Rifted subjects, fractured Earth: ‘Progress’ as learning to live on a self-transforming planet

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Abstract
In this article we make a case for an understanding of human difference that attends to the way that social collectives engage with the Earth’s own capacity for self-differentiation. This draws us into conversation with recent interpretations of Hegel that see at the heart of his philosophy not a self-aggrandizing human agent set against a passive nature but an inherently fractured subject confronting a no-less intrinsically sundered outer reality. We use the example of traditional open-field cultural burning to show how skilled operators can painstakingly develop responses to ecoclimatic variability, putting this into dialogue with Hegel’s reflections on the ‘incendiarism’ of political revolution as a human expression of the wider self-antagonism of nature. We go on to make connections between Hegel’s account of the way that subjects can anticipate their own futurity and Indigenous conceptions of non-linear time, suggesting that the emergence of new earth-oriented practices can be seen as a complex interrelation of past, present and future. We close by suggesting that ‘progress’ for Hegel is not about the collective subject achieving omniscience and omnipotence, but involves the onerous and harrowing coming to terms with both its own divided identity and its exposure to a discordant external reality.

Keywords
earthly multitudes, fire, Hegel, Indigenous peoples, planetary multiplicity, progress, universality

The crack in everything
In April 2021, plans to test geoengineering techniques in the north of Sweden were derailed. The pilot project, funded by billionaire Bill Gates, was to have involved...
releasing calcium carbonate into the atmosphere to test its efficacy in reducing incoming solar radiation. However, Indigenous Sámi peoples of northern Fennoscandia, working with Swedish environment groups, raised objections. Traditionally semi-nomadic herd-ers and foragers, the Sámi – like many other Indigenous peoples – have experienced invasion, dispossession and cultural devastation. They also face high levels of disruption of human-ecological systems because of the extreme sensitivity of the Arctic region to climate change (Furberg et al., 2011). In an open letter to the project advisory committee and the Swedish government, Sámi representatives and their co-signatories successfully called for cancellation of the trials, citing the catastrophic potential consequences of solar geoengineering on global weather patterns, and the lack of consultation about the trial with Sámi people or Swedish society generally (Sámi Council, 2021).

Echoing the Sámi and their allies, Earth system governance theorist Frank Biermann insists at once that political regulation of solar geoengineering raises challenges that ‘are unsurmountable in today’s global political system’ and that proposed technologies ‘assume a level of understanding of the planetary system that does not exist’ (cited in Mazza, 2021). Joining other critics, we discern that would-be geoengineers seem set on flipping threats of global catastrophe into quests for unprecedented leverage over Earth processes, a tactic epitomized by ecofuturist Stewart Brand’s recycling of his own half-century old mantra ‘we are as gods, we might as well get good at it’ (cited in Brockman, 2009).

Such hubristic visions are hardly new to the West. As philosopher Todd McGowan expresses the self-ratifying belief for which Hegel is often seen as the exemplar: ‘[t]he subject can know the world because the world is the product of the subject’s own activity’ (2016, p. 3). However, just as we should not be taken aback by resurgent fantasies of turning modernity’s unforeseen consequences into opportunities, neither should we be unduly surprised to see the Sámi and their allies contesting the latest stab at extending control over the world’s disarray and recalcitrance. Over recent decades, resistance from within and beyond the West to totalizing knowledge claims has been rising sharply. At a time when claims to universality are themselves seen to be implicated in cascading social and environmental crises, it is not only large-scale technological projects but any pronouncements on the planetary predicament that soon find themselves confronting counter-assertions of the partiality and situatedness of all voices (see Lövbrand et al., 2015).

As well as being a globe upon which peoples are unevenly impacted by planetary-scale problems, this is more vociferously than ever ‘a world of many worlds’, of plural perspectives, visions, cosmologies (de la Cadena & Blaser, 2018; Savransky, 2021). In our own attempt to develop a version of planetary social thought, we have sought to affirm the irreducible plurality of knowledge practices while holding onto the insights of wide-angle lenses on Earth processes (Clark & Szerszynski, 2021). Whereas many social critics censure Anthropocene science and related geoscientific thinking for assuming a univocal perspective on equally unitary Earth systems, we take a different view. Over the last 50 years or so, we argue, the Earth sciences have been moving towards a conception of what we refer to as ‘planetary multiplicity’: the idea that out of the dense intercon-nectivity of its constitutive physical systems comes the propensity of our planet to shift between multiple operating states (Clark & Szerszynski, 2021, pp. 8–9, 88–90). While
not denying that there are problems concerning how and from where this ‘non-self-identity’ of the planetary body is apprehended, we suggest that a sense of the multiplicity or self-differentiating tendency of the Earth opens up possibilities for understanding the many differences discernible in our own species.

One way of thinking about human difference, then, is to consider the full spectrum of ways in which social collectives have engaged with the Earth’s ongoing capacity, at every scale, to shift, transform, or become other to itself. We use the term ‘earthly multitudes’ to refer to these groupings and all the techniques, practices and tactics they deploy to live with and make use of planetary multiplicity (Clark & Szerszynski, 2021, pp. 9–11, 54). Such an approach helps us to see humans becoming who and what they are through their interventions in the variegated formations and dynamic processes of the Earth – which we view not as an alternative but as a complement to those modes of critique that put the emphasis on more conventional social, cultural and political variables.

When the Sámi and their allies point both to the social differences that hinder globally unified governance and to the dynamics of an Earth system that defy full predictability, we pick up echoes of our own figuring of earthly multitudes and planetary multiplicity. By contrast with some critical social thought, we prefer not to draw hard lines between the worlds of would-be geoengineers and those of more place-based and embedded collectives, though our sympathies lie firmly with the latter. For all our disapproval of certain proposals, we still conceive of solar radiation management as a mode of grappling with planetary multiplicity and thus as a variation on the theme of earthly multitudes.

So where does this take us regarding Western modernity and its self-understanding? How does thinking through planetary multiplicity and earthly multitudes relate to what is frequently taken to be the core conviction of modernity: the belief that those who wield reason have it in their power to advance into the external world, to make it their own, to enclose and possess all that formerly appeared ‘other’ – or what McGowan describes, again in reference to Hegel, as ‘the megalomania of the subject’ (2016, p. 7)? The short and easy answer is that we see our earthly multitudes – whatever their accomplishments – as eluding full command over the materials, powers and processes with which they engage, problematizing any such hubris. But there is a more complicated response, one that troubles the terms of the question itself.

Thus far we have been citing McGowan’s précis of standard interpretations of Hegel. What he actually argues, however, is that received readings of Hegel as the champion of a self-aggrandizing subject set on a possessive reconciliation with nature are in desperate need of overhaul. Taking cues from Slavoj Žižek and others, McGowan contends that Hegel ought to be seen as the preeminent theorist of an inherently fractured, non-selfsame subject who confronts a no-less intrinsically sundered and fractious outer reality. It is Hegel, McGowan and Žižek concur, who insists that nature or Being is essentially out of step with itself, that there is an insurmountable disjuncture in the world, just as there are inescapable fault-lines preventing human subjects ever being at one with themselves. As Žižek puts it: ‘the point of dialectical analysis is to demonstrate how every phenomenon, everything that happens, fails in its own way, implies a crack, antagonism, imbalance in its very heart’ (2012, p. 8). Or in Hegel’s own terse formulation, ‘everything is inherently contradictory’ (1969, p. 439).
Unearthed from the depths of an earlier modernity, this idea of an internally rifted subject facing a self-divided substantial reality resonates with our own thematizing of the interplay of earthly multitudes and planetary multiplicity. This raises important questions for us. What if the idea of a planetary system that is too dynamic, too prone to self-differentiation to ever be mastered has significant antecedents – predecessors lurking in the very places where we usually descry authority and self-assuredness? What would a more self-divided and nature-sundered vision of modernity mean for our own idea of earthly multitudes? And how might it travel and be set to work in the context of the earth-oriented practices whose origins and lineages far exceed the domain of Western modernity?

The following two sections open up these questions by putting traditions of cultural burning in conversation with commentaries on Hegel’s response to the political ‘incendiarism’ of the French Revolution. Staying with these examples, we then turn to the question of time, and ask what might be learned from moving between a Hegelian sense of retroactive temporality and accounts of earthly multitudes engaging with the volatile temporizations of the Earth itself. Finally, in the context of contemporary environmental challenges, we reflect on this dialogue between a traumatically asynchronous Western modernity and the long, not-always-continuous trajectories of collective engagement with a changeable planet – and consider what this ‘dialectical’ encounter might mean for rethinking notions of universality and progress. In the process, we seek to make space for conversations with our fellow earth-oriented social actors in ways that reckon with our own European inheritance rather than imagining that others – past, extant or yet-to-come – will gift us with the possibility of brand new beginnings.

**Earthly multitudes on a fiery planet**

Indigenous Australian fire management expert Victor Steffensen offers recollections of cultural exchanges with the Skolt Sámi of northern Fennoscandia. For all the geographic distance and ecoclimatic difference separating the Sámi from his own Tagalaka people, Steffensen recognized shared experiences of coexisting with plants, animals and spirits, and a common ambition for putting younger generations back in touch with place-based traditional knowledges decimated by colonial dispossession (2020, pp. 113–118). And just as state-imposed fire suppression has significantly attenuated customary burning practices across much of Australia, so too have official prohibitions negatively impacted the Sámi – who have deep histories of burning boreal landscapes to stimulate winter pasture for reindeer herds (Cogos et al., 2019).

As Indigenous fire experts have long maintained, ‘country’ that is denied the flames it is accustomed to not only suffers heightened risk of intense, destructive wildfire but also faces reduced ecological diversity, pest infestations and declining soil fertility (Kimmerer & Lake, 2001; Steffensen, 2020). Knowledge of how and when to burn, practitioners insist, can only be learned by trial and experimentation. This takes many generations to acquire, and when people move into different regions or when ecological or climatic conditions change, asserts Aboriginal Indigenous studies scholar Marcia Langton, these practices need to be revised or relearned (1998, pp. 48–50).

From our perspective, open-field burning is one of the most enduring and intriguing activities around which earthly multitudes assemble. Timely application of fire taps into
energy and organic matter that has accumulated over time, and in the process skilled operators can modulate the effects of ecoclimatic change. But for us, even extensive setting to work of fossil fuels – however unsustainable it may be – is a variation on the theme of the fire-using earthly multitudes: the combustion of fossilized hydrocarbons both channelling the material-energetic residues of past planetary operating states and cushioning ongoing environmental fluctuation. While we might well consider solar radiation management as a gathering of emergent earthly multitudes oriented to the unwanted consequences of burning fossil fuels, we should also keep in mind that open-field cultural burning itself is capable of re-engineering vast areas of the Earth’s surface. For as environmental historian Stephen Pyne contends: ‘[t]he aboriginal firestick became a lever that, suitably sited, could move whole landscapes, even continents’ (2000, p. 4, see also Langton, 1998, p. 24).

However it is deployed, fire retains the capacity to break free, especially when conditions change quickly. Communities with enduring traditions of cultural burning tend to have intricate rituals of knowledge transmission, and although the hearth fire may be shared with strangers, there are often sanctions on sharing flame itself (Pyne, 1997, p. 28). If danger attends the lending of fire to those unfamiliar with local conditions, how much greater is the threat when invasive peoples impose their own knowledge and practice of fire use on regions with very different fire regimes and land management strategies.

As Pyne has documented in detail, modernizing Europeans increasingly removed fire from their own intensely gardened landscapes – a move they could just about get away with because of the perennial dampness and lack of a distinctive fire season in Europe north of the Mediterranean (1997, p. 156). As the intelligentsia of a rapidly urbanizing Europe turned against open-field burning, they came to see uncontained fire as symptomatic of chaos, disorder and waste – especially when it flared during episodes of urban unrest. In the European countryside and in regions across the colonized world with pronounced fire seasons, traditional fire users strongly resisted attempts to suppress their cultural burning repertoires – frequently using fire as a medium both of political protest and landscape management (Clark, 2018; Kuhlken, 1999). Other earthly multitudes who confronted advancing capitalist and colonial ‘modernization’ hatched their own forms of resistance, including open confrontation and taking knowhow and practices underground.

While there have been many remarkable acts of survival and resurgence, our sense is that, overall, the combined onslaught of sociopolitical and epistemic violence has had devastating impacts on time-honoured collective means of engaging with planetary multiplicity. Regarding fire, there is growing evidence that suppression of traditional forms of open-field burning has had deeply deleterious impacts on biological and ecological diversity in many places (Pyne, 1997, p. 171). And as traditional fire experts know only too well, disastrous megafires like those that have recently raged through New South Wales and California are further manifestations of extended prohibition of cultural burning (Steffensen, 2020, p. 210).

It is tempting to move from such indictments to the generalized claim that Western societies seek to assimilate and control physical processes while a world of others conduct themselves with and through their immersion in the flows of nature. At this point, however, we want to pause and suggest a more complicated reading. Staying with the fire
theme, we turn now to that historical juncture where ‘incendiarism’ flared in the political and cultural centres of Europe as never before. Specifically, this brings us back to Hegel and his reflections on the most tumultuous event of his time: the revolution in France that literary theorist Rebecca Comay describes as ‘the burning center’ of his philosophy (2011, p. 5). Is this fiery enthralment of Hegel mere metaphor, we ask – a rise of figurative concern with fire that corresponds to the suppression of ‘actual’ fire use – or is something else going on here? And if so, what might that something mean for re-staging the conversation between fire-wielding multitudes in different parts of the world?

**Incendiary modernity, revolutionary Earth**

As both Comay and McGowan would have it, Hegel’s writing on the French Revolution ought to disabuse us of any sense that his convictions lay in the progressive reason-led ascent of the self-determining subject. Neither should his reflections on post-revolutionary terror simply be taken as an exposé of freedom’s betrayal or as a recoiling from radicalism run amok, they argue. Rather, for Hegel, the overthrow of the Ancien Régime is but one of the many untimely, unthinkable events that comprise historical experience, and its self-destructive sequel is an unsurprising playing out of the new dilemmas or contradictions that arise as soon as old authority figures are dispensed with (Comay, 2011, pp. 58–67; McGowan, 2019, p. 201). The challenge posed by revolutionary activity, then, is for collective human agency to come to terms with its own ‘fury of destruction’ (Hegel, cited in Comay, 2011, p. 67), in order that the world-shattering forces that have been unleashed can be harnessed for further transformation, rather than careering into exhaustion or self-annihilation. As Comay sums up the Hegelian project, ‘[t]he task of Spirit will be to reconstruct an existence amid the debris of empire’ (2011, p. 59).

It is philosopher Michael Marder, surveying the same blasted terrain, who commends us to read Hegel’s engagements with revolutionary modernity alongside his reflections on the physical element of fire (2015, p. 49). There is, Marder suggests, a common logic, a shared structural dynamic that goes well beyond metaphor. Fire, in Hegel’s dialectical vision, is the exemplar of nature’s inherent self-antagonism: ‘[i]n the wood’s endeavor to consume the air through fire, it fights against itself and against its own source’ (Hegel, 1953, p. 34). In this way, fire’s power of negativity encapsulates nature’s own self-movement – albeit not to the same extent as animal life, because fire soon consumes itself whereas animals never cease to move and change (Marder, 2015, pp. 52–53). Human collective agency, epitomized by revolutionary insurrection, constitutes a further leap in mobilization propelled by an inherently out-of-step or antagonistic existence. But as Hegel has it, in the case of human agents, unlike that of raging fire or roaming animality, there is the possibility of deciphering and grasping the contradictory conditions that impel them. And in this way, human subjects have at least the potential to divert their dangerous powers away from runaway, self-immolation and towards a fraught and judgdering self-determination (Marder, 2015, pp. 51–55).

No one is suggesting that we comb the Hegelian corpus for practical tips in deploying fire, whether to burn biotic overgrowth or to torch our masters’ mansions. Marder’s probing of the essential continuity between elemental fire and revolutionary fervour runs deeper than this. It brings us back to the argument made by McGowan and Žižek that the
centrepiece of Hegelian thought is not the tale of triumphant nature-assimilating historical development, but the insistence on the ineluctable sundering and self-division of both the social and natural domains. As Hegel asserts in *The Science of Logic*, ‘[i]t shows an excessive tenderness for the world to remove contradiction from it and then to transfer the contradiction to spirit, to reason, where it is allowed to remain unresolved . . . the so-called world . . . is never and nowhere without contradiction’ (1969, pp. 237–238). Fire, in this light, will continue raging through forests and conflict will keep wrenching society apart, because neither realm has ever been or ever will be an organic whole or plenitude. For Hegel, then, society and nature are by no means categorically separate or opposed. They are bound together through the *internal* disjuncture they share, meaning that separation, discontinuity, rupture is primarily located *within* the social and *within* the natural rather than *between* them. And it is only through thoroughly acknowledging the contradiction in *both* these manifestations of worldly existence that human history has any chance of building back better out of the ruins of repeated catastrophe.

While Hegel’s musings on social revolution have received more attention, it is vital to recall that he and his contemporaries were also in thrall to the idea that the Earth itself repeatedly passed through world-shattering upheavals. Growing familiarity with differentiated rock strata bearing the remains of entire worlds of extinct animals and plants prompted Hegel and fellow geological enthusiasts to think in terms of an immensely drawn-out Earth history shaken by ‘a series of tremendous revolutions’ (1970, p. 283). In our own approach, the late eighteenth-early nineteenth-century thematization of ‘revolutions of the Earth’ is a precursor of the notion of planetary multiplicity: an early glimpse of our planet’s propensity to fall out of step with itself, to reorganize its component parts into new orders. But it is only over the last half century or so that the Earth sciences have been able to piece together the processes behind these dynamics, and more recently still that we have witnessed sustained philosophical and social enquiry into the consequences of such changes for human existence (Clark & Szerszynski, 2021, pp. 23–32).

Hegel did not fully merge his thinking on the elemental dissonance of fire with his speculations on a revolutionary Earth. He lacked the evidence we now have that fire ‘appears more profusely during times of rapid and extreme climatic change’, and that epochal Earth history is characterized by very different patterns and types of wildfire (Pyne, 1994, p. 890). Moreover, obsessed as he was with philosophical or conceptual ‘reconciliation’ with the contrariness of Being, it is hard to imagine Hegel taking genuine interest in the way that different collectives grapple with the changing environments, whether with fire or by other means.

The problem, it hardly needs to be said, goes much deeper than this. Foreclosing on his own most cherished value of universalism (see McGowan, 2020, pp. 19, 22), Hegel derogated peoples outside of Europe – and especially in Africa – as too absorbed in the transience of the natural world to reflect upon their own existence. In this way, more than simply expressing the Eurocentrism of his day, Hegel emerged as one of the architects of European modernity’s equation of sociocultural and geographical difference from Europe with developmental backwardness (Clark & Szerszynski, 2021, pp. 110–114).

Much has been said, deservedly, about the implications of Hegel’s schema for the entrenchment of racial ideologies, and the role they played in European colonialism.
While it may not be intuitive, one way to deal with this troubling inheritance, we are suggesting, is to push deeper into Hegel’s notion of an inherently non-self-coincident physical world – allowing for Hegelian thought to generate an excess, to overreach its own system (see Žižek, 2012, p. 6). This calls for a sustained consideration of the inherent self-differentiation of the natural world, in all its gritty materiality and elemental uncertainty, as the inescapable condition of all human existence. And this, for us, permits a certain reclaiming of Hegel’s two-sided unsettling of self and world in ways that refuse his own developmental ranking of humankind – and put all earth-bound social beings on the same interminably shaky footing.

While we are intrigued to find traces in the intellectual core of an earlier European modernity of an articulation between a self-divided nature and equally equivocating social identities and mobilization, the troubling issue of a unidirectional and teleological framing remains (see Lundy, 2016). In the following section, we turn in more detail to the question of temporality in order to interrogate the developmental aspect of Hegelian thought and to further explore the potential for bringing Hegel’s ‘out-of-step’ subjects and world into conversation with our own concept of earth-oriented multitudes tussling with the tempos of planetary variability.

Temporalities of the Earth and its multitudes

Anthropogenic climate change is a discontinuous event, a return to circulation of carbon sequestered under distant and very different Earth-system conditions. In another delayed outburst, global warming-exacerbated megafires in New South Wales, California, Alberta and elsewhere explosively release biotic energy that has built up following attenuation of Indigenous cultural burning. And although the planet cannot spool back its own geological history, there are certainly convergences with aspects of past eras that occur as planetary conditions change. It is for this reason that Earth scientists are investigating the fire regimes of the warm, wet, high-carbon dioxide conditions of the Paleocene-Eocene thermal maximum – which occurred some 55 million years ago – as a proxy for near-future climate change (Denis et al., 2017).

So too can the praxis of past earthly multitudes gain new traction when Earth systems pulse and shift. As fire regimes enter novel states, traditional burning practices – precisely because they were forged to deal with conditions of variability – may become even more vital than they were previously (Steffensen, 2020, pp. 211–213). This is also a temporally convoluted process, as long-standing fire-centred land management is likely to have promoted fire-tolerant or fire-loving species, in this way selecting for its own future relevance (Pyne, 2001, p. 25).

With his problematic assumptions about non-European peoples remaining mired in unfavourable natural conditions, Hegel was never going to appreciate the complex temporalities of Indigenous or traditional fire-use (see Hegel, 2001, pp. 110–113). But as we have been suggesting, what Hegel does offer us is a singular thematization of time at odds with itself in both the subject and object worlds. In Hegel’s schema, an event as genuinely novel as the French Revolution (with the supplement of Haiti, as recent commentators rightly insist) is always to some extent out of time (Comay, 2011, p. 438). By dint of its radical rupture with the past, such an occurrence can never be at home in its
own historical moment; the best that rebellious social agents can hope for is that they begin to generate conditions that may one day prove hospitable to their own deepest yearnings and striving. By this reasoning, an action may or may not seed the conditions that will retrospectively establish its very eventfulness. As Žižek reads Hegel: ‘the meaning of my acts does not depend on me, on my intentions, it is decided afterwards, retroactively’ (2012, p. 321).

The paradox that propels Hegel’s project, contends Žižek, is the intuition that ‘what escapes our grasp is . . . the very birth of the New’ (2012, p. 273). Nothing, it would seem, could be further from the stereotypical Hegel who plots out the continuous ascent of a self-overcoming intellect or world spirit. But as we have seen, this is the very reading of Hegel that Žižek, McGowan and Comay, among others, have sought to subvert through their disclosure of a far more troublesome snarl of agency, fallibility and thwarted possibility in the Hegelian dialectic. And it is here that Catherine Malabou’s radical rethinking of Hegel’s notion of time opened the way. In her 1996 monograph, The Future of Hegel, Malabou set out to overturn the prevailing mid-twentieth-century view of Hegelian history as an effectively closed loop with no opening for the truly novel, for any real futurity (2005, pp. 4–5). In its place, she discerned a much more convoluted interplay between that which can be known or anticipated and those events that erupt contingently (2005, pp. 74–75, 133).

It is only retrospectively, as Malabou parses Hegel, that it becomes apparent that a certain gesture, a modification, an improvisation has passed from singularity to habituation and durability (2005, p. 74). As Malabou elaborates, the process by which contingencies selectively settle into necessities is constantly occurring in the realms of both substance (or nature) and subject. There is newness, futurity, history in both domains. But according to the logic we encountered in the previous section, whereas in the realm of nonhuman nature this becoming through self-differentiation remains relatively enthralled to chance, in the case of human subjects it is possible to consciously intervene, albeit speculatively, in the movements between accident and essence. What Malabou brings to the fore, then, is ‘the operation of synthetic temporalizing in Hegel’s thought, which means it is the structure of anticipation through which subjectivity projects itself in advance of itself, and thereby participates in the process of its own determination’ (2005, p. 18). As Hegel puts it, the substance-subject ‘sees itself coming’ (cited in Malabou, 2005, p. 18). Again, as we have previously seen, Hegel’s suturing of substance and subject is crucial here, for human collective agents temporize, or generate their own futurity, by working with and through the contingencies and the self-differentiation of the natural world (Malabou, 2005, p. 133).

Just as the natural and the social share an inherent self-dividedness, so too are Hegel’s ‘Old’ and ‘New’ both configured as dissonant, out of step – this being the key to his attempt to break out of any sense of the New organically or teleologically emerging from the Old. It cannot be overstressed that this rupture with ‘a continuous process of organic growth’ means that the emergence of the New, even or especially should human agents attain some degree of retractive self-determination, is a painful and wrenching one (Žižek, 2012, pp. 272–273). It entails a tearing apart, a violence afflicting previously existing forms and structures – though always with the proviso that such changes only occur because the past itself is always already a site of violent dislocation. Or as we
might extrapolate from this insight in the context of the current planetary predicament: it is only possible that (some) kinds of human agency can – violently – push the Earth system into a novel operating state because our planet is itself constituted by a multiplicity of potential states. And, because the social forces driving this disturbance, we need to add, are themselves constitutively stricken and conflictual.

It is understandable that earthly multitudes who are struggling to preserve, restore and develop vital repertoires – especially in the wake of colonialism – put the stress on the violence and volatility of social subjugation. But those who give voice to time-honoured practices have also cautioned against assumptions of originary wholeness or plenitude. ‘Everything ancient was once new’, observes Indigenous Hawaiian Pacific Studies scholar Emalani Case (2021) – a reminder that what is too easily designated ‘traditional’ knowledge was at one point novel, improvisatory and experimental. As we suggested in the previous section, earth-oriented practices like cultural burning must be recalibrated when planetary processes fluctuate or shift. And astute earthly multitudes know this, both in retrospect and looking forward. As Anishinaabe scholar-activist Kyle Whyte (2018) recounts, his and other Indigenous peoples experience time as an enspiralling of past and present, in which ancestors grapple with the variability of their environments so as to gift livable worlds to their descendants, while descendants learn from both the successes and shortfalls of these ancestors to keep the spiral turning.

As Comay observes of Hegel’s interrogation of the temporal perplexities of the French Revolution, any sense of a linear, causal arc of history is blown apart not simply by the radical break of revolutionary events but by the subsequent resurfacing, reprocessing, re-living of its constitutive experiences. ‘Time is not just contracted, arrested, or interrupted’, she reflects: ‘it is twisted and reversed’ (2011, p. 42). If we are to commend Hegel for trying to blast open the idea of a unidirectional developmental continuum, however, we should also credit Kyle Whyte’s modelling of Indigenous temporization with outdoing the dialectic at its own game. For as Whyte elaborates: ‘[e]xperiences of spiraling time . . . may be lived through narratives of cyclicality, reversal, dream-like scenarios, simultaneity, counter-factuality, irregular rhythms, ironic un-cyclicality, slipstream, parodies of linear pragmatism, eternality, among many others’ (2018, p. 229).

Hegel and Whyte’s unlikely pas de deux helps us to envision our earthly multitudes not only as accommodations to ongoing planetary variance, and as the incubators of knowledge, skills and tactics that may acquire new relevance when the Earth itself becomes otherwise, but as the progenitors of actions that are forever at risk of overreaching their own time and place – and unleashing their own world-shattering effects. The hominin ‘capture’ of fire dramatically increases the capacity of our genus to ride out climatic fluctuations and threshold transitions, even more so when human flame finds its way to vast stocks of concentrated subterranean biomass (Clark & Yusoff, 2014). But as the return to circulation of sequestered energy transforms global climate, shifting wild-fire regimes react back upon the very infrastructures of fossil-fuelled social life: forest fire is both sparked by and destroys electrical networks in California, bushfires in New South Wales ignite coal seams in open-cast mines (Clark & Rickards, in press). And as small woodland fires spiral into uncontrollable megafires, even the metropolitan authorities who once sought to prohibit open-field cultural burning increasingly recognize the need for skilled application of fire to living landscapes. At the same time,
climate engineers desperate to extract and sequester atmospheric carbon turn to ancient techniques of enriching soil through long-term deposition of charred phytomass (Leach et al., 2012).

Far more than a merely figurative echo between revolutionary incendiarism and the fiery endeavours of earthly multitudes, what we are getting at here is the need to make sense of change or newness itself as a selective realization of multiple possibilities that inhere in the past. As Žižek riffs off Hegel: ‘the New we are dealing with is not primarily the future New, but the New of the past itself, of the thwarted, blocked, or betrayed possibilities (“alternative realities”) which have disappeared in the actualization of the past’ (2012, p. 323). Likewise, our own conceptualization of earthly multitudes, fiery or otherwise, acknowledges that immensely varied repertoires for engaging with planetary dynamism have been stalled, repressed, diverted, expropriated. What we have in mind, then, is not a simple rewinding of history, but a counter-factual exploration of the profusion of earth-oriented practices that might be revisited, elaborated upon, developed in novel directions, as the conditions of the Earth itself are transformed. And a big part of this entails bearing witness to the ways that many contemporary earthly multitudes – like the cultural burners we have described – are indeed seeking to revitalize and repurpose skills and tactics that they have inherited from their forebears.

As Comay insists, the structure of experience posited by Hegel in his tussling with the temporization of French revolutionary freedom and terror is essentially traumatic: each attempt to revive and realize the potentials of radical sociopolitical change generates further contradictions and renewed violence (2011, pp. 4–5). Critical thinkers hardly need reminding of the pervasive and recurrent violence inflicted upon a world of other ways of knowing and being by Western colonial powers and by the generalized imposition of capitalist socioeconomic relations. Neither should we forget that much of what has been overwritten and attenuated, likewise much of what has endured and is being reinvigorated, is itself oriented to the risks of inhabiting inherently volatile environments (Whyte, 2018). And even in the absence of oppressive external social forces, a changeable planet retains its potential to overwhelm customary strategies dealing with variability. This too can be traumatic.

Again, in considering wounding ‘untimeliness’, recent commentaries on Hegelian historical non-synchronicity invite conversation with the fraught temporal experiences of resurgent earthly multitudes. While Whyte and others implicate Western narrations of ecological catastrophe with the successive waves of devastation wrought over centuries by colonizing powers on Indigenous socio-ecological formations, Steffensen depicts a kind of anticipatory grief experienced by Australian Aboriginal cultural burning experts as they witnessed the build-up towards the destructive fires that erupted in southeast Australia in late 2019. ‘The whole country was tinderbox’, he recounts, ‘and I knew that bad fires were going to come’ (2020, p. 209). And so Steffensen and fellow bearers of traditional fire-management expertise found themselves at once grieving over the attenuation of thousands of years of skilled burning practice and living amidst imminent social and ecological devastation. ‘Transforming past into future’, intones Comay, ‘anxiety teaches us how to mourn in advance’ (2011, p. 90). Or as Malabou puts it, the very retroactive structure of a Hegelian reworking
of the past, its combination of preserving and letting go of the old, ‘can be interpreted as the labour of speculative mourning’ (2005, p. 146).

For Hegel, the ‘explosive antagonism’ of the French Revolution, in Comay’s words, ‘marks a traumatic fold in the order of experience’ (2011, pp. 59, 42), while for Steffensen, uncared-for country is a ‘time bomb’ that enfolds grief for interrupted tradition with the anticipation of a world ‘exploding into fire storms’ (2020, pp. 56, 210). Without wishing to collapse these two expressions of historical untimeliness into each other, we want to trouble readings of Western modernity that too easily presume its universal faith in a progressive continuum and then proceed to use this assumption to impose insuperable divisions between the temporal experience of the West and its others. While widespread contemporary anxiety over ecoclimatic catastrophe suggests an escalating sense of time out-of-joint, an intention of our own notion of earthly multitudes is to propose that human collectives have always grappled with the discontinuity and equivocation of their physical worlds. In the final section, we circle back on the idea of a foundational non-self-identity shared by the human subject and its wider world, and we ask how this might help us think about the fate of the notions of universality and progress at the current geohistorical juncture.

**Wounded universality and non-linear progress**

‘[E]very epoch is a discordant mix of divergent rhythms, unequal durations, and variable speeds’, pronounces Comay, reflecting on Hegel’s view of revolutionary incendiaryism (2011, p. 40). ‘Real fires . . . burn in eccentric rhythms’, observes Pyne. ‘They integrate not only seasonal and phenological cycles, but events that are unexpected, stochastic, irrepeateable and irreversible’ (1998, p. 30). Just as Hegel extrapolated from the French Revolution to the wider question of how to collectively make history, so too can we generalize from fire to an encompassing vision of inhabiting a dynamic, self-differentiating planet.

Whatever our own judgement might be on their efficacy or their ethics, all human collectives, we argue, must find ways to accommodate themselves to the immanent variability of their physical worlds. This is the context in which we affirm the move away from readings of Hegel that equate ‘reconciliation’ or ‘absolute knowledge’ with mastering every possibility in advance. In the reworked Hegelian lexicon we have been drawing on, these related terms refer not to some final attainment of subjective omniscience, but to the collective subject’s onerous and harrowing coming-to-terms with both its own divided identity and its exposure to a discordant external reality (McGowan, 2019, p. 42). As Žižek tells it, there is a pronounced element of Entlassen or letting be in absolute knowing: ‘Hegel not only tolerates but demands that we allow the irreducible otherness of nature remain other’ (2020, p. 8). Or, as McGowan updates the Hegelian dialectic of dislocated social subject confronting dissonant nature for the era of global environmental upheaval: ‘[t]he climate crisis . . . is the point of absence of every social order. What every society shares today is the environmental catastrophe we cannot master’ (2020, p. 200).

It is important to keep in mind that Hegel’s nature is unassimilable by this logic not merely because it is unreachably alien to us, but because its inherent transience prevents it from being at-home with itself. This resonates with the way that we conceive of our earthly multitudes as unceasingly open, provisional and incomplete in their relation to the
immanent changeability of our planet. As with McGowan’s point above about all societies experiencing vulnerability to climate crisis, our own schema of ultimately insuperable collective exposure to planetary multiplicity draws us into the issue of universality that has been such a flashpoint in the social science encounter with the Anthropocene hypothesis (Clark & Szerszynski, 2021, pp. 35–38, 49–52).

In contrast to the blanket disavowal of the universal that characterizes much contemporary social and philosophical enquiry, resurgent Hegelian scholarship has tended to affirm the inextricability of notions of particularity and universality in Hegel’s thought. For the theorists we have been referencing, Hegel is indeed one of the progenitors of the idea that all assertions of universality expose or generate unassimilable particularities (Comay, 2011, pp. 119–120; Žižek, 2012, p. 523), and that each particular falls short of full self-identity (McGowan, 2020, p. 45). By this reasoning, what Hegel is committed to is a universality not of shared positive knowledge or goals, but of impurity, incompleteness, non-belonging and contingency (see Žižek, 2012, p. 175). As subjects, we meet with others in this way across and through the rift of our fallible being and our mutual experience of the sundering of the world. So far from the attainment of universal intelligibility and empowerment, contends Comay, ‘[a]bsolute knowing is just the subject’s identification with the woundedness that it is’ (2011, p. 130).

While the ‘multi’ in our earthly multitudes refers to the non-generalizable aspect of working or playing with specific constellations of materials, processes and forces, it also attests to the universal exposure of earth-oriented practitioners to the inconstancies – at every scale – of the planetary fabrics into which they weave themselves. If those who deploy open-field fire skilfully appreciate that different situations require different fires, so too are they bound by mutual recognition that every burning comes with its own risks, its potential to flare into something more or other than desired (see Bowman et al., 2016, p. 8).

We would add that every earthly multitude embodies and is animated by something of the excessiveness of the planetary powers it has joined forces with, such that this spark of volatility smoulders within as well as without (Clark & Szerszynski, 2021, pp. 46–49).

As we read it, the Hegel-inflected universalism of Comay or McGowan does not so much erect a common platform of global social injustice or human frailty as it summons Western collectives to interrogate the challenge that self-division poses for their identities while acknowledging that others will have their own version of riftedness and fallibility – including those injuries inflicted or exacerbated by the former. Not only does this imply facing up to the untimeliness of all encounters – the inevitable failures of mutual recognition (Comay, 2011, p. 126) – it also means accepting that our other-directed projects and imaginings will not bring wholeness to us, them or the world. ‘It is only through recognizing that the other is not a solution that one envisions a world of equality’, concludes McGowan (2019, p. 230).

If this approach to the Hegelian pursuit of reconciliation compels us to work relentlessly with our own inheritance, so too would one hope that it respects the right of others to review the achievements of their forebears and find them wanting in certain respects – as Whyte (2018), for example, is willing to do. On the other hand, such a task seems to render much more general the question about how to become a good ancestor that is most familiar from Indigenous discourses (Kimmerer, 2013, p. 9; Whyte, 2018, p. 229). It is here, we would hazard, that a revitalized Hegel converses most vividly with our earthly
multitudes. For the idea of an Earth out-of-step with itself underscores that even the most
time-tested and hard-won practices might be rendered untimely by unforeseeable plan-
etary transformation, just as it reminds us that suppressed or disfavoured knowledge and
skills may irrupt into relevance as their worldly context undergoes reconfiguration.
Within this temporal spiral, ancestors and descendants, past and future earthly multi-
tudes, reinvent each other, just as the Earth constantly redisCOVERs and repurposes its own
deply layered productions.

For all our enthusiasm with the idea of Hegel inducting a dynamically self-differen-
tiating nature into the inner sanctum of modern European thought, however, we ques-
tion the need to put so much rhetorical stress on ‘contradiction’, ‘antagonism’, the
‘against itself’ when the focus is not strictly on social conflict. In this sense we find
ourselves more drawn toward terms such as ‘out of step’, ‘nonsynchronous’, ‘partial’
and ‘imperfect’ used by recent commentators – which temper Hegel’s more aggressive
and martial idiom. By the same token, while allowing that trauma, grief and wounding
accompany extreme experiences of environmental variation, we want to leave room
for engaging with change in more opportune and favourable ways. Even if there is to
be no final harmonization of any earth-oriented practice with the planetary variability
and volatility, there is much to affirm in the way so many earthly multitudes have
learnt to work with and through this inconstancy. With skilful intervention, as we have
seen, fire is neither a fully compliant nor an utterly intractable force but can become a
medium of satisfying or even exultant experimentaton. ‘They were beautiful fires,’
recalls Steffensen of well-timed cultural burns, ‘each one lit up in the right place’
(2020, p. 81) – a sentiment shared by many who work and play knowledgeably with
the stuff of their worlds. For those whose memory of changeable land and sky runs
deep, life-threatening transformation can be viewed as more of a gathering-in or reju-
venation of the world in anticipation of renewed giving than as an act of violence or
animosity. ‘Even a wounded world holds us, giving us moments of wonder and joy’,
vouches botanist and member of the Potawatomi nation, Robin Wall Kimmerer (2013,
p. 327). And in the eyes of some earthly multitudes such an affirmation of the funda-
mental generosity of existence is extended to the way that the Earth experiences its
own disturbances or upheavals. In Kimmerer’s words: ‘[t]he grasses remember the
nights they were consumed by fire, lighting the way back with a conflagration of love
between species’ (2013, p. 248).

What light, then, can our consideration of cultural burning shed on the contestation
over geoengineering with which we opened? In ways that resonate with other examples
of careful and adept earthly multitudes, cultural burning is a profoundly place-based
project that at the same time contributes to an increasingly global acceptance of the
importance of ‘pyrodiversity’ and the power of well-deployed fire to mitigate some of
the impacts of changing Earth systems (see Bowman et al., 2016, p. 8). Or as we might
say, it is contingency flaring into necessity. This is at once a cultivation of collective
selves and a remaking of the world – albeit one that Hegel himself would not have rec-
nized as an exemplification of what he called reason and freedom. Aerosol-based solar
radiation management, by contrast, is not only premised on ‘a level of understanding of
the planetary system that does not exist’, it assumes an understanding that cannot exist,
because the planet is not self-same or present to itself.
For us, the value of a retroactive reading of Hegel is not that it provides a quick fix for separating geoengineering from more modest, localized material-energetic interventions, but that it focuses attention on dilemmas common to all who work with the ‘rough edges of the world’ (see Ingold, 2013, p. 73). An appreciation of worldly inconstancy and inherent limits to intelligibility, we suggest, guides the more time-tested earthly multitudes. And in this sense, what is most concerning about certain kinds of geoengineering proposal is less their experimental and interventionist impetus than their unwillingness to learn from a world of vastly more experienced, nuanced and judicious attempts to ‘engineer’ worlds and selves.

As McGowan (2019, p. 245) has it, Hegel understood progress as ‘the movement from more easily resolved social contradictions to more intractable ones’ – these thornier challenges including the derangement intrinsic to material reality itself. If that is not the ‘progress’ of replacing cultural burning with fossil fuels or stratospheric aerosol injection or even fields of solar panels, neither is it the abandonment of all hope in the human subject becoming more aware of itself and its world. More than simply learning from experience, the cultivation of reason and the crafting of livable worlds are a matter of confronting the excess in every accommodation to an inherently excessive Earth. That ‘everything ancient was once new’ is a vital intuition which applies as much to the Earth as it does to any human collective, as relevant to planetary multiplicity as it is to earthly multitudes. With all genuine newness, for substance as for subject, comes both the erasure of arrangements that once were and the unleashing of potentials whose full trajectory is unknowable. And it is by working with and through this predicament that earthly multitudes can hope, at least provisionally, to advance their cognitive and practical traction on the world.

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References
Bowman, D., Perry, G., Higgins, S., Johnson, C., Fuhlendorf, S., & Murphy, B. (2016). Pyrodiversity is the coupling of biodiversity and fire regimes in food webs. Philosophical Transactions of the Royal Society B, 371, 20150169. http://dx.doi.org/10.1098/rstb.2015.0169
Brockman, J. (2009). We are as gods and have to get good at it. http://www.edge.org/conversation/stewart_brand-we-are-as-gods-and-have-to-get-good-at-it
Case, E. (2021). Everything ancient was once new: Indigenous persistence from Hawai’i to Kahiki. University of Hawai’i Press.
Clark, N. (2018). Fire: Pyropolitics for a planet of fire. In K. Peters, P. Steinberg, & E. Stratford (Eds.), Territory beyond terra (pp. 69–85). Rowman & Littlefield.
Clark, N., & Rickards, L. (in press). An Anthropocene species of trouble? Negative synergies between Earth system change and geological destratification. The Anthropocene Review.
Clark, N., & Szerszynski, B. (2021). Planetary social thought: The Anthropocene challenge to the social sciences. Polity.
Clark, N., & Yusoff, K. (2014). Combustion and society: A fire-centred history of energy use. Theory, Culture & Society, 31(5), 203–226.
Cogos, S., Östlund, L., & Roturier, S. (2019). Forest fire and indigenous Sami land use: Place names, fire dynamics, and ecosystem change in northern Scandinavia. Human Ecology, 47, 51–64.
Comay, R. (2011). *Mourning sickness: Hegel and the French Revolution*. Stanford University Press.
de la Cadena, M., & Blaser, M. (Eds.). (2018). *A world of many worlds*. Duke University Press.
Denis, E., Pedentchouk, N., Schouten, S., Pagani, M., & Freeman, K. (2017). Fire and ecosystem change in the Arctic across the Paleocene-Eocene thermal maximum. *Earth and Planetary Science Letters*, 467, 149–156.
Furberg, M., Evengård, B., & Nilsson, M. (2011). Facing the limit of resilience: Perceptions of climate change among reindeer herding Sami in Sweden. *Global Health Action*, 4(1), 8417. doi:10.3402/gha.v4i0.8417
Hegel, G. W. F. (1953). *Reason in history, a general introduction to the philosophy of history*. Liberal Arts Press.
Hegel, G. W. F. (1969). *Science of logic*. Humanity Books.
Hegel, G. W. F. (1970). *Hegel’s philosophy of nature: Being part two of the encyclopaedia of the philosophical sciences (1830)* (A. V. Miller, Trans.). Clarendon Press.
Hegel, G. W. F. (2001). *The philosophy of history* (J. Sibree, Trans.). Batoche Books.
Ingold, T. (2013). *Making: Anthropology, archaeology, art and architecture*. Routledge.
Kimmerer, R. W. (2013). *Braiding sweetgrass: Indigenous wisdom, scientific knowledge, and the teachings of plants*. Milkweed Editions.
Kimmerer, R. W., & Lake, F. K. (2001). The role of Indigenous burning in land management. *Journal of Forestry*, 99(11), 36–41.
Kuhlken, R. (1999). Settin’ the woods on fire: Rural incendiarism as protest. *The Geographical Review*, 89(3), 343–363.
Langton, M. (1998). *Burning questions: Emerging environmental issues for Indigenous peoples in Northern Australia*. Centre for Indigenous Natural and Cultural Resource Management, Northern Territory University.
Leach, M., Fairhead, J., & Fraser, J. (2012). Green grabs and biochar: Revaluing African soils and farming in the new carbon economy. *Journal of Peasant Studies*, 39(2), 285–307.
Lövbrand, E., Beck, S., Chilvers, J., Forsyth, T., Hedrén, J., Hulme, M., Lidskog, R., & Vasileiadou, E. (2015). Who speaks for the future of Earth? How critical social science can extend the conversation on the Anthropocene. *Global Environmental Change*, 32, 211–218.
Lundy, C. (2016). The necessity and contingency of universal history: Deleuze and Guattari contra Hegel. *Journal of the Philosophy of History*, 10, 51–75.
Malabou, C. (2005). *The future of Hegel: Plasticity, temporality and dialectic*. Routledge.
Marder, M. (2015). *Pyropolitics: When the world is blaze*. Rowman & Littlefield.
Mazza, P. (2021). Saami indigenous back down Gates-funded geoengineering experiment. *The Raven*. https://theraven.substack.com/p/saami-indigenous-back-down-gates
McGowan, T. (2016). The insubstantiality of substance, or why we should read Hegel’s Philosophy of Nature. *International Journal of Zizek Studies*, 8(1), 1–19.
McGowan, T. (2019). *Emancipation after Hegel: Achieving a contradictory revolution*. Columbia University Press.
McGowan, T. (2020). *Universality and identity politics*. Columbia University Press.
Pyne, S. (1994). Maintaining focus: An introduction to anthropogenic fire. *Chemosphere*, 29(5), 889–911.
Pyne, S. (1997). *Vestal fire*. University of Washington Press.
Pyne, S. (1998). *Burning bush: A fire history of Australia*. Henry Holt.
Pyne, S. (2000). Where have all the fires gone? *Fire Management Today*, 60(3), 4–6.
Pyne, S. (2001). *Fire: A brief history*. University of Washington Press.
Sámi Council. (2021). *Regarding ScOpEx plans for test flights at the Swedish Space Corporation in Kiruna*. www.saamicouncil.net/news-archive/open-letter-requesting-cancellation-of-plans-for-geoengineering
Savransky, M. (2021). *Around the day in eighty worlds: Politics of the pluriverse*. Duke University Press.

Steffensen, V. (2020). *Fire country: How Indigenous fire management could help save Australia*. Hardie Grant Travel

Whyte, K. (2018). Indigenous science (fiction) for the Anthropocene: Ancestral dystopias and fantasies of climate change crises. *Environment and Planning E: Nature and Space*, 1(1–2), 224–242.

Žižek, S. (2012). *Less than nothing: Hegel and the shadow of dialectical materialism*. Verso.

Žižek, S. (2020). The greening of Hegel. *The Philosophical Salon*. https://thephilosophicalsalon.com/the-greening-of-hegel/

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