Withdrawing from atmosphere: An ontology of air partitioning and affective engineering

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Abstract

The main objective of this text is to warn against atmospherics. However comfortable it might appear, an atmosphere is politically suspicious because it numbs a body into an affective embrace of stability and permanence. It becomes doubly suspicious because a body *desires* to be part of the atmosphere. For this reason, I rethink both affect and atmosphere ontologically rather than phenomenologically. I argue that an atmosphere is engineered by subsuming individual affects to what I call, following Sloterdijk, an atmospheric glasshouse. I suggest that this happens in four steps: a distinction between inside and outside through partitioning; inclusion of the outside inside; illusion of synthesis; and dissimulation. In order to do this, I begin with air as the elemental paradox of ontological continuum and rupture. I carry on with the passage from air to atmosphere while retaining the discourse around continuum and rupture. Finally, I indicate a way of rupturing the atmospheric continuum through the ontological movement of withdrawal from the atmosphere. The ultimate goal of the article is to sketch a problematic of atmospherics that puts together without synthesising an elemental ontology of continuum and rupture.

Keywords

Atmosphere, affect, air, withdrawal, engineering

> Air was new, Air was strong, Air would bear her up. She knew now.
> She was rooted in the world but the world was rooted in Air. Geoff Ryman (2006)

Welcome to your Glasshouse

In Geoff Ryman's novel (Ryman 2006), air is a necessity that extends to more than just the living. It circulates between human and animal bodies, technology, knitted objects, freshly

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prepared food, the dead, even a whole village high in an imaginary Asian highland, in which the novel takes place. The world is rooted in this air – but this is no ordinary air. This Air (with capital A) transcends the world's skin in gasping breaths, connecting while isolating, pumping information, dead bodies, new commodities, capitalist ventures, temporal jolts and odd weather phenomena. This air is atmospherically engineered to facilitate consumerism, marketing, project management, design techniques – all that in an isolated village with hardly any electricity or telephones.

This air is found inside, an in-built Internet-type databank that can be invoked through bodily functions. Hesitantly, some inhabitants learn to manage it, inevitably leaving the others behind. This air partitions while being partitioned. It is the air of an immense glasshouse. It *can* be shared, indeed it is engineered to be shared, but only in a prefabricated way, seemingly rooted in the desire of its participating bodies, while however eliminating all need for alternatives. Is this a waft of freedom? Or maybe the putrefaction of claustrophobia? You need to be breathing the same air in order to be part of us. You know of no other air. You desire the only air you know. This air has become an institutional affect.

It is imperative not to forget this kind of air, despite temptations to the opposite. Marin Nieuwenhuis calls this 'unregistered air' (Nieuwenhuis 2015b: 92), namely the kind of air inhaled without critical reflection, atmospherically offered as the only alternative. This air, polluted and gassed, or rationed and reserved for specific bodies, or indeed readily perfumed and seductive, is increasingly becoming our political, legal, architectural, cultural atmosphere. We are still rooted in air; but this air is now partitioned, engineered, conditioned, atmospherically contained, affectively directed and ontologically restricted. This air no longer moves freely between inside and outside, between breather and world; rather, it must negotiate various material and symbolic partitionings. Even this inside/outside is dissimulated to resemble something else, something ajar in the face of brutal closure.

From air to atmosphere, the partitioning is inevitable and its political impact vast. In its enclosure, an atmosphere directs bodies and their airborne affects in politically specific ways and for politically specific purposes. Of course, being an affective event (see Anderson, 2009; Thrift, 2008), an atmosphere is volatile and its control necessitates several subterfuges. But the greatest coup of an atmosphere is that it generates the very affects that desire its continuation: affects conscripted to the service of the atmosphere. Welcome to your glasshouse.

This means that the register must change. The usual phenomenological approach to atmospherics feeds into the very affects that perpetuate the atmosphere (see, however, Bogost, 2012; Ihde, 2009; Spinney, 2015). We need a distance from phenomenology. However difficult this might be (see Philippopoulos-Mihalopoulos, 2011; also Roelvink and Zolcos, 2014 and the whole special issue), it is a political responsibility: an atmosphere must be ruptured and its co-optation exposed. This can only happen, I argue, through an ontological approach that shows how an atmosphere directs individual and collective phenomenologies towards a specific horizon.

The main objective of this text is to warn against atmospherics. However comfortable, an atmosphere is politically and legally suspicious because it numbs a body (via the body's own desire) into an affective embrace of stability and permanence. Even so, I reserve a positive role for atmospherics. My ambivalence is manifest in the ethical ambiguity with which I employ concepts such as continuum and rupture, partition, inside and outside and so on. My purpose, therefore, is not to point to ethically problematic atmospheres (see for example Borch 2011, 2012), or to distinguish between positive and negative atmospheres

(see, however, Philippopoulos-Mihalopoulos, 2015), but to expose the ontology of atmospheric engineering. I am also interested in retaining the ambiguity of atmosphere as both a meteorological and an affective event (McCormack, 2008). For this reason, and this is the other objective of this text, I rethink atmospheric affects institutionally rather than subjectively. I argue that an atmosphere is engineered by subsuming individual affects to what I call, following Sloterdijk, an atmospheric glasshouse. The final objective of the text is to indicate a way of rupturing the atmospheric continuum through the ontological movement of withdrawal, itself not a passive gesture but a revolutionary movement of removing oneself from the atmosphere.

In what follows, I begin with air and perform the passage into atmosphere, while in *The limits of phenomenology* section, I lay out my objections to phenomenology. In the Institutionalising affects section, I look at the way affects become engineered in specific atmospheric ways and in the *Engineering an atmosphere* section, I address the main steps of the engineering process. In the section on *Withdrawal from atmosphere*, I suggest a way out of atmospherics, based on a strategically employed understanding of ontological withdrawal, and in the final section, *Lighter than air*, I describe a withdrawal into air. The text is structured around an ontological paradox of continuum and rupture, according to which all bodies are part of the same ontological surface, while at the same time withdrawing from each other. I employ the theories of Peter Sloterdijk, Niklas Luhmann, Reza Negarestani, new materialisms, Deleuzian ontology and others, while also referring to the art practice of Tomàs Saraceno, an international artist who has worked both with the expanded aspects of air and its enclosures into atmospherics through his constructions that trap air while allowing its permeability. The ultimate goal of the article is to sketch a problematic of atmospherics that puts together without synthesising an elemental ontology of continuum and rupture.

From air to atmosphere

Air poses a multiplicity of challenges. As a rule, air is boundless. It is not easily contained for either scientific or theoretical scrutiny. Unlike solids or liquids, air partitioning requires significant technological investment both for the initial separation and importantly for its maintenance. On the other hand, air is hard to perceive. While weather phenomena, such as wind or fog (Martin, 2011), and airborne smells or coloured gases briefly reminds us of air, the majority of times, as Luce Irigaray has shown, we forget air (Irigaray, 1983).

Air is often understood as a void. Timothy Choy finds that 'air is left to drift . . . neither theorized nor examined, taken simply as solidity's lack' (Choy 2011: 145). This could of course be, Choy continues, because 'there is no ''air'' in itself. Air functions instead as a heuristic with which to encompass many atmospheric experiences' (Choy 2011: 145). It is in that sense that Steven Connor describes air as 'pure mediation' (Connor, 2010). For my purposes, *air is a conduit that mediates between phenomenological self and atmosphere*, or indeed the passage between phenomenology and ontology. The perception and apperception of air is a question of oblique manifestations that tickle one's phenomenological antennas. The air must be moved, coloured or lit in order to become phenomenologically vibrant within the sensorially controlled circle of one's perception. In other words, air must be phenomenologically partitioned in order to be apperceived. Even early experiments on the nature of air involved a glass jar in which air (and usually some other thing) was trapped and at the same time opened to the scientific gaze. Through his glass tube filled with mercury, Evangelista Torricelli managed in the 1640s to show that the air is heavy, and that it forcefully pushes in all directions (see Walker, 2007: 15*ff*). Thanks to further partitioning,

we know that air bounces, vibrates and transmits (see Adey, 2014). Building on existing air partitioning, in 1859 John Tyndall constructed the first ever 'mini-atmosphere', an intricate Victorian glass model, complete with controlled heat and light sources (Walker, 2007: 90). Air partitioning does not only take place for the purposes of scientific experiments. It is something that occurs regularly, unthinkingly, naturally. Air has always been both a physical and a moral issue, as Adey (2015) points out. It is split in social tiers according to geography, financial security, aesthetics and so on. The more we partition air, the more we discover its elusiveness. In so doing, we become aware of a rather peculiar fact: the air is elusive *because* of its partitioning. The fresh air up on the hilltops is as elusive as the miasmic air down the urban underbelly: the affluent residents of the suburbs are not better placed to capture the air than the environmentally aggrieved urban poor. They are both captured by the atmospherics engineered with them and by them. Yet, the other side of air is often tantalisingly breathed in through the partition left ajar. The air, as element, remains elusive.

So what is the elemental nature of air? (Adey, 2015; and in particular, see Engelman's, 2015 and McCormack's, 2015 for their post-human responses to the challenge). On the one hand, air is full of opportunities, a vast openness (Irigaray, 1983), ready to be breathed in with future, available to be folded in the present, amenable to mnemonic bottling of the past: air as one infinite *continuum*. This aspect of the air has been apparent from very early on, from the first Greek philosophers. A fragment by Anaximenes of Miletus, known for elevating air to the principal originary element, reads: 'since we come into being by an efflux from this (*air*), it is bound to be both non-limited and rich so that it never fails' (Anaximenes of Miletus, 1948: 19). Air as always reliable, unlimited and rich with opportunities. In its ideal political dimension, Marin Nieuwenhuis finds that 'the air is not divisible on the basis of a territorial logic. The air's wholesome and ever-continuing body constitutes a politics that is radically democratic and equal' (Nieuwenhuis, 2015a). But there is another side to air, which has opened up to scrutiny only after the publication of works by Adey (2010), Connor (2010), Neocleous (2013), Nieuwenhuis (2013), Sloterdijk (2011) and Whitehead (2009) on the political and military use of air. No longer unlimited, air is now understood as *rupture*: air as control, manipulation, compulsive desiring, communal identities and spatial partitioning. Air traverses freely everything we know and care for; yet it is also put in the service of ruptured atmospherics. Remarkably, the one side does not annul the other. Rather, aerial continuum and rupture are to be approached simultaneously, respecting their paradox.

This is the elemental nature of air: *the paradox of continuum and rupture, inclusion and exclusion, openness and closure*. Air is the principal geological, political, legal, architectural, geographical and cultural paradox that crosses animate and inanimate bodies and the spaces between them. I think of air here in its material manifestation as the sum of atmospheric gases, but also as the informational, emotional and sensorial continuum in which affects circulate. This is not metaphorical air but *elemental* air. In that respect, I take up the challenge issued by Adey (2015) on what it means to be elemental. While I wholeheartedly agree and even polemically argue (below) that phenomenology is not the way to deal with the elemental, I am less hesitant than Adey in foregoing the potentially romanticising dealings of air (see Steinberg's, 2015 critique of Adey). Focussing rather on its affectively engineered aspect is the only way in which the elemental can be understood ontologically: *it is through its being engineered that the elemental makes itself ontologically relevant* (hence the political approach in Nieuwenhuis (2015a) and Feigenbaum and Kanngieser (2015)). As I show below, the limits of this is the ontological withdrawal of all bodies, including elemental ones. I do not consider the elemental a transcendence but an

immanent materiality, put in use depending on the assemblage in which it emerges. The difficulty with the elemental is its paradoxical nature that defies fault-proof interventions. Even so, because of its nature, the control of the elemental has far-reaching repercussions in all other domains of the animate and the inanimate. On account of its ubiquity as both physical expanse and sociopolitical factor, air is regularly delegated to the position of a hanging apple ready to be harvested. Air captured is knowledge opened up. Apple in hand, and the garden blossoms to the etiolated air of the outside. But then, no longer is there garden, and the earth becomes one shadeless surface. Air remains always one but this one has all the allure of Rem Koolhaas's *Junkspace* (Koolhaas, 2002) or Peter Sloterdijk's *Glasshouse* (Sloterdijk, 2013), neither of which desirable places to live, should one had the freedom to choose. Yet, we all live in them, and we all think we have chosen freely.

Air is the phenomenological mediator for atmosphere. If air is elusive, atmosphere is more so. This is because atmosphere takes the aerial paradox and encloses it on one side. While air is both continuum and rupture, atmosphere is one large rupture containing both continuum and rupture. An atmosphere contains the aerial paradox reinscribed, safely trimmed, neatly enclosed. Louis Dumont has famously called this *englobement du contraire*, the encompassing of the opposite (Dumont, 1967: 397). Atmosphere is an infinite, continuous lab ('the laboratory has extended its walls to the whole planet (Latour, 2003: 3)') in which affects are directed in prefabricated ways, and where bodies are wilfully placed in a position of belonging. Everything is affectively connected to everything else through their desire to belong to the atmospheric continuum; yet, at the same time, everything withdraws in this atmosphere, succumbing to its ruptures. One finds both continuum and rupture in the atmosphere, but no longer as the elemental paradox of the air: the paradox has been tamed, the air has been captured, and the atmosphere has emerged.

The overarching atmospheric rupture relies on the mechanical (human and non-human, thus geological, climatological, discursive, territorial and so on) partitioning of air. On a lab level, creating an observable atmosphere is difficult because of the complexity of physical conditions to be reproduced. In its geological form, the earth's atmosphere is the ultimate aerial partitioning, separating air from non-air. Within that partitioning, everything is held together, attracted to each other in the name of the dark sky above. Atmosphere is a force of attraction. It relies on gravity to hold onto even the lighter gases necessary for atmospheric emergence. The connection between gravity and atmosphere is not unidirectional, but cyclical: via gravity, atmosphere attracts its own elements, self-perpetuating its fine aerial balance, allowing the emergence of James Lovelock's Gaia Theory, according to which the earth's consisting bodies produce and maintain Gaia as an emergence that includes all these bodies yet exceeds them (Lovelock, 1982). Atmospheric self-perpetuation, however, is not strictly speaking independence. It relies on a conditioned relation with its outside. Atmosphere consumes whatever tries to enter it from the surrounding environment. It flattens it and makes it its plaything: an object turning into fire turning into air. Like the Homeric Sirens, atmosphere seduces and cannibalises the intruders, converting them into its own elemental aerial nature. Architectural atmospheres are similarly all-absorbing and sensorially totalising, as Zumthor (2012) shows in his influential book *Atmospheres* – a blueprint of how to create an attractive atmosphere. Once inside, the outside ceases to exist. It becomes sky, phenomenology, filtered reality. Its ontology becomes de-ontologised, mediated by atmospheric self-perpetuation. Everything splays into the individual atmospheric bodies that desire things to remain just so. The aerial continuum is now tightly inside.

The limits of phenomenology

From air to atmosphere, the register changes. While air's presence relies on phenomenological apperception (also see Ingold's (2006) ontology of air's animate agency), atmospherics demand a different strategy that ushers the political into the elemental. Peter Adey correctly finds that 'the phenomenological is often told apart from economic, legal and class struggles, so obviously imbibed by aesthetic sense and meaning' (Adey, 2015: 59). The very tool of apperception, namely partitioning as a form of Husserlian bracketing (or *epoche*), turns against its own function and allows the aerial elemental paradox to escape, like badly bottled gas. We cannot apperceive an atmosphere because we are always already in it. Instead of liberating, phenomenological bracketing seduces us in atmospheric 'attunements' as Stewart (2011) put it, that still, however, begin from the difference between subject and object, rely on a human presence, and aim at the worlding of things, namely their unfolding before our senses. Even the ultimate Husserlian cry 'to the "things-themselves"' (Husserl, 2001: 168) falls flat: if atmospherics shows us one thing, it is that *there is no difference between self and environment, body and its atmospherics, human and things* (Brennan, 2004). Atmospherics pushes us decidedly away from the phenomenological opening between consciousness and thing; however, much intentionality (Husserl), ontotheology (Heidegger) or even chiasmatic flesh (Merleau-Ponty) has tried to bridge it. We are all deep in atmosphere – an unfamiliar, elusive atmosphere where the human is replaced by the posthuman, the animal, the technological, the monstrous.

What is more, atmosphere *precedes the bodies of its emergence*. The velocity of atmosphere is higher than that of its participating bodies. An atmosphere emerges in what Nigel Thrift calls 'the country of the half-second delay' (Thrift, 2008: 186) – the time consciousness needs to catch up with reality, which is often much longer (McCraty et al., 2004: 133–143). Although intimately relying on these bodies (there can be no atmosphere without planet, gravity, a variety of gases, inanimate and animate things), atmosphere precedes and exceeds them. It is not just the total sum of its bodies of emergence, but a thing of differential velocity, an emergence. According to its less traditional etymological trajectory, sphere (in Greek σφαίρα, 'sfaira') stands for *missile* or *bullet*. This atmobullet shakes with a pulsating velocity, a continuous yet imperceptible movement, a static yet vertiginous drive, quickened by its conative (Spinoza, 2000 denoting the will of a body to carry on becoming; also Bennett, 2010) desire to perpetuate itself.

Another reason for which atmosphere remains outside individual or even collective consciousness is the difficulty of apprehending an atmosphere in its totality without being sucked into the very atmosphere's phenomenologising techniques. Phenomenological apprehension leaves out a large chunk of what an atmosphere is, namely a supra-corporeal emergence that does not rely on consciousness, individual apperception or subjectivity – or, as Derek McCormack's puts it, 'a set of dynamic and kinetic affects, where affect is the pre-individual intensity of relation between bodies' (McCormack, 2008: 418). Phenomenologically, an atmosphere is mood, feeling, sensorial response. It is properly speaking, affective. But *in its ontology, an atmosphere encompasses its phenomenological emanations in a glasshouse that elevates affect to an institutional normativity*. Affects are directed in the service of atmospheric perpetuation.

In sum, ontology lies at the bottom of an ocean of airborne phenomenology, to paraphrase Torricelli's famous sentence: 'We live submerged at the bottom of an ocean of air' (see Walker, 2007: 18). We humans are more comfortable in our phenomenological ocean, deliberately ignoring the non-human and the inanimate (see, however, Adey, 2010; McCormack, 2008). Atmosphere relies on animate beings (and not just humans), including

the hydrogen-feeding bacteria before oxygen made its appearance on earth. But no animate being on its own can generate an atmosphere. The earth's atmosphere is the outcome of a precise gas cocktail, along with dust and pieces of rock, collapsing and coalescing into the planet we know and inhabit. Nor is atmosphere only on the surface of the earth. Gases have been trapped between the pieces of dust and rock, themselves constituting the core of the earth. These facts demand a different understanding of the role of the inanimate in the emergence of atmosphere (Walker, 2007). Levi Bryant puts it clearly: 'there is no reason to suppose that a phenomenological analysis can tell us about the being of beings or machines, as phenomenological analysis only tells us how we encounter beings, not how beings in and of themselves are' (see Bryant, 2014: 113). An atmosphere relies on animate and inanimate bodies to remain complicit with it for as long as the future and as far as the horizon. The phenomenological time becomes one endless *now*, the phenomenological space one infinite *here*.

It is, therefore, surprising that the relevant literature insists on phenomenology (see Anderson, 2009; Fischer, 2007). Take for example Gernot Böhme's definition of atmosphere: 'the common reality of the perceiver and the perceived' (Böhme, 1995: 34). In his attempt to move beyond architectural ocularcentrism, Böhme includes moods and emotions, but his atmospherics remains firmly phenomenological: 'seeing is all about distance. Not immersion. The sense of being in something is 'mood'. By feeling our own presence, we feel the space. We feel its atmosphere' (Böhme, 2005: 402). This position is problematic in many respects, and not least in that it presupposes a (human) subject and an object, thus resuscitating (by attempting to bridge) the Cartesian distinction phenomenology has been trying to distance itself from, as well as significantly the various racial, gender and sexual perspectives that have the potential of radically affecting the atmosphere (see also Löw, 2008). Böhme's 'betweeness' of atmosphere largely follows Schmitz's argument against the private nature of emotions and indeed the revival of the Homeric concept of emotions originating in the space surrounding the body (Schmitz, 1995: 292). As Schmitz writes in a previous work, 'space flows along with us' (Schmitz, 1967: 3). An atmosphere does not need utterances or even other human presences in order to emerge, Schmitz correctly argues. But then, Schmitz continues (Schmitz, 1995), the affected body is entirely taken over by the atmosphere, and becomes totally embedded in it. If, however, this were to happen, then an atmosphere would never emerge. An atmosphere relies on its bodies, and these bodies must remain part of the atmosphere on their own accord. *Bodies need to desire the atmosphere in order for the latter to carry on.* Ben Anderson's suggestion of atmospheres as 'a class of experience that occurs before and alongside the formation of subjectivity, across human an non-human materialities, and in between subject and object distinctions' (Anderson, 2009: 78) redresses several important problems, but still puts forth an understanding of atmosphere as an experience, that is furthermore taking place in-between categories that is imperative to overcome. But neither subject/object distinctions nor dialectic in-betweens have helped much so far, especially at this time of hyperobjects which, as Timothy Morton has pointed out, are so large and immanently expandable that are never fully present, yet manage to engulf everyone (see Morton, 2013).

To sum up before moving on: it is politically important to understand atmospherics ontologically. There is a significant difference between a phenomenologically apperceived atmosphere (which can be a question of mood, taste, personal disposition and so on) and an ontologically approached one. Although connected to bodies and their affects, an ontological atmosphere does not engage with the distinction subject/object, but with the indistinguishability between the two. This also means that an atmosphere is a posthuman

emergence, not centred on human experiences or connections but rhizomatically spread across the (human and nonhuman) bodies of its emergence. An ontological atmosphere is temporally precedent, because it moves faster than its bodies of emergence. Finally, an ontological atmosphere is always supraconscious, and guides its individual bodies in such a way that the latter remain in the service of the atmosphere.

Institutionalising affects

Atmosphere is held together through the affects of the bodies of its emergence. Let me first clarify that bodies here must be considered in the Spinozan/Deleuzian sense, according to which 'a body can be anything: it can be an animal, a body of sounds, a mind or idea; it can be a linguistic corpus, a social body, a collectivity' (Deleuze, 1988: 127). These bodies are held together through affects that exceed the bodies of their materialisation. Michel Serres's enigmatic 'the body exceeds the body' (Serres, 2008: 307) points to how affects are both embodied and excessive. Brian Massumi (2002: 35) defines affects as 'virtual synesthetic perspectives anchored in (functionally limited by) the actually existing, particular things that embody them'. An affect can never be fully captured and assimilated – it is both plural ('synesthetic') and future-tending ('virtual'). Massumi (2002: 35) points to the affect's inability to be fully captured, the 'escape of affect'). Although firmly rooted in the body, the affect protends to its virtual becoming. This excess, collectively yet autonomously, is the atmosphere, always coming earlier than consciousness and at the same time capturing the future. Atmosphere exceeds its bodies towards a collectivity that cannot be fully described or indeed prescribed.

An overview of what an affect is lies beyond the scope of this article. I have previously argued that the affective discourse must reconsider the usual emotional, sensorial and discursive exclusions (Philippopoulos-Mihalopoulos, 2013). The challenge is multiple: first, to understand affect as an indistinguishable totality of the above elements; second, to take affects, not as phenomenological, human-originating qualities but as posthuman, acentral, excessive attributes of an atmosphere whose ontological appearance is institutionalised. Thus, affect is posthuman in the sense that it neither originates nor ends necessarily in humans; acentral, in that it floats about rather than causally originating in one source; and excessive of its body of origin, fully given to the way the aerial continuum. This is the groundwork of an ontological understanding of affective atmospheres.

Affects become collective through transmission. In her seminal psychoanalytical work, Teresa Brennan has shown how affects are transmitted from bodies and spaces to other bodies and spaces (Brennan, 2004: 170; Mitchell, 2011). The same theoretical point is made by Sloterdijk, referring specifically to Gabriel Tarde's concept of imitation (Sloterdijk, 2004; Tarde, 1903). In *Laws of Imitation*, Tarde (1903: 81) analyses the charismatic leader and how such a presence can kick-start a wave of imitative somnambulism: 'society is imitation and imitation is a kind of somnambulism'. In the era of governmentality, however, a leader is internalised in each body and in the spaces between those bodies that engage in a self-policing, but most importantly, desire-creating frenzy. This is what Foucault (2003: 35–36) means when he notes 'the emergence, or rather the invention, of a new mechanism of power possessed of highly specific procedural techniques...which is also, I believe, absolutely incompatible with the relations of sovereignty.... It presupposes a tightly knit grid of material coercions rather than the physical existence of a sovereign'. Shared affects, embodied yet exceeding their bodies, enable an atmosphere to emerge. *Atmosphere is the excess of affect that keeps bodies together; and what emerges when bodies are held together by, though and against each other*.

The turning point of an engineered atmosphere is the specific direction it gives to affects. For, although an affect is excessive, acentral and posthuman, it is regularly manipulated or at least smoothed in an institutionalised direction. In *Libidinal Economy,* Jean-François Lyotard describes affects as the libidinal intensities that allow a system to direct desire (Lyotard, 1993). In that sense, affects are regularly exploited and channelled to serve consumerist needs, capitalist abstractions, legal obedience and political placation. In order to be better controlled, they are partitioned in discreet air-conditioned spaces: warm and cosy, cool and bracing, balmy and luxurious, polluted and degraded. Just as there is no escape from air, there is no escape from affective air-conditioning: 'Air conditioning is destiny' (Sloterdijk, 2014: 964). This air-conditioned partitioning where affects circulate in predetermined ways, is an engineered atmosphere. An engineered atmosphere 'knows all your emotions, all your desires. It is the interior of Big Brother's belly. It pre-empts people's sensations. It comes with a sound track, smell, captions; it blatantly proclaims how it wants to be read: rich, stunning, cool, huge, abstract, minimal, historical' (Koolhaas, 2002: 183). This is the point of Sloterdijk's analysis of the *World Interior of Capital* as 'a climatized luxury shell in which there would be an eternal spring of consensus' (Sloterdijk, 2013: 170), which finds its most prominent form in the Grand Installation of the glasshouse of capitalism, that 'interior-creating violence of contemporary traffic and communication media' (Sloterdijk, 2013: 198). By the same token, an atmosphere is not only calm and luxury. It can be equally effectively engineered as a conflictual, violent or unpleasant atmosphere, in which a body would feel comfortable. Odd as it might be to talk about comfort in a violent or conflictual atmosphere (see Lambert, 2013: 46; Philippopoulos-Mihalopoulos, 2015 on the problematic of comfort), comfort denotes belonging, and belonging exists across shopping malls and political battles alike. Whether it is engineering on a global scale, or localised engineering of a particular shopping mall, the affects employed, exploited and atmospherically institutionalised are the same.

In what follows I trace the main steps to engineering an atmosphere. Suffice to say, however, that it is not easy to produce an engineered atmosphere. To foreshadow the below, I would like to argue that *an atmosphere is successfully engineered when it manages to rupture the affective continuum with the outside, while at the same time reproducing it inside and presenting it as the only atmosphere possible*. This is the geology of atmosphere: outside there is no air. Here is the only possible place to be. Here, one has everything one desires: we are surrounded by the 'climatological erotics' of air-conditioning, as Dorian (2012: 29) puts it, but this time as a self-loving, solipsistic, fully self-sufficient atmoporn.

Engineering an atmosphere

An ontology of atmospherics requires its own engineering. Tomàs Saraceno's art installations offer just that. They consist of baubles made of glass or plastic filled with air and occasionally some other organic or inorganic material. Air is folded in the transparent wombs resembling miniature glasshouses. The partition is absolute, creating a hermetic atmosphere in each glasshouse. In the engineering of these glasshouses, the atmospheric ontology emerges. We are not in it, yet we are part of the installation. We can see it from a distance, yet we are interrupted by its transparency. We can observe the two sides of the air: boundless and bound, continuous and ruptured. We can observe the way atmosphere and conditions bind the air inside. We can also observe how the affective continuum with the outside is achieved. Indeed, we can observe this very invisible of visibilities: the boundary. Saraceno's glass separates while allowing immersion. Immersion folds inside, separation leaks out: ontology emerges.

Saraceno's constructions oblige us not to forget the air. The air is constantly present because it is continuously interrupted: glass partitions that allow seeing-through without transmitting the air. Inside, the air is enough for the encased bodies (plants, earth, water and other matter) to fulfil their function. *There is no need for more air*. The air is perfectly conditioned; it takes spherical form, becomes liquid perspiration, fills with the odour of the plastic and gets hued by the light around it (Sloterdijk (2004: 255) calls this 'connected isolation'; see also Latour (2011) on Saraceno). Saraceno's work embodies the ontology of a ruptured continuum. Each bubble is the perfect atmosphere of rupture (safety, isolation, immunity, independence, belonging) *and* continuum (the air outside remains always remembered and always present because of the transparency of the partition). The atmosphere has been engineered as a grand rupture that includes the ontology of air in its paradox as continuum and rupture. However, only the rupture is real. The continuum is an illusion allowed by transparency.

Temporally, an atmosphere encapsulates the past and the future in the perfect *now*. Referring to glasshouses, Sloterdijk writes: 'such edifices took into account that…the random uprooting of organisms to plant them elsewhere could only occur if the climatic conditions were transposed along with them' (Sloterdijk, 2005: 944). Glasshouses, in other words, rupture the air while encouraging an encapsulated history of provenance and a situated capture of future. The uprooting involved in the transplantation finds its equivalent in the construction of the ancient Greek city, which for Sloterdijk 'was a greenhouse for people who agreed to be uprooted' (Sloterdijk, 2005: 944). The key word is 'agreed': a contagious desire to agree that speaks from within each individual body, affectively directing it to stay put. This is what Mark Whitehead calls 'the self-regulating atmospheric subject', subjected to an atmospheric governmentality of displaced responsibility from the state to the individual herself, and packaged as empowering subject-positions (Whitehead, 2009: 225).

The above allows us to trace the way an atmosphere is engineered. The first step is the distinction between inside and outside (Luhmann's (2012–2013) most fundamental distinction that significantly influenced Sloterdijk), where the outside is marked as a negative space: think of gated communities' spatial organisation on the basis of exclusion of the outside. Add to this the second step: the outside is *included* inside. The predominant affect of an engineered atmosphere (of a gated community, of a club with strict entry requirements, of fortress Europe, of capitalism and so on) is one of 'comfort': we belong. We have all we need right here. An engineered atmosphere is 'an enclosure so spacious that one would never have to leave it' (Sloterdijk, 2013: 175). Nor could they leave it easily, even if they wanted to. Where would they go anyway? 'It is always interior, so extensive that you rarely perceive limits' writes Koolhaas on his own precipitous description of the atmospheric as junkspace (Koolhaas, 2002: 175).

The third step of an engineered atmosphere is an illusion of synthesis. This is what Reza Negarestani in his influential hybrid *Cyclonopedia* means when he writes that the objective of any air enclosure is 'to distil all cosmic processes into one unified body which is cyclically infinite yet functionally restrictive (everything must be unified). Such an environment or sphere functions as a cyclic or a spherical shape with an inner limit and an outer boundlessness' (Negarestani, 2008: 102). This is the illusion of synthesis that engineered atmospheres emulate: both continuum and rupture are already included within. The air is captured in its elemental form – an anthropocentric triumph: we have captured the elemental nature of the air! We sealed it inside while allowing it to roam wild. In both cases, the story goes, the air is ready to serve us. A win–win situation. 'There are no walls, only partitions, shimmering membranes' (Koolhaas, 2002: 176). So stay inside and enjoy the

best of all worlds. We are protected by the air inside, a round present vibrating with vaporous promises: we are protected by *atmosphere*. Negarestani again: 'Air as a manifest refinement is a vision-machine through which the world *looks safe*, that is to say, already consolidated, having been forced to take the path of unification and purity' (Negarestani, 2008: 102–103, emphasis added).

But think of Saraceno's glasshouses again: their immunity is only impressionistic. The synthesis of continuum and rupture inside is illusionary. The only thing an atmosphere does is to rupture, disaggregate and isolate: 'it creates communities not out of shared interest or free association, but out of identical statistics and unavoidable demographics, an opportunistic weave of vested interests' (Koolhaas, 2002: 183). An atmosphere cuts through the ontology of elements, isolating their paradoxical sides, not allowing them to connect. But it does this on a bed of continuum, agreement, desire. This is the last step: an atmosphere must dissimulate itself as pure emergence and never show itself to be an engineered feat, for otherwise the illusion will not be complete and resistance to it will be cropping up at an uncontrollable rate (see McCormack, 2008 for engineered and emergent atmospherics in terms of meteorology and affectivity, to which I add the strategy of dissimulation). Thus, an engineered atmosphere dissimulates, indeed ruptures, its engineered provenance and volatility. Shopping malls are built so that one has to walk slowly, cannot find easily the way out, and is bombarded by constant shopping 'needs'; add to this the fact that one cannot stage a protest or bask or run or wear a hood or do anything other than what is prescribed; and then add what the customers expect from a shopping mall and how any untoward gesture is seen suspiciously. This is the perfectly engineered atmosphere: when the very bodies police themselves, even in absence of obvious legal norms. Dissimulation means: no one has engineered the atmosphere, no one has organised the participating bodies to generate it. Nothing has instilled the bodies with the desire to regulate themselves in accordance to the atmospheric bubble.

Withdrawal from atmosphere

The above mechanisms are not meant to operate as a blueprint on how to engineer an atmosphere. Quite the contrary: my motivation is to warn against the seduction of atmospherics and the way they tend to numb the phenomenological body in a state of desire for carrying on being part of it. By looking into the engineered emergence of an atmospheric ontology, however, a critical rupture to the atmospheric continuum is inflicted, taking us backstage where the magic happens. Once aware of the atmospheric smoke and mirrors, one does not so easily succumb to it.

Ontology is of course not a panacea. Except for the issue of 'my ontology is better than yours' (Hubbard, 2012), for which only a radical epistemology might be the answer (Luhmann, 2012–2013), ontology is compromised by what it ultimately reveals: *that not everything is revealed*. There is always a part of a body that withdraws from being, folds inside, and remains unconnected. This is the ontological withdrawal as it reached us from Heidegger (1978). Its appeal, however, is also postphenomenological, since it intimately connects to the Deleuzian/Guattarian notion of excess, as its flipside (Deleuze and Guattari, 1986). They both move in a similar direction, away from connectivity and towards becoming minor and ontologically concealed. The difference is that whilst excess ontologically blinds with its diffused non-connectivity, withdrawal darkens in an inner fold of internal connection. Excessive or withdrawn non-connectivity characterises all bodies, however implicated in the continuum. A new theorisation generally responding to the name object-oriented ontology (Bryant, 2011; Clough, 2010; Harman, 2005;

Morton, 2013) has taken a distance from the obsessive hyperconnectivity of theories such as ANT, and shows how ontological withdrawal is the shadow of networks. Thus, Bryant (2011: 32) writes: 'withdrawal is not an accidental feature of objects arising from our lack of direct access to them, but a constitutive feature of all objects regardless of whether they relate to other objects'. Objects withdraw from each other, indeed 'absolutely from every relation' (Harman, 2005: 76), since they are neither reducible to the sum of their relations, nor, however, are they ever fully ontologically revealed. 'We are always on the way to withdrawal', Negarestani (2008: 50) writes. Withdrawal works as one side of the ontological paradox, the other being the possibility of carrying on being unified (Harman, 2011). Just as in the case of the elemental side of air, ontology is a paradox between continuum and rupture, revelation and concealment, openness and closure.

The way described above however, ontological withdrawal lacks the political element of resistance to atmospherics. As a reality of all bodies, hardwired in every gesture and every desire, withdrawal can go either way. Cocooning in an atmosphere is a form of withdrawal, regularly exploited by atmospheric engineering in the form of illusions of belonging. To know when to withdraw from one's desire, however, is the real moment of withdrawal. I have been writing on withdrawal from the perspective of law and justice, arguing that justice is a gesture of withdrawal from the situation in which one is politically and legally forced (see for example Philippopoulos-Mihalopoulos, 2010). In that vein, I propose that ontological withdrawal can be a strategic gesture, politically organised to help escape an atmosphere. In other words, I am keen on adding the political to the ontological, thinking of withdrawal as a way out from the atmospherics of desire.

This is far from easy. If successful, an engineered atmosphere precludes any possibility of way out, resistance or even reaction to it. An important factor in achieving this is the dissimulation of legal and political structures and the presentation of the particular atmospheric space as *anomic*, namely without law, or more specifically without the *need* for law. This does not mean that what is offered is illegal. On the contrary, it would be a space beyond the distinction legal/illegal: it is, finally, a *just* space. Or so is felt by the participating bodies. Through its various dissimulations, an atmosphere presents itself as a duration of theological enclosure, whether Edenic or heavenly. It is an end-destination, a divine equilibrium that has even managed to get rid of the divine presence all together: the law is no longer needed since every body has found its place. But there is a price to pay for living in a place where the potential of a conflict with the law is suppressed and replaced with a general atmosphere of *de facto* functionality. This loss of the normality of risk, difference and conflict directs affective desire in a particular way, and makes it imperative for these conditions to be maintained, whatever the political cost. This is indeed the perfect atmospherology: security is provided because it is desired, and it is desired because it is provided. Roberto Esposito writes: 'as in all areas of contemporary social systems, neurotically haunted by a continuously growing need for security, this means that the risk from which the protection is meant to defend is actually created by the protection itself' (Esposito, 2011: 141). Atmosphere is often the result of dubious political, legal and architectural action, such as neighbourhood cleansing, legally encouraged ethnic homogeneity through immigration policies, walled communities, CCTV and so on. Security is a fragile, fully engineered atmosphere that relies on exclusion and purification, as well as intense conditioning of residents in order to actually desire this sort of non-legal, non-conflictual, seemingly safe atmosphere. What happens when atmospheres 'place the individual in a circuit of feeling and response, rather than opposition to others' Hemmings (2005) wonders, namely in an anomic, non-conflictual circuit with no apparent

exodus? (in the context of affect). Quite simply, the desire to find a way out is minimised, and completely overtaken by the desire to carry on business as usual.

How is then a body convinced to withdraw from an atmosphere? An ontological distance from atmospheric seduction is obviously pivotal, but how is this achieved? Paradoxically, what entraps, also offers a line of flight. One never knows exactly how the engineering will work out. It may or may not work according to plan. Sloterdijk refers to Dostoyevsky, who, even amidst his critical fascination with the glasshouse phenomenon, was convinced that 'eternal peace in the crystal palace would mentally compromise the inhabitants' (Sloterdijk, 2013: 171). But not just mentally. An atmosphere does not discriminate between human and nonhuman. Just as every body is summoned in the service of atmosphere, every body's failure is a potential atmospheric failure too: people get bored, things break, the weather changes, technology lets us down, governments fall, accidents happen and disasters hit. Affects become too excessive to be controlled, and when aggregated in the form of atmosphere, they change in volatile ways, even when established techniques of complexity reduction are followed (Sloterdijk, 2005: 948). At such points, an atmosphere changes, becomes other. The conservative atmospheric urge is to continue in the business-as-usual mode and aim for homeostasis. However, at the point of becoming other, an atmosphere becomes ontologically vibrant, and possibly phenomenologically apperceptible. Epistemologically speaking, it becomes accessible as rupture, or different atmosphere. This is the chance for a withdrawal from atmospherics: right when the crack between atmospheric becoming becomes vibrant, and the atmosphere is no longer able to contain and direct the excess of affect. Matt Finn describes it thus: 'the apparent power to change or 'kill' the atmosphere can come with the same startling rapidity, where someone's mere bodily presence ruptures the collective interpersonal sensibilities' (Finn, 2015: 5). In that sense, withdrawal can be conflictual and forceful, provided that the existing atmosphere has not already conscripted conflict in the service of the atmosphere. Or it can be a gesture of gliding opposition: find the cracks and ride them, surf on the atmospheric movement of engineered normativities, dwell on the *here* of atmospheric dissimulation.

A particular kind of courage is needed to leave behind one's bubble of comfort, however defined. Withdrawal might take advantage of cracks, but itself is a strategic movement, although perhaps without the full consciousness of a discerned objective. It is a movement away from an atmosphere with the aim of dismantling this atmosphere and reorienting the bodies within it to a different horizon: 'the revolutionary knows that escape is revolutionary – *withdrawal, freaks* – provided one sweeps away the social cover on leaving, or causes a piece of the system to get lost in the shuffle. What matters is to break through the wall' (Deleuze and Guattari, 1983: 277). Deleuze and Guattari's reworking of Nietzsche's eternal return flesh out the force of withdrawal as a revolutionary movement, provided that the atmosphere is swept away by it. The (glass) wall must be broken, and its two sides ruptured: both the actual perpetuation of the atmosphere and the perpetuation of the individual body's desire (indeed, there is no difference). The air, in its full elemental paradox, must be claimed. No longer the atmospherically conditioned air, but an air fully given to the unresolved fight between continuum and rupture. *Withdrawal goes against one's own desire to remain put*.

Luckily, one is rarely alone. A mobilisation of collectivity is often a condition for the strategic rupture of withdrawal, even if not always in an obvious manner. It does not have to be a 'united front' or a worked out agreement. It can be, and increasingly is, an emergence that lasts for as long as it does. It can be found in such symbolically and actually charged spaces such as the Palestinian Occupied Territories (Lambert, 2011), the atmospheric nationalism of Olympic games (Closs Stephens, 2015), and the London Riots in relation

to surveillance atmospherics (Ellis et al., 2013), but also in small everyday acts of withdrawal from what the atmosphere dictates bodies to do. This is what Paul Celan's *Atemwende* captures: the rupturing of one's regular breathing rhythm, and the withdrawal from a common breathing pattern (Nieuwenhuis, 2015b, referring to Celan, 1968). The moment one stops and reflects on the air and its imposed partitioning is the under-breath that cracks the aerial domes of atmospheric oneness. Jane Bennett talks about that when she writes that 'perhaps the ethical responsibility of an individual human now resides in one's response to the assemblages in which one finds oneself participating: Do I attempt to extricate myself from assemblages whose trajectory is likely to do harm?' (Bennett, 2010: 37). Less pronounced in Bennett's work is the gravitational pull of a promise of constancy, making withdrawal all the harder. This is not metaphorical language. In the epoch of the Anthropocene, where humanity's engineering affects the earth's atmosphere in geologically irreversible ways, the challenge is to withdraw from the illusion of human centrality, while retaining the ontological knowledge that the human is, by now, everywhere. This is the new responsibility of the human: to go against her own self-governing impetus.

Lighter than air

Ultimately, the ontological occlusion remains: we do not know *how* bodies withdraw. An engineered atmosphere makes use of this occlusion by strategically converting it into a comfortable dissimulation, making bodies feel that they are both withdrawn *and* connected. This is the main difference between engineered and emerging atmospherics: while both cover the basic conative need of withdrawal, in the latter case the connection is only phenomenological. An atmosphere needs to keep bodies apart in order to control the way affects spread. The scale is now one of bubbles, as Sloterdijk has found in the first volume of his trilogy: each body is isolated in immunised conditions, separate from each other. For Sloterdijk, the connection is actual, in its turn giving rise to the societal *foam* (Sloterdijk, 2013). But for the kind of atmospherics I talk here, the connection is purely impressionistic, facilitated by the translucence of the partition. An atmosphere apparently keeps bodies together, while in reality it keeps them apart.

The game must go on. Tomàs Saraceno's recent project, which is also his response to Bruno Latour's invitation to construct a monument to the Anthropocene, is a solar balloon (see Saraceno and Engelmann (2014) and my contribution to the installation catalogue). Launched in Toulouse in October 2014, the balloon relies on the principle of lighter-than-air constructions that soar merely by virtue of their differential weight to the air around them. Of course, the balloon is filled with air whose lightness is continuously produced within the balloon's skin by means of solar heat. But the partition is only partly isolating the air; it actually allows the air to circulate freely between inside and outside, constructing a different understanding of inside which is not only contiguous with its outside but, significantly, refillable. This is neither an illusion, nor a dissimulation. It is an actual manifestation of how continuum and rupture can operate devoid of atmospherics. There is a shift of focus here, from glass closure to balloon opening. Of course, the opening is not so large that it would annul the enclosure, but enough to bring a different input in atmospherics. No longer an issue of isolation but of aerial withdrawal, the balloon withdraws from the earth while soaring up in the air. The balloon's manufacturing process is indicative: it is a collective effort from various people across the globe collaborating in providing the material and stitching it together. The balloon's withdrawal is hardly absolute, but its ontology opens up a different line of flight than the previous atmospheric configurations. It opens the path

for what Amin and Thrift (2013) have seen as the profoundly political responsibility of cultivating *alternative* affective connections.

Here, withdrawal bears the news of an elemental rupture: there is a way out! One can go higher, can leave this atmosphere for a different one and can forge new affective connections. One can escape to what Tim Ingold has called *weather-world*, that zone of flows between earth and sky (Ingold, 2011), where one can finally live in the Open, the Outside. Or even the Aristotelian *aether*, the infinite zone that surrounds the air, away from atmospheric air-conditioning, inhabited by demons and other minor divinities. The balloon soars towards Nieuwenhuis's space where 'there exists an opportunity, or at least a responsibility, to continue resisting and hope that there is such an outside, to think about the possibilities for a politics of the air free from the gravitational political forces that pull us down' (Nieuwenhuis, 2015a: 176). However romanticised this might be, it has the peculiar power to hide, even for a moment, the brutality of the ontological occlusion: from up here everything is revealed. Above all, the balloon manages to occlude the fact that even if one escapes an atmosphere by withdrawing from it, *one always ends up, sooner or later, always preconsciously, always affectively directed, into another atmosphere*. There is no escaping the continuous rupture into atmospheres. Yet, as Nietzsche writes, 'there is no outside! But we forget this... How lovely it is that we forget!' (Nietzsche, 2005: 175). It is perhaps politically important to forget, to carry on with a different horizon, to believe in phenomenological ruptures (for the necessity of illusion, see Philippopoulos-Mihalopoulos, 2015). Writing about a different balloon flight, Derek McCormack manages to connect the ontological and the phenomenological in a subtle atmospheric gesture that soars 'through a distributed atmospheric field of circulating materials moving at differential rates from which obviously emotional geographies precipitate – narratives of hope, longing, sadness, despair, and joy' (McCormack, 2008: 426). The affect comes through the air and registers symbolically, emotionally and sensorially with the bodies between and in which it circulates. The solar balloon has allowed the emergence of an imaginary continuum of withdrawing affecting and affected bodies to rise into a global, elemental, excessive visibility.

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