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Resonance and Vegetal Citizenship in Aldo Leopold's *A Sand County Almanac*

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ABSTRACT

The problem of ethical obligations to plants has rarely been raised in Western traditions of thought. However, it is central to Aldo Leopold's *A Sand County Almanac,* one of the key texts of modern American environmentalism. For Leopold, the effects of a civilisation on the vegetal base of the trophic pyramid are the ultimate measure of its value, and the principal failure of modern civilisation is that it blinds people to this fact. For humans to become proper citizens of the land community, they must build reciprocal relationships with other members of the community, which can be understood as relationships of resonance (H. Rosa). Crucially, this also includes plants, who are thus recognised as vegetal citizens. Leopold's descriptions of his own relationships to the native flora, built over the course of a decade of ecological restoration work on his property in Sauk County, Wisconsin, must be viewed in this context.

KEYWORDS

anthropomorphism, biotic community, environmental ethics, land ethic, resonance

hat do we owe to plants? Taken in a material sense, this question is easily answered: photosynthesis by plants provides the energetic foundation for almost all of life on Earth. In the most basic and literal sense, and even before considering the specific uses of the countless materials derived from plants, we owe them our very existence as biological organisms. What kinds of *ethical* obligations this existential debt might impose on human beings, however, is a different question – one that very few Western thinkers considered to be worth asking. Around the turn of the last century, this began to change. Scholars across the humanities started to write against the 'plant blindness' endemic to modernity (Wandersee and Schussler 2001), and they tried to articulate new or rehabilitate old ways of valuing vegetal life. In the emergent field of plant ethics, they have shown how established approaches in environmental ethics fail to take proper account of plants. 'Extensionist' arguments seek to ground plants' ethical value in their possession of attributes we also value in humans or animals (such as sentience or agency; Pellegrino 2018, 15),

and to expand concepts such dignity or rights so as to include them (as Peter Singer famously did for some nonhuman animals). 'Biocentric' positions, by contrast, rest their case on the shared property of aliveness, arguing that all living things deserve moral respect merely by virtue of being alive. As Angela Kallhoff has pointed out, both types of argument can be criticised for failing to grasp plants in their specificity, unduly anthropomorphising them, in the first instance, and in the second begging the question how the claims of one life form ought to be weighed against those of others. Kallhoff proposes a third strategy, arguing that plants have their own capacity for flourishing which humans can recognise without projecting feelings onto them or otherwise eliding the fundamental otherness of vegetal life (Kallhoff 2014). Because plants have the capacity to flourish, humans can care for them, and genuine relationships of care are valuable in and of themselves, in ways that cannot be reduced to the particular benefits accruing from such a relationship to either party (Schörgenhumer 2018).

In this essay, I will not try to retrace any of these arguments in detail. Instead, I want to turn to a writer who thought deeply about these issues long before the current upsurge of interest in matters vegetal. Aldo Leopold's famous essay 'The Land Ethic' is widely credited as the first serious attempt to articulate an environmental ethics. Leopold himself is claimed as an intellectual forebear by conservationists all over the world (you will, for example, encounter quotations from him on the signage in Taiwan's national parks). 'The Land Ethic' is still widely taught and discussed in philosophy and environmental studies departments, and catchphrases from *A Sand Country Almanac* (1949; in the following cited as SCA), where the essay was originally published, are regularly invoked by ecocritical scholars. Yet, however often we are admonished to 'think like a mountain' (SCA: 137), *A Sand Country Almanac* itself has become a classic in the sense of Mark Twain: 'something that everybody wants to have read and nobody wants to read' (Twain 1910: 194).

One reason for re-reading Leopold's *Almanac* today is that it offers valuable insights about the human relationship to vegetal life, and about the question of how this relationship might be conceived in terms which are not purely instrumental. Leopold's views are not readily translatable into the vocabulary of contemporary plant ethics. Reading the *Almanac* is to see the writer pursue several different, sometimes incompatible, arguments and explore a range of discursive registers in the effort to find

a language which could adequately express what it means to care for the land. In 'The Land Ethic', Leopold formulates his famous imperative that humans should learn to see themselves and other creatures as 'citizens' of the land community. However, this abstract notion of biotic citizenship only comes to life in the more overtly autobiographical sections of the book which dramatise the experience of becoming a biotic citizen – a process which involves, crucially, coming to care for plants as fellow citizens. Leopold's views as they emerge from these sections run in many ways parallel to a relational ethics of care for plants such as has been proposed by Kallhoff and others. The conceptual framework I will employ in the following is the more capacious one of *relationships of resonance*, as developed by Hartmut Rosa. Relationships of care require an attentiveness by the carer to the needs of the cared-for, and the former also must take action for the welfare of the latter. They do involve 'uncontrollable relational experiences of Otherness' which are the defining feature of relationships of resonance (Peters and Majid 2022: 142), but are better understood as constituting a more narrowly defined subset of the latter. Both are relationships constitutive of the self, making someone the person they are, whose value can therefore not be easily generalised.

In the following, I will begin by introducing the concept of the land community which forms the foundation of Leopold's ethical thought, as well as the notion of biotic citizenship he derives from it. After discussing some of the attempts that have been made to clarify the meaning of these concepts by grounding them either in a republican ethics of civic duty or in a biocentric ethics of ecological interdependence, I then go on to analyse passages from the *Almanac* which describe the process of becoming a citizen of the land community as an entry into a relationship of resonance – especially of resonance with plants. The latter's status as 'vegetal citizens', I conclude, is an outcome of the same relational process by which Leopold himself is constituted as a citizen of the land community.

II.

The key concept on which Leopold's land ethics hinges is what he variously calls 'the biotic community' or 'land community'. It is this entity at which his new categorical imperative is first of all directed: 'A thing is right when it tends to preserve the integrity, stability, and beauty of

the biotic community. It is wrong when it tends otherwise.' (SCA: 262) While this concept is central to Leopold's thinking, it is also deeply ambiguous. On the one hand, Leopold uses the terms 'biotic community' or 'land community' as straightforward synonyms for what ecologists also refer to as the food web or the trophic pyramid. The basic outlines of this will be familiar to anyone who paid attention in their high school biology class: plants absorb energy from the sun, herbivores eat plants, carnivores eat herbivores, and detritivores eat everything that has died, turning it into soil which then feeds the plants, and so on. To describe this structure as a 'pyramid' (as Leopold also does on many occasions) implies no normative hierarchy – it simply points to the fact that the number of organisms tends to decrease as one ascends from one level of the pyramid to the next (man, Leopold points out, occupies an intermediate layer' next to the 'bears, racoons, and squirrels which eat both meat and vegetables' – SCA: 252). When Leopold speaks of land, he is referring to this entire complex structure: 'Land … is not merely soil; it is a fountain of energy flowing through a circuit of soils, plants, and animals.' (SCA: 253) Over the course of evolution, Leopold argues, this structure has steadily grown in complexity. The actions of modern humans, by contrast, have tended to have the opposite effect: they have simplified the food web, leading to the extinction of species, the accelerated loss of topsoil and the proliferation of pests and diseases. He lays particular emphasis on the negative effects the extirpation of top-level predators such as wolves have had on biodiversity, anticipating more recent ecological research on trophic cascades (Ripple and Beschta: 2005). Ultimately, Leopold argues, such human interventions have vitiated the ability of the whole system to regenerate itself. Humans act in this manner because they have failed to recognise that they are part and parcel of the land community and that, by diminishing it, they are at the same time diminishing themselves. It is this failure of recognition that Leopold's land ethic is meant to remedy: '[A] land ethic changes the role of *Homo sapiens* from conqueror of the land community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such.' (SCA: 240)

In this latter formulation, however, the meaning of 'community' has subtly shifted. It is no longer just a matter of purely biophysical relations, of energy coursing through a biological circuit; instead, the community is now characterised as something one can be a 'citizen' of, something

which seems to entail rights and obligations. But citizenship and the attendant rights and obligations cannot be 'facts' in quite the same way that energy flows are – in our usual understanding, their reality is a function of the 'respect' accorded to them, as Leopold's formulation also suggests; their existence depends on their being recognised. My passport is a physical object, but the rights it conveys to me are not, just as the value of a banknote has nothing to do with the paper on which it is printed. In this sense, citizenship and community are relationships whose reality depends crucially on recognition, on routinised expectations of reciprocity that are condensed into shared symbols (such as passports or banknotes). And crucially, citizenship is conditional: it can be disavowed or revoked. By contrast, the position of an organism in the trophic pyramid is non-negotiable, even though certain species may enjoy some degree of variability (humans, for example, may choose to be vegetarians). Every organism must eat and will be eaten, in accordance with its biophysical properties; and, much as some of us might dream of becoming autotrophic, the gift of photosynthesis remains, for the time being, a unique privilege of plants.

One might conclude from this that Leopold's land ethic, insofar as it involves a description of the trophic pyramid as a 'community' with human and nonhuman 'citizens', is based on a metaphor – a metaphor which sets us up to succumb not only to the naturalistic fallacy (i.e., turning an is into an ought – in this instance: turning the fact of trophic relations into a normative fantasy about how biological species ought to relate to each other) and anthropomorphism (by projecting characteristically human qualities onto nonhuman beings), but which furthermore entangles us in a paradox: as the appeal of the land ethic seems to be directed only at humans, they are clearly assumed to occupy an exceptional position within a community of which they ostensibly are only 'plain members' (SCA: 240). The form of the statement (which singles out humans) thus contradicts what it purports to say (that humans are on a level with other members of the community).

Philosophical interpretations of the *Almanac* have generally sought to resolve this paradox by focusing only on one side of the community metaphor (which conflates political or social relations and ecological relations) while downplaying or ignoring the other. Thus, Peter Cannavò has argued that Leopold's notion of biotic citizenship must be understood in the context of an American tradition of republican thought,

exemplified most famously by Thomas Jefferson, which emphasised conceptions of the common good and civic virtue. In this view, prudent land management which ensures the long-term health of the polity's ecological base is what the citizens of a republican polity owe to each other, because the health of the land is a direct condition for the health of the polity (Cannavò 2012: 867–68). Accordingly, Leopold's 'biotic community' would be 'merely' a metaphor which serves to illustrate the biophysical conditions for the flourishing of what remains in the end an exclusively human community. Conversely, Baird Calicott's influential ecocentric interpretation seeks to ground the Land Ethic in a Darwinian account of moral sentiments as an evolved response arising from real interdependencies. Moral sentiments enable cooperative behaviour which is beneficial to the survival of the group. Just as we gradually came to recognise ethical obligations towards society as a whole, rather than just towards individual human beings, it makes sense to postulate ethical obligations towards ecological systems once we have come to recognise that they, just like human communities, form integrated wholes in which the welfare of the parts depends on the welfare of the entire community. The biotic community is thus an ecological reality which, as such, demands recognition and engenders a sense of ethical obligation in humans that is not substantially different from that obtaining within human communities.

Both of these interpretations capture important aspects of what *A Sand County Almanac* does; yet each comes with its own set of problems. In Cannavò's account, biotic citizenship is a purely human affair, and ethical obligations to nonhumans are merely a derivative function of ethical obligations between humans. The question with which I opened this paper – 'what do we owe to plants?' – does not even arise. But in Callicott, as well, the question of humans' ethical obligations to the vegetal citizens of the biotic community is sidelined by their obligations to the community as a whole, as he readily acknowledges: 'ethical consideration of its individual members is preempted by concern for the preservation of the integrity, stability, and beauty of the biotic community' (Callicott 1989: 196). Whatever we owe to plants, neither interpretation leaves much room for imagining the relationship between humans and plants in the manner Leopold's phrasing asks us to: as one between fellow citizens of a community to which both belong.

III.

I do not wish to contest the philosophical soundness of these two interpretations of *A Sand County Almanac*, nor do I want to suggest that they are seriously at odds with the text: as suggested above, one of the qualities that lends the book its enduring fascination is its philosophical eclecticism. Leopold does not push a single line of argument, but presents his readers with a whole bundle of reasons why people should care about the land, offered in a style that is by turns discursive and lyrical, satirical and meditative. However, neither of the two interpretations is especially helpful in understanding how Leopold writes about his experiences with nonhuman beings, and particularly with plants. Leopold's ethical intuitions grew out of his conservation work, and they cannot be easily separated from the relationships with other animals and plants that he formed over the course of a lifetime's worth of practical engagement with them. He understood these relationships to be reciprocal. They are not relationships between an inquiring (human) subject and a passive object, but are better understood as 'relationships of resonance' in Rosa's sense: they not only define the subject and the world in relation to each other, but both are 'shaped, and in fact constituted in and through their mutual relatedness' (Rosa 2019: 36; this and all following translations by the author). Rosa's concept is also germane because it is couched in a larger critique of modern life whose ever-accelerating pace, he argues, is systematically undermining the possibilities for experiencing resonance. Resonance is thus the conceptual counterpoint and antidote to the modern experience of alienation. Since the Romantics, Rosa points out, 'nature' has been one of the privileged domains where such experiences are sought out – albeit often in a vitiated form, cut off from everyday experience. This scepticism towards modernity is shared by Leopold, who, in the Foreword to the *Almanac* excoriates 'our bigger-and-better society' which has become 'so obsessed with its own economic health as to have lost the capacity to remain healthy' (SCA: ix). Much like Rosa, too, Leopold sees the scientific attitude, which consists in refusing resonance and treating the world as a passive object, as an important part of the problem.

Significantly, while Leopold is insistent that 'becoming a plain member and citizen of the land community' (SCA: 240) is partly a matter of ecological knowledge, he never suggests that it is merely a matter

of acknowledging the reality of the trophic pyramid: 'The evolution of a land ethic is an intellectual as well as emotional process' (SCA: 263). Many of the essays and narrative sketches in the *Almanac* are best understood as dramatising this process. They position Leopold himself as someone who, over the course of a lifetime of study and practical engagement, has gradually evolved towards the views expounded in 'The Land Ethic'. The chapter 'Song of the Gavilan', based on Leopold's experience during his several hunting trips to Mexico's Sierra Madre in the late 1930s, provides an especially poignant example. Leopold sets up the chapter by describing the sounds of the river Gavilan. 'This song of the waters', he goes on,

> is audible to every ear, but there is other music in these hills, by no means audible to all. To hear even a few notes of it you must first live here for a long time, and you must know the speech of hills and rivers. Then on a still night, when the campfire is low and the Pleiades have climbed over rimrocks, sit quietly and listen for a wolf to howl, and think hard of everything you have seen and tried to understand. Then you may hear it – a vast pulsating harmony – its score inscribed on a thousand hills, its notes the lives and deaths of plants and animals, its rhythms spanning the seconds and the centuries. (SCA: 158)

The 'vast pulsating harmony' is something that is neither available to the unaided senses nor understandable in purely intellectual terms, even though both sensory engagement and intellection appear to be required in order for it to become 'audible.' This sound, which is not really a sound, is that of energy coursing through the trophic pyramid ('the lives and deaths of plants and animals'). It is, one might say, the way in which the reality of the land community reveals itself to the human observer – although 'observer' is hardly the appropriate term here, as Leopold so insistently figures the relationship between the human 'you' and their biophysical surroundings in acoustic terms.

Leopold's insistence on the acoustic metaphor is more than a rhetorical flourish; its aptness becomes apparent when one considers the phenomenology of hearing. Sounds, Peter Sloterdijk points out, 'have no tangible substrate that could be encountered in the attitude of standing opposite something. From the physiology of listening as a state of being set in sympathetic vibration, it is evident that acoustic experiences are media processes which cannot possibly be represented in the languages of object relationships' (Sloterdijk 2011, 296). In the act of listening, the boundary between self and world is crossed effortlessly.

Hearing the world (as something by which one is affected and can attune oneself to) is not just a deficient version of seeing it (as a set of objects clearly separated from the self) – as Sloterdijk argues in a reflection on the sonic environment of the fetus, it is the primordial mode in which the world is encountered. The fetus, wholly enveloped by the soundscape of the mother's body, can thus serve Rosa as paradigm for his central claim that resonance is a process which does not so much put an already existing self into a relationship with a pre-given world, but rather produces self and world at the same time, as a co-occurring 'bi-polar unit' (Rosa 2019: 86) or, again in Sloterdijk's words, a 'biunity' of 'mutual referentiality and intertwined freedom from which neither of the primal partners can be removed without canceling the total relationship' (Sloterdijk 2011: 43). To be a citizen of the land community is to find oneself precisely in such a relationship – a relationship of resonance which cannot be objectified without destroying it. In the concluding passages of 'Song of the Gavilan', Leopold thus turns his acerbic wit against his academic colleagues:

> There are men charged with the duty of examining the construction of the plants, animals, and soils which are the instruments of the great orchestra. These men are called professors. Each selects one instrument and spends his life taking it apart and describing its strings and sounding boards. This process of dismemberment is called research. The place for dismemberment is the university … [All] are restrained by an ironbound taboo which decrees that the construction of instruments is the domain of science, while the detection of harmony is the domain of poets. (SCA: 162)

To appreciate Leopold's polemical tone, it is worth recalling that he was writing at a time when ecologists were above all concerned with shedding their image as butterfly-collecting amateur naturalists. They were striving to step out of the long shadow of natural theology and formulate their insights in a mathematical language which could satisfy strict criteria for scientific objectivity (Bergthaller 2007: 95–97). Leopold is swimming against this historical current when he insists that to describe the trophic pyramid merely as a set of discrete empirical facts is to become deaf to its song. In order for it to be experienced as a community, and its members as fellow citizens, it is necessary that the self be transformed; in the terms of the above passage, it must become a 'poet' attuned to the 'harmony' of the land.

Ecological attunement is a process; as such, it unfolds over time. Leopold's statement that hearing the song of the Gavilan requires one to 'first live here for a long time' may seem somewhat ironic, given that his own sojourns in the Sierra Madre never lasted much more than a month (Fleming and Forbes 2006: 25). Nonetheless, his claim is well-earned, and the underlying idea is essential to *A Sand County Almanac*, informing its very structure and providing the narrative underpinning for the many anecdotes of which it is composed. While 'The Land Ethic' is undoubtedly the most famous essay in the book, there is a good reason why Leopold placed the essay in its concluding section ('The Upshot'), because the concepts he advances there only really begin to make sense against the backdrop of the process of ecological education that is detailed in the preceding sections, especially the first section which gives the book its name. In this section, 22 sub-chapters of varying length are grouped according to the months of the year, from January to December. In these vignette-like stories, Leopold tells of the experiences he gathered over the course of more than a decade of ecological restoration work on his 'shack', the plot of abandoned farmland in Sauk Country he purchased in the Winter of 1935. This was a region which in the preceding April had been struck especially hard by the series of droughts and dust storms that became known as the 'Dust Bowl'. Leopold's goal was to see whether he and his family would be able to nurse the ailing land back to health. Because Leopold recognised that plants formed the base of the trophic pyramid, restoring the vegetation that had covered the area prior to the arrival of Euro-American settlers in the 1840s was central to these efforts. Beginning in the Spring of 1936, the Leopolds began to plant thousands of native pine trees and shrubs on their plot (Meine 1988: 364–65).

IV.

It is therefore not at all surprising that so many of the chapters of *A Sand County Almanac* are focused on Leopold's encounters with plants, and that this is especially the case in the opening 'Almanac' section of the book. His descriptions of these encounters are often whimsically anthropomorphic, but, as we shall see, never gratuitously so. They are always indicative of a heightened attentiveness to the peculiar qualities

of a given form of life, and to the way humans are affected by it. Every week between April and September, Leopold writes in the subchapter 'Prairie Birthday', 'there are, on average, ten wild plants coming into first bloom' (SCA: 47). This vegetal exuberance necessarily overtaxes the human ability to pay attention, yet it leaves no one untouched. How individual persons react to it reveals something about who they are: 'Tell me of what plant-birthday a man takes notice, and I shall tell you a good deal about his vocation, his hobbies, his hay fever, and the general level of his ecological education' (SCA: 48). But Leopold makes it very clear that this is no mere parlour game: the inattention to plants is an important reason for their destruction. 'Prairie Birthday' is above all a lament for the decline of Wisconsin's native flora. Its primary subject, however, is Silphium, a species of flowering plant that used to cover the Midwestern prairies but has now been reduced to marginal plots of land such as railroad embankments and, as Leopold pointedly notes, graveyards. The aim of the chapter, one might say, is to make Silphium 'grievable' (Barnett 2022: xx), but also to hold it up as an example and a warning: the story of Silphium, he writes, 'is one little episode in the funeral of the native flora, which in turn is one episode in the funeral of the floras of the world' (Leopold 1966: 50). Leopold cares for the fate of the Silphium because it has become a 'personality' to him, as he writes in a key passage:

> Silphium first became a personality to me when I tried to dig one up to move to my farm. It was like digging an oak sapling. After half an hour of hot grimy labor the root was still enlarging, like a great vertical sweet-potato. As far as I know, that Silphium root went clear through the bedrock. I got no Silphium, but I learned by what elaborate stratagems it contrives to weather the prairie drouths. (SCA: 52)

In the encounter with Silphium which Leopold describes here, he does not so much learn *about* the plant as *from* the plant. The encounter does not merely change how he *views* the plant: as his efforts to recruit it for his ecological restoration project are defeated by its 'elaborate stratagems', Silphium also changes *him*. The episode thus dramatises Leopold's transformation into an ecological citizen. It also highlights that this transformation is inseparable from his recognition of Silphium as a fellow member of a community to which both of them belong. This involves his being humbled by Silphium – quite literally *humiliated*, as he is brought to the level of soil in the futile effort to dig up its root

– which teaches him to 'respect' the plant, in the terms of 'The Land Ethic'.

Importantly, whereas the passage from 'Song of the Gavilan' may have seemed to suggest that entering a relationship of resonance with the land community requires an attitude of passive contemplation, the Silphium episode makes it very clear that, to the contrary, it may first of all be a matter of physical labour on the land, and that recognising plants as fellow citizens also involves an appreciation of the labour they perform for the community. In a brief subchapter titled 'Draba,' Leopold does precisely that. Draba is one of the earliest wildflowers to bloom in the Sand Counties, and it is a wholly inconspicuous plant:

> Draba plucks no heartstrings. Its perfume, if there is any, is lost in the gusty winds. Its color is plain white. Its leaves wear a sensible woolen coat. Nothing eats it; it is too small. No poets sing of it. Some botanist once gave it a Latin name, and then forgot it. Altogether it is of no importance – just a small creature that does a small job quickly and well (SCA: 28).

The performative contradictions account for much of the peculiar pathos of the passage: no poet sings of Draba – except for Leopold, and he is also plucking the reader's heartstrings by emphasizing how it perseveres in spite of others' disregard. Even the lowliest members of the community have a 'job' to do, Leopold suggests, and hence a dignity that demands our respect. Those who humble themselves before the quiet efficiency of Draba are amply compensated: 'He who hopes for spring with upturned eyes never sees so small a thing as Draba. He who despairs of spring with downcast eye steps on it, unknowingly. He who searches for spring with his knees in the mud finds it, in abundance' (SCA: 28). The respect Leopold pays to Draba is that of one labourer to another.

However, the plants that receive by far the most attention are pine trees. Given what we know about Leopold's restoration work at the shack, this should be wholly unsurprising: much of his time there was spent planting pines. In the 'Almanac' section, there are two longer subchapters in which pines figure centrally. The first of these is titled 'Axe-in-Hand', and it is a part of the 'November' chapter. As the title suggests, it is a meditation on the cutting of trees, which, Leopold tells his reader, is best performed during this month. Since our ancestors invented the shovel to plant some trees and the axe to cut others, he writes, the owner of land 'has assumed, whether he knows it or not, the

divine functions of creating and destroying plants' (SCA: 72). This is a matter of utmost importance, as he explains in a passage that echoes his critique of academic specialisation in 'Song of the Gavilan':

> Other ancestors, less remote have since invented other tools, but each of these, upon close scrutiny, proves to be either an elaboration of, or an accessory to, the original pair of basic implements. We classify ourselves into vocations, each of which either wields some particular tool, or sells it, or repairs it … by such division of labor we avoid responsibility for the misuse of our tools save our own. But there is one vocation – philosophy – which knows that all men, by what they think about and wish for, in effect wield all tools. It knows that men thus determine, by their manner of thinking and wishing, whether it is worthwhile to yield any. (SCA: 72)

It is important to appreciate the radicalism of the idea Leopold is proposing here: all technology must be judged by how it affects the vegetal base of the trophic pyramid, and hence the land community as a whole. The relations a civilisation entertains with plants is the ultimate measure of its value. The fundamental failure of modern civilisation is that it has blinded people to this fact, which is why so much of technological progress is self-defeating.

It is against this background that Leopold's following reflections on his own arboreal preferences must be read. He tries out several explanations for the bias that leads him to favour pines over the birches with which they compete: it might be 'paternal' affection, because he has planted the pines himself. It might be because birches are numerous whereas pines are scarce, hence a bias in favour of the 'underdog'; also, pines are more long-lived, so that the mark his work leaves on the land will last longer; unlike birches, pines are evergreen, and their wood fetches a better price on the market (SCA: 73–74). None of these explanations satisfies him. The most compelling reasons he is able to muster have to do with the role which the pine plays in the biotic community:

> Under this pine will ultimately grow a trailing arbutus, an Indian pipe, a pyrola, a twin flower, whereas under the birch a bottle gentian is about the best to be hoped for. In this pine a pileated woodpecker will ultimately chisel out a nest; in the birch, a hairy will have to suffice. In this pine the wind will sing for me in April, at which time the birch is only rattling naked twigs. (SCA: 74)

Tellingly, the last sentence in this list does not state a biological fact, but rather an aesthetic preference: there is no ecologically sound reason to prefer the rushing of wind through pine needles to the clattering

of leafless branches. The associations pines form with other species of flora and fauna are a matter of scientific record, but Leopold does not pretend that this could lend a firm scientific basis to his preference for pines: 'The only conclusion I have ever reached is that I love all trees, but I am in love with pines' (SCA: 74). Being in love with a tree is not a casual affair – it is a close relationship shaped through physical interactions over an extended period of time:

> The wielder of an axe has as many biases as there are species of trees on his farm. In the course of the years he imputes to each species, from his responses to their beauty and utility, and their responses to his labors for or against them, a series of attributes that constitute a character. I am amazed to learn what diverse characters different men impute to one and the same tree. (SCA: 75)

The passage can be read as generalising from the kind of reciprocal interaction with Silphium described in 'Prairie Birthday'. In the process of working with plants, they become 'personified' – yet this personification has little to do with a facile attribution of human characteristics to beings that are fundamentally unlike humans. It does not require 'empathy', which assumes a 'substantial sameness of the empathizer and the empathized' (Marder 2012: 260). Importantly, the fact that different people attribute 'diverse characters … to one and the same tree' does not entail the kind of arbitrariness that is usually implied when we call people's views 'subjective', because the trees here are not just passive 'objects': the biases people form with regard to trees reflect not just differences between people, but rather differences between the kinds of relationships that have emerged between them. Insofar as these are relationships of resonance in Rosa's sense – that is to say, relationships in which humans become particular kinds of subjects by responding to a world that likewise responds to them (Rosa 2019: 453) – the question with which Leopold concludes his list of possible motivations for his bias is indeed strictly unanswerable: 'is the difference in the trees, or in me?' (SCA: 74)

The wholly unrestrained anthropomorphism of the second subchapter which focuses on pines should be read in light of these considerations. In 'Pines Above the Snow', Leopold describes pine trees as 'thrifty,' because 'they never pay current bills out of current earnings' (SCA: 88), and as engaging in 'much small-talk and neighborhood gossip', because the condition of the pine trees reveals 'the gastronomic status of the deer' and other animals in the vicinity (SCA: 89). White pines, red pines,

and jack pines, the reader learns, 'differ radically in their opinions about marriageable age' (i.e., they start blooming at different ages – SCA: 90), and, 'like people, are choosy about their associates' (SCA: 91). Indeed, 'each species of pine has its own constitution, which prescribes a term of office for needles appropriate to its way of life' (SCA: 92). By the end of the chapter, the conceit wears rather thin. Yet what is happening in these passages is not merely a matter of naturalising civic virtues by projecting them onto plants; nor is the anthropomorphic allegory only a vehicle for botanical information. Rather, I would argue, Leopold seeks to convey the intimacy of a relationship which affects him as much as it does the trees under his care. As Rosa writes, this is a relationship that cannot be established through 'cognitive learning processes and rational insight, but results from practical and emotionally significant engagement' (Rosa 2019: 461).

While such 'engagement' has an important aesthetic component, Leopold insists that it is above all a matter of labour on the land. Once again, it is worth recalling that the vast majority of the pines he is writing about here would have been planted either by him or by the members of his family. *A Sand County Almanac* as a whole is suffused by a profound scepticism as to whether industrial civilisation will indeed be able to change. The ecological restoration project on Leopold's Sauk County property was an attempt to reverse at least some of its devastating effects, and to chart a different course for the future. Leopold was far from certain about the outcome of this experiment. Of the 2,000 pine trees planted during its first Spring, hardly any survived until the end of the year, and it took many years before the family's labours started to show results (Meine 1988: 365). One must keep this in mind to fully appreciate the pathos of the closing paragraph of 'Pines Above the Snow':

> It is in midwinter that I sometimes glean from my pines something more important than woodlot politics, and the news of the wind and weather. This is especially likely to happen on some gloomy evening when the snow has buried all irrelevant detail, and the hush of elemental sadness lies heavy upon every living thing. Nevertheless, my pines, each with its burden of snow, are standing ramrod-straight, rank upon rank, and in the dusk beyond I sense the presence of hundreds more. At such times I feel a curious transfusion of courage. (SCA: 93)

V.

I suggested at the outset that *A Sand Country Almanac* proposes to its readers a notion of 'vegetal citizenship'. As should be clear by now, what the text has in mind has little to do with chartered rights and duties. What should also be clear, however, is that when Leopold speaks of citizenship in the biotic community, he is neither limiting the use of the term to humans or animals, nor is he suggesting that humans should start handing out metaphorical passports to other species. In matters of biotic citizenship, it takes one to know one: in order to become able to recognise plants as fellow citizens, we must turn ourselves, or be turned, into citizens of the land community. To become such a citizen is to enter into a relationship of resonance which transforms all parties involved.

The answer Leopold provides to the question with which I opened this essay – what do we owe to plants? – is therefore not one that could be formulated in deontological terms, as a matter of rights and duties, even though Leopold tried to do exactly that in 'The Land Ethic', tempting many of his philosophical interpreters to follow him down the same path. However, relationships of the kind he writes about so eloquently elsewhere in *A Sand Country Almanac* cannot be prescribed: we do not fall in love by decree, and to command gratitude is to falsify in advance all expressions of it. That is why Leopold is rather dismissive about the Mosaic decalogue (SCA: 238), and only slightly less so about contemporaneous efforts to regulate farming practices through the creation of new laws and governmental institutions (SCA: 109), even when he recognises their necessity. Since we owe everything to plants, no list of obligations could ever suffice to acquit ourselves of our debt. What we owe to Leopold is much easier to specify: to read the *Almanac*, and to take it as a powerful example for 'what [it] would … look like to move through the world in a way that both acknowledges and gives back to the trees' (Sandilands 2021: 780).

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