Contemporary Political Theory (2025) 24:274–297
https://doi.org/10.1057/s41296-024-00742-9

CRITICAL EXCHANGE

New materialism and the politics of climate action: a critical dialogue

Lars Tønder, *Power in the Anthropocene* (Edinburgh: Edinburgh University Press, 2025)

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Published online: 13 January 2025

Making room for the non-human

The climate crisis is accelerating at an unprecedented rate, driven by a combination of anthropogenic activities and natural feedback loops. The rapid warming of the planet, deforestation, ocean acidification, and biodiversity loss are interacting in ways that intensify their collective impacts, leading to more extreme weather events, shifting ecosystems, and destabilising food and water resources. The accelerating effects of environmental change are not merely a scientific concern but a profound political and theoretical challenge that destabilises existing frameworks of power, sovereignty, and governance. As climate-induced disruptions intensify, the state's ability to secure its territory, manage resources, and protect its citizens is called into question as are traditional forms of political contestation and resistance. The

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environmental crisis, therefore, accelerates not only ecological breakdown but also demands a radical rethinking of key political concepts in an era of unprecedented planetary change.

Do we currently have the intellectual tools and conceptual resources to adequately address the challenges of the climate and biodiversity crises? This question is at the heart of Lars Tønder's latest book *Power in the Anthropocene*, which is motivated by the suspicion that the humanities and social sciences are ill-prepared to conceptualise these crises or formulate a viable political strategic response. According to Tønder, to understand how complex systems function across human/non-human boundaries, we require a radical reappraisal of how power operates and how it could be used to combat the challenges facing us today. Tønder's alternative conception of power draws on a range of 'new materialist' thinkers—contemporary scholars such as Jane Bennett, William Connolly, Donna Haraway, and Bruno Latour, with certain historical figures such as Baruch Spinoza and Friedrich Nietzsche providing philosophical support. His analysis of power is organised around a series of challenges and provocations to traditional theories and attempts to broaden and expand our understanding of how power works, particularly regarding humanity's relationship to the Earth, non-human animals, and ecosystems.

Power in the Anthropocene offers an interrogation of how our traditional political categories must be altered to take into account the Anthropocene—a proposed geological epoch that signifies the beginning of significant human impact on the nature of the Earth. Tønder asserts that the planet has entered a new phase in which the consequences of human activity are as significant as other natural forces such as gravity or electromagnetism. While many disagree about the precise dates for such an age or whether such a framing makes sense as a geological timeline, there is little doubt that human actions are now irrevocably changing the natural conditions upon which other social and political decisions are made. Climate change has destabilised natural ecosystems and opened the door to discussions of the need for radical human interventions in the climate such as geoengineering and carbon capture and storage.

Tønder's argument rests on three central propositions.

The first is based on the need to undo the centrality that has been placed on human beings and human activity as somehow unique and radically different from other forms of life. Drawing on William Connolly, Tønder interprets the social sciences as captured by a 'socio-centric bias', one that emphasises a purely human form of political analysis that tends to see human actors and institutions as the only agentic forces in the world and the locus of a privileged point of analysis. Hence, Tønder's injunction to 'make room for the nonhuman!' (Tønder, 2025, p. 20). As Tønder puts it, 'by displacing the human as superior to everything else, we begin to notice how dependent society is on its environment and its multifarious set of actors and forces, however invisible they may seem' (Tønder, 2025, p. 21).

This move seeks to broaden our gaze to a range of non-human entities and explore the active and sometimes unpredictable ways they shape social and political processes. While social sciences tend to bracket their field of inquiry as consisting of purely social interactions, leaving the rest to the natural sciences, Tønder makes a convincing case for how our dependency on the environment and the multiplicity of non-human actors and forces that comprise it should be a key concern for

researchers. This would open an examination of how nonhuman actors might themselves be involved in and 'present' in decision-making processes such as through representatives for environmental concerns in legislatures.

A second key concern that motivates Tønder is reorienting our analysis of power based on an appreciation of the importance of the Anthropocene. Leading theorists of power such as Michel Foucault and Pierre Bourdieu have tended to interpret power as a certain relationship of forces between human actors. Power can exist within social institutions and be produced by organisations and through discourses, but ultimately it is based on human affairs and exists in 'social space'. While drawing from insights derived from these writers, Tønder uses new materialist philosophy to complicate the picture and shows how if power is indeed omnipresent then this analytic must also be applied to human and non-human forms of life.

From this vantage point, Tønder criticises the 'power as domination' or what some have labelled the 'power-over' conception which is often associated with state authority and the power of repression. Along with other theorists such as Antonio Negri, Michael Hardt, and Hannah Arendt, Tønder expands our understanding of power to see it more as a capacity for agency (both human and non-human), which he argues 'renders the exercise of power something constructive and dynamic' (Tønder, 2025, p. 22). In the Anthropocene, this understanding of power is particularly important because simplistic relationships of dominated and dominator fit awkwardly in more complex processes of environmental change and climate crisis, making an appreciation of this new understanding so urgent.

Tønder's third proposition is the proposal of an organisational form suitable to the task of political transformation needed to tackle the climate crisis. While the previous two points are largely diagnostic, this line of argument has a strong normative aspect, proposing a 'politics of swarming' as a potential pathway towards the extensive democratisation of society. Tønder argues that rather than promoting a form of government that curbs democracy's excesses or simply attempts to optimise existing democratic institutions, we should advocate a wider range of democratic assemblages to mobilise in support of deep structural changes to our politics and society. The idea behind this strategy is to maximise the number of actors that would contribute to democratic transformation and to expand the sites at which democratic action was possible from a single national legislature to a wider range of political actors and locations, including non-humans such as plants, ocean currents, and other forms of non-human life. This would involve broad assemblages of actors able to self-organise and engage in decision-making processes. These assemblages would not follow fixed command structures but would instead develop new knowledge following dynamic feedback loops.

Paul Apostolidis welcomes the renewed attention on the unpredictability and uncontrollability of the climate catastrophe, but questions whether a new materialist framework of power provides clear and distinct analytic tools to understand how power operates in climate politics and to challenge dominant power structures that prevent urgent action. Surveying many of the key concepts of new materialist philosophy, such as 'assemblage' and 'entanglement', he questions whether these new units of analysis provide sufficient analytical clarity, particularly in comparison to rival methodological tools provided by eco-socialism and degrowth communism,

among others. He also sees the type of horizontalist and network politics indicative of Tønder's 'politics of swarming' as potentially inadequate to counter the well-organised concentration of capitalist power without a more robust theory of leadership and more consideration of centralised organs.

Sophia Hatzisavvidou sees much strength in an analysis of power that includes non-humans and is based on a grounded empirical analysis that connects the concerns of eco-feminists, new materialists, indigenous studies, and other theoretical projects. Extending our understanding of rights to potentially include non-human aspects of nature is considered an important step towards ecological justice and has overlaps with the ways in which certain indigenous groups conceive of nature as kin. Her main concern is with what might happen to questions of human responsibility for the climate crisis if human agency and capacity for action is deprioritised as part of a broader decentring of the role of the human. Might a new materialist methodology unwittingly partake in the deferring of responsibility onto an uncontrollable natural environment at a time when human action is more needed than ever?

Amanda Machin applauds Tønder's focus on the matter of power, but she also questions whether Tønder's political strategy of a politics of swarming is enough to achieve genuine political transformation. The idea of human and non-human actors collaborating in decentralised ways is critiqued for its potential lack of political agency and coherence. Instead of a politics of swarming, Machin prefers the political category of 'the more-than-human many', which consists of the excluded and marginalised as agents of democratic transformation. In this approach it is the disruptive potential of the excluded whose participation in an unjust system provides the force to destabilise the status quo and bring about political change. Ultimately, Machin calls for a critical and politically engaged understanding of power that addresses the demands of radical democracy and transformative politics.

The contributions in this Critical Exchange raise significant questions about the potential tensions between rethinking agency beyond the human and the necessity of maintaining human responsibility in the face of ecological crises. On one hand, Tønder's call to expand our understanding of power in the Anthropocene, particularly through a new materialist lens, invites us to recognise the agency of non-human entities and dismantle the anthropocentric bias embedded in traditional political analysis. This broadened perspective emphasises entanglements between human and non-human forces, urging an ontological shift that reframes power as more ephemeral and distributed than what is usually acknowledged.

Yet, as several critics point out, this decentring of the human raises crucial concerns: how do we hold humans accountable for the climate crisis if our analysis diminishes human exceptionalism? Hatzisavvidou highlights the risk of deferring human responsibility at a time when decisive action is urgently needed. Furthermore, while Tønder envisions a 'politics of swarming' as a pathway for democratic transformation, critics like Apostolidis question whether this decentralised approach can adequately confront the concentrated power of capitalist forces without a more robust theory of leadership.

Ultimately, this dialogue underscores the delicate balance required between embracing a more-than-human framework and ensuring that human agency and responsibility are not obscured in the process of rethinking power in the

Anthropocene. While Tønder's critics raise important concerns about the analytical clarity and practical feasibility of these proposals, his work nevertheless opens up valuable new avenues for considering how we might reconceptualise our forms of political analysis and strategy to confront the challenges of the Anthropocene. As we face the accelerating effects of environmental change, the need for such intellectual innovation and interdisciplinary dialogue becomes ever more urgent.

James Muldoon

Theory by moonlight: power, hegemony, and political desire in the anthropocene

The signs that anthropogenic climate change is gathering speed and threatening the future of humanity seem increasingly impossible to ignore. From assaults by hurricanes of unprecedented size and frequency to year-on-year smashed heat records, accelerated rates of glacier melting, and ongoing species extinction, the warnings that present social institutions and practices are incompatible with the earth's preservation in a healthy and inhabitable form are everywhere. The effects of climate change are also more and more palpable in everyday experience, whether that means working nights in southern California farmlands where super-hot afternoons now make labour in those hours unbearable, buying air conditioners in traditionally temperate Seattle, or lowering expectations for August tourism in Athens. In these circumstances, and given the obstinate insistence of governments, corporations, and leading international organisations that current norms about economic growth and cultural flourishing can still be maintained without destroying the planet, it makes sense to wonder whether the root problem might not be just wrong-headed ideas about how to deploy human power in the world but rather the guiding notion of what power itself means.

Lars Tønder's book *Power in the Anthropocene* makes a bold and audacious claim: the accelerating climate emergency requires social scientists and critical theorists to reconstruct their fundamental conceptualisations of power. Tønder contends that a theory of power inspired by new materialist philosophy is needed that understands nonhuman entities to exert power and agency that is just as formative of our shared cosmos as the actions of humans. I am predisposed to agree that a fundamental reorientation in public thinking and affect regarding human–nonhuman relations is essential if we hope to reverse our current calamitous trajectory. But, as I shall explain below, I am not convinced that the new materialist vision does or even can achieve everything that Tønder claims for it. Above all, I am not persuaded that the theory of power developed by Tønder offers critical theorists a viable alternative analytical approach to understanding either how power operates, or the kind of political action needed to radically change dominant power-formations. Tønder's work can, however, provoke our imaginations in ways that incite sorely needed motivation to picture the world and humans' place in it in new and different ways, as I discuss subsequently with the aid of a concrete example.

My hesitations about the book's argument arise when I read passages describing the altered perspectives that Tønder believes the new materialist approach enables. Tønder (2025, p. 104) argues that if we adopt a 'conceptualization of power as immanent to the material world itself', then this will add 'analytical clarity' to attempts to understand 'the many processes prevailing in the Anthropocene'. In the case of Greenland, for instance, Tønder thinks that this conceptual shift is needed for analysts to see that new plant growth in the wake of the ice sheet melting not only has the negative effect of darkening more of the earth's surface, hastening global warming; it also has positive implications, making new industries possible and enlarging the economic basis for efforts to gain political independence. He claims that without adopting new materialist thinking, analysts will be prone to overlook 'the many domino effects and feedback mechanisms that amplify anthropogenic climate change' (Tønder, 2025, p. 133). Attentiveness to these dynamics, he contends, can only be sparked by an epistemological reorientation that prioritises understanding how human and nonhuman forces 'develop in mutual but also unpredictable interactions with one another' (Tønder, 2025, p. 87).

Yet, why is reconceptualizing nonhuman entities as agents of power necessary to understand the complicated processes through which nonhuman–natural and human–social changes affect one another? I would readily grant that policymakers, social leaders, and academic analysts tend to be dangerously overconfident that the main approaches to 'sustainability' will be anywhere near sufficient to ward off ecological devastation (see Blühdorn, 2016). Such influential figures are also shockingly cavalier about the radical uncertainty involved in predicting the effects of human actions vis-à-vis the climate. It is a rather large leap, however, to go from acknowledging this frustrating and worrisome reality to ascribing it to a philosophical failure that new materialism alone can address. There could well be other viable ways of explaining this hubristic attitude, which suggests that alternative political responses to this situation, apart from those Tønder recommends, may be possible. As for Greenland, why is attributing co-worldmaking power with humans to ice and plants necessary to acknowledge and take seriously the unpredictability of events and the complex combination of positive and negative effects that stem from the ice sheet melting? If leaders are unwilling to recognise and respond to the global-warming effect of new plant growth, this could be traced to a normative capitalist imaginary that equates human wellbeing with unhindered exploitation of 'natural resources' and perpetual economic growth. Correspondingly, if there are unacknowledged actors whose power should be affirmed and bolstered in this scenario there are more preferred candidates than ice and plants. Might not material, far-reaching change depends more directly on the activities and consciousness of working-class people whose exploited labour—say, in agricultural industries enabled by the new vegetation—gets occluded by paeans to economic growth or by nationalism's transfiguration of wage labour in the service of capital into a class-homogenising ethos of patriotic citizenship?

Treating nonhuman material entities as powerful agents can also diminish rather than enhance analytical lucidity when a theorist attempts to incorporate nonhuman agency into an overarching schema of power that ends up blurring rather than clarifying how power is organized and operates. Like other new materialists, Tønder

embraces the notion of the 'assemblage' to express the general ensemble of the relations of contact and reciprocal effect among multiple diverse forces, human and nonhuman alike. I am not convinced that this idea does the analytical work that is typically claimed for it, even though I recognise that the attempt to imagine configurations of power which include nonhuman participants demands novel and more capacious concepts. When Tønder (2025, p. 129) applies his (worthy in principle) methodological guideline of 'listening to the context' to Greenland, he writes: '… this starting point entails a proliferation of the number of relevant actors, encouraging us to include human-centered assemblages while also providing space for the water temperatures, sea currents, migration patterns, microbial shifts, plant growth, icecap weight, and much more. Together, these various actors (and probably many more) constitute the overarching assemblage of human and nonhuman life, which, from the perspective of new materialism, constitutes the relevant unit of analysis'. In what sense is an assemblage, described in these indeterminately expansive terms, a meaningful and actionable 'unit of analysis' for social critique? To me, it appears rather to be a catch-all notion into which are folded a wide range of contextual features in analysing how power works in Greenland and its environs.

Consider, by contrast, the key categories that Gramscian theory articulates to distinguish substantive aspects of a hegemonic project as the main unit of analysis: organic intellectuals, central leadership cadres, local formations of common sense, and cultural and historical blocs. Gramscian theory develops a conception of the composite whole by disentangling and analysing these elements, which have distinct functions and contribute in special ways to the interrelations among them. The theory does not content itself with the simple if pertinent observation that these forces are mutually 'entangled', which is an oft-repeated term in Tønder's book. Rather, it ascribes to them specific activities, capabilities, and relational dynamics. This is what provides the model with analytic clarity. By comparison, theorising power via the notion of the assemblage obscures more than it illuminates.

A similar issue applies to the discussion of the politics of 'swarming' in *Power in the Anthropocene*. I appreciate Tønder's robust affirmation of the power of ordinary people to interpret given circumstances critically and discover how they may be open to transformation. This is so even when these circumstances seem intractable and powerful institutions encourage fatalistic accommodation (or as we so often and so dismally hear these days, 'resilience').

Yet, I question Tønder's one-sided emphasis on fostering 'many centers of power', 'pluralization', and 'diversity'. I am hard-pressed to think of a political or social movement that has succeeded without striving for a balance between upsurges of bottom-up energy and leadership from below and steering, harmonisation, and vision from above. Network politics certainly has its strengths, which dispersal and plurality foster, as David Schlosberg (1999) argues, not least because capital gains power through many forms of differentiation, including differences of race, gender, and local political geography (Mezzadra & Neilson, 2019). Yet, capital also expands through globally centralised and coordinated operations, and oppositional forces must counter in kind. Gramsci's theory offers a helpful point of reference here, too, as a penetrating account of how to combine centralised and decentralised authority in popular politics. A Gramscian perspective recognises the critical ferment and

leadership potential that always abide among ordinary participants in a political movement, while acknowledging that systematic efforts by a core cadre of leaders, whose ranks and ideas are routinely refreshed by new members from the base, are indispensable to realising that potential in historically consequential ways (Gramsci, 1971, pp. 188–189, 330–331, 334–335). In short, juxtaposing Tønder's approach with that of Gramsci suggests that the politics of swarming needs supplementing with a conception of leadership to realise its potential.

I still believe Tønder's book accomplishes something remarkable and important by jarring loose new impressions of the landscapes of political struggle in our time, overshadowed as these terrains increasingly are by the unfolding climate disaster. This is apparent to me when I reflect on my own research with *Power in the Anthropocene* in mind. I am currently exploring the working conditions and work-related experiences of night-shift workers in Amazon's 24/7 warehouses in the Inland Empire (IE) region near Los Angeles, where most of these workers are Latino. My inquiry highlights issues of 'social reproduction', defined broadly to include not only the bare renewal of workers' bodies and minds for the next night's labour but also people's resources, capacities, and relationships when it comes to caring for themselves and others and enjoying a world outside work and care.

Reading *Power in the Anthropocene* made me wonder about human–nonhuman interactions in this realm of warehouse night work and its social-reproductive ramifications. Most immediately, there is the workers' relation to night. Night is a context for warehouse labour that the earth's cyclical movements generate. Its effects on workers include making them exhausted beyond expression. Night also induces workers to consume assorted toxic substances so that they can stay awake and minimally alert, especially caffeine- and sugar-loaded energy drinks but also plenty of weed, alcohol, and even 'hard drugs', as one interviewee attested. Amazon clearly needs something other than just plain workers: it needs cyborgs, human–nonhuman hybrids fashioned by and for the work of the night.

Another crucial ecological aspect of this story is extreme damage to air quality due to pollution from vast fleets of trucks that continually transport containers to and from the warehouses and clog the region's freeways, along with a feedback loop this generates between climate change and the nocturnalisation of work. Air pollution has caused an epidemic of respiratory illnesses, especially among children and the elderly (Victoria, 2022). It also contributes to global warming, and temperatures in this near-desert region have been reaching dangerous extremes for days on end in recent summers, indicating a domino effect of just the kind that Tønder highlights as an indicator of the nonhuman's untamable and unpredictable power: ultra-hot days lead to more night work, especially for farmworkers who can no longer safely labour outside in afternoon hours and so must start their days in the pre-dawn darkness and/or work well into the evening (Solis, 2016).

When I consider these events and try to imagine the earth's rotational cycle as agentic or the air as exerting power, at Tønder urges me to do, my pulse quickens. Perhaps the mental exercise of thinking of these nonhuman entities as co-constituting deplorable conditions in the IE intensifies my sense of warehouse workers' intolerable subjugation to forces that they cannot control. That sense then impels urgent questions, which some, including me, find strange: What would it mean for humans

to collaborate with the earth, the air, and the night to try to change these conditions? What could it mean, to approach these entities as allies in the fight against Amazon? I would argue that the value of asking these questions and trying to craft such solidarities with nonhuman power lies neither in gaining analytical clarity nor disclosing new solutions to problems in the IE. Rather, grappling with such questions spurs the imagination and stirs emotions. Posing these 'strange' questions makes us more disturbed about the daunting forms of oppression that workers experience, more desirous of a different kind of future for the IE, and more sensuously in tune with what that future could look and feel like as well as how it can be made real.

Along those latter lines, thinking about how to wage struggles against Amazon with Tønder in mind alerts me to something significant about the distinctive form of political resistance that people in local IE communities have recently mustered against the warehouses. In 2022, the main regional environmental justice organisation, the Center for Community Action and Environmental Justice, organised several mass protest events in small IE cities. The events were modelled on a traditional northern Mexican horse parade called a *cabalgata*. As part of my research, I observed and participated in a *cabalgata* in the city of Bloomington, where the local planning board had just approved the development of an enormous new warehouse that required tearing down an entire working-class neighbourhood. The *cabalgata* was breathtaking. About a hundred riders on horseback amassed at a city park, most wearing traditional Mexican clothing or American-*mexicano* cowboy gear, from elderly people to small children. They then rode sternly, with an aura of dignity and power and in a collective show of community, around the streets of Bloomington, with about two hundred people on foot behind them chanting '*¡Bloomington no se vende!*' ('Bloomington is not for sale!') and '*¡Sí se puede!*' ('Yes we can!').

More than a singular event, the *cabalgata*, in a larger sense, manifested people's passion for sustaining a distinctive local *ranchero* culture. Latino people with varying degrees and kinds of migration histories and identities have fashioned this cultural formation in the place they consider their home north of the US–Mexico border, drawing on northern Mexican habits of daily life. The *ranchero* lifeway involves owning a small plot of land where one can have a family, keep a few animals, and give children room to play freely and safely. Land-predatory warehouse expansion has assaulted the region's Latino community on this level of cultural creativity and sustainability, too. People are increasingly priced out or simply moved out of their neighbourhoods. Nor is it so safe for kids anymore, with trucks not only jamming the freeways but careening around backstreets. According to one of my interviewees, a truck recently jumped off the road and killed a little girl on a playground.

Thinking with Tønder, we might ask: what if the wellsprings of motivation for fighting back against the warehouse developers and planning commissioners run deeper than reservoirs of hope for preserving a traditional human culture under threat, to which land and animals belong as objects of human care? What if we thought about the horses, goats, and gardens surrounding houses in Bloomington as empowering the people's resistance? As co-constituting members of the *pueblo* (playing on the term's varied valences in Spanish) about which the *cabalgata* riders and marchers shouted, *.¡el pueblo unido jamás será vencido!*. ('the people/town united will never be defeated!')?

Imagining nonhuman entities as involved in *ranchero* culture or the town in this way makes me feel the potential and actual power of the people more acutely than ever. It also attunes me to their power as *potentia*, in the sense that Tønder underscores throughout his book: power-to rather than power-over, hence power to initiate, create, and preserve. This exercise of the imagination may not add much lucidity to a social–theoretical analysis of power in the IE, in terms of better understanding power's primary agents, mechanisms, and vulnerabilities. Yet, it opens a new optic on what is at stake in the struggle. That, in turn, could affect movement strategy by catalysing intuitions about why it would be worth the time, energy, and resources to continue the *cabalgatas* and how they are more than mere protest events. Letting one's imagination expand in this way, with Tønder as a guide, also adds a welcome dose of hope and excitement to my affective sense of how the power of the *pueblo* can emerge and assert itself in the shadow of Amazon, by the light of the moon.

Paul Apostolidis

Struggling for and with the more-than-human world

Lars Tønder's book boldly claims that the social sciences need a paradigm shift. If our geological era has changed, shouldn't we also change how we (as social scientists) analyse power? Even if geologists disagree on whether the Anthropocene is a geological event (Witze, 2024), the introduction and unfolding of the Anthropocene as a conceptual event in the social sciences and humanities has opened up new analytical spaces and imperatives.

Tønder's book, rich in theoretical analyses and grounded in empirical evidence, not only critiques existing studies of power but also champions the new materialism paradigm. He argues that this paradigm, with its potential to resonate with kindred fields such as ecofeminism and Indigenous studies, offers a fresh lens for understanding power in the Anthropocene. The task is immense, and Tønder undertakes it with admirable intellectual curiosity and care; the outcome is a sophisticated, compelling argument. There are a wealth of reasons why political theorists and analysts of power more broadly may want to engage with this book.

My reflections will focus on two points that I see as cardinal to Tønder's intervention of folding a more interconnected or ecological approach to the climate crisis: first, a set of barriers that new materialism encounters as an emancipatory, inclusive project; and second, the challenge of achieving the outcomes Tønder aspires to if the political alliances he envisions are not extended to marginalised humans.

The first point concerns one of the book's double overarching aims: 'to undo the privileging of human activity as something unique and radically different from all other forms of life' and 'to expand the analysis of power in breadth as well as in depth' (Tønder, 2025, p. 6). Pursuing this aim, Tønder argues, entails examining how nonhuman actors are involved in political decision-making processes. This aim of new materialism resonates with positions and demands raised by communities of scholars and activists contesting the dominant Eurocentric epistemological and ontological paradigm, as Tønder does here (e.g. Escobar, 2020). The analysis offers a compelling range of cases that evidence how nonhuman materiality has the power

to compose reality: melting ice-sheets allow for the emergence of new biodiversity that further accelerates the rise of temperatures and modern deforestation practices enable the emergence of new mushroom varieties that reconfigure social and cultural reality (ch. 3). Such an ecological appreciation of human/nonhuman entanglements indeed enriches our analytical capacities, fostering epistemic alliances and allowing for a deeper engagement with a broader range of agency. New materialism indeed brings us closer to the Anthropocene context of power, as Tønder argues.

Nonetheless, two limitations might hinder the materialisation of this expansive project towards emancipatory, equitable future ecopolitical arrangements and I believe that they deserve further reflection. The first limitation invites considering what this 'un-privileging' of human agency would entail regarding specifically the issue of human responsibility for climate change. Theoretically and analytically, the idea of folding nonhuman forces into our analysis of power makes sense. I concur with Tønder that escaping the socio-centric bias that dictates social science thinking and policy making today is essential for understanding and engaging with power in the Anthropocene. But I am wary of attempts to appropriate this expansion of agency for purposes that serve the current extractive system rather than a more ecologically sound and socially equitable alternative.

Consider the following example: No matter how reasonable and even attractive the idea of regenerative agriculture may sound (Tønder, 2025, pp. 139–143), the truth is that the current system is extractive by design. Unless this system is engaged with in ways that radically transform it, simply injecting pockets of sustainable forms of production within it will remain an inadequate task. Actions of political resistance such as those discussed by Apostolidis in his contribution to this Critical Exchange are more attuned to the task of dismantling this extractive system. Amidst the inexorable success of the global climate governance regime to continuously invent new forms of 'environmental protection' that prioritise solutionism and technofixes that benefit the expansion of markets and capital (Dillet & Hatzisavvidou, 2021), it may be tactically useful to protect some space for human exceptionalism, especially with regard to responsibility as an aspect of human agency. This tactic might help to prevent the appropriation of the power of nonhuman agentic forces to justify disclaiming responsibility for disasters which, branded as 'natural' and hence 'unavoidable', would leave powerful agents of the current system devoid of any responsibility for their actions. The power of nonhuman agents calls for revisiting and revising dominant, modern, liberal understandings of responsibility, while maintaining a level of human accountability that ensures the thriving of care towards the more-than-human world. This is, for example, what Haraway (2016) calls 'response-ability', or the capacity to be present and respond to ecological emergencies: staying with the trouble that a damaged planet invokes and engage with our nonhuman partners with care and respect. Nonetheless, developing new ways of thinking-with or composing-with ontologically different partners that could give rise to this form of responsibility and care require some level of human responsibility, not least to prevent the appropriation of these ways of thinking from agents seeking to justify their damaging actions.

The second—and closely related—limitation concerns the difficulties of meaningfully including nonhuman (or more-than-human) actors in decision-making. The example of extending political rights to forms of nonhuman life (like rivers and

mountains) is analytically useful in destabilising the notion of a 'human' rights-bearing subject (p. 185). But I would like to push this claim further to suggest that beyond 'experimentation with traditional forms of political representation' (p. 185), this extension of political rights to more-than-human actors might also be understood as a matter of epistemic justice—a matter that raises a host of different challenges. Related here is the possibility of reconsidering the place that 'nature' has in many Indigenous cosmologies, where it is recognised as kin (Krawec, 2022), a sentient being that is part of the family rather than something 'out there'. Recognising nature as kin would allow extending political rights to nonhumans in a way to address the epistemic injustice done to indigenous communities at least since the imperial era.

Although extending political rights to nature as kin is indeed an essential step towards ecological justice, it is only a step. Inclusion to political institutions and processes (such as the attribution of rights) does not guarantee better democracy or more equitable political outcomes; indeed, it can serve as a way to perpetuate deeply entrenched power relations (Blaser, 2018). To extend political rights to entities of the natural world there needs to be some distinct (although not special) place for *anthropos* (and a consideration of who is considered in this category) as the agent that has the capacity (and response-ability) to properly protect and defend these rights. Some degree of distinctiveness is required for ensuring that rights are indeed protected institutionally, e.g. in court rooms.

But a different set of challenges emerges here. How do you maintain the relevance of an expansive ethical, ontological, and epistemological project like the one proposed by Tønder for people who do not share new materialism's ontological commitments or priorities? I am thinking here of city dwellers, workers fighting to cover their material needs, and policymakers who work with limited resources (funding and time): even though they might share the same concerns as new materialists, a social science that fails to account for their particular commitments or material priorities would risk being obsolete and hence irrelevant. If a radical democratic project consists in bringing 'the many' into politics—a 'many' that includes rivers, mountains, and lakes—then a democratic project that doesn't provide a sense of relevance to the many (see Machin in this exchange), cannot be either democratic or radical.

To envision how the extension of political rights to nonhumans could be materialised we need to employ the best of our imaginative tools. Tønder identifies 'the lack of analytical and political imagination' as 'the biggest problem facing the social sciences' (Tønder, 2025, p. viii). Even if this were the case, social sciences don't have to take on the responsibility of political imagination alone; indeed, to claim so is to assume that social sciences have a special capacity to produce knowledge that corresponds to the need to imagine just and sustainable presents and futures. The arts and humanities, but also practitioners in architecture and design, authors and performers, and Indigenous communities holding traditional knowledges on what it means to include nonhumans in public life actively are all available to contribute with their imaginative capacities. Joining forces, they could engage in imaginative ways of collectively pursuing the task

of envisioning and materialising pathways for the more affirmative and interconnected politics that new materialists envision.

Political theory can indeed contribute towards this direction by revisiting neglected texts and exploring avenues and pathways that canonical thinking has hidden, more or less intentionally (Hatzisavvidou, 2024, 2025) and by attending to the struggles of those we might want to develop solidarities with nonhuman agents but due to their material conditions have different priorities (Apostolidis, 2019). The main challenge I see here is how we (social scientists) take these collective forms of imagining beyond our classrooms, experimental participatory workshops, and academic publications.

Which brings me to my next point. Tønder identifies three interpretations of the Anthropocene: the dystopian (which he views as most prevalent within literary and aesthetics communities), the ecomodernist (which he says is most prominent in the policy world), and the Gaian (which emphasises the need to create new life forms across and beyond existing human/nonhuman entanglements). Tønder does not clarify where the Gaian interpretation finds expression. I suspect the answer is a combination of 'somewhere in academic books and venues' and 'in communities that are considered backwards and uncivilised', namely these communities that have historically suffered from exclusion, marginalisation, and oppression. Unless these epistemic and material injustices are addressed meaningfully, including these communities in a Gaian political formation will not be enough to counter the other dominant interpretations of the Anthropocene. The distinction between the Gaians and ecomodernists that Tønder draws is particularly important. Gaians emphasise 'the need to create new life forms across and beyond existing human/nonhuman entanglements' (Tønder, 2025, pp. 14–15); ecomodernists (or Prometheans) consider human dominant over nature, thus placing their faith for solving the climate crisis on using new technological inventions, including geo-engineering (Tønder, 2025, p. 16).

I see the contestation between the Gaian and the ecomodernist interpretation as one of our times' most important political struggles. The two interpretations are so different that it is reasonable to argue that they are mutually exclusive. This is because the relentless exploitation of the more-than-human world (including communities and individuals deemed less-than-human) has not been a byproduct or unintended consequence of the ecomodernist approach—or what can be called the techno-capitalist ecopolitical imaginary (Dillet and Hatzisavvidou, forthcoming). It has been the necessary and enabling condition of the implementation of the ecomodernist project.

One of the challenges here is that unlike the ability of the ecomodernists to coalesce into hegemonic constellations of power, the Gaians remain largely detached from other potential allies. Although there are many reasons behind this detachment, a possible explanation is that the Gaian interpretation cannot be easily reconciled or attuned with the demands of a socio-economic model that relies heavily on relentless extraction and ceaseless consumption. Searching for potential allies among more-than-human agentic forces might prevent Gaians from fostering effective alliances; the latter may as well lie with those considered as less-than-human by some techno capitalist visionaries.

Reaching out more directly and actively to marginalised, neglected, exploited humans might result to sustainable futures where forests, rivers, and mountains become not merely sites of struggles but kins, agents we can relate to. Unless the defenders of the Gaian interpretation find ways to counter the gripping and destructing ecomodernist reign, there will be little left to struggle for.

Tønder's work is a rich source for engaging with questions around key political issues in the Anthropocene: who should be included in political processes, how this inclusion can be materialised, and who could be mobilised as an ally to create 'a symbiont, more-than-human world' (Tønder, 2025, p. 6). Thinking with Tønder, one can appreciate the possibilities and challenges that come with the task of undoing our dominant ways of thinking. This is a form of mental and affective exercise that as someone who shares many concerns with new materialists welcomes and treasures.

Sophia Hatzisavvidou

Swarming vs. the more-than-human many

What is the role of the social sciences with regard to the interconnecting challenges of the Anthropocene? How can environmental sociologists, political scientists, democratic theorists, and human geographers, amongst others, more adequately respond to the diagnosis of the new epoch? If this diagnosis transmutes humanity into a geological force and an ensemble of embodied creatures thereby undermining the binary categories of 'society' and 'nature'—then to what extent must those whose job it is to analyse society, radically overhaul their ideas and methods? Is it possible that by improving their grasp on the dynamics of power in the Anthropocene, social scientists can augment their own capacity and influence?

Lars Tønder takes these questions seriously. The starting point of his bold monograph is the provocative rejection of 'the dogma of sociocentrism' and the claim that this rejection can itself strengthen the social sciences. In other words, to stay relevant in the face of the various problems and transformations in the new epoch, we must come to terms with the material and entangled aspects of human life and embrace a different conception of power. Later I will return to the construction of the 'we' in the previous sentence, but I will start by highlighting, and championing, the task Tønder gives his readers: to heed the seething complexity of a more-than-human world wracked by ecological troubles, to revise and sharpen their inquiries, and to make them more pertinent for those worried about the capacity of political institutions and practices to respond to the dominoing global challenges of today. Critical thought is blunted by anachronistic accounts of power blind to the nonhuman. If new materialism draws attention to the power of matter (Coole & Frost, 2010, p. 1), then Tønder attends to the matter of power.

To a certain extent, the task of developing a new conception of power for the Anthropocene is an extension of Max Weber's (1947) project to categorise the amorphous character of power, which he examines alongside domination, authority and legitimacy. As Tønder notices, Weber's account of power neglects the forces in nonhuman nature. Weber has been rebuked for regarding human society as exempt

from the laws of the natural world to which nonhuman species are subject (Buttel et al., 2002, p. 5). In this, he exemplified the rule and not the exception; arguably sociology in general has been characterised by persistent anthropocentric assumptions and conceptions that are troubled by environmentalism (Machin & Ruser, 2023). Still, Weber was keenly aware of social–environmental relations, the environmental destructiveness of energy-intensive capitalism, and the 'natural limits' of fossil fuel extraction (Foster & Holleman, 2012). He also famously diagnosed the 'iron cage' and the disenchantment with—or 'de-magic-fication of'—the world arising in industrialised societies (Weber, 2004, p. 13), interpreted by environmentalists as indicative of the contradictions in human exploitation of nature (Foster & Holleman, 2012, p. 1660).

In this Critical Exchange Paul Apostolidis suggests that Tønder's book is successful in 'jarring loose' new reflections and Sophia Hatzisavvidou claims it provokes a 'mental and affective exercise'. I wonder if the project of developing a new materialist account of power that Tønder refers to as *potentia* might also herald a possibility for countering Weberian disenchantment and fostering a re-enchantment with the world. *Potentia* is distinct from power-over which involves domination over other humans and nonhuman nature. *Potentia* is power-to, the power that enables the performance of a particular action. It is the generative potential that is not possessed and wielded by any single individual, but rather is inherent in and distributed around the world in an array of entangled processes.

In Tønder's account, these processes include the melting and calving glaciers that themselves contribute to rising sea levels and concomitant global warming; the roaring of 'pizzly' bears, the hybrid creatures created through the climate change-induced migration, and the interbreeding of different species; the protest marches against the lockdowns implemented in the pandemic caused by a virus spread rapidly around the world as a symptom of intensified globalisation and homogenised agriculture; and the toppling of a bronze statue by a crowd of protestors armed with ropes and cheers who assembled on a sunny day to expose their city's slave-trading past and challenge the refusal to own that past (Machin 2024). *Potentia* is distributed across assemblages made up of various actants and forces ultimately overspilling and contravening any predictions made by human calculations. New materialism highlights the significance of assemblages composed of microbes, beetles, wind turbines, emotions, performances, algorithms, hurricanes, holograms, and hairstyles.

This new materialist account of power can support social science analysis of the complex dynamics of various events and problems. As I see it, new materialism is not so much a brand new account of the situated and entangled nature of human forms of life. It is rather a critical response to it, provoked and sustained by an enchantment with all of its possibilities and limits. Attention to the animals, pesticides, sugars, and agricultural workers that are assembled in the production of food, for example, can lead to a different experience of eating and a new kind of food politics (Bennett, 2010, p. 51). An encounter with a glacier, and the culture and politics that surrounds it can encourage a greater appreciation of local knowledge (Cruikshank, 2005). An awareness of the material embodiment of political creatures can provoke renewed scrutiny of the concepts, practices, and institutions of democracy (Machin, 2022b).

For Tønder, however, the new materialist account of power is not only a resource for describing the force of things, it also has significant normative implications. One of the most striking claims of the book is that since this account provokes an awareness of the significance of various objects, beings, and forces often omitted from mainstream social science, it also works in the service of radical democracy. Tønder argues that 'the political vision emanating from the new material analysis of power' is the 'the politics of swarming', to which he devotes a whole chapter (Tønder, 2025, Chapter 5). In this politics of swarming, as many actors as possible are mobilised to create a bottom-up momentum for social transformation. The swarm, says Tønder, is not aimed at finding consensus nor does its constituent parts insist on unification, rather it draws together a plural and diverse assemblage of humans and nonhumans in which there is 'maximum freedom for everyone involved in order to promote decision-making processes' (Tønder, 2025, p. 170; see also Connolly, 2017). Swarm formations are decentralised, inclusive, smooth, and flat assemblages that harness different forms of knowledge from across civil society and an awareness and appreciation of nonhuman nature that are used to challenge and reconfigure existing institutions and practices.

I find this claim the most intriguing aspect of the book because 'the politics of swarming' sits oddly with some of the key aspects of radical democracy as I understand it. There is no consensus on the meaning of radical democracy, but it can be characterised as a collection of theories and practices that are concerned with enhancing and expanding political participation to guide politics closer to the core democratic principles of freedom and equality, and to 'bring the many back into politics' (Asenbaum et al., 2023; Norval, 2001; Tambakaki, 2018, p. 512). It is therefore possible to see the politics of the swarm as corresponding to the project of radical democracy in the Anthropocene. But where does the transformative potential of the swarm lie exactly? How is it mobilised? What gives it political agency?

To answer these questions, it is helpful to compare the swarm to the category of 'the many' discussed by Paulina Tambakaki in her exercise in rethinking radical democracy. 'The many', Tambakaki explains, is a non-identity that encompasses the excluded, exploited, disempowered, and deprived, who can be mobilised to become a political subject precisely because *of* their exclusion and deprivation, and for that reason can play a part in transformative politics: 'The many subjectify to reinscribe equality and transform the current order' (Tambakaki, 2018, p. 511). This account resonates with Jacques Rancière's understanding of democracy as constituted by the disruptive formation of new political subjects (Rancière, 1999, p. 101). From this perspective, the capacity for transformation is not an inherent feature of the diverse assemblage and volume of the swarm, it is *exclusion* from participation that threatens the hegemonic order. The power of the many lies in the threat of destabilisation that its mobilisation poses to the existing system. When Tønder states that radical democratic transformation does not happen from the centre, he still limits himself by focusing on the movements of the periphery and its capacity to swarm; might he find more opportunities if he extends his attention to the boundary and what lies beyond it?

It is possible to understand 'the many' as the more-than-human. In a previous Critical Exchange in this journal, Hans Asenbaum and I offered a new materialist reading

of radical democracy and discussed the democratic implications of what we referred to as the 'nonhuman condition' (Asenbaum et al., 2023). We accused radical democracy of neglecting more-than-human ways of knowing and being. Our aim was not so much to demand the extension of democratic rights to mountains and rivers, but rather to call for a profound rethinking of the underpinning assumptions about political subjectivity which neglects its entanglement with its material and ecological surroundings (Asenbaum et al., 2023). The more-than-human dimensions of the world that increasingly impinge upon it but remain invisible can be conceptualised as the many. Understood this way, the many is composed of the excluded, deprived, and unnamed and yet who populate the vast majority of the world, those who are potentially mobilised because of their exclusion and the demand for visibility and equality and who therefore hold the power to revitalise democracy and provoke social transformation.

The diagnosis of the Anthropocene, Tønder shows us, can be interpreted in different ways, but he suggests it is imagined through the lens of the myth of Gaia. Gaia is the ancient Greek goddess of Earth referred to as a symbol of the complex unity of the Earth system. The Gaia interpretation comes with a recognition of the dangers of the exploitation of nature and the need to create and empower new life forms and imaginaries. Gaia stands as a reminder of the more-than-human-many, prohibited from and through dominant forms of environmental governance. For me, it is this excluded Gaian more-than-human many, rather than the swarm, who can exercise potentia in the Anthropocene. For it is the more-than-human-many who disrupt the political realm, who challenge the boundaries of the collective subject and reimagine the 'we' of democratic politics, who part-take in environmental policymaking and politicise democracy (Machin, 2022a).

This takes me back to the 'we' that appears consistently throughout the book. Tønder's 'we', as I see it, is meant as an invitation (Connolly, 2017, p. 122), interpellating readers as reflexive and politically engaged researchers, as 'social scientists and as entangled-engaged citizens' (Tønder, 2025, p. 132) who are asked to care about the more-than-human world they are part of. The book is therefore not only the start of an important conversation about power, agency, nonhuman, democracy, and social science, but it is also a call for more critical scholarship rooted in an enchantment with the world in which it unfolds, a resistance to the characterisation of that world as a resource to be dominated and an awareness of the excluded who have not yet been named but may yet provoke the transformation 'we' are seeking.

Amanda Machin

Power in the Anthropocene: a new materialist perspective

The evolving dynamics of power and politics in a world increasingly defined by global warming and multiple ecological and socioeconomic crises present a profound challenge to political theorists. This much should be clear from reading the four interventions by James Muldoon, Paul Apostolidis, Sophia Hatzisavvidou, and Amanda Machin. Each intervention raises issues that resonate with the ones I pursue in *Power in the Anthropocene* and, by so doing, they open a window to a set of poignant-yet-difficult challenges that political theorists, especially those working on

climate change and ecological catastrophe, will continue to face in many years to come .Given this situation, my objective here is not to definitively resolve the arguments and insights raised by Apostolidis, Hatzisavvidou, and Machin. Rather, I seek to dwell in the spaces their critiques have illuminated, incorporating the challenges they pose into a broader meditation on what political theory could—and should—become in light of the deeply entangled nature of the contemporary world.

Consider the issue of 'analytical clarity'. According to Apostolidis, the new materialist approach that I develop in the book fails to offer such clarity. Partly because it does not give priority to the most important cause of climate change—capitalism—and partly because it elevates the basic unit of analysis—the assemblage—to a catch-all entity that precludes differentiation between and within agents, institutions, and discourses. The upshot is a lack of traction on the forces driving climate change politics, especially the 'normative capitalist imaginary' that enables ecological exploitation at the expense of sustainability and human wellbeing. A similar concern informs the argument by Hatzisavvidou, who worries that new materialism absolves agents from their responsibility in relation to climate change and the suffering it entails.

In the case of both Apostolidis and Hatzisavvidou, the solution is to downplay the element of entanglement so important to new materialist thinking. For Hatzisavvidou, it means holding on to 'some degree of distinctiveness', which, I take it, would allow us to assign more responsibility to some but not others. For Apostolidis, the solution is a return to a distinctively Gramscian perspective, giving way to an analysis in which agents, institutions, and discourses are more clearly differentiated.

The remarks by Apostolidis and Hatzisavvidou beg the question: what should analytical clarity mean at a time where report after report highlights the entangled nature of the world, showing how changes in one ecosystem affect the other ecosystems? In the book, I answer this question by taking a clue from the work of Haraway, who, in her own way, emphasises how and why political theory—and the humanities and the social sciences more generally—should 'stay with the trouble' (as she puts it in the title of her 2016 book, *Staying with the Trouble: Making Kin in the Chthulucene*). On my reading, this approach is not a turn away from analytical clarity, but an invitation to see issues of precision and thoroughness differently.

The reason why I focus on the plethora of forces involved in a case like the melting of the Greenland ice-sheet is not because I disagree that multinational oil companies play a major role in global warming, but because we need to grasp their entanglements with the more-than-human in order to fully appreciate how and why their actions are unsustainable—and why any attempt to control the climate through technologies built around the idea of human mastery is doomed to fail. Oil extraction, for example, goes further than serving the needs of a small group of investors and rich CEOs. Instead, it constitutes a whole way of life ranging from the Earth's underground to offshore oil rigs to private homes, dinner tables, and much more. At each stage of this chain, oil is not only a passive resource available for human exploitation but a force that creates its own demands, interacting with phenomena where the distinction between the human and the nonhuman is less apparent, including (as is evident in the case of the Greenland ice-sheet) agriculture, permaculture, and rising sea levels. It is the negative feedback loops invoked by these forces that

calls for a new materialist analysis to provide a comprehensive critique of the forces at play in the current ecological crises.

Another way of saying this is the new materialist approach that I propose entails a double vision in which clarity connotes seeing the world as connected *and* differentiated, dynamic *and* settled, human *and* nonhuman. The motivation for envisioning analytical clarity in this manner is both ontological and strategic and speaks even more directly to the concerns raised by Apostolidis and Hatzisavvidou. Seen from an ontological point of view, the emphasis on entanglements across multiple temporalities tracks new materialism's commitment to radical immanence and the assumption that all modes of existence share in the same substance. It is this outlook that modifies the demand for 'distinctiveness' as well as the Gramscian attempt at identifying organic intellectuals and others as the 'main unit of analysis'.

Similarly, from a strategic point of view, it may be advantageous not to begin the analysis with a set of predefined agents, institutions, and discourses. To determine how organic intellectuals can mobilise against ecological depletion, for example, it is surely helpful to uncover how these intellectuals came into being in the first place, as well as how their actions in the present draw sustenance, affectively as well as cognitively, from the world around them.

A similar point can be made about those who, in Hatzisavvidou's words, fight against the 'techno-capitalist ecopolitical imaginary'. What is more, and as I also discuss in the book (especially ch. 6), insisting on foregrounding the entanglements between human and nonhuman forces does not preclude a critique of capitalism and its demand for economic growth. Rather, it means placing capitalism in a truly ecological context and showing how a divergent set of structures and phenomena affect each other, triggering a series of negative feedback loops.

Perhaps the real issue is not so much about analytical clarity as it is about differences in conceptualising political and social change. These differences run explicitly or implicitly through all three interventions. Apostolidis questions new materialism's one-sided emphasis on 'many centers of power', 'pluralisation', and 'diversity'. Machin raises a similar concern, asking for a clarification on what she calls 'the transformative potential of the swarm'. On Hatzisavvidou's account, the problem arises because new materialism (or at least the kind that my book espouses) runs the risk of alienating potential allies by putting too much emphasis on the ontological dimensions of human/nonhuman entanglements and too little on the lived experience of the communities, especially in the global south, where the history of exclusion, marginalisation, and oppression is brutally apparent.

For Apostolidis and Hatzisavvidou, the alternative to these blind spots is a theory of social and political change that counters the current techno-capitalist hegemony with an alternative hegemony organised around principles of social justice, radical democracy, and ecological sustainability. As Hatzisavvidou points out in connection with my book's discussion of the competition between the different constellations at play in the Anthropocene, while the 'Prometheans' (i.e. the ecomodernists who promote technological solutions) are much better organised and able to influence the political system, it is less apparent how the 'Gaians' (i.e. the grassroots who promote a radical transformation of society) can make a real impact given their divergent form of organisation and mobilisation.

Before I say more about this concern about how to challenge and overturn the ecomodernist discourse, let me emphasise that new materialism's interest in pluralisation and diversity does not amount to a disinterest in the kind of power that undermines pluralism through political domination and economic and/or ecological exploitation. In fact, thanks to its interest in exploring what political theory could and should look like once we take the entangled nature of the world seriously, new materialism offers plenty of resources for addressing issues of domination and exploitation as well.

First, it does so by foregrounding the classical distinction between *potentia* ('power-to') and *potestas* ('power-over'), insisting that any analysis of power must pay attention to both, including how each amplifies and/or interrupts the other. Second, it shows how *potestas* informs specific modes of organising contemporary society, and how this applies to debates about green transition and climate change policies as well. Third, it suggests that even modes of power that we normally associate with *potentia* can produce non-pluralising outcomes in cases where the intensity is low and the connections with other forces in society are cut off, amounting to what we could call 'blunt power'.

The combined effect of these three contributions is, in my view, a critique of power attuned to domination and repression while at the same time insisting that the organisation of power can and should be different, both in terms of how it is practised in the current context of resistance and mobilisation and in terms of how it can inspire more equitable and empowering ways of living together. No analysis of power can do without either *potentia* or *potestas*; both are needed to sustain a truly critical analysis of power.

Having said this, it is true that new materialism envisions social and political change differently from how other, more classically inspired forms of critical theory do. Machin's insightful comment about *potentia*'s re-enchanting qualities should be read along these lines, highlighting how attention to the productive aspects of power can reintroduce a sense of wonder and care for the world of entanglements. Indeed, rather than seeing change in hegemonic terms, new materialism sees it as a question of empowering socio-political tipping points, both positive and negative, and always in conjunction with forces that cross the usual human/nonhuman-divide.

Another way of saying this is that new materialism draws attention to how change emerges gradually, through incremental shifts, which typically begin separately from other shifts in the same network but over time, and often supported by mutually amplifying feedback loops, end up producing radical change, enabling a group or an entire society to transition from one state of being to another state of being. It is this gradual-turned-radical account of change that inspires new materialism to foreground practices of political resistance and social innovation that may take place at the periphery of power but nevertheless harbours a potential for effecting radical change once the feedback loops and connections with other interventions get powerful enough.

Most climate laws in Europe and elsewhere have come about in this manner, as have more concrete changes in food and energy production. Moreover, given new materialism's insights about change from below, I do not worry as Hatzisavvidou does about the Gaians' ability to become powerful enough to overturn

ecomodernism's hegemonic power. Or at least not in the same way as she puts it in her remarks. To me, the challenge is not to reproduce the political form that one opposes. Rather, it is to show how power subsists beneath and around this political form, however, hegemonic it may seem, offering us a path to a different way of organising the relationship between the rulers and the ruled.

We may get even more traction on this issue by turning to another question raised by Apostolidis, Hatzisavvidou, and Machin: the question of radical democracy and how it relates to what I call a 'politics of swarming'. Concerns about how to conceptualise the relationship between these two ways of articulating political resistance and mobilisation (i.e. radical democracy and politics of swarming) run through all three contributions. Machin in particular worries that the politics of swarming 'sits oddly' with key aspects of radical democracy, which she highlights by turning to the category of 'the many' as developed by Tambakaki in her recent work. On Machin's reading of Tambakaki's work, the many signifies a 'non-identity' that extends to various marginalised groups in society—especially the exploited and disempowered—who can be 'mobilised to become a political subject precisely because of their' marginalisation. Machin uses this insight to suggest that radical democracy is about caring for these groups and that mobilising them can affect the change that a politics of swarming hopes for but, on her reading, does not secure.

Machin's way of posing the issue resonates in multiple ways with the ambitions and assumptions embedded in the politics of swarming. As I noted above, swarming, too, works to mobilise the energies, flows, and potentialities that circulate outside the established centre(s) of power. In the book, I develop this approach in greater detail, pointing to the often-overlooked efforts by local co-ops who promote regenerative agriculture, indigenous communities who protest exploitation by multinational corporations, ordinary people who organise in climate citizens' assemblies, ecofeminists who organise to advance food sovereignty, and performance artists who envision a future in conversation with other species. These groups represent what Hatzisavvidou refers to as the 'Gaians' and what Machin names 'the many', as they typically fall under the category of the excluded and the disempowered. The affinities between, on the one hand, this way of naming the source of democratic mobilisation and, on the other hand, the new materialism that I develop in the book point to a clear overlap between radical democracy and the politics of swarming as also highlighted by Machin in her contribution. Not only do both approaches turn their attention to the periphery of political and social life, insisting on giving a voice to those who are marginalised or otherwise excluded, they envision democratic politics as a struggle between the enabling and disenabling dimensions of power—what I, as noted in the above, call *potentia* and *potestas*.

Given these affinities, my reluctance in fully embracing Machin's alternative is not so much prompted by a disagreement about the diagnosis and goal of democratic politics as it is driven by a difference in how to delineate and mobilise the field of power in which it operates. To begin with, I worry that a category like 'the many' underestimates the plurality of connections that exist between the many and the few. While the latter clearly occupies a privileged position, it would be a mistake to disregard its links with—and sometimes even reliance on—the former, whether it is in terms of support and acceptance or in terms of obtaining

a sense of identity by being in opposition to the many, a point that in and of itself suggests a higher degree of entanglement than what we might normally consider. A politics of swarming aims to mobilise all these links to effect the greatest possible change, augmenting the concern for the more-than-human that also Machin highlights.

Two ways in particular stand out. First, a politics of swarming highlights the kind of collective intelligence that arises when multiple actors—some human, some nonhuman, and almost everyone entangled with each other in one way or another—exchange knowledge across a network of mutual connections. This kind of intelligence ensures that successes and failures are shared, and that the actors who engage in political resistance and social innovation learn from each other on a continual basis. Second, a politics of swarming places this sharing of knowledge in a political context in which sustainability and expansion of the conditions of life take priority—what we could call 'gradual power', emphasising the ability to create durable relations that expand the capacity to affect and be affected. This kind of power gives swarming its normative direction, imbuing it with a criterion that recognises the many entanglements between humans and nonhumans.

Much of this resonates with the example with which Apostolidis closes his contribution. As he suggests in relation to his own research, a new materialist approach, such as the one I explore in the book, encourages political theory—and the political and social sciences more generally—to situate struggles for sustainability and democracy within a truly ecological context, one in which the so-called human activity intersects with animals, plants, soil, light, and many other beings imbued with life and meaning. Apostolidis highlights how analysing power in such a context implies attending to how often overlooked agents, including horses, goats, and gardens surrounding houses in Bloomington (the city in which Apostolidis conducts his research on community-organising) participate in 'empowering the people's resistance' and therefore can be seen as 'co-constituting members of the *pueblo*'. While Apostolidis limits his account of this perspective to suggesting that it 'opens a new optic' on what is at stake in the struggle for sustainability and democracy, my argument would be that it is precisely because these nonhuman forces interact with what political theory and other disciplines normally call 'human' that we need to change the way we study power, analytically as well as normatively.

The two ambitions go hand-in-hand, and help to underscore how and why new materialism has so much to offer in the discussion of democracy and climate change. Once we breach the door to a more-than-human world, we also need to rethink the concepts used to not only criticise the world but also mobilise other, more sustainable ways of living together. To open a 'new optic' is in that sense to rethink what we mean by power and everything that comes with it, including analytical clarity, socio-political change, and democratic mobilisation.

Lars Tønder

Data availability N/A.

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