

THE AESTHETICS OF HEAT. FOR A CULTURAL HISTORY OF CLIMATE IN THE AGE OF GLOBAL WARMING

– EVA HORN (VIENNA)

Abstract

In the age of global warming heat has become not just a climatological fact, but also a metaphor to convey a physical and affective dimension to the phenomenologically ungraspable process of climate change. The article investigates the political and epistemological uses of this metaphor. It outlines a short history of a semantics of heat from Montesquieu to Hellpach, and asks for its implications within a theory of the exchange between humans and their environment. While the cold calls for an insulation of bodies and spaces, heat blurs the boundaries between bodies and their environment. The article looks at three aesthetic examples experimenting with the effect of heat on human experience and perception: Robert Müller's novel *Tropen (The Tropics)*, H.G. Ballard's Novel *The Drowned World*, and Olafur Eliasson's installation *The Weather Project*. All three stage heat as a condition that forcefully transcends the traditional separation between the subject and the object of perception.

Climate is not what it used to be. Defined as a stable pattern of recurring weather events climate has been mainly a background phenomenon, a silent and steady backdrop to the agitated narrative of human history – at best a marginal aspect of human culture, not an agent in its own right. Unlike dramatic weather surprises, climate seemed as predictable as the seasons, an abstract horizon of expectations: snow in winter, heat in summer, rain in the monsoon. It didn't even need a forecast. "Climate is what you expect, weather is what you get," wrote the science fiction author Robert Heinlein. (Heinlein 1973: 371) Obviously, this has changed today. From being the epitome of regularity and stability climate has today become the element of an uncanny nature, subject to huge and perilous, yet imperceptible changes. The awareness of man-made climate change has brought it to the foreground of our attention, aided by extreme weather events, erratic seasons, changing landscapes, the thawing cryosphere, and many other phenomena. Anthropogenic climate change, the scope and consequences of which we are still only beginning to understand, has conveyed a new sense of the fragility of our natural life-world. Yet the trouble with climate and climate change today is that their understanding hinges on a very abstract definition of climate – both temporally and spatially.

Climate in a narrow sense is usually defined as the "average weather", or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands or millions of years. The classical period is 30 years, as defined by the World Meteorological Organization. These quantities are most often surface variables such as temperature, precipitation, and wind. Climate in a wider sense is the state, including a statistical description, of the climate system. (IPCC: Glossary)

Defined as a long-term average, climate and climate change, despite their profound consequences for any living condition on the globe, remain purely abstract entities. While we can get a sense of climate only at specific locations (i.e. we know typical weather patterns for Stuttgart, Singapore, or Stockholm) there is no such thing as "global climate" as an object of sensory experience. Seen this way, climate is nothing more or less than a highly complex scientific object – a *matter of fact*. (Latour 1993) Yet, be it in the form of rising CO₂ levels and temperatures, ocean acidification, melting glaciers, and profound transformations of water and air flows, climate is also one of the biggest environmental and thus *political* problems we are facing today. It is a *matter of concern*, a matter of political debate and human decision-making. In the past decades we have improved our models and simulations of the chemistry and behaviors of the Earth's atmosphere, yet still its dynamics remain not fully understood. Equally elusive or 'wicked' are the conflicts over which political steps to take, as the air as a *global* commons transcends traditional political decision making based on municipalities or nations. So climate, despite everything we know about it scientifically and politically, keeps being ornery both as matter of fact and of concern. Following Timothy Morton, the über-hip guru of a new "ecology without nature", to quote one of his titles, (Morton 2007) one could therefore conceive of the climate today as a "hyperobject" that challenges both scientific conceptualization and proper politicization. It is "massively distributed in time and space relative to humans", (Morton 2013: 1) an object we cannot really view from a distance – be it the distance of scientific objectivity or that of rational decision-making. There is, Morton argues, no meta-perspective or meta-language that could provide a viewpoint for 'neutral' observation of or experimentation with the climate: we are permanently engulfed by it, penetrated, transcended and transformed by climate. It involves us while we involve ourselves within it, with every breath and every airplane we take.

Global warming: the hyperobject and the hyper-metaphor

In order to convey a sense of urgency regarding the planet's ecological transformation, authors writing on anthropogenic climate change in the past years tended to resort to a very familiar sensation: heat. (e.g. Monbiot 2006, Bailey/Compston 2012, Motavalli 2004, Berger 2000, Pittock 2005) From "Feeling the Heat" (Bailey/Compston, Motavalli) to "Beating the Heat" (Berger), heat seems to be the sensory translation of a threat. Even if heat in the sense of the familiar scorching feeling is, as a topic, mainly absent from the books flaunting it in their titles, the thermal metaphor has been of vital importance for any politics related to climate change. If μεταφορεῖν (*metaphorein*) means "to transfer or transport", heat here is a metaphor that transfers a matter of fact into a matter of concern, science into politics. In fact, "climate change" seems like a euphemism for a much more dramatic process, the fact that – among many other environmental crises – global temperatures are in fact rising.

Morton, e.g., points out this logic of euphemism when he explains his refusal to use the term "climate change" in his book:

Throughout [my book] I shall be calling it *global warming* and not *climate change*. Why? [...] Climate change as a substitute [for what should be called "*climate change as a result of global warming*"] enables cynical reason (both right and left) to say that "the climate has always been changing", which to my ears sounds like "people have always been killing one another" as a fatuous reason not to control the sale of machine guns. (Morton 2013: 8)

Making the comparison between climate change/global warming and the justifications for uncontrolled gun sales, Morton calls for a rhetoric of urgency and trauma as the precondition of politicizing the topic:

What we desperately need is an appropriate level of shock and anxiety concerning a specific ecological trauma – indeed, *the* ecological trauma of our age, the very thing that defines the Anthropocene as such. (Morton 2013: 8-9)

The metaphor of heat, however, is not only supposed to shock us into awareness and political action, it also serves as the hidden bedrock of Morton's core point, the concept of the "hyperobject". Hyperobjects such as climate change, radioactive matter, omnipresent styrofoam/plastic particles and other man-made, deleterious and ontologically uncanny entities, Morton argues, are objects that elude perception and conceptualization because of their extension in time and space. For him, global warming – because of its elusiveness and omnipresence – is *the* "hyperobject" par excellence, invisible, barely computable, consisting not in a materially graspable entity but in a vast and complex mesh of inter-objective effects and inter-relations. The 'hyper-ness' of the hyperobject global warming can only be expressed by the thermal metaphor of heat, heat as an unescapable quality of atmospheres that bodies can be trapped in, heat as a threat to organic life, and eventually as a physical state of growing entropy.

The thermal metaphor can also serve as a shibboleth distinguishing between friends and enemies in the political battle about how to deal with the current ecological crisis. In a conversation with the late sociologist Ulrich Beck, Bruno Latour comes up with an almost Schmittian declaration of enmity towards all those who lamely talk about "climate change" instead of "global warming" and likens them to the positions of the "climate sceptics" who deny the role of humans in climate change: "The decision is brutally clear: Either you make a distinction between friends and enemies – then you enter the realm of the political. Or you back off from waging wars and having enemies – then you eschew politics." He considers those who talk about "climate change" as enemies, as a radically different species:

They live in a different world than I do, and they live in a world that is being destroyed. They are appropriating my land. The fact that this land is not defined as a nation does not mean that this is not an usurpation. To put it more bluntly: they are humans, I am Gaian. (Selchow 2014)

Talking about "heat" and not just "change" thus seems to be essential when dealing with the epistemology, the politics and the ontology of what can be summed up in the geological term "*Anthropocene*", the fact that humankind is leaving its ineffacable mark on the surface of the planet. Heat here is not just a metaphor that conveys a physical sense of a whole ensemble of hyper-complex, yet impalpable processes of ecological destruction. In a way much akin to Morton's "hyperobjects", heat in this context becomes a *hyper-metaphor*: it evokes not only a dimension of sensory perception that climate change dramatically lacks, but it also generates an affect – the "shock and trauma" of a dramatically changing life-world. While we cannot feel global warming on our skins it needs to be *felt* here and now, or *made to be felt* both *sensitively* and *affectively*. The heat metaphor seeks to convey a phenomenal sensibility to an uncanny, complex and unrepresentable process that exceeds our categories of perception and cognition.

This affect has a political effect. While we are still debating the transition of rich Western economies to carbon-neutrality, we are, at the same time, also facing growing issues of "climate justice" for Asian and African countries who claim that

reducing greenhouse gases unjustly hampers their chances for economic development. Caught in these political rifts of cost-benefit debates in the West, and the desire for a Western lifestyle elsewhere, the thermal hyper-metaphor may transport an affect of trauma and anxiety, but it also conveys a sense of a newly defined union of mankind as a species. Or even a unity of all living organisms. Aren't we all bodies suffering from heat? And isn't heat not only affecting human lives and life-styles but also those of every other species? In this sense, heat may serve as a common denominator binding the lives of humans to everything alive that is non-human but equally impacted by rising temperatures and ocean levels. The heat metaphor thus may help not just to grasp the problem's urgency but also to *reshape the community* of those who are concerned by it. In Bruno Latour's words:

The task might not be to "liberate climatology" from the undue weight of political influence. On the contrary, the task is to follow the threads with which climatologists have built the models needed to bring the whole Earth on stage. With this lesson in hand we begin to imagine how to do the same in our efforts to *assemble a political body able to claim its part of responsibility for the Earth's changing state*. After all, this mix up of science and politics is exactly what is embodied in the very notion of anthropocene: why would we go on trying to separate what geologists, earnest people if any, have themselves intermingled? (Latour 2011: 8)

Calling "global warming" a metaphor, however, does not imply that it is *only a metaphor*. My point is not to dismiss the thermal metaphor but to point out that we cannot even address climate change *without resorting to metaphors*. This also includes metaphor's aesthetic offspring such as images, symbols, imaginations and fictions. The abstractness of climate change and other dimensions of the Anthropocene crisis call for a translation into visible, sensible, imaginable tropes in order to effectively penetrate into the realms of collective awareness and political debate. The epistemic inevitability of metaphor, as stated by the philosopher Hans Blumenberg, shows its eminently political dimension most clearly in the case of global warming. (Blumenberg 2001) How can we analyze this ineluctable hyper-metaphor? Certainly not by the idea that calling global warming a metaphor we debunk it as a "mere metaphor". On the contrary: Blumenberg has pointed out that crucial concepts of Western philosophy are, in fact, "absolute metaphors", metaphors that have no conceptual proprium and cannot be reduced to conceptual abstract language. The metaphor's essential function for thought is filling a "conceptual void, that can only be filled by the imagination." (Blumenberg 2007: 74) A "metaphorological" reading of the thermal metaphor therefore would mean to explore the imaginary implications conveyed by such a metaphor, its history, and its epistemological impact.

A cultural history of climate

In order to understand the profound transition of our environment and our life-worlds brought forth by global warming, we need do more than rely on the simulations of climate research or the findings of ecologists, biologists, and geologists. As scholars of the humanities we are called upon to investigate the history, the philosophy and the aesthetics of the relationship between humankind and nature, between cultures and climates. Ever since antiquity, the concept of climate (and its various synonyms such as "zone", "latitude", "airs", "circumfusa", "atmosphere" etc.) has denoted much more than the chemical and physical states of the Earth's atmosphere. "Climate" has dealt with an array of relations: the relations of bodies to their environment and their means of subsistence, of populations to the locations

they dwell in, of cultures to the thermal conditions they exist in. Climate, as Mike Hulme has recently argued, is not just a natural phenomenon but a cultural pattern:

[...] climate [is] best be understood as an idea which mediates the sensory experience of ephemeral weather and the cultural ways of living which humans have developed to accommodate this experience. The idea of climate connects material and imaginative worlds in ways that create order and offer stability to human existence. People could not live without their climate. (Hulme 2016: 2)

If climate must be understood as a *cultural pattern* designed to make sense out of the ephemereal, irritating, yet existential experience of "being-in-the-weather", we need to analyze the cultural significance granted to climatic phenomena. With regard to our topic, the question is not why and to what degree the Earth is heating up, which indeed pertains to the natural sciences. From a humanities point of view, it means to ask about a *cultural history of heat* as the history of man's knowledge, theories and imaginations about this thermal condition. Moreover, it means to ask for an *aesthetics of heat* as the poetic, pictorial, auditive rendering of a state that, despite its overwhelming sensual power and immediate perceptibility, seems difficult to represent in media such as words, images, or sound. How can we "feel the heat" (or be made feel it) when we are not in the thick of it? What is the cultural significance of heat? What can we learn from the historical or fictional accounts and theories about the effects of tropical climates on the human body, soul, and culture? My hypothesis is that heat is a very specific thermal condition, a condition that is not just at the other end of the thermometer as opposed to the cold. Heat – in its cultural understanding – *melts* the boundaries of man and nature, between the inside and the outside of the body, between perception and imagination, between the subject and the object of cognition.

Thinking about the history and cultural significance of heat has to start with a concept of climate that is entirely different from what we discuss as "global climate" today. For a long tradition of thought from Antiquity through the age of Enlightenment, the idea of a "global climate" would not have made any sense at all. "Climate", derived from the Greek term κλίσειν, marks the specific angle of sun on the slope of the Earth's surface, which defines the thermal conditions of a geographical zone. Climate is thus essentially a *geographical category*, specifying and explaining the temperature, quality of air, soil and water sources, the vegetation, the forms of agriculture and trade in a given region. Unlike today, where we have come to see climate mainly as a temporal phenomenon, subject to long-term changes, fluctuations and, eventually, human interventions, climate has been, in the long history of the concept, an entity related to a specific locality. Climate was thus seen as essentially *stable* or subject to very slow historical change – a change that, for some authors, will account for changes in culture and the downfall of empires. Climate concerns a sense of place, not of time, and conveys an explanation of the differences between one locale and its inhabitants and those of another. The emphasis is on distinction: differences in temperature, winds, and forms of subsistence account for the differences between mentalities, cultures and political institutions. The treatise on "Airs, Waters, and Places", attributed to Hippocrates, e.g., states that a doctor first and foremost has to know everything about the temperatures, seasons, winds and rainfall in a given region in order to understand the bodies, mentalities and ailments of its inhabitants. (Hippocrates 1978) For it is, according to Hippocrates, this environment which explains the differences in bodies and mentalities between the inhabitants of different regions. Aristotle famously argued

that the temperatures have an effect on the inhabitants' cultural and social institutions:

The nations inhabiting the cold places and those of Europe are full of spirit but somewhat deficient in intelligence and skill, so that they continue comparatively free, but lacking in political organization and capacity to rule their neighbors. The peoples of Asia on the other hand are intelligent and skillful in temperament, but lack spirit, so that they are in continuous subjection and slavery. But the Greek race participates in both characters, just as it occupies the middle position geographically, for it is both spirited and intelligent; hence it continues to be free and have very good political institutions, and to be capable of ruling all mankind if it attains constitutional unity. (Aristotle 1944: VII, 7, 1327b)

Aristotle links the temperature of an area to the skills and temperaments of its inhabitants. From here he draws conclusions to the political forms that the population of a given climatic zone can assume: while the cold facilitates a spirit of liberty, yet disables political organization, hot climates create intelligence, but numb the sense of political freedom. Only the temperate zone in the middle enjoys the virtues of both intelligence and political organization. What we see here is the beginning of a tradition that links the climatic conditions of a place to the cultural and social institutions of its inhabitants. Today, this long tradition of what could be called an *anthropology of climate* has been discarded as "determinist". Yet, unlike our contemporary idea of a global and temporalized climate, this tradition establishes a link between cultures and climates. It offers explanations for the differences between cultures and their histories, and it asks how cultures have evolved in a constant exchange with natural environment. Instead of strictly separating nature and culture, this tradition of an anthropology of climate offers a view on human culture and society not as a way of liberating humans from the constraints of nature, but as multiple forms of negotiating human life and environmental conditions in a process of mutual influence and transformation.

Theories of heat

One of the most famous attempts at a political anthropology of climate is the XIVth book of Montesquieu's *The Spirit of the Laws* (1748). Montesquieu's overall goal is to establish a theory of legal and political institutions in relation to the facts of human existence, such as climate, religion, forms of trade, modes of subsistence, and the geopolitical position of a country. If climate is one of the chief natural influences on human existence, Montesquieu argues, it is well worth explaining the different forms of social institutions, such as, e.g., democracy or despotism, monogamy or polygamy, a cult of passive submission or vigorous work ethics, in regard to the influences of the climate upon human nature. Montesquieu's idea of climate is relatively simplistic: he sees temperature as the main factor of influence. Consequently, his point of departure is a physiological theory of the effects of coldness and heat on the tissues of the human body:

Cold air constricts the extremities of the external fibres of the body; [...] consequently, it increases also their force. [...] On the contrary, warm air relaxes and lengthens the extremes of the fibres; of course, it diminishes their force and elasticity [...]. People are, therefore, more vigorous in cold climates. Here [...] the action [of the heart and the reaction of the extremities of the fibres] are better performed, the blood moves more freely towards the heart, and, reciprocally, the heart has more power. This superiority of strength must produce various effects; for instance, a greater boldness, that is, more courage; a greater sense of superiority, that is, less desire of revenge; a greater opinion of

security, that is, more frankness, less suspicion, policy, and cunning [...]. Put a man into a close warm place, and, for the reasons above given, he will feel a great faintness [...]. The inhabitants of warm countries are, like old men, timorous; the people in cold countries are, like young men, brave. (Montesquieu 1899: 221-2)

While the cold preserves the forces of both body and soul and therefore allows for physical strength as well as boldness and courage, heat, in Montesquieu's view, softens the fibers of the body. It weakens the body's forces, and hampers a person's willingness to do hard work. Heat makes him or her passive, lazy, cowardly and more inclined to sensual and especially sexual pleasures. Montesquieu's theory of the physical and mental effects of heat and cold not only draws on an array of travel accounts and colonial lore of the 17th and early 18th century describing the seemingly outlandish mores of Asian and African societies from a colonialist perspective. It also refers to a relatively simplistic idea of the body, based on a physiological experiment. By freezing a sheep's tongue Montesquieu observes that in the cold the taste-buds contract while they open and expand when thawing. (Montesquieu 1899: 222-3) Heat, he concludes, opens up the human body to relinquish its energy, but also opens man's mind and soul to perception, imagination and religious faith. Heat thus can have paradoxical effects. The Indians for instance - as typical inhabitants of the hot South - are so delicate and sensitive that their climate-induced passivity and cowardice can be overcome by the power of their imagination as it is intensified by the heat:

Nature, having framed these people of a texture so weak as to fill them with timidity, has formed them, at the same time, of an imagination so lively, that every object makes the strongest impression upon them. That delicacy of organs, which renders them apprehensive of death, contributes likewise to make them dread a thousand things more than death: the very same sensibility induces them to fly, and dare, all dangers. (Montesquieu 1899: 224)

Of course all this sounds like the jingoistic theory of a climate theorist from the North, who, just like Aristotle, sets his home climate as the norm of truly beneficial temperatures. And this jingoism will be the birthmark of many theories of climate and culture from Montesquieu up to 20th century theorists such as Ellsworth Huntington or Willy Hellpach. Unlike these modern theorists, however, Montesquieu allows for paradoxical effects of the temperatures or even for institutions that effectively counteract the effects of the climate. While in the Indian example heat – by the power of imagination – counteracts its own slackening effects, Montesquieu also mentions an example of deliberate human resistance to the effects of the climate: The Chinese, equally challenged by hot temperatures, establish a cult of work which actively opposes the weakening force of the heat: "The more the physical causes incline mankind to inaction," he writes, "the more the moral causes should estrange them from it." (Montesquieu 1899: 226) Humans, in Montesquieu's view, may be challenged by the climate – but by means of well chosen social and legal institutions they can decide whether to give in or to resist the forcings of their climate.

Willy Hellpach, a German physiologist and psychologist of the early 20th century, follows in these footsteps to produce a similar typology of cultures and social behavior determined by climatic conditions. Hellpach, however, does not assume any degree of liberty within the climatic conditions. He bluntly states the differences in cultures and mentalities between Northerners and Southerners:

The inhabitants of the northern parts of each continent are largely characterized by such essential traits as sobriety, austerity, coolness, calmness, readiness to get to work, patience, tenacity, rigor, and the consequent exertion of the understanding and the will. In the southern parts the essential traits are liveliness, excitability, impulsiveness, sensitivity of the spheres of feeling and imagination, a sedate letting-things-go or sudden flaring-up. Within a nation, its northern population is more practical, dependable, but less open and sociable, whereas the southerners are more musical, more open (pleasant, endearing, chatty), but inconstant. (Hellpach 1938: 429-430, transl. E.H.)

The anthropology of climate seems to project a disparaging, if not utterly racist view on any culture other than the Northern-Occidental. From a post-colonial point of view, these broad-brush and mildly ludicrous theories on the cultures of "the South" or of "the North" reflect not much more than the self-proclaimed superiority of the colonial gaze. However, it is also possible to throw a more redeeming glance on this tradition of an anthropology of climate by setting it in a different perspective. Bruno Latour has criticized the idea of modernity as a path towards a separation of man and nature. (Latour 1993) By pursuing a process of separating the spheres of culture and nature modern culture has emerged not as a liberation from or domination of nature, but as a constant re-entanglement of both spheres. If human culture and social structures are not seen as a liberation from nature but as constant re-negotiations between nature and the human, Montesquieu has a point: He tries to establish a theory of human society that links the facticity of the natural habitat to the normativity of human institutions. He thereby investigates the degrees of freedom or determination of culture by nature. We cannot think of the structures of government or of the family outside and independent from the the locality and the natural conditions in which they are set. While modern climate anthropologists such as Hellpach or the most famous of modern climate determinists, Ellsworth Huntington, see man as essentially *determined* by his climatic origin, Montesquieu emphasizes that, within these settings, man has a *choice*: the good lawmaker will try to counterbalance the impact of climate on humans, for instance by establishing a cult of work in the hot regions where people are prone to laziness, as the Chinese, according to Montesquieu, had done. He tries to think man's freedom to make his own rules and laws, i.e. man's modernity, *within* the framework of his climatic environment, not independent of it. Without the determinism that has often marked the anthropological theories of climate, Montesquieu may be seen as a first attempt to think *acclimatisation*, the endless negotiation between humankind and its climatic conditions. What we call today the cultural history of climate is the history of this negotiation.

After Montesquieu, as the rise of colonialism in the 19th century lead to more and more Europeans being confronted with the intense experience of tropical heat through, heat gains a reputation of being a massive hazard to both mental and physical health. The 19th century abounds with medical treatises on the deleterious effects of tropical climates on European bodies and souls.¹ Tropical heat is not just suspected of temporarily ruining the health of colonial officials and travelers. It affects their modes of life, moral composure, and eventually is even passed on their offspring. (Livingstone 1999: 93-110) Europeans, within a few generations, "degenerate" in the tropical heat:

[...] of those Europeans who arrive on the banks of the Ganges, many fall early victims to the climate, as will be shown hereafter. That others droop, and are forced, ere many years, to seek their native air, is also well known. That the successors of all would gradually and assuredly degenerate, if they remained in the country, cannot be questioned. (Martin 1856: 454-55)

Within colonial medicine, heat is cast as the chief villain: it wrecks bodies and minds, undermines the virtues of a European lifestyle, and either kills Europeans or eventually brings them to mingle with the natives. It is this colonialist discourse on the deleterious effects of hot climates that will eventually form the basis for a climate-determinist anthropology. At the beginning of the 20th century, theories of climatic influences on human minds, characters, and work efficiency will eventually conflate climatic factors with hereditary categories such as race or genetic health. For the geographer Ellsworth Huntington, superior civilization can only thrive in a “temperate climate”, free from extremes of heat or cold, yet blessed with an invigorating seasonal contrast between winter and summer. Huntington actually even measured the loss of performance of workers in the southern US during the summer months. He concluded that heat unfailingly reduces mental and physical energy and, therefore, that no advanced cultural or scientific achievements could be expected from the inhabitants of hot countries. (Huntington 1915) Consequently, the colonial theories of heat and the deterministic theory about the relation between climate and culture were often used to legitimize repressive measures for overcoming native ‘sloth’ or to raise the efficiency of workers by artificial cooling through air conditioning. (Horn 2016)

The aesthetics of heat

Even if this cultural demonization of heat is mostly defunct today, it hints at a quality of heat that cannot entirely be dismissed. Physically, heat presents a particular challenge. It is a thermal condition that is much more powerful, much more invasive than cold against which the body can easily be protected by muscular contraction, clothing, and housing. Heat is not so easily escaped. In the tradition of an anthropology of climate (deterministic or not, colonial or post-colonial), heat is perceived as the epitome of climate influence *tout court*, a climate that radically shapes man and human culture. Cold is external to human bodies that (in a healthy state) maintain a temperature of 36^o C. It makes them contract within themselves which in turn facilitates more freedom of movement, more restraint, more control - in other words: more independence from the surrounding environment. As thermal influences on bodies and cultures, heat and cold are thus not just gradually different values on the thermometer. They are *qualitatively* different. Cold closes the body off from its environment. Heat makes the body melt into it, open up to it. The body is transcended by and infused in heat. While cold allows for distance, self-reflection and objectivity, heat triggers apathy and relaxation, but also, as Hellpach suggests, it is supposed to facilitate social intercourse and communication. It makes us open up not only to the natural but also to the social environment. Heat gets us involved, as it were, involved with the world around us as our senses are being sharpened to the point of oversensitivity. Our imagination intensifies. Our bodies soften and melt into the sensual and sexual appetites that heat stimulates.

While most of the authors examining the influences of temperature on human bodies either favor “temperate climates” – usually located at the place where they happen to live – or sing the praise of the invigorating effects of cold climates, with the rise of modern travelling and tourism to tropical countries, warm climates have gained in public favor and even become an object of fascination. What once accounted for the noxious character of tropical zones has now become their special point of attraction: lush nature, exotic bodies, the ‘relaxed’ lifestyle of the South, erotic stimulation etc. (Cocks 2007)

Michael Taussig, one of the few ethnographers to address heat as the almost inevitable condition of ethnographic research in tropical countries, sketches out a theory of heat as a force to transform perception and consciousness.

Heat is a force like color that sets aside the understanding in place of something less conscious and more overflowing, radiance instead of line, immanence instead of that famous bird's-eye view. As our planet heats up and the Tropics spread, is it not possible that not only a new human body but a new type of bodily consciousness will be created in both temperate and tropical regions, a consciousness that reattaches the body to the cosmos? (Taussig 2004: 31)

By suggesting to just surrender to the intense, mind-opening force of heat, Taussig gets to the core of the impact of heat. In the penetrating force of heat we realize how climate transforms the human being. Not just her cultures, mind, work-efficiency or mentality, but, more fundamentally, the very conditions of humans' relationship to the world. Heat radiates, penetrates and transforms solid matter and thereby dissolves clear-cut lines and boundaries. It oozes out of the atmosphere into bodies and things, it sticks to objects, distorts our view, intensifies our feelings. Heat is – as it were – the bodily sensation of what Morton describes as the “viscosity” of the hyperobject. Hyperobjects, Morton argues, are always too close to be perceived. They don't allow for a distanced, reflexive kind of cognition. We are always already immersed in them, as they are immersed in us:

Global warming [...] is viscous. It never stops sticking to you, no matter where you move on Earth. [...] The object is already there. Before we look at it. Global warming is not a function of our measuring devices. Yet because it's distributed across the biosphere and beyond, it's very hard to see as a unique entity. (Morton 2013: 45)

Heat, in other words, is the quality of something that has no qualities, yet a quality that challenges the terms and conditions of perception itself. Heat allows for no bird's-eye view on global warming, no distanced perception or cognition of heat. Heat must be felt, like an affect. Heat may just be an affect.

How can one represent heat? Make it be felt? We can look at graphs of rising temperatures, but that will not do much to help us – as the books on global warming advise – to “feel the heat.” How can we ‘feel’ the heat beyond its imminent presence? What would an aesthetics of heat look, feel, sound, taste like? What would it reveal of heat? Here are three examples stemming from three possible sources of such an aesthetics of heat: colonialist literature, Science Fiction, and contemporary art. They are three modes of an imaginary ‘invention’ of heat revealing some of the implications of its impact on bodies, minds, and communities.

My first example is a passage from the novel *Tropen (The Tropics)* by the Austrian expressionist writer Robert Müller, published in 1915. *Tropen* is a lurid, slightly surrealist account of a trip three men took into the jungle between Venezuela and Brasil, a journey full of violence, dreams, utopist schemes, and the desire for an enigmatic indigenous woman called Zana. Müller, who most likely never visited the Tropics but may instead have spent the time in question in a psychiatric ward, is influenced by colonial literature, most obviously by Conrad's *Heart of Darkness*. He quotes all the tropes of the tropics available from colonial fiction and travel accounts: the laziness and lust triggered by the suffocatingly hot and moist air; the lush, anthropomorphic landscape and vegetation; and the regression to lower, ‘primal’ stages of consciousness. As the men are being rowed upstream on the fiction-

al Rio Taquado in white blistering heat the narrator half-consciously starts contemplating:

All of this I had already experienced once. This mild, weary water had washed around me. This illusory light, this sweetness, this mood, this dawning of the unspeakable, it was not new, it resonated with the memory in man, it was a – repetition. It was... hot, ha, hot, the river might even have cut across the equator; ... Perhaps I'm just one of the lichens that turn in the water, one with a brain, with a sick, evil brain... The fat arms of lianas hugged the overhanging trees and fed an entourage of lascivious-looking flowers. Orchids spread their little, thick snouts through the knotted leaves... In the depths of my consciousness, in the mountain of my provenance slumbered a mood from the prehistory of millions of living beings, the maternal lactation and feeding of the river, the obliging calm of idleness had gratified my simple drive... Between me and this life about me there existed not only perhaps a metaphysical, but even a superb material identity... I am a much improved tropical landscape. Wherever I go and wherever I stand, I bring with me a normal temperature of 36 degrees, a sumptuous shooting of juices, a vegetation of warm splendor. (Müller 1993: 24-30)²

Müller's narrator casts the heat as a medium of regression: it dissolves the ego and leads it back to former stages of its existence. Yet what is most striking about this passage is the blurring of the boundaries between the observer and the surrounding nature, or, more precisely, the instance of cognition. While immersed in the perception of the tropical jungle, he suddenly perceives himself not only as part of this jungle but as the landscape itself. He *is* the landscape turned outside in, a tropical biotope at stable 36 degrees C, "a sumptuous shooting of juices, a vegetation of warm splendor." In Müller's fictional vision of heat, not only do the instance of perception and the perceived collapse into one flowing, productive stream or mush. The narrator also dives into the deep time of his ontogenesis, the fetus floating in the nutritious waters of the womb, but also into an even deeper time of the origin of life as such. He returns to a world of liquids and cells, molecules and temperatures, the "prehistory of millions of living beings, the maternal lactation and feeding of the river". (Müller 1993: 26) Heat and moisture are the medium of phylogenesis, yet in their mere potentiality, their origin, species that are not yet formed. Heat opens up a pathway to this primordial world – and thus perhaps to Taussig's "bodily consciousness [...] that reattaches the body to the cosmos." Müller's fictional tropics open up a world of pre-history, a trip back into unphantomable pasts of organic life, the individual's relation to its origin, to the pre-history of the human species as well as the becoming of life in general.

Even though it resonates uncannily with some of Müller's intimations on heat dreamed up fifty years earlier, my second example is taken from an entirely different genre, science fiction – or, more precisely, the imagination of a world in a deep future of radical global warming. With recent years being the hottest in recorded history, James Graham Ballard's novel *The Drowned World*, published in 1962 and thus long before the scientific discovery of global warming, today reads like the narrative illustration of the IPCC's worst nightmare. The novel is set in a world where intensified solar radiation and atmosphere depletion have caused world-wide temperatures to rise sharply. The polar ice-caps and glaciers have mostly molten, submerging the big European cities in silt and water. London, where the novel is set, has become a tropical lagoon, its flora and fauna has metamorphosed into that of the Triassic period. There are giant ferns, huge insects and reptiles, while humans, reduced to a mere five million gathering around the poles, are almost the last mammals alive. A biologist, Kerans, stays in the submerged, swampy London while most of the small dispatch of military and research personnel retreat

to the cooler zones up North. Kerans gets more and more drawn into the atmosphere of a heavily metamorphosing nature. Species de-volve back into paleozoic life-forms adapted to the temperatures of the Triassic, clocks start going backwards, humans are having intense dreams set in the deep time of paleohistory. As nature is transforming due to the heat and the high mutation rate caused by the intensified radiation, the novel develops a theory of time as climate – and climate as time. The changes in the physical world go hand in hand with profound changes in the psychological world. One character tries to make sense of it:

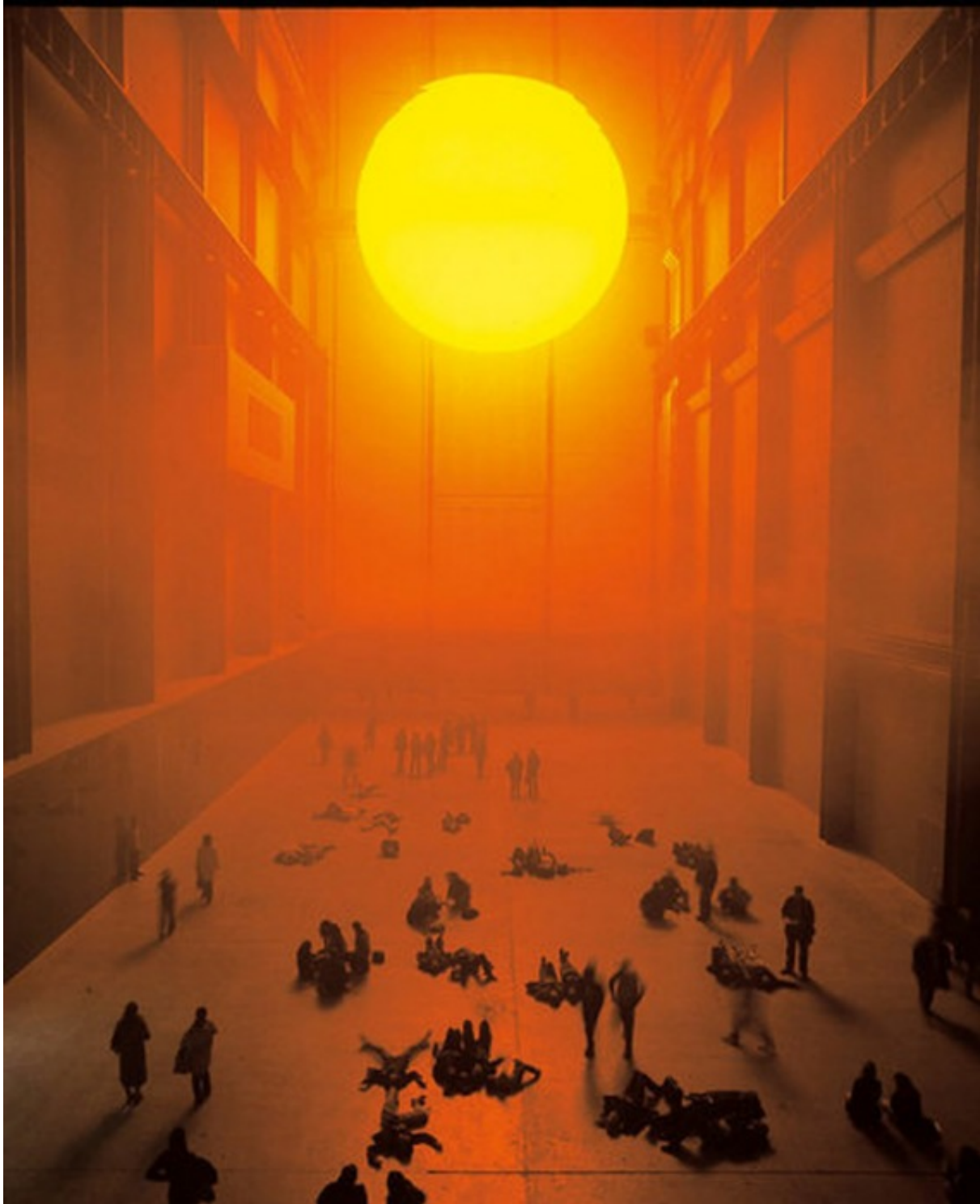
[...] as we move back through geophysical time so we re-enter the amniotic corridor and move back through spinal and archaeopsychic time, recollecting in our unconscious minds the landscapes of each epoch, each with a distinct geological terrain, its own unique flora and fauna, as recognisable to anyone else as they would be to a traveller in a Wellsian time machine. (Ballard 2014: 44)

Observing the metamorphosis of life-forms around him, Kerans “longs to descend through archaeopsychic time to reach its conclusion”, a state before civilization, individuality, and even before man. (Ballard 2014: 84) He eventually heads further south, travelling in the time machine of heat, and escaping the erratic violence of another character, Strangman, who tries to bring back a weird form of human civilization by draining the swamp in which London is drowning. In Ballard’s logic, heat is a reversal of time, an opening into the abyss of planetary pasts, a species-memory that relates the modern individual back to a deep time of the becoming of life. Heat dissolves not only the boundaries of bodies, and the division between subject and object, observer and observed, as Müller notes. For Ballard, heat sets the human in relation to a prehistory of life that transcends human civilization and consciousness. It is a post-human force that ultimately will make the species disappear – just like the novel’s protagonist Kerans who in the end vanishes into the jungle of the South.

While both Ballard and Müller still describe heat as a force pertaining to a wild, tropical nature which ultimately claims its victory over human consciousness, my third, contemporary example has done away with any allusion to “nature” or “wilderness”: Olafur Eliasson’s installation *The Weather Project* was set up in the huge Turbine Hall of the Tate Modern, London, in the winter of 2003. Stepping out of the gloom of a London winter, visitors saw a bright warm sun shining from one end of the 150m long hall into a huge, hazy space, the ceiling of which reflected them like a mirror: a *mise-en-scène* of a tropical, steamy sunset/sunrise. Yet it was all artificial: a natural phenomenon technically created in an interior space. Eliasson had installed a hemisphere of yellow monofrequency lights into a half-sun that was mirrored into a full round by the mirror foil installed at the ceiling. The haze in the hall that intensified the atmosphere of warmth was blown in by haze-machines.

Instead of referring to heat as a force of nature, Eliasson cites an iconography of the sunset while ostensibly re-creating a natural phenomenon by technical means. The semi-transparent haze emanating from behind the sun-shaped light panel added to the feeling of warmth and togetherness. Visitors reacted to that atmosphere with an attitude of awe and wonder, but also quickly started to play with it. Realizing that the immense height of the building’s ceiling was actually a mirror, they started laying down on the ground in patterns reflecting themselves inside the huge specular space. In patterns, they were co-creating the room with their bodies arranged in groups. Eliasson’s experiment enables social relations brought forth by an artificial climate. He thus explores atmosphere both as a climatic and a social phenomenon, thereby tapping into the tradition of a political anthropology of climate as laid out by Montesquieu. Climate is a social factor. The artist himself stat-

ed that the installation's goal was to overcome the Modernist distance between viewer and artwork and to allow for an immersion into art, just as a body is always already immersed when being in a hot space. Seen this way, climate is very much akin to society, a space of inescapable immersion: "The Weather has been so fundamental to shaping our society that one can argue that every aspect of life – economical, political, technical, cultural, emotional – is linked to or derived from it." (Eliasson 2003)



Olafur Eliasson: The Weather Project 2003. Monofrequency lights, projection foil, haze machines, mirror foil, aluminium, scaffolding, 26,7 x 22,3 x 155.44 m. London: Tate Modern.

Unlike Müller and Ballard who cast heat as a force of *nature* that opens up a relation to the deep time of life, even beyond the human, Eliasson takes up the ancient link between society and climate. He technically constructs a climate, evoking a sunset, tropical heat, and the haze of that steaming lagoon that London has become in Ballard's scenario. But he makes that construction more than transparent. By emphasizing the technical, artificial character of his visual and social rendering of heat, he makes it socially reflexive: Heat is not a medium of time but, in Eliasson's installation, a medium of social relations, communication, and human reflexivity. Eliasson's installations generally evoke a space that no longer allows for a "natural climate" or a "wilderness" beyond human impact. In his 2003 installation, Eliasson transports an aesthetics of heat that Müller and Ballard could only analyze and contemplate as a state of nature into the post-natural world of global warming. Matters of fact and matters of concern can no longer be separated. The "tired old divisions between wild and domesticated, private and public, technical and organic," Bruno Latour writes on behalf of *The Weather Project*, "are simply ignored, replaced by a set of experimentations on the conditions that nurture our collective lives." (Latour 2003: 30)

So what could be an aesthetics of heat? What is heat, aesthetically speaking, in the age of global warming? What is climate change – a natural or a cultural entity? And how would heat enable us to phenomenologically and aesthetically experience this ineluctable and uncanny entanglement between nature and culture? Heat, we learned from the cultural history of hot climates, brings out the inseparable, non-objectifyable, "viscous" coherence of life - life of which the human species is a part, yet *only* a part. Like any other species, humankind is formed by and yet also forming and transforming this living matter. Like any other species, humankind is subjected to heat – yet a heat that is no longer just a "natural" phenomenon. Understanding the profoundly changed climate of the Anthropocene might therefore be a task that necessarily involves a new look at the mutual transformations between humans, climates, and cultures. It involves re-locating the human species in a deep time of climatic history and the formation and evolution of life. It means taking into account climate as a "cultural fact", a symbolically and socially fraught part of nature. It means exploring the climatic imaginaries that cultures have brought forth. Any historical anthropology of climate must therefore draw on works of art, on fiction, on the bizarre imaginations of the heated and overheated brains of artists. "As the planet is heating up", as Taussig puts it, a possible way to rethink the inescapable entanglement of man and nature might be through an aesthetics of heat.

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<<http://metaphora.univie.ac.at/volume2-horn.pdf>>

Notes

- 1 The most influential early work on these effects is Johnson 1815.
- 2 I am grateful to Ben Robinson for translating the passage. Unfortunately to my knowledge there is no English translation of the novel so far.

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