## O del mio Dolce Ardor

# Thermoaesthetics and the Phenomenology of Thermal Touch

### Erika Natalia Molina Garcia

To attempt to move the project of thermoaesthetics from a phenomenological perspective forward, understood conjunctly as the study of thermal touch and a thermal reading of art, in this paper, I first introduce the philosophical interest in temperature with the Aristotelian doctrine of thermal homeostasis and the importance of the idea of a Plastic Sensorium, in the context of scientific and philosophical haptic research currently active and developing. In the second part, I explore some recent studies in the fields of thermal and haptic aesthetics, reviewing three occurrences of temperature in art from the perspective of the phenomenological concept of generativity. Finally, I explore some Husserlian considerations on thermal touch and the cosmological questions a thermoaesthetics raises. | Keywords: Thermoaesthetics, Plastic Sensorium, Generativity, Adumbration Analysis, Thermic Values

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Kerem Gibi, Nâzım Hikmet, 1930¹

Poem reproduced in Raw (2011, pp. 184-185). Translated by James Ryan and Hüda Cereb.



#### 1. Introduction

Between the freshness of rain on our skin and the need for fire in a political revolution, between the endless quest for absolute zero (-273.15 degrees Celsius) and young Icarus's last journey as represented by countless artistic iterations, between snowballing wildfires, the possibility of a nuclear blast and the warmth of colours and textures, extends a field of aesthetic research that studies touch in its less geometrical, more intensive component: temperature. What is temperature's aesthetic role and value? Although in the context of Western rationalism, it might have been difficult to appreciate how aesthetically central temperature is (cf. Diaconu, 2024, p. 118), we have become aware of how prevalent thermic sensations are, and of their role as "condition of possibility for human experience in general and artistic experience in particular" (Diaconu, 2024, p. 119).

"We have entered 'a haptic age'", declares David Parisi (Parisi, 2018, p. 272), echoing those who announced it before him. We have entered an era of "increased focus on touch as an epistemic and experiential modality", an era engraved most notably by a renewed interest in the role of tactile perception in aesthetics (*Ibid.*). An aesthetics of touch can be gathered both in explorations from a bygone time, such as the old project of a physiological aesthetics (Allen, 1877), nowadays seemingly renewed as neuroaesthetics (Skov and Nadal, 2022), or from current interests in the aesthetics of the intimate and the erotic, of blindness and other perceptual/somatic variations, or in the aesthetics of dance and sports. Here, the apparent confusion between two meanings of the term *aesthetics*, referring both to perception-related and art-related philosophical problems, is rather an unavoidable, culturally significant ambiguity and, for us, the value of using such a concept and of attempting to develop research in this field.

This nexus between art and the senses is at least what I would like to address in this paper by studying temperature and its aesthetic value from a phenomenological perspective. In a phenomenological approach, practised or contemplated art is an intersubjective, worldly and situated experience to be studied first and as its fundamental stratum from the perspective of the senses, but reciprocally, as art is part of our lifeworld, it also influences the constitution of our communities and subjectivities, shaping our sensoriality and sensibility back. As Hans Rainer Sepp and Lester Embree put it, the sphere of the sensuous or of "aisthesis marks the realm in which aesthetics as a traditional discipline meets phenomenology [...]. Aisthesis and aesthetic behaviour are bound to the sensuous concretum that is the human body in its relation to world and history" (Sepp and Embree, 2010, p. xvi). Considering such a complex structure of sensuous experience in what relates to art, and what's more, in its thermal component, one of its less discernible aspects, demands a transdisciplinary aesthetics that thematises both the senses and the arts in a choral and harmonised manner.

This is, of course, no easy task, and in this paper, drawing on some recent attempts (cf. Diaconu, 2024, chapter 3 and chapter 8), I aspire to humbly give

no more than a short step in the direction of the project of thermoaesthetics. With this goal in mind, in the first part of this paper, I introduce the subject, discussing the philosophical interest in temperature in the context of the Aristotelian doctrine of life as dependent on haptic conditions of thermal homeostasis. In the second part, I explore some recent studies in haptic and thermal aesthetics, as they root themselves in phenomenological tradition and ideas, reviewing temperature in various artistic fields. Finally, I explore some Husserlian considerations on thermal touch and the cosmological questions a thermoaesthetics raises.

#### 2. For a Plastic Sensorium: Aristotelian Phenomenology of Temperature

The distinguishing characteristics of the body, qua body (τοῦ σώματος ἢ σὧμα), are tangible; by distinguishing characteristics I mean those which differentiate the elements hot and cold, dry and wet (θερμὸν ψυχρόν, ξηρὸν ὑγρόν) [...]. The tactual organ (ἱ δὲ αἰσθητήριον τὸ ἀπτικόν) which perceives them, i.e., that in which the sense of touch (άφη), as it is called, primarily resides, is a part which has potentially the qualities of the objects touched. For perception is a form of being acted upon (πάσχειν). (Aristotle, 1964a, 423b, p. 135)

For Aristotle, life depends on achieving and maintaining the right conditions of temperature and moisture, those that are necessary for its emergence and subsistence (Aristotle, 1964b, 466a, p. 403). Life depends on an elemental homeostasis between the living body and its environment that can only be mediated and accomplished by touch. Touch is, indeed, the sense that allows us to feel the body as a living body, the one allowing for the minimal somatic selfawareness needed - even if rudimentary - by all animals to survive and have a sense of navigation in their world (Aristotle, 1964a, 434b, p. 197). Such sensuous performance is accomplished only because – contrary to other simpler senses, like hearing or vision – touch conjugates several sensible oppositions: hot and cold, dry and wet, hard and soft, (θερμὸν ψυχρόν, ξηρὸν ὑγρόν, σκληρὸν μαλακόν, Aristotle, 1964a, 422b, p. 129), among others. The philosophical interest in touch is, one might say, indeed, primordial. The haptic age, Parisi announces seems to have started with philosophy itself. Aristotelian ideas on the vital primacy of touch and human intelligence as relying on the plasticity of our flesh (Aristotle, 1964a, 421a, p. 121) are eloquent in this regard. Aristotelian psychology seems to have been a coherent system founded on tactile perception, with thermoception as a key component. This is especially relevant for the school of thought through which philosophy tends to assume the task of understanding the living and sensible body, namely phenomenology, for it seems to inherit such primacy of touch.

In 1874, Franz Brentano – a bridge figure between Aristotle, 19th-century psychology, and Husserl –, trying to distinguish between mental and physical phenomena, indicates that the temporal unity of experience hinders our ability to distinguish various kinds of phenomena. The temporal unity of experience, namely how the many streams of perception merge into an indistinguishable felt object as they simultaneously concur, makes it not only difficult to distinguish mental from physical phenomena but also, among the kind of mental phenomena that sensory inflows are, it makes it quite arduous to distinguish various floods such as taste, touch, pain or warmth.

The nerves of the tactile sense often simultaneously transmit a so-called sensation of touch, a sensation of warmth or cold, and a so-called sensation of pleasure or pain. Now we notice that when several sensory phenomena appear at the same time, they are not infrequently regarded as *one*. [...] It is not surprising, then, if we do not always distinguish precisely between a phenomenon which is a temperature sensation and another which is a tactile sensation. Perhaps we would not even distinguish between them at all if they did not ordinarily appear independently of one another. (Brentano, 1995, p. 64)

If we did not feel the heat of fire at a distance, the coldness of a room or the warmth of our skin when we blush, i.e. if we had no thermal sensations separately from the sensations of texture, shape and pressure we have when handling objects, it would be very difficult to even conceive of thermoception as anything different from touch, or even see it as one of its components. This most significant haptic element that thermal perception is from an Aristotelian perspective, appears experientially, phenomenologically as essentially different from direct tactile experience. This experiential difference between concrete, proximal and mechanical touch (that might and does also reveal temperature as a secondary objectual trait) and the broader haptic experience we have when feeling the temperature of an object at a distance institutes a criterion of differentiation between touch and thermoception. Be it distal or even internal as in the case of our body or skin temperature rising and dropping, thermoception reveals thus its peculiarities. The ancient localisation criterion Aristotle had, namely that temperature sensations occurred in the skin, in the body and were, therefore, a part of the sense of touch, shivers and the Western sensorium seems to expand. Nowadays, the sensorium, understood here as our sensory model, i.e. as the changing catalogue of how many and of what nature we consider our bodily senses to be,<sup>2</sup> counts many more modalities than the five distinguished by Aristotle, with listings containing between eight and more than twenty (Paterson, 2007, p. 20). That thermoception is a kind of touch is nonetheless still well established.

While referring to *thermoception* and not simply to *thermal touch* gives in itself the impression that it could constitute a separate sense, its naming responds more to the need to study it in detail than to an ontological or categorial difference regarding tactile modalities. Apparent changes in the *sensorium*, conceptual overlapping and terminological confusions might come more from these changing uses when naming the senses than from an actual transformation of our cultural sensory model. For instance, Robert Franz Schmidt understands thermoception to be one of the three main components of *somatovisceral sensibility* (Schmidt, 1981, pp. 81–125): "The skin is not

The concept of *sensorium* has a long history (see Howes, 2023, pp. 7-17). I see three of its meanings as most relevant in current sensory literature. First, the aforementioned idea of sensory model, which can also be referred to as *cultural sensorium* for sensorial catalogues vary not only from epoch to epoch but also from culture to culture (to see some examples, Howes, 2023, pp. 58-61). Second, it can refer to a characteristic trait in a given cultural sensibility, which can be referred to as *cultural sensorium* as well; for example, ocularcentrism in Western culture. Finally, it can refer to the ensemble of our bodily senses working together as a whole, a simple synonym for *sensibility*.

a uniform sensory surface. Within it, in varying density, are found the receptors three independent modalities: pressure/touch and (thermoreception). (mechanoreception), heat cold and pain (nociception)" (Schmidt, 1981, p. 81). Beyond the skin, the somatovisceral perceptual/sensory system stretches to the deeper layers of the flesh, muscles, bones, joints, connective tissues and viscera, with the particular trait of not concentrating on any specific organ, as vision in the eyes or taste in the tongue. This somatovisceral sense would correspond simply to what Aristotle called touch, currently understood as the haptic system, as an array of touchrelated sensations, to differentiate it from the more specific proximal/ mechanical touch.

More recently, this proximal, "touch component of the sense of touch" (Okami, 2014, p. 241) has been designated as tactition. Along with thermoception and nociception, tactition would constitute the threefold essential structure of the haptic sense. If we do not reduce the sense of touch to tactition, then thermoception is still one of the senses of touch. And even if one of the criteria for distinguishing touch from thermoception has recently been anatomical and neurofunctional analysis, this kind of research continues to show the imbrication of all the senses of touch. As the works of Crucianelli and Morrison on haptic exteroception and interoception clarify (Crucianelli and Morrison, 2023), there are many physiological and cognitive complex processes we might broadly distinguish as sensations of tactition, affective touch, temperature or pain, but they are frequently interwoven in terms of fibre-recruiting and fibrefiring (between unmyelinated C fibres and lightly myelinated Aδ fibres; Crucianelli and Morrison, 2023, p. 201), as well as extremely nuanced and granular in terms of felt experience and subjective accounts. In this context of open and multidisciplinary exploration of the senses, the only wise attitude seems to be to keep working from the perspective of a plastic sensorium, never fixing it or closing it to new inputs science or philosophy might bring.

However, the idea of plasticity has yet another layer of meaning in this paper. It is in the context of a philosophical history of temperature that Madalina Diaconu recalls the founding Cartesian meditation on a melting wax figure (Diaconu, 2024, p. 48). This crucial moment of Western philosophy represents the larger preoccupation it inherently has concerning the question of materiality and already shows the quiet importance of temperature, as it relates to the plasticity of materials. Even if the intensive nature of temperature – intensely subjective and hardly graspable through geometrical means – prevented it from significantly being considered in philosophical and aesthetical discourses, today our cultural context is different. An example of this is Michel Guérin's *Philosophy of Gesture*:

Percussions attack matter to impose a more or less deliberate form on it. Throughout human history, technicians have transformed matter through fire and striking. In this sense, the inspiration that guides them, directed toward the world of solids, is the one the sculptor has, that 'demiurgic' worker capable not only of *modifying* matter but also of *shaping* it. (Guérin, 1995, p. 34)<sup>3</sup>

Translation of "Les percussions attaquent la matière pour lui imposer une forme plus ou moins délibérée. Durant la plus longue histoire de l'homme, le technicien a transformé la matière par

Guérin explores how every art starts as and depends on a dancing gesture. It is only afterwards, with technique, effort and knowledge, that gestures become music or literature, painting or architecture, through a process of material densification, modification and shaping, of understanding and penetration of the logic of materials. In other words, it is only later that art becomes art by syntonising deeply with the matters at hand (cf. Guérin, 1995, p. 77). Useful and pragmatic, emotional and expressive, gestures are the place where art begins and where an otherwise exiled human, estranged from nature, finds its place in a dancing cosmos of materialities. Gestures are thus the intersection point between reality and virtuality, physics and metaphysics (cf. Guérin, 1995, p. 76); between art, matter and our senses. As Joan Miró highlights, "the encounter between instrument and material produces a shock, which is something alive and from which [...] there will be a repercussion on the spectator", adding more precisely concerning ceramics that "you have to know how to master fire [...]", although "even if you use the same formula, the same degree of firing, you never get the same result" (Miró, 2017, pp. 40-41).

If fire is so often used in artistic production, it is because temperature constitutes one of the main variables for modifying material qualities. Malleability, shapes, textures and colours transform through temperature alteration and fire exposure. In this sense, referring only to this very concrete connotation of temperature, I would argue that one of the main reasons for the field of artistic practices and objects to be traversed by the phenomenon of temperature and by its strongest symbol, fire, is that this vital process of understanding and syntonising with matter requires us to manage the thermal dynamics between bodies, spaces and materials so that our gestures effectively come to their demiurgic and symbiotic artistic ends. Connecting Aristotle's and Guérin's ideas, one could say that the plasticity of our flesh marries the plasticity of the world through fire. These authors together lead us to appreciate that temperature is not only crucial to staying alive from a physiological perspective, but also from a sociocultural perspective: to keep producing art and keep doing it with a deep somatic meaning. Both authors together allowing us to start considering the concept of a thermal integration of humans in the cosmos.

#### 3. Thermic Art and Phenomenological Haptic Aesthetics

In this part, I discuss contemporary thermal and haptic aesthetics as they draw upon phenomenological tradition, succinctly reviewing occurrences of temperature in different artistic fields. Although, given the universal need of dealing with temperature in art, from the warm-ups of a dancer to a potter's kiln and the delicate conditioning of spaces for artwork preservation (cf. Diaconu, 2024, p. 120), this review will be limited to a couple of significant examples (for a broader review see Diaconu, 2024, pp. 128–134).

Most recently, in chapter 8 of her recent *Aesthetics of Weather*, Madalina Diaconu structures a thermoaesthetics in five layers where temperature is

le feu et la frappe. C'est en ce sens que l'inspiration qui le guide, dirigée vers le monde des solides, est celle du sculpteur, cet ouvrier 'démiurgique' capable non seulement de modifier la matière, mais encore de la façonner."

studied in terms of condition, functionality, intermodality, expression and agency. At a first level, temperature is seen as a precondition for making, preserving and experiencing art. In a second, deeper layer, it is considered a functional factor in the evaluation of applied arts, most notably architecture and design. The author then presents a layer of thermal examination of intermodal sensorial experiences, like the ones we can have of fresh fragrances or cold materials, to finally explore a fourth analytical layer of temperature in the context of artistic expression and a fifth, where temperature becomes a cocreative agent, as contemporary artists include it to transform their works and installations in ways they can implement but not forecast. The theoretical part of Diaconu's aesthetics of temperature is fundamentally phenomenological, although it draws most remarkably on non-Western philosophical sources, like Watsuji Tetsuro's concept of an elemental natural environment or  $F\bar{u}do$  (Diaconu, 2024, p. 49), and goes into great thermodynamical and physiological detail.

An attempt at establishing an aesthetics of touch in broader terms, also drawing on phenomenological scholarship, can be found in Mark Peterson's *The Senses of Touch*, where the author tackles the relationship between vision and touch in the philosophical tradition and explores the therapeutic potential of tactile interactions:

[...] phenomenology enables a rich sensuous description of manifold tactile experience not only in the psychologically based terms of the immediacy of cutaneous sensations (pressure, heat, pain) or even the somatic sensations (such as kinaesthesia, proprioception, the vestibular sense). It also allows other qualitative factors such as the feeling of proximity or distance that accompanies touch experiences, the affective charge that prompts cathartic release through therapeutic touching, or the empathic component that arises within touching-as-feeling. (Paterson, 2007, p. 155)

Phenomenology is, in this context, more than a conceptual tool or framework. Paterson's perspective of practical analysis and analytical practice considers phenomenological tradition but also our own embodied and visceral experiences as implied spectators and/or artists, as well as the phenomenological analysis one might develop from it. This is what we see at work when Paterson develops the first part of his haptic aesthetics, dedicated to more traditional art forms, as a path of increasing tactile and kinaesthetic involvement, first examining the role of touch in painting, then in sculpture and finally in architecture (Paterson, 2007, pp. 87-102). This progressive unfolding of "different degrees of physicality in the aesthetic encounter" (Paterson, 2007, p. 87) shows that the haptic experience each of us might have with these differently tactile and differently engaging art forms shapes the style and order of Paterson's theoretical exposition. In the second part of his haptic aesthetics, dedicated to less traditional art forms (Paterson, 2007, pp. 103–126), the author interprets Orlan's, Stelarc's, and Char Davies' works, again, as increasingly immersive haptic experiences, this time exploring the realm of the artificial and digital expansions of the sensorium:

[...] extending the skin, fleshing out understandings, [...] aesthetics as practice, indeed a haptic aesthetics as practice, can similarly realize the body, sensation and space in a different way. Performing visceral philosophy or staging phenomenological experimentation. (Paterson, 2007, pp. 125–126)

The nexus between art and the senses at the heart of the culturally significant ambiguity of aesthetics as both a field of perception studies and art studies takes on a new, intensified meaning, leading us to wonder: how do artistic haptic experimentations change our sensory awareness? And how can they thus change the phenomenology we can practise with regards to our sensory experience, the experiential descriptions we can make of it and the phenomenological doctrine we can elaborate from it? Now, haptic aesthetics has developed significantly, not only in the fields Paterson tends to analyse but in literature as well, through various related avenues, as one can appreciate in Rebecca Scherr's, Milena Marinkova's or Abbie Garrington's works (Scherr, 2007; Marinkova, 2011; Garrington, 2013). Exploring the role of the tactile in Gertrude Stein's creations and erotic poetry, Scherr highlights "Stein's belief in the materiality of language, that is, in the 'thingness' of language" (Scherr, 2007, p. 193): "language is an entity one can hold, feel, mold, move, encounter" (Ibid.). As Paterson regarding painting, sculpture, architecture and performance, Scherr identifies two ways in which tactility is present in this literature: the actual materiality of objects – in this case, texts –, their texture, proxemic possibilities and so forth, and the distal haptic affection works of art can arouse. In this sense, Scherr does not only highlight the – may I call them - more positive faces of touch: namely, that tactility, in art in general and literature in particular, supposes and imposes a closeness, an empathic relationship between materialities, objective and subjective, that gives more presence and affective meaning to creative objects. She also importantly focuses on a certain loss: "[...] textual tactility is never actual touch but rather an approximation of it as communicated in words and sounds, lending Stein's tactile aesthetic a melancholic quality" (Scherr, 2007, p. 210). A general feature of the sense of touch appears, in this manner, in a literary aesthetic context. Touch implies its paradoxical conditions, namely that the touched gets into (be it distal or atmospheric) contact with the touching (and vice versa), establishing a relationship of proximity, mutual affection, reciprocal porosity and coimplication. At the same time, the touched and the touching are unavoidably at a distance from each other, and tactile relations are never fusional.

Milena Marinkova, interpreting the works of Michael Ondaatje, proposes haptic aesthetics to be a part of a larger *tactile epistemology* that "resists the transparencies of absolute knowledge and ultimate truth" (Marinkova, 2011, p. 17) through a focus on the corporeal, the intimate and the affective. This focus would generate a kind of writing that tries, very precariously, tenuously, to navigate the in-betweens of minority and majority literature, looking for political options, in an attempt to give voice to a sort of third option between a Freudian and a Marxist paradigm. Between the idea that the individual subject stands on its own, as an ego, as a single point of independent vital force and the idea that it is the mere result of social structures, an intersection of ideologies, the measly product of concomitant factors, tactile and intimate

writing would serve as a productive escape into different aesthetic possibilities. Ondaatje, author of *L'Homme flambé* (*The Burning Man* retitled as *The English Patient*) would furnish with his works the perfect example of this new aesthetic.

In this haptic aesthetics, phenomenology is again crucial but as a counterexample for it is interpreted as a theory of the subject that risks being too close to the Cartesian ego, subtracting it from its carnal, situated existence (cf. Marinkova, 2011, p. 4). Even so, Marinkova values phenomenology for its theoretical achievements, such as overcoming the rough distinction between inside and outside thanks to the notions of *being in the world* or of *flesh of the world* (Marinkova, 2011, p. 6), and builds upon phenomenologically inspired scholarship (Young, 1990; Marks, 1999). The reason for Marinkova's haptic aesthetics to be more hostile to phenomenology seems thus to simply be a – at times – reductive interpretation of it as a science of the ego, as pure intentional analysis; a reductive understanding that Paterson does not have.

Diaconu, Paterson, Scherr and Marinkova give us only a glimpse into the numerous research paths that can be developed when considering phenomenological haptic and thermic aesthetics as a cohesive, nonetheless dual (both perceptual and artistic) field of study: from the influence of phenomenological tradition and concepts in haptic aesthetics as it develops with regards to various artistic practices, also the ones not reviewed in this paper such as music or theatre (cf. McTighe, 2013; Van Elferen, 2020), to the study of thermic values (Diaconu, 2024, p. 119) as they originate in sensory experience, as they are reproduced by cultural uses and as they impact all aspects of artistic creation and appreciation, and the interpretation of the countless methods different artistic practices have of expressing thermically and producing thermal impressions in their audiences (cf. Diaconu, 2024, p. 130). For now, I would like to briefly refer to three artworks where temperature is significant. My criteria for quoting these three examples are that they convey through temperature and through its fundamental symbolization, fire, a Husserlian concept whose importance has recently been highlighted, the concept of generativity; and that they do it (if we consider the three examples as an ensemble) in a progressively ethereal and dynamic way. This last criterium illustrates for me a thermic value, namely a value that the perspective of temperature allows us to have, understand and appreciate, in this case, the value of the vanishing of well-defined objective and subjective borders in benefit of a better comprehension of our interdependence.

As Bernhard Waldenfels indicates, "for Husserl, generativity is something that belongs, along with historicity, to the fundamental features and characteristics of human and interpersonal existence" (Waldenfels, 2024, p. 57). Succinctly understood, generativity is the inter- and trans-generational structure of experience, the dynamic link between generations that culturally and historically locates us. In this sense and connecting with the literature analyses explored in this chapter so far, I would like to quote Linda Hogan's *The History of Fire*:

My mother is a fire beneath stone. My father, lava. My grandmother is a match, my sister straw. Grandfather is kindling like trees of the world. My brothers are gunpowder, and I am smoke with gray hair, ash with black fingers and palms. I am wind for the fire. My dear one is a jar of burned bones I have saved. This is where our living goes and still we breathe, and even the dry grass with sun and lightning above it has no choice but to grow and then lie down with no other end in sight. Air is between these words, fanning the flame. (Hogan, 2014, p. 118)

Hogan's poetic reflection codifies the generations, one after the other burning, first erupting, living and expanding to then fade into ashes, in the language of flammable and flaming elements. Leaving aside the double meaning of these elements as creative and destructive forces, Hogan will highlight fire as a symbol of the energy needed both to create and to survive, not only as individuals but as members of an ancestral community: "The creation of fire is a skill passed down [...]. From whatever tribal hearts we derive, Native writers assure us we are keeping the fire of our own that runs in our veins" (Hogan, 2017, pp. xiii–xvi). Therefore, temperature is not only crucial in this poetry because our bodily constitution requires certain thermal conditions for functioning, from which a set of aesthetic values derive, as Diaconu's aesthetics highlights.

It is rather the element of fire and the characteristics of the flammable, with its fluctuations and constants, with its voracity and its ineluctable extinction – an extinction that is nonetheless never absolute but always residual, opening to an uncertain future – that which makes this piece thermoaesthetically remarkable. In resonance with Hogan's symbolic use of fire, Géraldine Tobe's quasi-aleatory smoke paintings look to condense the artist's individual and cultural history with the transient residue of fire. Tobe describes her work as follows:

I was looking for freedom. [...] I wanted to find a medium other than paint. And I found smoke. It's the fire that consumes, the force that incinerates. When life ends, we are reduced to ashes. [...] Smoke is a process of destruction and recreation. I began to understand that smoke was a tool which helped me to heal. [...] It's the smoke that decides. I'm impatient to see the final work and I'm often surprised by the result. When I start working, I lose all sense of pain and enter an almost transcendent state. At that point, it's no longer my own actions, but other forces that seem to take possession of my body. (Tobe, 2024)

Tobe's use of the tenuous materiality of smoke, even more tenuous than that of fire, acts as an intensification of the artistic translation of the

transgenerational and generative dynamics Hogan also tries to capture (cf. Tobe, 2022). As in a second, deeper level of artistic understanding of our historical being, smoke seems to go beyond the concreteness of fire but skips the ending of ashes, opening us to the conception of an in-between or a third realm of particles and fumes, between life and death, that the artist understands to be spiritual (cf. Tobe, 2024). Diaconu's aesthetics captures a similar quality, mostly in the context of her analyses of architecture and urban spaces, as they fill up with "aerosols, moisture, mineral dust, ashes, soot particles, dust from the construction and demolition of buildings, plant and fungal spores, urban radio and electromagnetic spectrum and pollutionnoise" (Diaconu, 2024, p. 125). Diaconu will have in mind throughout her book contemporary artists as creators of atmospheric installations; Olafur Eliasson among them. This is the last artist I would like us to consider.

As palpable in works like *The Weather Project* (2003, cf. Eliasson and Engberg-Pedersen, 2012, pp. 116–123) or *Your Waste of Time* (2006, cf. Eliasson and Engberg-Pedersen, 2012, pp. 124–127), Eliasson's installations aim to generate a societal reflection, in the context of global warming, through atmospheric modifications that have at their heart different means of evoking and provoking thermal interplays between artwork and audiences. Influenced by phenomenology (cf. Eliasson, O., Böhme, G., Borch, C., and Pallasmaa, J., 2014, p. 96), Eliasson takes into account how every material is filled by psychosocial meanings, identifying the ethics in aesthetics or how aesthetic choices determine our behaviour and what we pay attention to. In this sense, he tries to draw attention to our current societal condition, working simultaneously on the awareness of reality, making otherwise unremarkable atmospheres noticeable, and on the utopian production of possible futures:

[...] the right material can make the atmosphere apparent by giving it a trajectory, by making it almost tangible. Yet it could also go another way: the materiality of something has the capacity to work in a non-normative or liberating manner, opening up new ways of engaging with the atmosphere. (cf. Eliasson, Böhme, Borch and Pallasmaa, 2014, p. 95)

## 4. Phenomenology of Thermal Touch and Thermoaesthetics' Cosmological/Everyday Scope

After our review of this triad of works as artistic reflections on our transgenerational bond through temperature and fire, I would like to explore some Husserlian considerations on thermal touch and, more explicitly, the cosmological questions thermoaesthetics raises, already suggested by the triad.

What is it that makes us say and feel that a colour, the lightning of a room, a visually perceived texture, or a person is warm or cold? Why is the bark of this tree thermally cosy and a hospital room is not? Why do we qualify our enthusiasm as ardent, lovers as burning with desire, a murderer as cold-blooded, a reactive person as hot-tempered or a long period of geopolitical tension under the threat of the ultimate nuclear ablation as *cold war*? These are not metaphorical attributions, unless we give metaphor a different meaning, or we somewhat abuse of language. As Gaston Bachelard puts it in

1938: "metaphors are not simple idealizations which take off like rockets only to display their insignificance on bursting in the sky" (Bachelard, 1964, p. 109). They are semiotic systems that relate concretely to sensory experiences. These experiences are fundamentally haptic and meaningfully thermal. Why is looking at fire or images of the North Pole so hypnotic and poetic? Why do landscapes with extreme temperatures, like deserts or high mountains, imbue us with peculiar feelings of awe and pleasurable horror? Why do human presence and exploits in those places, why do Pompeii or Antarctica, seem so symbolically loaded and aesthetically meaningful?

These are the concrete questions referring to actual phenomena that thermoaesthetics ought to explore, questions of aesthetic feelings and sentiments as they relate to our senses and their liminal possibilities; questions that, drawing on Husserl's works, can be studied in their different levels of sedimentation: cultural, sensorial, cognitive, and in the various aspects shaping them as aesthetic experiences – at least those that are palpable to meditative enquiry and subsequently describable.

As noted by Espen Dahl, phenomenology has always been carnal (Dahl, 2024, p. 3), and may I add, haptic. As the author points out, even if only recently a carnal turn has been well established and recognised in philosophy, more specifically in phenomenology and hermeneutics,4 Husserl started phenomenology thinking about embodiment. With this assertion, one might more immediately think – as Dahl does – of works like the 1907 lectures Thing and Space or The Pencil Manuscript (Bleistiftmanuskript, 1912, considered the common source of the second and third volumes of *Ideas*). It is important to observe, nonetheless, that in Logical Investigations, Husserl already thought deeply about the relationship between sensory perception and - traditionally seen as - higher levels of cognition, e.g. abstraction, meaning-conferring or knowledge. Albeit to differentiate a pure stratum of meaning-intention, unified psychological differences (i.e. subjective appreciations interpretations), Husserl continuously notices how sensuous experience determines thinking: "The verbal presentations which accompany and support my silent thinking sometimes involve picturings of words spoken by my own voice, sometimes of letters written by me in shorthand or longhand" (Husserl, 2001, p. 228).

Although mostly to thematise pure logic, contesting psychologism and questioning any theory that would reduce meaning-making to an image-attaching process (cf. Husserl, 2001, p. 229), the founder of phenomenology explores, nonetheless, already in these early works, the role of sensory perception in conscious activity. If one were to refute the interpretation of phenomenology as always and fully carnal as well as haptic, its influence on contemporary haptic aesthetics – as seen in the second part – and this early preoccupation with the somatic origin of abstract thinking are at least hard to contest

This through a collective volume (Kearney and Treanor, 2015) assembling texts by Kristeva, Henry, Ricœur and others, that would hence situate this *turn* at the turn of the twenty-first century, or at most, going further back, around the second half of the twentieth century with Merleau-Ponty's works.

In this context, phenomenology developed as a method with no radical opposition between objectively analysing consciousness and subjectively describing it. Our experience presents itself to our awareness and we can explore it in great detail, seizing its ingredients, fleeting as they might be. With phenomenology, we are thus not condemned to live each experience as a hardly differentiated complexity only to be described with vague impressions. Experiences are shared and shareable, and their descriptions precise, but not for this reason less flexible, individually situated and evolving. The trait of the phenomenological method that seems crucial concerning thermoaesthetics, is that it allows for a differentiation between experiences globally grasped and their ingredients or their minimally discernible experiential qualities. Active or passive, approaching to touch something/ someone or receiving touch, a haptic phenomenology examines the whole of tactile experience. We watch a ballet, we run, we fight, we dance, we touch and are touched: be it in relations of distal or proximal contact, be it by objects, spaces, performers, fellow spectators, players or dancers, we are in these examples having full or global haptic experiences that we appreciate knowingly or unknowingly as being beautiful, ugly, uncanny, sublime, ridiculous, disgusting, amazing and so forth. In all these haptic experiences there are thermal elements to be analysed.

Phenomenology displays, indeed, not only fully formed tactile experiences like these. In further meditation, granular aspects, such as rhythms or vibrations, textures or temperatures also appear. The phenomenology of thermal touch and thermoaesthetics should reverse the usual analytical path and focus first on one of those little aspects of experience like vibration or texture: namely, temperature. I would call this type of phenomenology, this direction of phenomenological meditations, *adumbration* analysis (cf. Husserl, 1952, p. 87) by opposition to the analysis of fully formed experiences. For Husserl, phenomena are constituted *via* a synthetic operation of consciousness (which is not to be understood merely as individual – cf. Fricke, Beyer and Kjosavik, 2019) that assembles the past and the future of perception.

In the case of touch, a shifting haptic memory and everchanging haptic protentions generate a perceived present, full of apparent objects, subjects and atmospheres. But these present moments, these *things* and all our tactile experiences are nothing but a precarious collection of *adumbrations*. In the context of haptic aesthetics, relevant adumbrations might be the shifting vibrational sensations we constantly have or the subtle perception of rhythms and textures. This meditative and descriptive phenomenological work on adumbrations is particularly delicate for it takes us to seemingly pre-egoic regions of experience:

[...] vasodilatation and vasoconstriction are not experienced as such, but as a general unfolding and folding, disclosing and closing of the (bodily) self, and both are involuntary [...], which confirms the pre-personal dimension of perception. (Diaconu, 2024, p. 58)

For the moment, let us continue these phenomenological considerations on temperature in the realm of conscious, subjective intentionality. As I do in this

paper and following a Kantian tradition, Husserl uses the term aesthetics to refer to two different intentional phenomena: aesthetic feeling/valuing and aesthetic feeling/sensing. In this last sense, he evokes the term aesthetic body to simply refer to our living, sentient bodies, as well as terms like orthoaesthetic and heteroaesthetic (Husserl, 1986, p. 347), referring to the expected and unexpected functioning of the senses, namely, usual perception and illusion or hallucination. Although thoroughly related, the aspects of valuing and sensing are explored when following two different goals. The feeling/valuing aspect is typically studied when Husserl tries to differentiate the types of intentional acts and objects. Aesthetic experience appears in contrast with, for example, purely theoretical acts, for it is important to distinguish aesthetic feeling/valuing from theoretical acts of value predication. Feeling/valuing a work of art or appreciating an ordinary object aesthetically is always an emotive act, even in its valuing sub-aspect. Husserl distinguishes in the feeling/valuing act two sides, none of which refers neither to sensorial feeling nor to theoretical valuing: a sensuous intuition that is not mere sensing of a physical object, that is always already an axiological intuition, implying our habits and cultural values – in an attitude that he characterizes of *delighting abandon* –, and an aesthetic judgement, that, again, is not a theoretical interpretation of a physical object or event but an axiological and emotive appreciation of what is delighting us, horrifying or amazing us in the aesthetic objectivity at hand, more generally and in the context of social canons (Husserl, 1986, pp. 10-11). This type of aesthetic valuing is seen as one of the three higher human deeds, among theoretical and practical acts: art, science and work (Husserl, 1986, p. 207).

On the other hand, the aesthetic body as a living organism is rather studied when trying to understand perceptive experience more broadly, not only as the experience of creation or art appreciation. It is in these somatic thematizations that the thermal aspect of touch appears in phenomenological research, although never to the degree the importance of thermic experience would deserve. In 1907, even if hesitantly, Husserl elaborates an analogous partition as the traditional one between primary and secondary objectual properties – albeit introjected, i.e. in a different realm, the realm of intentionality –, classifying the qualities we feel through thermoception as secondary or appended determinations:

The body must first be there, in order to be able to appear warm or cold. If I hold a metal sphere in my hand, the temperature may change faster or slower in passing from warm to cold. The tactile determination of space, which is constitutive for the body, remains unaltered and is the foundation of the localization. The warmth and coldness fill space; they cover over the actually appearing tactile space of the body by overflowing it, so to speak. The warmth in itself, although it stands there as filling, has no proper space; it diffuses in the tactile space and is bound to it. (Husserl, 1997, p. 65)

For Husserl, only vision and touch seem capable of constituting spaces where objects can primarily appear and appended properties, precisely, *append*, attach. Of these two, only touch is capable of constituting the surface and depth of our own bodily space as belonging to us: of our flesh. Thermoception,

being the *intensive* haptic feature that it is, would not seem to be capable of producing *extension*, the coordinates of a perceptual space.<sup>5</sup> But Husserl feels its importance and hesitates, writing around 1910: "Upon closer examination, we still have levels here in the sensuous filling, a first and a second sensuous matter, namely the visual and the tactile properties, possibly also the temperature, and, on the other hand, the sound, odour, taste" (Husserl, 1997, p. 298). Throughout what became the writings of the third and second volumes of *Ideas*, the tactile signature of living beings, namely that their differentiating trait is to be able to touch and self-touch, to self-affect or feel themselves touching in every tactile interaction, is one of the main concepts Husserl wants to put forward. He does this through the idea of *Empfindnisse*:

[...] the very process of touching something establishes a new kind of experience. It is rare to find Husserl constructing neologisms, but in this case, he introduces the term *Empfindnisse*, a lived experience (*Erlebnis*) that is not an experience-of (*Erfahrung*), a sensorial event (*Empfindung*), that is not a perception (*Wahrnehmung*), a finding of oneself (*sich befinden*), that is not a finding of something. *Empfindnisse* are those peculiar sensorial events that offer the body as lived to itself in the very process of being offered to the world. They arise at the intersection of tactile sensations and kinaesthetic sensations. (Welton, 1999, p. 45)

When Husserl thematizes this haptic self-affection, the Empfindnisse through which tactile sensation localizes in a part of the body, giving it the character of my living body, sometimes braids in his descriptions thermal and textural feelings, giving temperature a more relevant place: "The cold, smooth fingertip touches the warm, somewhat rough back of the hand. I experience [...] the flow of the cold- and smoothness-sensations as feelings of the back of the hand, and the flow of the warmth- and roughness-sensations as feelings of the finger" (Husserl, 1980, p. 106). There is a difference, nonetheless, between stating that the body is fundamental in phenomenology or that aesthetic and thermal considerations can be found scattered throughout Husserl's works, opening a way for the development of and nourishing current phenomenological aesthetics of touch, image-consciousness and atmospheres, and stating that Husserl explicitly and significantly researched the role of touch and temperature in art, which is not the case. Fortunately, as highlighted in part two, Madalina Diaconu's work delves into the essential role of thermoception in the phenomenology of the body and the possible routes for developing an aesthetics of temperature in a thematisation of experience as both ordinary and cosmic, circadian and planetary.

As Aristotle, Diaconu shows in her *Aesthetics of Weather* that warmth is fundamental to life, and a crucial haptic trait of the living body, which has aesthetic implications. The theory of art resulting from the consideration of this aspect of our sensuous experience is both an aesthetics of everydayness and an aesthetics of the – sometimes horrifying – cosmic sublime. We are constantly exposed to weather conditions, wind, rain and radiation, constantly dealing and trading somatically with the planet, its atmospheres, its material and biological ecosystems, in a thermal interplay that determines our aesthetic

For a possible phenomenological analysis of thermic space, see Diaconu (2024, pp. 54–56).

sensoriality and sensibility. In the context of urban settings, Diaconu reflects on this as follows:

When the weather produces arrhythmia in the collective 'soma' of the city life, perturbing the rhythms of the traffic and causing all sorts of desynchronizations, the perception of time and space itself changes. Not only do bodies look different (less smart and rigid) and interact differently (physical proximity is no taboo anymore when it comes to share a tiny shelter), but also the topology of the space is reinterpreted in the light of the exposure to the weather. (Diaconu, 2024, p. 175)

Beyond the aesthetics of the city, its design and architecture, thermal dynamics constantly materialize in every aspect of our culture for responses to high and low temperatures are not only physiological but involve clothing, foods, and all means of heating, cooling and insulation (cf. Diaconu, 2024, pp. 58–59): "Homeothermy implies the balance between the warmth the body receives from the environment and produces itself, on one side, and the heat the body releases in the atmosphere, on the other side" (Diaconu, 2024, p. 60). For this author, the dynamical interrelatedness temperature reveals, ultimately leads to a sense of thermal symbiosis that earthly animals would have: "warmblood animals co-create with their heat tides, like a collective living body, the thermal aura of the Earth: its atmosphere" (Diaconu, 2024, p. 61). Closing on an empirical note, our cosmological condition as highlighted by the study of temperature is this: we are terrestrial beings, pushed into the warming surface of a spinning, crusted, melting ball of metal, travelling – luckily – near the sun, another heated, travelling ball, this time of gas and fire, where nuclear fusion occurs continuously, through an otherwise mostly gelid space, almost as cold as absolute zero. This thermal condition expands the scope of and gives consistency to an aesthetic reflection able to go from fashion and architecture to the aesthetic experience we might have of volcanoes, the ocean, tornadoes or when looking at images like The Blue Marble or The Cosmic Microwave Background.

#### 5. Concluding Remarks

In this paper, I have tried to move forward in the project of thermoaesthetics understanding it as part of the larger field of phenomenological haptic aesthetics, as both a sensorial/perceptual study and as a study of art. Temperature is one of the main components of touch, and in the case of affective touch, simply essential. Today it is well-known that the neuronal system responsible for this type of touch (CT afferents) prefers "caress-speed stroking at a 'creature' temperature" (Morrison, 2016, p. 202). This means that this system shows optimal awakening when facing stimuli at speeds of 3 centimetres per second and temperatures of 32 degrees Celsius. A caress by a warm being: this is what affective touch – and all the processes relying on it, from cognitive to physical, emotional and social development (cf. Olausson, H., Wessberg, J., Morrison, I. and McGlone, 2016) – needs.

Now, as soon as one starts caring about temperature, the focus quickly expands from affective human touch to interspecies tactile relations, and soon to all objects that are sources of heat or that modify our thermic dynamics, starting

with the sun. The whole history of Western philosophy and aesthetics appears in a different light then, or may I say, with a different warmth. In his Pyropolitics, Michael Marder notices, in this sense, how archaically rooted a certain thought of heat and temperature is in our culture, as well as how overlooked it has been: "An inheritor of the Heraclitean way of thinking, Plato depicted the sun as a force that simultaneously enabled seeing and was responsible for the generation of beings, their springing up into existence, by virtue of its abundant heat" (Marder, 2020, p. 32).

Visualism or ocularcentrism, "heritage of the West at least from the time of Plato's story of the cave and the sun" (Shapiro, 1993, p. 125), with its pervasive effects through epistemology and aesthetics, is thought to have its roots in this first allegorical and metaphysical trace of a rationally divinized sun, interpreted as the ultimate source of light and truth. Looking at it again from the perspective of sensoriality, this rational divinization appears to be dependent on a correlative forgetfulness of the sun as a source of warmth and life. Thinking phenomenologically, from the perspective of embodied experience, these sensory values reappear, and the allegorical scene displays all its force: the fire that is also inside the cave, the warmth of fellow prisoners, the freshness of the exterior, the refreshing wind and oxygenating trees, the lake, and the whole thermal dynamics of interior and exterior. But if it is not to be a mere reinterpretation of Western culture in a thermal key, which specific questions a thermoaesthetics would give answers to? For Gallace and Spence an aesthetics of touch in general - in itself multisensorial and multidisciplinary, not only thermal - should look for answers to an array of different questions:

[...] are tactile sensations beautiful in their own right? And, more importantly, to what extent does tactile information contribute to our global (or multisensory) aesthetic experiences? [...] What, then, is considered pleasurable to touch? How can particular tactile sensations be considered 'beautiful'? Do we need a new language for tactile aesthetics? What are the neurological substrates associated with the appreciation of tactile stimuli? (Gallace and Spence, 2014, pp. 277–278)

A phenomenological thermoaesthetics should answer these questions concerning coldness and warmth, as well as questions related to the role and value of temperature in our daily life and art. As shown in part two of this paper, some questions relate more closely to the phenomenological method (for example, what influence do phenomenological concepts have in thermal aesthetics), some relate more closely to artistic practices (for instance, the techniques artists might use to produce thermal impressions), while other will be at the intersection of the two (for example, the issue of how artistic experimentations and performances might change our sensory awareness). Moreover, drawing on Aristotle, Husserl, Guérin, Diaconu, Hogan, Tobe and Eliasson, I have tried to show a set of additional questions that I would qualify as *cosmological* or even *existential*, pertinent to thermoaesthetics for they explain why, even if traditionally ignored, thermal issues remain essential and ubiquitous in art. Temperature is at the heart of our bodily existence, crucial for our interaction and symbiotic life with and within natural and artificial

matter, in the context of not only a cosmological present but of a generative pass and a generative future that through thermal symbols, allegories, metaphors and artifacts we can aesthetically materialize. If the North Pole, volcanic eruptions or the perspective of a nuclear winter are both hypnotic and terrifyingly astonishing, it is because they reflect and embody these thermal dynamics in their fragility and unpredictability, our *locus* in it and the possibility of losing it, as traditionally the symbol of fire did.

The publication of the paper was generously supported by Agencia Nacional de Investigación y Desarrollo/Subdirección de Proyectos de Investigación/Fondecyt Iniciación/2025 - 11250833 [National Agency for Research and Development/Subdirectorate of Research Projects/Fondecyt Initiation/2025 - 11250833].

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DOI: 10.5281/zenodo.15824671