting the purchase of patented seeds. Brownfield ecosystems. Our own guts.

Free radicals are everything and everyone who, deliberately or simply by refusing to stay within conventional boundaries, sends out that crackling radio signal reminding us that another timeline is possible. Art, design, and culture can amplify or produce those signals. All we have to do is tune into the right frequencies.





↓ Photography by Inés Karčáková