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REWILDING BEYOND PRISTINE: DECOLONIZING THE WILD FOR MULTISPECIES AUTONOMY

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1. Introduction: the imperative for clarity in the rewilding framework

Aldo Leopold famously observed, «The last word in ignorance is the man who says of an animal or plant: ‘What good is it?’» [Leopold 1949, 246]. This statement highlights the dangers of viewing nature through a narrow, utilitarian lens. In an era where human influence permeates every corner of the Earth, rewilding compels us to reconsider the meaning of “wild” and its significance. We can no longer leave the question of what constitutes “wild” to ignorance; instead, we must actively reclaim and redefine this term and its implications if we are to coexist meaningfully with other-than-human beings in a multispecies world. As rewilding gains traction as a strategy for ecological restoration, it is crucial to clarify both what we aim to restore and for whom these efforts are intended [Jepson & Blythe 2022].

Rewilding, which emerged in the 1990s as a paradigm-shifting approach to biological conservation and ecological restoration, was primarily developed in North America. Rooted in the foundational work of Reed Noss and Michael Soulé [Soulé and Noss 1998], rewilding promotes ecosystem restoration through the “three Cs”: the establishment of corridors, the reintroduction of large carnivores, and the creation of core protected areas [Fraser 2014]. However, the romanticized, anti-hu-

manist view of wilderness, popularized by figures like Dave Foreman [Foreman 2004], has been critiqued for promoting the preservation of spaces devoid of human presence, thereby overlooking the complex and historically intertwined relationships between humans and their environments. This perspective, fully embraced by Foreman and codified in the U.S. Wilderness Act's definition of wilderness as a place where humans are only temporary visitors, continues to shape conservation discourse.

“Wilderness” as a conservation target, particularly in the U.S., has a deep-rooted history. In 2024, the *U.S. Wilderness Act* celebrated its 60th anniversary, having played a critical role in shaping ideas about what aspects of nature were deemed worth preserving [Nelson & Callicott 2008]. The 1964 Act defined wilderness as “an area where the earth and its community of life are untrammelled by man”, while also framing it as a resource for human use. This duality has sparked significant scholarly debate, as the concept brings with it ontological assumptions that can have violent implications for human communities within the more-than-human world [Feltrin 2024].

The rewilding movement gained significant global traction following the publication of George Monbiot's *Feral* in 2014, positioning rewilding as a beacon of hope in a world overwhelmed by ecological pessimism. Rather than treating conservation as merely a defensive effort against extractivism, rewilding emphasizes the active reversal of biodiversity decline while fostering a stronger reconnection between humans and thriving environments. Although rewilding can be understood as a form of conservation, it goes beyond traditional conservation practices by promoting healthy, more-than-human assemblages without adhering to strict predetermined targets [Taylor 2013]. It stresses the need for less biopolitical control over other-than-human entities and processes, encouraging their autonomy [Hawkins *et al.* 2022]. Rewilding envisions a project that allows ecological entanglements to unfold organically, supporting biodiversity without imposing a human-directed master plan [Woods 2017].

Today, rewilding has evolved into a global phenomenon, exemplified by initiatives such as *Rewilding Europe* and the *Global Charter for Rewilding the Earth*. Despite its growing influence, the term “rewilding” is increasingly becoming a buzzword in discussions about ecological policy, activism, science, and philosophy – similar to how terms

like “sustainability” and “green” are often overused. Dolly Jørgensen [2015] describes terms like “rewilding” and related terms like “wild”, “wildness”, and “wilderness” as “plastic”, arguing that their broad application diminishes their scientific precision and philosophical depth, reducing their effectiveness in guiding policymakers and stakeholders [Pörksen 1995]. This overuse allows various individuals and organizations to claim they are working toward rewilding or promoting wilder outcomes, practices, places, and futures. However, this often sets the bar too low for rewilding projects – for example, labeling projects as “wild” even when they exclude large carnivores and rely on human culling for complete top-down control of herbivore populations [Tree 2018]. The consequence is not only a loss of accuracy in how the term is applied but also a dilution of its radical potential to challenge the current state of ecological and wildlife “mismanagement” – management often biased by anthropocentric premises.

To ensure that rewilding is truly generative and effective in fostering a wilder and more just future, two pivotal issues must be addressed. First, we must rethink the term “wild” in a way that facilitates reconciliation with Indigenous communities. The concept of “wilderness”, often associated with Theodore Roosevelt’s narrative of the “last frontier”, is partly a product of settler colonialism, as environmental scholar Kyle Whyte argues [Whyte 2024]. Roosevelt was an ardent conservationist and played a significant role in the development of the American conservation movement during the late 19th and early 20th centuries. His vision of the wild was heavily influenced by the frontier ethos – the belief that the American wilderness was a place of rugged individualism and a testing ground for American character [Nash 2014]. Roosevelt saw the wilderness as a critical part of the American identity, viewing it as a place where the nation could retain its pioneering spirit in an era when the physical frontier was closing. He championed the preservation of vast tracts of land as national parks and forests, seeing them as necessary to protect the nation’s “wild” places from industrialization and urbanization. However, as Whyte critiques, traditional notions of “wild” are problematic because they often overlook historical and ongoing cultural interactions with landscapes, thereby perpetuating colonialist perspectives and marginalizing Indigenous practices [Cronon 1996]. By rethinking “wild” to include these diverse and longstanding

relationships with the land, rewilding efforts can become more inclusive and just, better reflecting the deep connections between these landscapes and the communities that have historically inhabited and cared for them, proposing co-stewardship rather than top-down management.

Second, we must adopt a conceptual compass to determine whether a project genuinely enhances “wildness” – that is, if it truly makes environments and the more-than-human community wilder – or if it merely represents “rewilding washing”, serving the interests of ecotourism and other anthropocentric agendas. Rewilding can unfold in multiple ways, ranging from passive approaches, such as land abandonment, to more radical initiatives like Pleistocene rewilding, which are entangled with partially ecomodernist ideas, including de-extinction efforts promoted by companies like *Colossal Biotech* [Pettorelli *et al.* 2019]. This diversity represents the “how” in the pursuit of creating something wilder. However, achieving coherence across these strategies necessitates meticulous attention to terminology. A precise definition of “wild” is crucial for establishing a multidisciplinary framework that can discern whether specific projects represent genuine rewilding efforts or are merely instances of “rewilding washing”. By addressing these challenges, rewilding can evolve into a more inclusive and globally recognized effort that honors both ecological integrity and biocultural heritage.

This paper argues that to fully embrace rewilding as a key concept of the 21st century, it is crucial to refine and focus on its objectives – specifically understanding the “what” of the “wild” that rewilding aims to restore. The final section explores the complexities of defining “wild” in the context of technological advancements in biosciences and their significant ethical implications. It particularly focuses on adopting the here proposed interpretation of “wild” as multispecies autonomy, both in contrast to and in generative relation with the growing influence of ecomodernism in addressing the current ecological crisis, including biodiversity loss. While rewilding holds great potential as a transformative tool for ecological restoration, its effectiveness hinges on a deep, nuanced understanding of the “wild” and a commitment to honoring the complex interplay of ecological and cultural histories. This approach not only addresses ecological issues but also incorporates ethical considerations, paving the way for a more generative and just engagement with the multispecies community.

2. *The problem with the wild*

In her influential paper *Rethinking Rewilding* [2015], Jørgensen critiques the rewilding concept by examining its etymological roots and its evolving application in both scientific and activist circles. She argues that the prefix “re-” implies a return to a previous state, yet the exact nature of this state – particularly what “wild” truly means – remains ambiguous and undefined. This lack of clarity, she suggests, is a major flaw in rewilding as a coherent socio-ecological project. Employing a Foucauldian genealogical approach, Jørgensen traces how “rewilding” shifted from a specialized scientific term to a mainstream environmental slogan, now burdened with varied and often conflicting meanings. She draws on Pörksen Uwe’s [1995] concept of “plastic words”, describing rewilding as flexible enough to accommodate multiple agendas but at the expense of its scientific and philosophical precision. This vagueness, she warns, could dilute rewilding’s practical effectiveness in conservation, potentially leading to misguided or ineffective strategies.

Without clearer definitions and goals, Jørgensen argues, rewilding risks following the trajectory of terms such as “sustainable development”, which have lost much of their original potency through overuse and vague application. This dilution could render rewilding a weaker environmental concept, undermining its potential to inspire transformative strategies aimed at fostering multispecies flourishing on a planet in crisis. While Jørgensen’s critique seeks to sharpen the understanding of “wild”, her second argument delves deeper into a more problematic dimension of rewilding.

Jørgensen critiques how the term “wild” often evokes romanticized images of nature untouched by human influence. This idealized vision, she argues, inaccurately represents ecosystems, which have always existed alongside varying degrees of human activity. As she notes [2015, 487], «Rewilding as activist practice attempts to erase human history and involvement with the land and flora and fauna, yet nature and culture cannot be easily separated into distinct units. Rewilding as currently practiced disavows human history and finds value only in historical ecologies prior to human habitation».

Jørgensen challenges this traditional view of the “wild” as a realm free from human presence, arguing that it perpetuates a colonialist di-

chotomy between nature and culture. This view overlooks the complex historical relationships between human societies and natural environments that have shaped ecosystems for millennia. By idealizing an untouched wilderness, rewilding risks neglecting the important ecological roles humans have historically played – roles that continue to shape biodiversity and landscape structures today.

Recognizing the interplay between humans and the broader multispecies community does not justify all human interventions, nor does it suggest that every human interaction with nature is equally legitimate. Instead, Jørgensen urges us to acknowledge *Homo sapiens*' ecological and ontological place within the multispecies community, rejecting the modernist Cartesian dualism that separates humans from nature [Marchesini 2023]. This nuanced perspective fosters a deeper understanding of our role in the more-than-human world, moving beyond simplistic binaries and toward a more integrative approach to conservation and ecological restoration.

In the conclusion of her deconstructive paper, Jørgensen proposes a revision of the rewilding concept – one that fully embraces the complexities of human histories. She advocates for a model of coexistence rather than exclusion, promoting the integration of the wild in its diverse forms. This approach honors various ecological narratives and envisions a future where humans and other-than-humans are interdependently connected, fostering conservation initiatives that are inclusive, contextually informed, and reflective of the ecological and cultural complexities they aim to protect.

Jørgensen views the *Rewilding Vancouver – Remember. Reconnect. Rewild.* exhibition as an illustration of this shift toward a more inclusive conservation strategy. The exhibition, which used taxidermy models and multimedia to reimagine urban spaces as vibrant ecosystems, advocates for a forward-looking approach to rewilding. It moves away from the traditional idea of rewilding as merely returning landscapes to their historical states and instead promotes dynamic coexistence between humans and other-than-human life. This perspective aligns with calls for reimagined interactions with the other-than-human, focusing on potential future states rather than simply replicating the past. The exhibition exemplifies how rewilding can include human participation in ecosystem restoration, advocating for a conservation approach that

integrates rather than segregates. In this framework, “wild” is no longer seen as separate from humans but as a hybrid concept – open, evolving, and shaped by historical and evolutionary entanglements.

Jørgensen ultimately supports a vision of rewilding focused on coexistence, even in urbanized or heavily anthropogenic landscapes, over the creation of spaces where large animals exist without human interference. However, while this approach is inclusive, it does not seem to fully embrace an ethics of restitution – one that restores space, resources, and agency to species whose habitats and opportunities to thrive have been severely diminished by human actions through a long history of human supremacy and resulting biodiversity loss. Although this refined version of “rewilding” addresses traditional objections tied to anti-human, anti-civilization, and flawed ontological assumptions, it remains too vague to serve as a reliable guide for well-designed policies and practices. Additionally, it provides little explicit guidance on how coexistence should be structured or how much space, agency, and opportunity to flourish should be granted to other-than-human co-inhabitants.

While Jørgensen views the *Rewilding Vancouver – Remember. Reconnect. Rewild.* exhibition as a positive development, it remains a narrow example within the broader rewilding movement. Her critique, though insightful, is largely deconstructive and offers limited constructive guidance for redefining rewilding in a more actionable and robust manner. This leaves us with a notion of rewilding that is deficient – as if genuine rewilding could embrace coexistence without critically questioning the layers of multispecies injustice upon which the present world is built. Before embarking on envisioning multispecies futures, rewilding must unequivocally confront the historical destruction of ecosystems, species, and lives.

Whyte offers an even more skeptical view of the term “wild”, examining “wild”, “wilderness”, and “wildness” in environmental discourse [Whyte 2024]. He highlights the profound implications these concepts have for Indigenous peoples. Whyte demonstrates how dominant notions of wilderness often obscure or disregard the historical and ongoing relationships Indigenous communities have with these lands. He references a cartoon by Bernard Perley that depicts a European ship arriving on an Indigenous shore. One Indigenous person turns to another

er and says: «It looks like the wilderness just arrived» [Whyte 2024, 71]. This illustration captures the imposition of a concept of “wilderness” alien to Indigenous understandings of the land [Whyte 2024].

Whyte argues that contemporary narratives celebrating “wild” areas for their pristine, untouched qualities perpetuate a history that excludes Indigenous presence and ecological stewardship. These narratives extend the legacy of colonialism, erasing Indigenous influences under the guise of preserving nature. This aligns with the doctrine of *terra nullius*, a legal principle used by European powers to justify the colonization of Indigenous lands under the false premise that these lands were uninhabited or unowned. The concept of “wild” lands often stems from excluding Indigenous peoples, ignoring their sovereignty and presence. Moreover, modern conservation efforts that focus solely on ecological ideals – without considering Indigenous rights and consent – can further marginalize these communities, continuing patterns of dispossession.

Whyte critiques the concept of wilderness as defined by the *American Wilderness Act*, describing it as rooted in a dualism that positions nature as the “Other” – both threatening and celebrated in opposition to humanity. This critique is echoed by ecofeminists like Carolyn Merchant [1990] and Val Plumwood [1998], who denounce such dualistic views as sources of injustice. They argue that these perspectives support frameworks that perpetuate an adversarial relationship with the environment, while marginalizing Indigenous and minority groups. Such critiques call for a reevaluation of conservation practices to ensure inclusivity, recognition of Indigenous rights, and acknowledgment of the interdependencies between cultural histories and ecological systems.

Rewilding cannot rely on “fortress conservation”, where landscapes are set aside as isolated outdoor museums of biodiversity. While a pessimistic view of human nature – as inherently destructive – might suggest there are no other options, this approach only deepens the ontological divide between humans and the multispecies community. It also perpetuates harmful practices, such as displacing marginalized communities for conservation projects, and fails to challenge human supremacy over the more-than-human world. Rewilding must move beyond such dichotomous thinking, promoting just coexistence for the benefit of both humanity and the flourishing of the other-than-human world.

Whyte emphasizes that contemporary uses of “wild” often remain problematic. “Wildness” is used to describe ecosystems or nonhuman entities in ways that fail to account for Indigenous peoples’ consent, self-determination, history, and knowledge. Such uses effectively erase Indigenous peoples from ecosystem histories, perpetuating exclusion. Whyte calls for a reevaluation of “wildness” that fully integrates Indigenous rights, consent, and historical context into environmental stewardship. He advocates for a holistic approach that recognizes the interconnectedness of humans and nature, emphasizing that Indigenous practices are vital for ecological health and sustainability. This perspective challenges traditional dichotomies of wild versus managed, and human versus natural, promoting a conservation ethos that respects and incorporates Indigenous knowledge and rights. This type of thinking, often referred to as stewardship, has traditionally been opposed to the idea of wild places defined by the absence of human management. However, building on Whyte’s critiques and moving beyond his objections, this tension could be addressed through the concept of co-stewardship, where humans and other-than-humans collaborate in creating vibrant, ecologically diverse multispecies communities.

By integrating the insights of Jørgensen and Whyte, we gain a more nuanced understanding of “wild” and “rewilding”. This perspective should embrace historical accuracy, acknowledge the dynamic nature of ecosystems, and recognize the roles Indigenous and local communities have historically played in maintaining ecological balance. Their analyses call for a shift in rewilding philosophies toward more inclusive, culturally aware, and ecologically sound practices. This shift acknowledges the complex interdependencies between human and more-than-human systems, fostering a conservation strategy that is comprehensive and respectful of all stakeholders. Ultimately, this approach aims to achieve multispecies justice through the concept of co-stewardship, where “wild” becomes a positive, definable feature that transcends the false dichotomy between humans and nature.

Yet, even as we acknowledge the need to decolonize the concept of “wild” and move away from the notion of “pristine nature” – a concept largely considered non-existent in the Anthropocene, as Jamie Lorimer [2015] suggests – a significant gap remains. While Jørgensen and Whyte have effectively critiqued what “wild” should not be, the question still

lingers: What, then, is “wild”? Can anything truly be considered “wild” at all, especially when we accept the fundamental hybridity between human systems and other-than-human assemblages? In the following section, I explore this question by presenting ideas from contemporary scholars who focus on the agencies of other-than-human entities within the multispecies community.

3. *How can and what do we mean by “wild” in rewilding?*

Understanding “wild” within the context of rewilding requires a nuanced interpretation that emphasizes multispecies agency and autonomy rather than the absence of human influence. This perspective represents a shift from conventional conservation methods towards more integrated and ethical practices that recognize the intrinsic value and rights of other-than-human entities within ecological processes. Traditionally, rewilding focused on restoring large wilderness areas by reintroducing apex predators and establishing migration corridors. However, the concept has evolved to emphasize less human control and greater ecological autonomy [Hawkins *et al.* 2022]. Here, autonomy is not the absence of human influence but the ability of ecosystems to self-regulate and sustain themselves through the complex interplay of all living organisms, including humans [Monbiot 2014].

This redefinition challenges the traditional dichotomy between humans and nature – a binary deeply embedded in Western conservation philosophy. It is increasingly evident that such distinctions are not only scientifically inaccurate but also culturally insensitive, ignoring the ways in which many Indigenous and local communities have shaped and maintained biodiverse landscapes. Instead of viewing human impacts as universally negative, a nuanced approach acknowledges that humans can play a positive role in enhancing biodiversity and ecological health. In a rewilding context that prioritizes multispecies autonomy, humans are one of many keystone species – alongside whales, wolves, and beavers – rather than a god-like species (*Homo Deus*) or an intrinsically destructive force.

By redefining “wild” to encompass the capacity for ecosystems to function with autonomy while still interacting with humans in ways that

do not undermine their ecological integrity, rewilding can be reshaped to support a more comprehensive approach to conservation. This approach advocates for creating landscapes that are not merely reserves for flora and fauna but spaces where human communities can interact with the more-than-human world in sustainable and enriching ways. This involves resisting conservation initiatives that simply fence off large tracts of land and instead integrating human rewilding activities that support ecological processes and biodiversity.¹

Embracing this understanding of “wild” allows for a more sophisticated and culturally sensitive approach to rewilding. It invites a broader coalition of human stakeholders, including Indigenous peoples, local communities, ecologists, and conservationists, to collaborate in crafting conservation practices that respect cultural heritage, ecological science, and the rights of other-than-human subjects. This approach not only enriches biodiversity but also enhances the human experience within the landscape, fostering a deeper respect and care for the more-than-human world. An example is *Rewilding Apennines*, where efforts are focused on creating wildlife corridors within a human landscape and promoting coexistence with the Marsican brown bear through the creation of “smart bear communities” rather than confining these animals within heavily controlled areas. Rewilding should not only aim at restoring large predators or keystone species but also at restoring ecological functions and processes that include human biocultural practices contributing positively to ecosystem dynamics.

In a direct response to Jørgensen, Jonathan Prior and Kim J. Ward [2016], without explicitly adopting the notion of co-stewardship as a feature of wild places, provide some of the most solid and convincing ideas of “wild” and rewilding. Their work advances the conversation, helping us understand if projects are moving in the right direction of

¹ The ultimate long-term goal of rewilding is to create hybrid landscapes where both humans and other living beings can coexist and flourish together while addressing conflicts beyond anthropocentric and human supremacist management. However, in the short term, there remains a fundamental role for areas where human activities should be minimized, especially in a world plagued by the sixth mass extinction. While turning half of the planet into a national park isn’t the solution, this paper does not claim that integral reserves and similar core protected areas are unnecessary for the sake of multispecies thriving.

“wilding” landscapes, assemblages, and multispecies communities. In their response, they highlight that ecological restoration practices come in many forms and, while rewilding shares some similarities with other approaches, it distinguishes itself through a focus on autonomy. Unlike other ecological restoration practices, which rely on substantial human control and intervention through adaptive management and maintenance interventions, rewilding seeks to restore autonomous biotic and abiotic agents and processes. While human actors may initiate rewilding efforts, the restoration of wild organisms or ecological processes occurs through a gradual relinquishment of direct human management. Top-down management is substituted by reciprocal influence and cohabitation among different agencies.

The autonomy that sets rewilding apart is also what intertwines the various versions of the practice found in literature. More-than-human autonomy is central to each of the six uses of rewilding identified by Jørgensen in her 2014 paper, as well as other types of rewilding that don’t fit neatly into these categories, such as the removal of dams and other hard engineering within river systems and calls for the rewilding of the seas. It’s important to note that most rewilding practices in Europe don’t aim to reproduce wilderness management or construct an idealized version of nature [Pereira & Navarro 2015]. Instead, they’re developed on the premise that future conservation landscapes will be cohabited and co-shaped by humans and other-than-humans. Existing examples of rewilding acknowledge the implicit entanglement of other-than-humans and humans in conservation endeavors and celebrate more-than-human autonomy in rewilding as fundamental to the creation of experimental, forward-looking conservation futures.

To illustrate this point, Prior and Ward examine two rewilding examples: the *Oostvaardersplassen Reserve* [OVP] in the Netherlands and the *Scottish Beaver Trial* [SBT]. Both projects operate on the idea that humans and other-than-humans can coexist and share the same space, allowing natural processes to evolve in surprising ways. Although the OVP is often cited in rewilding literature [Lorimer 2015], the *Rewilding Apennines* project better aligns with Prior and Ward’s argument. In the OVP, the lack of large carnivores forces humans to cull large herbivores, with hunters attempting to mimic the role of wolves. Additionally, this project does not significantly overlap with human set-

lements. By contrast, *Rewilding Apennines* demonstrates the potential for rewilding through human-bear interactions, and the SBT showcases how beavers unexpectedly share landscapes with humans. Ultimately, the key philosophical question revolves around how to define ecological and subjective autonomy in a way that supports the idea of “wild” as self-willed – applicable to humans, other-than-humans, and the entanglements that form between them.

Defining autonomy in detail is beyond the scope of this essay, but avoiding speculative traps, it can be understood as the ability to make one’s own decisions without being controlled by anyone else. Historically, in Western cultures – drawing on thinkers like Immanuel Kant [1997] – only humans, due to their capacity for rationality, have been recognized as potentially autonomous beings. Other animals, by contrast, were regarded as heteronomous, meaning they were seen as being directed by external forces, without self-will or the capacity for self-determination. Now, moving beyond anthropocentrism and embracing new scientific knowledge, we can clearly see autonomy as a much more abundant feature in the world when it is not constrained by structural biopolitical forces. However, autonomy is not merely independence, as Prior and Ward’s paper might suggest, since they do not make this specific but essential distinction. Ontologically, we are all dependent but still retain a degree of self-determination [Marchesini 2023]. Yet, when life is heavily managed and organized top-down – where wildlife is as controlled as livestock – autonomy is stifled, and therefore, the wild is dormant, if not completely absent.

In conclusion, rewilding, when reconceptualized to embrace multispecies agency and autonomy, challenges traditional conservation paradigms by integrating human and other-than-human interactions within ecological processes. This nuanced understanding moves beyond the simplistic dichotomy of humans versus nature, advocating for a more inclusive approach that values the autonomy of all species and acknowledges the positive roles humans can play in conservation. By focusing on creating hybrid landscapes where both human and ecological systems can thrive, rewilding can foster richer, more sustainable interactions between humans and the more-than-human world. Projects like *Rewilding Apennines* and the SBT exemplify this evolving approach, demonstrating the potential for mutual benefit and coexistence.

Ultimately, a redefined notion of “wild” that includes the capacity for ecosystems to function with autonomy while engaging with human activities supports a more holistic and culturally sensitive model of conservation.

4. Rewilding and technological innovations: exploring the case of de-extinction

As rewilding continues to develop as a dynamic and multifaceted approach to ecological restoration, its intersection with emerging technologies presents both new opportunities and significant challenges. At the heart of rewilding is the idea of fostering autonomy for the more-than-human world – allowing ecosystems and species to thrive independently of human control. Ecomodernism, a movement that advocates for using advanced technology to mitigate environmental impacts while supporting human development, presents a controversial yet intriguing perspective on rewilding. Ecomodernists argue that by intelligently applying technology, it is possible to decouple human progress from ecological degradation, thereby achieving both conservation and economic growth [Symons 2019]. However, this vision raises critical questions about whether technological interventions can truly support the autonomy of the more-than-human world or if they inherently impose human control over nature [Marris 2021].

Despite its promising stance on technology, ecomodernism appears limited in its ability to decouple growth, often achieved through mastery over nature, from its core principles [Kenis & Lievens 2015]. This brings us to the question: What roles can technology play within the framework of rewilding as the autonomy of the more-than-human world? A version of ecomodernism that fully embraces this autonomy would likely resemble what might be called “multispecies modernism”.

One of the most debated aspects of ecomodernism within the context of rewilding is the concept of de-extinction – the use of biotechnology to resurrect species that have disappeared from the Earth. This concept, which once seemed like pure science fiction, is increasingly becoming a reality as advances in genetic engineering, such as CRISPR-Cas9, make the revival of extinct species technically feasible [Shap-

iro 2020]. Proponents of de-extinction argue that bringing back species like the woolly mammoth could have significant ecological benefits [Wray 2017]. For example, reintroducing mammoths to the tundra could theoretically help combat climate change by converting forests back into grasslands, which have a higher albedo effect and thus reflect more sunlight, potentially cooling the planet. Moreover, the presence of such large herbivores could mimic the ecological functions lost with their extinction, promoting biodiversity and ecological resilience [Zimov *et al.* 2012]. This is the goal of the ongoing Siberian project named *Pleistocene Park*, initiated by scientist Sergei Zimov. This project, in collaboration with the biotech company *Colossal* and professor George Church, aims to recreate a proxy of the woolly mammoth to restore this keystone species to the Arctic tundra, thereby supporting the autonomy of these ecosystems by fostering natural processes with minimal human intervention [McCauley *et al.* 2016].

However, the allure of de-extinction is accompanied by a host of ethical and ecological concerns [Kasperbauer 2017]. Critics argue that the species created through de-extinction would not be identical to their ancestors, lacking the evolutionary context and adaptations that allowed their predecessors to thrive in past environments. These “new” species would essentially be genetically modified organisms, crafted by human hands to fit a particular vision of what these animals should be, rather than a true return of the species that once roamed the Earth [Martinelli *et al.* 2014]. Additionally, there is the question of where these species would fit into contemporary ecosystems. The environments that once supported these species have often changed drastically since their extinction, and introducing de-extinct species could lead to unforeseen and potentially harmful ecological consequences. For instance, these animals might compete with current species for resources, disrupt existing food webs, or introduce new diseases, leading to a cascade of ecological impacts that could be difficult to predict or manage [Richmond *et al.* 2016].

Furthermore, the ethical implications of de-extinction extend beyond ecological concerns. There is a risk that focusing on high-profile, technologically driven projects like de-extinction could overshadow more traditional conservation efforts that address the root causes of biodiversity loss, such as habitat destruction, pollution, and climate

change. Critics argue that de-extinction might be more about human hubris and the desire to demonstrate technological prowess than about genuine ecological restoration. This raises the question of whether resources invested in de-extinction might be better spent preserving the species and ecosystems that still exist, allowing them to thrive autonomously, rather than attempting to recreate what has been lost under human control [Sandler 2013].

This tension between technological optimism and ecological realism is central to the debate over ecomodernism's role in rewilding. While technology offers powerful tools that can aid in ecological restoration, it is crucial to consider whether these interventions align with the core principles of rewilding – principles that emphasize the autonomy of ecosystems, species and individuals to self-regulate and flourish without human dominance. In this context, the introduction of de-extinct species could be viewed as contradicting the core concept of wildness, which traditionally signifies a state of nature unimpeded by extensive human manipulation. If rewilding is about allowing ecosystems to function autonomously, how do we reconcile this with the active role of technology in shaping these ecosystems? Does the use of biotechnology and other advanced technologies undermine the very concept of wildness, or can it be reinterpreted as a new form of co-stewardship where humans use their technological capabilities not to control the multispecies community but to support its intrinsic processes and autonomy?

A fundamental ethical issue arises when considering the patenting of newly resurrected species [Carlin *et al.* 2013]. If rewilding is about fostering multispecies autonomy and self-willed entities, this concept is incompatible with using resurrected animals solely or primarily as tools to achieve supposed greater goals. These animals should be able to define their own *telos* with a degree of unpredictability if we are to consider them genuinely wild and aspire to a wilder world. They should not be regarded as mere tools or means to an end, nor should they be seen as heteronomous entities – those whose actions are entirely directed by external forces – deprived of autonomy.

Prior to envisioning potential multispecies futures, rewilding needs to directly address the past devastation of ecosystems, species, and lives. Humans can play a pivotal role in addressing some of the damage they have caused, such as by reviving an ancient lineage that still holds

intrinsic value within its genetic material. If species are intergenerational achievements, “flight ways” to use the terminology of Australian philosopher Thom van Dooren [2014], we may have a duty or responsibility, if technically possible, to revive a flight path we have altered. Following a possible interpretation of multispecies justice, which involves addressing the destructive appropriation of the more-than-human world by humans, to foster coexistence on fairer grounds. However, this intervention, as invasive as it may be at the genetic level, should ultimately lead to a hands-off approach that respects the autonomy of these revived species. The question remains: Are we capable of resisting the extractivist appropriation of other lives? Can modern society resist patenting and owning the other-than-human?

According to the ideas advanced in this paper, there is no inherent contradiction between a de-extinct mammoth and a wilder multispecies community, at least on a theoretical level. The true question is not how something originated – a traditional obsession with things being natural, pure, and pristine – but rather the autonomy of the species itself to unfold free from biopolitical control and top-down regulation. So, can a technology like de-extinction play a substantial role in supporting rewilding? Ultimately, it depends on getting the legal, political, and ethical framework right, rather than being preoccupied with a presumed ontological fallacy regarding de-extinct species.

This debate is complicated by the scale of technological interventions aimed at creating or restoring entire ecosystems, as opposed to focusing on smaller, localized efforts. Proponents argue that such large-scale interventions are necessary to address the immense environmental challenges of the Anthropocene, such as climate change and mass extinction. For instance, geoengineering projects like rapid massive afforestation or artificial glaciation have been proposed to stabilize the climate while restoring ecosystems [Griscom *et al.* 2017; Field & Mach 2017]. However, these large-scale interventions raise concerns about homogenization, where diverse ecosystems might be reshaped to fit a uniform model, potentially undermining the biodiversity that rewilding seeks to enhance through autonomous, self-regulating systems. Additionally, these projects often require substantial financial investments and political support, which could divert resources from more immediate and tangible conservation efforts.

The ethical implications of such technological interventions in rewilding are significant. While these projects may offer solutions to global environmental challenges, they risk imposing a top-down approach to conservation that may not be suitable for all ecosystems or communities. Emphasizing technological solutions might marginalize Indigenous and local knowledge systems, which have historically been crucial in maintaining biodiversity and ecosystem health [Whyte 2017]. Ignoring or sidelining this knowledge in favor of high-tech solutions could perpetuate ecological imperialism, where external forces dictate conservation terms without adequately considering the needs and perspectives of local communities and the autonomy of the ecosystems involved.

The integration of ecomodernist strategies into rewilding prompts a reevaluation of conservation goals and ethics in the Anthropocene. Should we aim to return ecosystems to a pre-human state, or is it more ethical and realistic to recognize that human influence is now embedded in all ecosystems? If so, how do we address the layers of past multi-species injustice, ensuring restitution for what has been violently taken from other life forms? This question has significant implications for the future of conservation and rewilding. If we accept human influence as inevitable, rewilding must evolve to reflect this reality, balancing technological interventions with efforts to restore and maintain the autonomy of the more-than-human world [Morton 2017].

This balance is crucial if rewilding is to fulfill its promise as a transformative approach to conservation. While technology can provide powerful tools for addressing environmental challenges, it is essential that these interventions do not undermine the core principles of rewilding, which focus on fostering ecosystems and species that can function autonomously. For example, technologies like satellite imagery and remote sensing can offer valuable insights into ecosystem health and help track the progress of rewilding projects in real-time. These tools can enhance the adaptive management of ecosystems, allowing conservationists to respond more effectively to environmental changes. Similarly, genetic technologies could enhance the resilience of species to changing conditions, potentially aiding in the recovery of endangered populations. However, these interventions must be carefully designed and implemented to support, rather than disrupt, the autonomous processes that sustain ecosystems.

Ultimately, more technology often equates to more control. Can scientific advancements instead serve a freer world, not just for humans but for all species? Can the idea of improving humanity through technoscience be aligned with serving multispecies justice? The concept of rewilding, if grounded in a proper understanding of wildness as autonomy, could be the antidote to a global society increasingly obsessed with controlling all variables [Tokarski 2019].

To ensure that technological interventions in rewilding are ethical and effective, it is essential to engage a diverse range of stakeholders in the decision-making process. This includes not only scientists and policymakers but also Indigenous peoples, local communities, and other groups with a direct stake in the outcomes of rewilding projects. By incorporating diverse perspectives, rewilding initiatives can become more inclusive and culturally sensitive, ensuring that technological interventions respect the rights and knowledge of all stakeholders, humans and other-than-humans alike. This inclusive approach is particularly important in the context of global environmental justice, as it ensures that the benefits of rewilding are shared equitably and that marginalized communities are not disproportionately burdened by the risks associated with technological interventions.

In conclusion, the intersection of rewilding and technology presents both significant challenges and opportunities. Ecomodernism and de-extinction offer new tools for ecological restoration, but they also raise important ethical questions about the role of humans in nature. By critically examining these issues, we can develop a more nuanced understanding of rewilding that incorporates technological innovation while remaining true to the core principles of ecological autonomy and multispecies justice.

5. *Conclusion*

In conclusion, the concept of “wild” in rewilding initiatives must move beyond the outdated and exclusionary notion of pristine wilderness, which often marginalizes Indigenous communities and disregards their long-standing relationships with the land. As scholars like Jørgensen and Whyte have highlighted, rewilding must embrace a de-

colonized understanding of “wild” that acknowledges the complex, intertwined histories of humans and other-than-human beings. This reimagined concept of wildness prioritizes multispecies autonomy, recognizing the value of coexistence over segregation and exclusion.

Central to this reimagining is the concept of co-stewardship, which moves beyond the idea of humans as mere protectors or managers of nature. Instead, it envisions humans as active participants in a shared ecological community, collaborating with other-than-human beings to sustain and enhance the health of ecosystems. Co-stewardship emphasizes mutual respect and interdependence, where humans and other species work together in ways that honor the agency and autonomy of all life forms, requiring both theoretical shifts and practical actions. This approach not only challenges the traditional hierarchical view of conservation but also promotes a deeper, more ethical engagement with the natural world.

Furthermore, the integration of technological innovations, such as those proposed by ecomodernism and de-extinction, into rewilding efforts presents both opportunities and challenges. While technology can offer powerful solutions to environmental crises, it must be employed in ways that respect and enhance the autonomy of ecosystems and species. Achieving this balance is essential if rewilding is to fulfill its promise as a transformative approach to conservation. By embracing a nuanced, decolonized understanding of wildness and integrating the principles of co-stewardship, rewilding can lead to a more just, equitable, and effective restoration of multispecies communities in a rapidly changing world.

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Keywords

rewilding; wild; conservation; environmental philosophy; multispecies justice

Abstract

Rewilding, introduced in the 1990s by Reed Noss and Michael Soulé, aims to restore ecosystems on a large scale through the creation of ecological corridors, the reintroduction of apex predators, and the establishment of core protected areas – known as the “three Cs”. Initially focused on North America, it gained global recognition after the publication of *Feral* by George Monbiot (2014).

While rewilding has achieved significant successes, it faces criticism for its perceived anti-humanist tendencies, masculine wilderness ideals, and romanticized narratives. Additionally, as “rewilding” becomes a buzzword, it risks losing scientific rigor and political relevance. Dolly Jørgensen warns that rewilding has become “plastic”, diluting its policy impact and reinforcing exclusionary, ahistorical perspectives. Kyle Whyte critiques the concept of “wild” for disregarding Indigenous relationships with the land and perpetuating colonial frameworks.

This paper argues that for rewilding to serve as an effective ecological tool, it must embrace a nuanced, multispecies approach. Rewilding should integrate ecological, cultural, and ethical perspectives, prioritizing equity and Indigenous knowledge while rejecting superficial rewilding washing. It promotes a vision of the “wild” as multispecies autonomy, advocating for co-stewardship and a regenerative, anti-colonial approach to conservation.

Il rewilding, introdotto negli anni ‘90 dai biologi della conservazione Reed Noss e Michael Soulé, promuove il ripristino degli ecosistemi su larga scala attraverso strategie quali la creazione di corridoi, la reintroduzione di predatori apicali e l’istituzione di aree centrali. Inizialmente focalizzato sul Nord America, il movimento si è diffuso a livello globale grazie al libro *Feral* di George Monbiot, uscito nel 2014.

A fronte dei notevoli successi ottenuti, il rewilding è stato criticato per le accezioni potenzialmente anti-umaniste, maschiliste e romantiche della nozione di natura selvaggia, spesso scollegata dalla effettiva realtà ecologica e sociale. Inoltre, poiché il termine “rewilding” è divenuto una parola d’ordine al pari di quello di “sostenibilità”, si trova esposto al rischio di perdere rigore scientifico, profondità filosofica ed efficacia politica. Secondo Dolly Jørgensen, il rewilding ha mantenuto fondamenti antistorici e spesso discriminatori nei confronti dell’uomo. Kyle Whyte ha invece criticato l’idea stessa di “selvaggio”, accusandola di ignorare le culture indigene e il loro rapporto con la terra, riproducendo schemi coloniali. Questo articolo sostiene che, per essere davvero efficace, il rewilding deve adottare un approccio multispecie; privilegiare l’equità, valorizzare le conoscenze in-

digene, evitando forme di rewilding washing; adottare una nozione di “selvaggio” volta ad affermare un modello di conservazione rigenerativo e anticolonialista.

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