

The Climate Politics of Care Practices: A Conceptual and Political Exploration of More Than Human Atmospheric Care Under Conditions of Air Pollution

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Krisis 43 2023, (1): 43-62.

Abstract

In the struggle for breathable air amid pollution and climate change, both resistance and inspiration can be found in “atmospheric care practices” (Vine 2019). In this article, I embed these practices in a more than human political approach (Puig de la Bellacasa 2017). More than human atmospheric care practices work to undo toxic harm both on a material and social level while intimately involving human beings with more than human worlds. In so doing, they are demonstrative of different kinds of agency and political activity that open up alternative ways of relating and responding to climate change.

Keywords

Air, Breath, Care politics, More than human, Pollution

DOI

<https://doi.org/10.21827/krisis.43.1.37969>

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The Climate Politics of Care Practices: A Conceptual and Political Exploration of More Than Human Atmospheric Care Under Conditions of Air Pollution

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Both in theory and in practice, people were looking to the sky for clues about how to think relationships between (and beyond) humans

(Ahmann 2020, 465)

The ethical obligation to remediate neglect is asymmetrical and historically situated: today it might involve more humans assuming the everyday responsibility to intervene in unbalanced worlds, to respond to a biopolitical situation in which ones are in measure to care for others who are in need of being cared for, and to acknowledge the care value of more than human agencies

(Puig de la Bellacasa 2017, 162).

Introduction

What may be learned from looking at the sky in 2022 about current and future ways of living, relating, and responding to climate change? As a philosopher working on the politics of breath in the Netherlands, I tend to discern a bleak picture: the port of Rotterdam once again emerged as the most polluting in Europe (Transport and Environment 2022). Tata Steel is being sued by the public prosecutor after reports indicated significant differences between actual emissions of heavy metals and those reported (van Bokkum 2022). Most airports lack the necessary nature permits to ensure their CO₂ and NO_x emissions do not damage surrounding life, and all the while the ongoing “nitrogen crisis” puts construction plans for housing on hold and farmers under pressure (Salden 2020, Joosten 2021). Indoors, the situation is not much better: ventilation remains a bottleneck for indoor air quality in schools and offices and therefore in Covid-19 policy (Heijenga and Driessen 2020). Heat trapped in houses and cities is a recurring sustainability and wellbeing problem (Kennisportaal klimaatadaptatie, n.d.(a)), and increasingly frequent and longer periods of drought decrease the (stability of) agricultural yields and threaten water supply (Kennisportaal klimaatadaptatie, n.d.(b)).

In short, The Netherlands is in *atmospheric* trouble. On the one hand, (industrial, agricultural, commercial) air pollution and atmospheric quality issues are repeatedly underestimated and underregulated. By giving out cleaning *advice*, renovation *suggestions*, and ventilation *standards*, while keeping structural and larger-scale factors out of policy's sight, national and local governments defer responsibility for breathable air to residents and depoliticise toxicity and pollution by treating them as questions of (quantitative) management. On the other hand, ongoing and future climate change further increases the frequency and length of heatwaves and periods of drought, thereby putting an even bigger strain on agricultural crops, local flora and fauna, and (more) vulnerable human breathers such as young children, elderly, and people with respiratory disease.

This problematic bind puts the *breathability* of air, for human as well as other beings in the region, under pressure. In thinking about ways of living, relating, and responding in times of climate change, I therefore take air – the element most life forms rely on for their most basic survival and which we all inadvertently share – as my “place” of interest. For, in the crosshairs of harmful pollution and governmental neglect, approaching air in terms of breathability makes visible the claim that air and atmosphere are intimately embodied sites of imagination and political struggle. I wonder: how can we fight atmospheric troubles that are so thoroughly branched out and ingrained? And in doing so, what world(s) do we bring about, or, to put it the other way around, what world(s) are we fighting for?

In this article, I argue that in the struggle for breathable air we can find both resistance and inspiration in atmospheric care practices, and we should therefore embed them in a *more than human* political approach. This is, first, because more than human atmospheric care practices, uniquely in comparison to other political tactics, work to undo toxic harm both on a material and on a social level, while intimately involving human beings with more than human worlds. Additionally, in so doing, they are demonstrative of different kinds of agency and political activity which open up alternative ways of relating and responding to climate change.

To situate my argument, I introduce Tata Steel in section (I) as an archetypical example of continuing industrial pollution that structurally threatens the breathability of air for local inhabitants. After that, I turn to care practices as ways to foster breathability: in section (II) I introduce care politics and embed it in an atmospheric theoretical approach. In section (III), I

conceptualise “more than human atmospheric care practices”, drawing mainly on María Puig de la Bellacasa’s (2017) feminist and new materialist work on *more than human care* in *scientific* practices and Michael Vine’s (2019) anthropological work on *atmospheric* care practices in *California*. This conceptual work is necessary since a more than human approach to care aimed at breathability has not been developed before. In the final section, (IV), I present three arguments for the political significance of more than human atmospheric care: (1) more than human atmospheric care practices materially and socially undo toxic harm, (2) they forge intimacies with other than human beings and invite inhabiting more than human worlds (in ruins), and (3) they turn critique into practice, thereby fostering counter-hegemonic ways of relating, living, and responding.

I. An Archetypical Example to Think With

In Tata Steel I have found a great example of underregulated and underestimated “toxic harm” by pollution, which I approach here as an archetypical example of the atmospheric troubles we – and more regions in the Global North¹ – are in. Tata Steel is one of the biggest industrial plants in The Netherlands and has been a source of pride and employment in the region. Recent reports, however, confirm that their emissions are harmful and possibly illegal. Drawing on Liboiron et al. (2018), I use the notion toxic harm to signal that the harm inflicted takes the shape of irreversible, structural damage to life.

By washing cars and windows of residents (many of whom employees) in the neighbourhood, the corporation carefully manages the nuisance caused by their visibly undeniable pollution (Kuiper and Kreling 2021) without taking responsibility for the less readily visible effects.² Residents who work in the factory, and/or have long family histories entangled with the factory and the region, have previously described Tata Steel as a good neighbour and employer that takes care of local residents as well as can be expected (van Bokkum 2021). But this sentiment is waning.

In February 2022, the public prosecutor announced a criminal investigation into the emissions of Tata Steel Ijmuiden B.V. and Harsco Metals Holland B.V. (located on Tata Steel’s terrain) because a lawsuit was filed in the name of over 800 individuals and some legal entities (Openbaar Ministerie 2022). Under inquiry is whether the corporation and/or its management were *intentionally* and *unlawfully* polluting air, soil, and surface water in the region. At that point

in time, several other lawsuits concerning the emissions of both corporations were already in process, facing the Economic Bench (*ibid.*).³

This investigation seized the political moment. Half a year earlier, a report published by the National Institute for Public Health and the Environment (RIVM) confirmed that industrial dust (among which lead, graphite and PAHs), which settles in surrounding towns, has negative health effects for local people, especially in cases – such as children playing on playgrounds – where settled dust is ingested by moving from surfaces onto hands and into mouths (Mennen et al. 2021). In response, the general reading public and politicians were outraged by Tata Steel’s conduct. Parliament demanded that Tata Steel radically reduces their emissions and for a moment even contemplated nationalisation (Tweede Kamer 2021).

And yet many residents felt the report to be *too little, too late*. For one, “everybody” already knew that Tata Steel has been polluting surrounding environments and continues to do so. If not because they could see thick, black dust on windows, bikes, and plants, then often because they noticed the effect on their breathing (Oldenbeuving and Timmer 2022) or on the health of others around them. Besides, long-term health effects were not part of RIVM’s research; whereas PAHs are known to be carcinogenic and lead poisoning disrupts brain development. Also, local and national governments have, for a long time, trusted and thereby protected Tata Steel’s interests over residents’ concerns. Some residents, understandably perhaps, find this situation deeply problematic and disconcerting: they would like to know what will be done against the corporation, or at least against its (illegal) emissions. Others see it as (an historical) part of living in the region.

II. Thinking Care Politics Atmospherically

In light of this duplicity, I am interested in exploring the question of how breathability may be fostered in the face of ongoing pollution that is historically and economically embedded. Which practices, processes, strategies, or otherwise can help in fighting this history of ecological and governmental neglect, and what clues may they hold for relating and responding to climate change? In the fight for breathable air, now and in the future, I propose a politics of care, and with that, I turn to care as a political framework. This is because care draws attention to non-formal practices of human and other living beings towards “as well as possible” co-existence (Puig de la Bellacasa 2017; Tully 2014). Moreover, it allows zooming in on the importance of learning and unlearning, which to me seem as indispensable to finding different

ways of relating, living, and responding in these times of ecological, environmental, and climate disaster (Singh 2018; Tsing 2015).⁴ Difference, here, is meant to indicate options beyond, or outside of, the hegemonic. For instance, learning to repair in a disposable-driven society, or to notice and respond to everyday needs of human and other than human beings in a time that favours efficiency and individual resilience over community. Or, unlearning to think in terms of mastering nature or mastering the “battle” against climate change. As a healthy, long-educated, urban and left-wing woman academic, I thus hope to find places and practices of hope and strength, but also of refusal and contestation (see also Honig 2021) in practices of care. As ongoing, necessary, and non-innocent parts of life, care practices deserve attention in the face of further, and working through current, collapse.

But care is a messy and confusing term that is often misunderstood as apolitical. And yet I think that it is exactly the political character of care that makes it difficult, or even impossible, to pin down. For care, rather than a neat moral framework, encompasses a plurality of practices, relations, and attitudes that are constitutive of the worlds in which human beings and others dwell. This daily, embodied, and relational way of co-constituting worlds and what it means to live in them is thoroughly enmeshed with questions of power, agency, and responsibility, as it may *open* or *foreclose* possible ways of co-existing. Therefore, in line with Honig (2021), I see care also as a place of refusal. A refusal that is part of a feminist politics in response to (systemic) neglect.

Fisher and Tronto famously wrote that care “includes everything that we do to maintain, continue, and repair our “world” so that we can live in it as well as possible” (1991, 40). This indicates that care is not only relevant in parenting, friendship, or healthcare relations and should not be assumed individualistic or dyadic (Tronto 1993, 103-104). Political theories of care instead explicitly include political and social forms of care: individual care has social or political bearing, policy can be approached in terms of care, and systemic as well as collective forms of care can be discerned (see for example Tronto 2013; Chatzidakis et al. 2020; Dowling 2021).

In this article, I theoretically explore care *practices* under conditions of air pollution. By practices I mean those (repeating) actions, gestures, (semi-)conscious habits and practical dispositions that are not mechanical nor systemic, but rather weave together everyday life. Practices

are often iterative and connected to learning and unlearning: to practice something is to get acquainted with a certain activity, to repeat and adjust, to embed it in relevant contexts (Puig de la Bellacasa 2017; Stengers 2005, 195). Although emphasis in this paper lies on practices employed by residents, I do not place responsibility for breathable air with them. Nor do I deny (the importance of) care on the level of policies, (democratic) processes, or systems. Neoliberalisation has, especially in (post-)industrial regions, deferred responsibilities for (ecological) public goods as much as possible to individual agents (Ward 2015; Isarin 2005). What I find in the care practices discussed in this paper, therefore, is not meant as a neoliberalism-flavoured solution- “if only regular people would care more, we would not be in this situation” – but as a source of resistance and inspiration. That is, I see these practices as building blocks for a broader care politics of breathability that is required in times of atmospheric crisis.

Since care practices are culturally constructed, ongoing, necessary, and thus non-innocent parts of life, I think it is important to avoid essentialising or universalising care. I am not developing a moral theory and therefore also not interested in defining “good” care versus “bad”. Instead, I take the plurality of care practices and the friction that these inadvertently produce as a guide for *critical questioning, resistance, and alternatives*. For as “we cannot possibly care for everything” (Puig de la Bellacasa 2017, 78), care involves “cuts” just as much as relations. “Choosing” to care for one thing often means to care less or have less time to care for another.⁵ Caring for or taking care of someone /something may just as much be a political positioning as voting or speaking out is often seen to be.

To care for something or someone thus necessitates (re-)drawing borders of in- and exclusion. But, how is drawing borders conceptualised in relation to atmospheric trouble or air pollution? As Peter Sloterdijk (2016) writes, “air” and “border” may be an unfamiliar combination to imagine, but an important one nonetheless; to take Tata Steel as an example: where do they “draw the line” regarding their neighbourly cleaning practices? Or to phrase that same question differently: who is part of the problem of pollution and who is not? How are these borders kept in place, or redrawn, by local human beings, and by other than human beings?

To draw borders of atmospheres in one way or another “remap[s] power, care, and blame” (Ahmann 2020, 466). This may refer to spatial or geographic borders, but it equally holds for borders mediating relations between “human worlds” and “nature”. For instance, by cleaning

cars and windows, Tata Steel chooses to care for specific things valuable to human beings but not to contribute anything to the living conditions for other than human beings in the region, nor for the physical health of human beings themselves. Since air is so clearly a more than human affair (van Balen 2021), exploring a politics of breathability requires a language to not only attend to human practices but also to those of other than human beings.

To come to a conceptualisation of such “more than human atmospheric care practices” in the section below, I draw upon two existing concepts of care: Puig de la Bellacasa’s (2017) work on more than human care informs my conceptualisation of more than human worlds and other than human agencies, but needs a reorientation to be useful in everyday encounters instead of scientific practices. *Matters of Care* moreover does not address breathability or air. In addition, Michael Vine’s (2019) work on atmospheric care practices in the Californian Owen’s Valley inspires my notion of practices aimed at breathable atmospheres but needs embedding in a European context. His work, moreover, is explicitly extended to other than human agencies and in more than human worlds in my approach.

III. Conceptualisation: The More Than Human in Atmospheric Care

Care as introduced above includes the possibility of caring for other than human beings, and thus for animals, fungi, microbes, objects, environments, and more (Tronto 1993, 103). But in Tronto’s work, and in many other political care theories, these beings only – or mainly – appear on the (not-) receiving end of human care practices. In her work on care in scientific practices, Puig de la Bellacasa (2017) redefines care by positioning it in an extended notion of “world” and by disrupting the “we” in Fisher and Tronto’s famous definition, because it alludes to human exceptionality in its first occurrence (“all the things we do”) and a focuses on human life in the second (“so that we can live as well as possible”). Rewritten, the definition of care reads: “everything that *is* done [...] to maintain, continue, and repair ‘the world’ so that all [...] can live in it as well as possible” (Puig de la Bellacasa 2017, 161).

Like Tronto and Fisher, Puig de la Bellacasa places “the world” in quotation marks, possibly to signal that “world” is a troublesome term which more concretely refers to a compilation of more than human *worlds* woven together by caring relations and by the care and other practices that co-constitute them. Continuing this pluralisation but in a different manner, I approach these worlds in terms of *atmospheres*, because atmospheric thought makes air – so often forgotten about in philosophy from ontology to phenomenology and politics (Irigaray 1999;

Sloterdijk 2016) – explicit. Living, breathing beings find each other in atmospheric environments that are simultaneously co-constituted by them and constitutive of who and what they are, and of whom they encounter in them. Living is therefore not only living-with (Haraway 2017) but living-in and -with (Sloterdijk 2016; van Balen 2021).

Atmospheric thought in this way proposes a lived and embodied approach to air and airborne beings/particles that involves noticing the ways in which air – and those things that are like air to beings living in and with it – has the capacity to “lift and settle” (Choy and Zee 2015), shapeshift spatially and temporally (Ahmann 2018; 2020), enter and affect the body (Irigaray and Marder 2016), and sustain and take away breath (Simmons 2017). This does not mean air and atmosphere are synonymous. In line with atmospheric theory, I define air capaciously: air can be described in terms of the *particles* it consists of (N₂, O₂, Ar), but it can equally be approached in terms of *conditions* such as drought, heat, and humidity. Some species, moreover, make up air’s *habitations* and can be (almost) indistinguishable from air and its breathability. Bacteria, fungi, viruses, and insects figure centrally in changing climates whether in terms of collapse, migration, plagues, or pandemics. Air thus comes to the fore in this article interchangeably in terms of particles, conditions, and habitations. Encompassing not only “physical” air but also “metaphoric” air, atmospheres refer to that which is *like air* to living beings. Particular atmospheres “connect” those who are involved (Ahmann 2020), separate “us” from “them” or “inside” from “outside” (Sloterdijk 2016), and condition (inter)action.

From an atmospheric perspective on worlds, existence (or rather co-existence) is thus always an embodied and situated existence in atmospheres that connect all of us (in difference and non-universally) via lungs, pores, and respiratory systems, but irrespective of state borders, doors, and skins. Breathability, in this way of thinking, comes to the fore as a common good: almost everything that lives on earth is dependable on air being breathable (to them). Introducing atmospheric thought into Puig de la Bellacasa’s approach to care, I therefore propose to define care atmospherically, as *everything that is done to maintain, continue, and repair worlds (atmospheres) so that they are breathable to all*. By replacing “all may live in it as well as possible” with “breathable to all”, I additionally remove the suggestion of maximisation and instead revert to a notion of breathing (well) that connects human and other than human beings ecologically as well as metaphorically.⁶

In his work on air quality issues in the Owens Valley in California, Michael Vine (2019) describes atmospheric care practices as “positive air-conditioning”, thereby replacing Sloterdijk’s often criticized defensive political interpretations of atmospheres (Mutsaers 2015; van Balen 2021).⁷ Atmospheric care practices are characterised by Vine as a “circuitous route” (2019, 27) of care for loved ones and others, including the self. That is, they are “space-making practices” (2019, 30) directed at breathability. The space “made”, or rather co-produced, with others in these practices is a location and/or situation in which the air is (more) breathable for those inside. Extending Vine’s conceptualisation, I argue that these practices are not uniquely human. As explained above, care does not only include caring *for* other than human beings, but also *by* and *with* “them”. Living in and with (un)breathable atmospheres conditions more than human worlds and is co-constituted by more than human agencies. As such, other than human beings take care of breathability in their own ways, and as human beings we are dependent on these processes in many respects. By including these more than human caring practices, we can better account for the intertwining of different agencies in co-creating breathable atmospheres.

Acknowledging a multiplicity and differentiation of agencies does not absolve human beings from having responsibility in responding to the ecological, environmental, and climate disasters we are all in. More human beings can and therefore should take “everyday responsibility” to intervene in unbalanced worlds (Puig de la Bellacasa 2017, 162). Breathable atmospheres concern not only breathability for human respiration but also for plants, animals, bacteria, and others. Instead of allowing and cultivating collective neglect, for human beings, and specifically for those with the capacity to do so, practicing care thus means to recognise and tend to the diverging perspectives, agencies, vulnerabilities, and needs of those living in and with unbreathable atmospheres.

IV. Situating Atmospheric Care Politically

I started this article with the suggestion that more than human atmospheric care practices could be places of resistance as well as inspiration. To shed light on their relevance in these respects, while situating the conceptualisation above in concrete practices, I explore three arguments in this final section as they help me make political sense of the local responses to airborne pollution in the region surrounding Tata Steel.⁸

Undoing Toxic Harm

More than human atmospheric care practices work to undo toxic harm. For instance, Dirk, a 51-year-old male with heart problems, looks for different routes to walk with his dog on days he can hear himself breathe squeakily. Traversing the streets together, Dirk takes notice of the many developing cancer and heart problems among his neighbours (Oldenbeuving and Timmer 2022), thereby tracing the long-term effects of toxic harm as it tears through his community. On longer walks into the dunes, Dirk and dog encounter other instances of toxic harm: the dune area suffers from heightened nitrogen deposition which has a diminishing effect on biodiversity as it actively changes the soil composition (de Bruijn 2020). Biodiversity plays an important role in the function of the dune area as a barrier between sea and land, as a living space for many animal species among which are birds, bees, and toads, and as a natural cleaning system for potable water (ibid.; PWN, n.d.). The lead that is emitted by Tata Steel cannot be dismantled by plants or animals and is poisonous to most living organisms, among which are humans. Nevertheless, plant-life and bacteria continue to live in the dunes taking up CO₂, and the sand and salt filter the air while creating habitats for those with a preference for dune ecosystems.

By figuring out breathable spaces to walk through and by paying attention to long-term health issues which neighbours suffer from because of that same air, Dirk and his dog practice atmospheric care. The same goes for plants filtering out CO₂ and sand harbouring, for example pollinating, insects by contributing to the air quality in dune areas. These practices are local ways to repair, maintain, and continue the breathability of the air/atmosphere over and against the harmful neglect perpetuated by, in these examples among others, Tata Steel.

The examples furthermore show that more than human atmospheric care works to undo toxic harm, both on a material and social level. This is not a complete undoing, of course: toxicants cannot be cleaned up or filtered out, and the idea that this is (or will be) possible is liberal ideology rather than scientific fact (Liboiron et al. 2018; Povinelli 2021). And yet, caring for the breathability of air and atmosphere can partially and/or temporally alleviate toxic harm by co-producing spaces in which the air quality is better, or in which the atmosphere is less hostile to the breathing needs of those within it.

A first way atmospheric care undoes toxic harm is by creating (co-producing, tracing) places in which the air is (more) breathable by tending to the organisation or arrangement of that

space and the demarcation of it. This may mean finding ways to reduce pollution to a minimum in specific places. Air filters, glass covering for gardens, taking notice of “good” and “bad” days and adjusting to those; all of these are ways to live with the presence of toxicant pollution while carefully constructing spaces in which the air is (more) breathable. Likewise, planting pollinator-friendly vegetation for wild bees, or leaving the lawn un-mown for them, are ways of fostering breathability through practices of space-making. By their own means, plants, animals, bacteria, and others contribute to breathable air for themselves and often for the species on which they, in turn, rely. Plant roots dig through soil thereby keeping it loose enough for worms to traverse through and breathe in. Pollinators frequent certain plants and spread out their seed over distances the plant would not reach alone.

A second way to undo toxic harm through care is by paying attention to and spending time on those beings, processes or places that are structurally pushed out of sight or neglected as a result of toxic harm. In the Tata Steel example, long-term health effects that have been kept out of scope for decades become visible as a pattern because Dirk traces their interconnections. Simultaneously, Dirk and dog tend to a sense of community, to neighbourly love. Among those neighbours, other than human beings come to the fore as parts of that community and as potential allies in the struggle for breath.

A third way to undo toxic harm is by impairing or obstructing the “opportunities” (Liboiron et al. 2018, 334) that toxicants and toxic harm create for exploitative relations, exclusionary spaces, and inequalities. When the dog and Dirk walk the neighbourhood and account for all the cases of cancer or heart disease, they carefully work to undo the social and societal neglect that allows for these diseases to spread “under the radar”. By doing so they contribute to it becoming impossible for Tata Steel to produce steel without figuring in societal and environmental cost. Practicing atmospheric care in this way problematises and stumps relations conducive to continuing toxic business as usual. In replacing ignorance for attention, and in moving from neglect to care, social relations are remade not only between individuals, but also on a larger scale.

Forging Intimacies

These social relations are not confined to human beings. When human beings tend to breathability in such practical ways, something changes in the relation between actor and environment. Practicing atmospheric care means that attention is directed towards often-ignored parts

of life, and the air and those things that are like air to “us” become reaffected (Cf. Puig de la Bellacasa 2017) in the sense that tending to the breathability of air cultivates a proximity, an involvement or *intimacy* with and through air, which engages us affectively. In Kennemerland concerned parents started the non-profit organisation FrisseWind.nu which literally means “fresh breeze [dot] now” but also colloquially refers to a new regime or reign. With this organisation, which in its name explicitly connects the material and social or systemic aspects of breathable atmospheres, parents call attention to the basic rights of children to “clean air, clean water, a healthy and safe home” (FrisseWind, n.d.; Borst 2021). What is interesting here is that parents, formerly unconcerned with environmental or ecological issues, now intimately connect themselves to other than human beings (e.g., animals, plants) and particles (e.g., particulate matter, airborne lead) in their surroundings because of the role they play in their (shared) struggle for breathable air, and more broadly, a healthy environment.

This indicates that affective relations grow and multiply as one starts noticing new and different things about their environment. Tending to the breathability of air *extends the social* to include other than human beings. These more than human intimacies come to the fore in a different light if we consider the natterjack toad as a second example. The natterjack toad has been found on Tata Steel’s terrain in a study on protected species that live within the development zone of the factory. Akin to Anna Tsing’s (2015) matsutake, the natterjack toad thrives in places without or with almost no vegetation, in which it seeks out temporary and shallow waters such as in tire tracks and rain puddles. By inhabiting these ruinous grounds, they ensure that other than human beings cannot be disregarded as part of the living community involved with (the repercussions of) Tata Steels activities, even within the borders of the factory. Instead of withdrawing from Tata’s industrial sites, the natterjack toad thus redraws borders between the factory and its “surroundings”, thereby “remap[ping] power, care, and blame” (Ahmann 2020, 466). In a more than human political approach, it is important to learn to recognise differentiated other than human agencies.

Inspired by the toad’s tactic, we might pay attention to atmospheric care practices as a variation on practices of *homemaking*: of becoming familiar with air as a place in and with which living takes place. I borrow the concept of homemaking from critical phenomenologist Mariana Ortega’s (2019) “home-tactics”, which she developed to account for the ways in which people from marginalised groups foster a feeling of being at home in places in which this is not

automatically or readily the case. To account for the political power of these practices, Ortega describes them as “ingenious, [more or less] improvised resistant practices performed by those who do not have power” (2019, 169). By building a life on the toxic grounds of the factory, natterjack toads make a home out of a space that was not meant to host (especially endangered) living beings. Of course, fostering to feel “at home” in times of atmospheric trouble has a strange and uncanny ring to it (Doeland 2019). In damaged worlds, practicing intimacy with forgotten “things”, and re-affecting our relationships with those things, means that the uncanniness of the situation(s) we are in becomes more tangible, as it explicitly enters lived experience.

Turning Critique into Practice

This uncanniness of feeling at home in and with atmospheric troubles precludes the final argument for the relevance of more than human atmospheric care; it relates critique to counter-hegemonic practice. To come back to the natterjack toad, by inhabiting desolate stretches of industrial grounds, these toads not only signal but also actively counter the designation of these places as “sacrifice zones”. Even though many might argue that grounds within the borders of the factory are already so polluted that they may be developed (further) into industrially productive places, the simple presence of the natterjack toad (ethically and juridically) problematises this position.

In like manner, Douwe, a 59-year-old “self-made jurist” from Wijk aan Zee, has been reading through environmental permits for 20 years and attends almost every public meeting concerning Tata Steel in order to speak up (Kreling and Schoorl 2019). He thereby withstands the boringness and slowness of decision-making processes on pollution-restrictive policy and future development on which much activism and attention breaks (Ahmann 2020). He scoldingly does away with Tata Steel’s neighbourly care as a ruse meant to keep locals quiet and charitable. Walking bare feet through the town and surrounding region, Douwe seemingly easily connects complex dossiers such as the Dutch nitrogen crisis with its repercussions on local ecosystems and building permits, Tata Steel’s historic role as the main employer in the region and as such a source of local pride, and the different particles and gasses emitted by different parts of the factory, including those other companies residing on Tata Steel’s terrain.

What this shows is that practicing atmospheric care turns critique into counter-hegemonic practice and vice versa. This is because tending to the world with care is at odds with the pace

and capitalist rationality of this moment in time in this (“Western”, European) place on earth. By tending to the breathability of air as a route to care for one another, more than human residents embed Tata Steel’s activities and emissions in discourses on healthy living environments. Not a development zone, but a home to endangered species and a neighbour to many more. Not a question of counting particles and keeping up production, but air as something living beings breathe in and depend on. Reinscribing the meaning of air and particles in this way makes explicit the point that hegemonic forms of industry and the neglect and toxicity that come with them are untenable.

In their atmospheric care practices, moreover, residents form new more than human coalitions which bring together beings in their shared fight against business as usual. In these coalitions, dominant power relations, taken-for-granted procedures, and demarcations of who and what is involved are questioned. Business as usual can no longer rely on a “shared understanding” of the economic benefits between local government and industry. Instead, an active discussion in which polluters are held publicly responsible is demanded by growing numbers of residents, as well as people who may not live locally but who consider breathable air a public problem on a wider scale.

Lastly, in the search for ways to tend to and repair environments, air, and health, alternative ways of relating to one another and toxic environments are practiced. Moreover, locally embedded ways of responding to ongoing pollution are developed. For instance, confronted with a staggering lack of information during an acute and frightening stench-event after office hours, neighbours worked together to tend to those who got unwell, called local authorities, and kept everyone informed (FrisseWind, n.d.). Such ways of relating and responding may form the basis for contesting ideas on how to do (or not do) industry in polluted environments and under conditions of ongoing ecological and climate disaster.

Conclusion

In this article, I conceptualised more than human atmospheric care practices and explored the political role they play in the face of ongoing, historically and economically ingrained toxicant pollution. This conceptualisation brought me to define more than human atmospheric care as *everything that is done to maintain, continue, and repair worlds (atmospheres) so that they are breathable to all*. Exploring these practices as space-making practices in terms of arranging, demarcating, and home-making, I traced their political relevance in times of atmospheric

troubles in the Netherlands, and by extension in more regions around the Global North. First, I argued that more than human atmospheric care practices work to undo toxic harm both materially and socially. I illustrated this by referring to Dirk and his dog, who walk the neighbourhood in search of a place where they can breathe freely while attending to the effects of lifelong pollution and systemic neglect. Secondly, I argued that more than human atmospheric care forges more than human intimacies by (1) extending the social, and (2) re-affecting worlds as places of co-existence in and with pollution, climate crisis, and capitalist ruins. The natterjack toad showcased how this is not only a human-to-nonhuman affair, but one that brings to the fore and differentiates other than human agencies as well. Finally, I argued that more than human atmospheric care is a form of practicing critique that reinscribes air with biological, social, and political meaning, gives rise to new coalitions, and in which alternative, counter-hegemonic, ways of responding and relating are developed. Douwe's persistence and the way in which neighbours came together demonstrated that care does not only hold a critical potential because it can point to places of neglect, but it also brings into existence alternative ways of co-existing in damaged worlds.

The conceptual and political exploration in this article shows that in looking for ways to respond to and live with atmospheric troubles, more than human atmospheric care practices combine critique with practical ways of learning and unlearning that are needed to bring about possible alternative futures. This calls for their revaluation aside from formal political tactics. Moreover, since practicing atmospheric care comes with the formation of new, more than human, coalitions brought together in their concern for breathable air, progressive and green political organisations could learn a lot from paying attention to them. Part of that learning process will need to include a revision of the idea that toxicant pollution can be cleaned up or moved, and by extension that the toxic harm it inflicts can be done away with without changing how we conduct ourselves industrially, agriculturally, and commercially (Povinelli 2021). Practicing atmospheric care makes it visible that in the midst of polluted environments living continues and is made possible by the care that more than human residents put into their environments and one another.

There are two concerns that I have nearing the end of this article. The first is the potential neoliberal annexation of atmospheric care practices as ways to divert responsibility away from governmental and industrial actors. Let me therefore reiterate that I am not interested in

practices of atmospheric care as solutions to, or substitutes for, a lack of adequate governmental regulation and commercial/industrial change. This leads me to my second concern. By politically exploring more than human atmospheric care, I do not mean to ignore or erase historically and currently less privileged, (and) vulnerable, beings that are left to their own devices in living with less-than-breathable air with serious harm and, not incidentally, death as a result. It is therefore important to keep in mind that (atmospheric) care practices are marked by intersecting questions of class, race, and gender. They moreover navigate differentiated vulnerabilities and precarities of specific living beings in relation to specific conditions. For instance, the acute awareness of the threat of lead poisoning to a pregnant biologist may lead to a different way of tending to the breathability of air around her than the manner of response enacted by a long-term Tata employee with developing respiratory disease. In case studies and/or by doing ethnographic research, these historical and situated specificities can and should be explored to further develop or adjust the theoretical work.

Acknowledgments

This publication is part of the project “Out of Breath: Towards a Politics of Breathability”, which received a PhD in the Humanities grant by the Dutch Research Council (NWO).

Notes

1] Even though I only refer to Dutch examples and sites in this article, I think the scope of analysis may extend to other (de-industrialising / post-industrial) regions in the Global North in which a combination of wealth and geographic location have (long) rendered atmospheric troubles relatively invisible.

2] Liboiron, Tironi and Calvillo (2018) argue that we must be careful not to confuse toxins for toxicants. For whereas toxins can wither away, be cleaned up, or contained, toxicant pollution only accumulates while it structurally changes the environments and beings it enters. Instead of ‘merely’ poisoning or killing living beings, the authors argue that toxic harm – the harm inflicted by toxicant pollution – is the ‘contravention of order at one scale and the reproduction of order at another’ (335). In the case of Tata Steel’s lead emissions, for example, lead poisoning is known to be harmful to the development of the brain and nervous system (WHO 2021) in many living organisms and cannot be broken down by any organism currently present in the region: it destroys ecosystemic and organic order and is as such not only an environmental, but also an ecological threat to life. However, these toxicants also reproduce order – that is, the production of stable, affordable, high-quality steel, at the scale of competing industrial processes. Wiping off windows, even wiping off whole areas, thus does not undo toxic harm. Rather, it sustains it.

3] The Economic Bench (*Meervoudig Economische Kamer* in Dutch) is a special court of three judges who deal

with complex and important economic criminal cases.

4] To briefly situate these references: James Tully (2014), in his work on civic and civil citizenship, describes many of the non-formal practices that make up the former as practices of care. María Puig de la Bellacasa (2017), as I come back to in section III, defines care as aimed at ‘as-well-as-possible’ living. In *Unthinking Mastery*, Julietta Singh (2018) emphasizes that it is the trope of ‘mastering’ something that we must unlearn to disentangle ourselves from the violence and anthropocentric hubris that have brought about environmental disaster. And finally, Anna Tsing (2015) explores other than human histories by learning to notice different things, beings, and storylines.

5] Since care is a necessary part of life, a political approach of care queers the language of choice. Do we ‘choose’ to care or is care something that (just) needs to be done? Who ‘chooses’ to care and who (can) ‘choose’ not to (knowing that others will pick up the slack)?

6] It goes beyond the scope of this article to theoretically explore breathability. Here, by breathable atmospheres I thus refer to atmospheres (material/metaphoric) that sustain living beings. This is an open-ended description and necessarily so. For what may be breathable to a 30-year-old healthy man may be directly harmful to a child with asthma or to bees for their ability to navigate. Moreover, what may be breathable on the short term can be life-threatening on the long term.

7] Vine (2019) develops his concept in Owens Valley (USA), where residents struggle with particulate matter pollution that results from ecological degradation due to water extraction. Being situated in another place entirely, the historical and social circumstances, ecological problems, political-institutional structures, and traditions of (indigenous) activism diverge from those in the Netherlands. However, since Owens Valley showcases residents having to take responsibility for breathable air in the face of industrial neglect akin to, for example, people in Tata Steel’s vicinity, I think that Vine’s conceptual contribution may be relevant beyond its original context.

8] The examples I discuss in section IV are compiled from and inspired by newspaper articles on Tata Steel and interviews with residents, scientific reports, and several websites (see in-text references). They do not present a case study but are used and extended to situate and illustrate the arguments put forth.

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Biography

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