Solar Drawings and Moving Shades: An Affective Aesthetics for the Urban Climatic Mutation

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ABSTRACT

In a world saturated with planetary images that compel but rarely mobilize, we turn to solar drawings as an affective aesthetics for climate action. How can drawing attune us to changing landscapes while supporting transdisciplinary inquiries? We explored this in a workshop held in Barcelona in 2024, focusing on urban shades and extreme heat. At its core were anthotypes—solar drawings made with spinach emulsion—used to record the flickering presence of shades in different urban arenas. Thinking with anthotypes allows us to be affected by solar exposure as a planetary condition, reframing shades as inhabited or inhabitable regions. As we see it, these unstable records can become relevant forms of experiential research, activating embodied visual sensitivities to correspond to worlds undergoing climatic mutation through speculative explorations that seek to take overheated urban milieus into our own drawing hands.

Keywords
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planetary media

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Solar Drawings and Moving Shades: An Affective Aesthetics for the Urban Climatic Mutation

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A MUTATING WORLD OF IMAGES

Perhaps it would not be too far-fetched to say that what we usually refer to as the Anthropocene is, as historians Christophe Bonneuil and Jean-Baptiste Fressoz (2017) suggest, a world of images. Think of the different

Figure 1: Shades on a sketchbook, Barcelona, June 2024. Photograph by the authors.

kinds of hockey stick graphs that tend to be used to represent the "great acceleration" of climate collapse. But also, extreme weather forecasts, heat maps, or thermal cartographies with their satellite imagery, not to mention tables with climatological data and temperature graphs, or the myriad approaches to "disaster porn" in pictures and videos taken from smartphones and regularly displayed on social media.

Many of these images share the quality of being what media theorist Jussi Parikka (2023) addresses as "operational": technical images that do not just show or depict, but "make do." They are invisual records—not intended for the human eye—captured by highly sophisticated devices that sense spectrally, allowing the nesting of worlds through sensor infrastructures that, in turn, enable the creation of diagrams, tables, or maps that lead governments to issue warnings or prod people to act.

Having experienced a pandemic of disastrous anthropic origins, several heat waves, the worst drought in a century, and one of the wildest cold drops ever recorded in the last few years in Spain—though we are sure this resonates elsewhere—we have been plunging into these image-prone calls to action. And yet, the looming presence of disasters of all kinds, fast and slow, does not seem to mobilize most people to attempt to explore the vast transformation of carbon lifestyles that would be needed, according to environmental agencies, to bring this to a halt.

In these tumultuous times, with changing landscapes shaking and moving in all kinds of unprecedented and dangerous ways, we would like to discuss a perhaps tiny but powerful material exploration: the need to approach what Bruno Latour (2017) described as the ongoing "climatic mutation," with a mutation in the aesthetic tools through which we record, become affected, and call ourselves to action. In a recent monograph by anthropologist V. Chitra, called *Drawing Coastlines*, she claims that:

> The extractive landscapes we inhabit are a product of anthropocentric drawings that plan futures in terms of human timescales. Dismantling these extractive regimes requires dismantling the visual narratives they are founded on. In other words, the regimes of climate change are, at least in part, outcomes of visual work. (Chitra, 2024, p. 37)

Using comics' transmedia capabilities to gloss, quote, caricaturize, as well as synthesize ethnographic work—such as contextual information and infographics or vignettes describing situations—Chitra seeks to:

> Draw attention to the crisis of imagination that keeps alive the idea that climate change can be addressed through solution-oriented, short-term future making. In the case of technical drawings, this means imagining

> different lives, forms, and representational frameworks, and drawing them differently. (Chitra, 2024, p. 37)

But there are many ways in which drawing could be mobilized to think and act differently about our current planetary predicaments. This article is an attempt to explore another register. It stems from an encounter between two friends—an anthropologist interested in artistic research and an artist with an ethnographer's soul—who have known each other for a long while, but who rediscovered a mutual interest in experimenting with documentary forms of record in 2024. Allow us to introduce ourselves:

Tomás is an anthropologist with an interest in artistic and designerly forms of expression and the production of ethnographic encounters, having undertaken for well over a decade various explorations of urban care architectural initiatives, of an activist and professional kind. For the past two years, he has been captivated by inquiring ethnographically into urban shades and shadows, recently reinvigorated by municipalities and urban planners—like the city of Barcelona, whose shade infrastructural project he has been following—as a different principle for redesigning our environments in a context of growing Anthropocenic concerns over the deadly effects of the urban heat island, recurrent heat waves, or the increase in cases of melanoma due to changing exposure to solar radiation.

Carla is an artist with an ethnographer's soul, who has been working on projects where drawing has become fundamental for unearthing and sharing popular knowledges, relevant to the articulation of territories, memories, and communities. As a researcher, she explores different forms of what she calls "drawings in context." In her most recent practice, she has been experimenting with involving atmospheres and climates as drawing situations, considering recording devices and techniques that bring us closer to changing climates— these ecologies in transition, through the technique of anthotypes, an unstable record of light, perhaps enable us to attune to the changing conditions of shades, cultivating an affective aesthetics.

What drew us together again was an engagement with the real, an exploration of materials for recording what happens at the crossroads of the arts and anthropology in a peculiar context where shades have been revitalized in urban planning. What follows is our attempt to use the affordances of an approach to situated drawing in combination with a climate-reactive graphic support: anthotypes, peculiarly unstable graphic forms that use plants as record materials. By describing a workshop in which we attempted to sketch out moving shades to create masks that would later be used to solarize emulsified paper, we want to make a case for an exploration of the

affective aesthetics of potentially very minor gestures. With this, we wish to cultivate forms of record that could move us to think and act otherwise amid current Anthropocenic mutations.

SHADOWING BEYOND SOLAR URBANISM

In a context of growing extreme heat as a public health concern in Euro-America and beyond, shades have been our meeting ground—something we have sought to explore by means of situated drawing approaches. Beyond the nitty-gritty climatological aspects of how shades can be used to create protected spaces from stark solar radiation, shades also captivated us because of their deeply aesthetic and symbolic connotations.

Anthropologists like Paul Stoller (2021) describe in great depth the communal relevance of the jujube (*Ziziphus jujuba*) tree's shade for social life in West Africa. But we could also think of the centrality of the baobab for the social life of many African and Oceanic peoples: a magical place to tell stories, rest, or eat. Shadows, however, exist in divergent cosmological practices in more than one way. The Maenge of New Britain, according to a classic study by anthropologist Michel Panoff, distinguished different types of them:

> Within the whole Maenge lexicon, the word *kanu* is one of those that possess the most numerous connotations. Its primary meaning is "shadow," with the qualification that it can only be used when speaking of human beings and some animals such as pigs and dogs, while the shadow of a tree, for instance, is called *nunule*. (Panoff, 1968, p. 276)

Figure 2: Infrastructural shade, Barcelona, June 2024. Photograph by the authors.

However, in recent years, in fiercely modernist cities across Euro-America, we have witnessed an urban revitalization of shadows, in the Euro-American physicalist sense of the term: as areas of darkness or optical occlusion (Casati, 2003). For modernist cosmologies, there is nothing more mundane than shadows, since all earthlings have one. However, these conventional and seemingly mundane cosmic relations to solar radiation have gained significance because they can transform urban atmospheres, regulating exposure to harmful heat.

But urban modernity was built behind their backs. With an impulse similar to that of Copernicus and Galileo, 19th-century hygienic urbanization placed the Sun at the center of urban design, calling for the opening of streets and avenues for the sun and fresh air to deliver their hygienic potential. Hence, it entailed demolishing unhealthy medieval neighborhoods, with their winding, dense streets treated as potential epidemic hotspots. One of the many effects of this heliocentric urban turn was to attribute to the star that presides over our firmament a beneficial role in public health. In his 1867 *General Theory of Urbanization*, the rationale for the urban plan that transformed the city of Barcelona once and for all, Ildefons Cerdà himself—the Catalan equivalent of Paris's Baron Haussmann—expressed:

> The Sun gives us light, and it gives us health. For this reason, both civilized man and savage [*sic*] constantly seek it out. These cursory indications will provide enough basis for understanding the fundamental importance of the orientation of the *intervías* [the blocks] in urbanization, since it determines a house's degree of exposure to the sun's rays, the cause and origin of so many advantages. (Cerdà, 1867/2018, p. 367)

This generally positive appreciation of the sun in the city needs a counterpoint today: what should we do when it harms us or puts us at risk, as in extreme heat conditions or in radiation exposure that leads to melanoma? The peculiar modern "solarity" (Howe et al., 2023), the urban incarnation of the Enlightenment dream of total visibility, seems to have difficulty avoiding prejudice toward everything that remains outside of these irradiations. Therefore, shadows are commonly read as the hidden, the pathological, the archaic, the conservative, the dangerous, or the murky depths of a city's underground—or as a crucial hidden architecture of the tortured psychoanalytic self.

Come what may, most of our modernist and enlightened tradition has been constructed as a battle of light against shadows. And for this reason, shadows have an incredibly loaded political valence: the dark, the strange, or the hidden. In a context still living with the effects or the long wake of the

slave trade, the Caribbean thinker of the Black radical tradition, Édouard Glissant (1997), defended "a right to opacity" as a condition of survival for all those outside the modern Enlightenment canon. This resonates with the recent work of architectural historian and disability activist David Gissen (2022), who, in his book *The Architecture of Disability*, claims it as part of an inclusive urbanization of those bodies removed from the centrality of urban design.

UNSTABLE RECORDS BEYOND REPRESENTATION

But shadows also carry with them a very powerful aesthetic descriptive force, and this was an important aspect of our joint exploration. Our conversation started with the following questions: How can drawing help us become ethnographically attentive to changing urban landscapes? How can drawing using different material supports activate processes of transdisciplinary inquiry requiring a shift toward bodies and matter attuned to the ongoing climatic mutations? These were some of the drivers that led us to organize *The City of Shades*, a workshop held in June 2024 in Barcelona, where we aimed to inquire ethnographically into what urban habitability might mean in the face of extreme heat, paying attention to urban shades as a relevant experimental space.[1]

The hypothesis of the entire workshop was, in a clear Latourian nod, the following: "What if we have never been solar?" In other words: What if, to relearn how to live in cities today, we needed to displace the wild elemental power of the Sun from the center, placing ourselves in the shade? To do this, we invited participants to explore drawing strategies in guided walks, aimed at exploring moving shades and attempting to be moved by them. Indeed, shades are an intriguing object of inquiry and record.

In fact, "object" might not be the best word, as it carries a representational ethos suggesting a peculiar kind of drawing practice, a naturalist one. The invention of perspective and naturalist representation was not just what the modern world did to drawing practice (Alpers, 1983; De Meyer, 2025), but also the main contribution of the arts to the nascent experimental sciences: a world of stable subjects and objects, mediated by devices that help create a mechanical and reproducible sort of objectivity. In the anthropology of science and technology, this naturalistic aesthetics of drawing has been discussed as relevant to the production of "immutable mobiles," that is, combinable inscriptions drawn together in centers of calculation, which enable the construction of facts (Latour, 1990). This objectual aesthetics also had, as an effect, the articulation of what Latour (2021) has recently discussed as a "freezing of the landscape," treating the world as an immutable "out there," mobilized only for representational purposes.

1 See https://umbrology.org/bcn2024 (last accessed December 30, 2025).

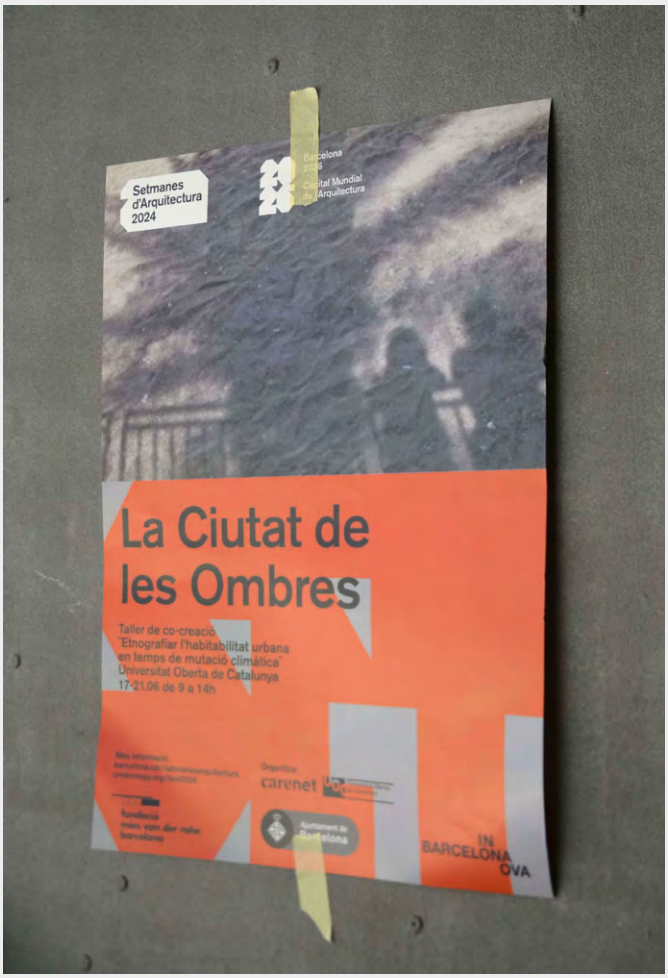

Figure 3: *The City of Shades* workshop's poster, Barcelona, June 2024. Photograph by the authors.

Interestingly, as Fernando Domínguez Rubio (2020) has shown in his magnificent monograph *Still Life*, this fixation has also affected the "mimeographic" condition of artworks in museums, a conservation impetus that entails material practices of caring for the reproduction of sameness. But this "fixation with fixation," as we prefer to call it, has also increasingly affected drawing materials, as can be seen when paying attention to the industrial genealogy of artistic media: pens, pencils, and papers marketed to be used in all kinds of positions and atmospheres, a tendency that has intensified with the hegemony of photographic and videographic forms of record. This fixation with fixation, however, has tended to render absent the extractivist practices required to build stable, mineralized, and petrol-driven graphic media. Siobhan Angus's (2024) recent book *Camera Geologica* is a great example of this paradox.

Some ecologically-minded contemporary drawing practitioners are trying to move away from this representational ethos, attempting to propose an aesthetics of dynamic landscapes as ways of discussing our fraught, mutating world. A wonderful example can be found in the book by Frédérique Aït-Touati, Alexandra Arènes, and Axelle Grégoire, *Terra Forma* (2019), or Alexandra Arènes's more recent solo monograph, *Gaïagraphie* (2025). Their attempt is to create what they call a Gaia-graphy: a drawing investigation of the cartographies of the living and non-living in critical zones. Despite their intriguing processual drawings, undertaken not from the modernist point of view (*point de vue*) used by most territorial representations but from the point of life (*point de vie*) and dynamic relations of concrete living beings in concrete territories, the result turns out to be a rather static representation of landscapes, albeit differently defined.

In a similar vein, we could mention the architectural drawing installation *Italian Limes*, by Studio Folder: part of a wider genealogical cartographic investigation into the notions of the border, it uses a drawing machine—an automated pantograph—to translate the coordinates received from sensors installed to track the melting ice of the alpine border between Italy and Austria.[2] These unique live drawings of border changes in real time, activated when visitors enter the exhibition space, display the mutations of a melting glacier border due to rising temperatures. Their project aims to discuss how these changes display a metamorphosis of modernist ideas of territory, conceived as a backstage of human action, posing impossible problems to different European authorities as borders come undone (Ferrari et al., 2019). While *Italian Limes* foregrounds drawing as a form of live mediation with faraway landscapes in mutation ("where national borders drift with glaciers") (*Italian Limes*, 2019), we wish to discuss a situated and changing, even ephemeral, form of drawing everyday climatic mutations, paying attention to mundane yet usually forgotten realms: urban shades.

CHANGING MATERIALS TO ENTER IN RELATION WITH A CHANGING WORLD

In our workshop, we devoted half a day to a failed attempt at drawing shades using regular "stable" materials—such as pencils, markers, and papers of different weights and opacities. In our guided exploration, we wanted this attentive, situated drawing practice to enable a conversation around what shades are. Rather than objects, we wanted to discuss them as an encounter with solar radiation, as it moves through our habitats on a rotating Earth; an effect of different bodies more or less partially blocking the sun's rays or other sources of light.

2 See http://www.italianlimes.net/ (last accessed December 30, 2025).

Figure 4: Mosaic showing the preparation of the spinach and the emulsifying of the workshop's papers, June 2024. Photographs by the authors.

As we tried to draw, we discovered that shades do not tend to present themselves as "one." Rather, they usually instantiate as hanging and sometimes haphazardly compounds with a foliage-like aesthetics, as it happens with plant or tree cover. Indeed, shades are seldom static entities. They change many times with the wind or the clouds. Hence, perhaps they should be qualified more precisely as a "flicker." This requires a particular procedural approach to their drawing. Julio Cortázar expressed this marvelously in the short tale "To Dress a Shade" (*Vestir una sombra*):

> The hardest part is to surround it, to know its limits, where it connects with dimmed light, at the edge of itself. To choose it among so many others, to separate it from the light that every shadow breathes stealthily, dangerously. Then, to begin dressing it as if distracted, without moving too much, without frightening it. [*Lo más difícil es cercarla, conocer su*

Figure 5: Mosaic of the anthotypes atelier at *The City of Shades* workshop: drawing different shades, then creating masks to expose spinach-emulsified papers to the sun's rays. Barcelona, June 2024. Photographs by the authors.

> *límite allí donde se enlaza con la penumbra, al borde de sí misma. Escogerla entre tantas otras, apartarla de la luz que toda sombra respira sigilosa, peligrosamente. Empezar entonces a vestirla como distraído, sin moverse demasiado, sin asustarla*]. (Cortázar, 1969, p. 190)

In our case, in an exploration of carbon-free and non-extractivist record materials to address such a flickering status,[3] Carla introduced her recent approach to drawing with anthotypes, recently vindicated in contemporary environmental art because of their ephemeral status (Bortolucci Baghim et al., 2024; Roncero Palomar, 2022). Usually described as pre-photographic forms of record, anthotypes are an ancient technique that has also gone by the name of "solar drawing." But anthotypes differ from other ancient techniques, like cyanotypes, because of the material used in the emulsion. Cyanotypes use iron salts and produce Prussian blue images, whereas anthotypes use plant dyes, such as those from algae or spinach, and result in images with natural, often pastel colors, created by long sun-bleaching of the pigments. Hence, the etymology of their name, deriving from the Ancient Greek word for flower, *anthos*.

Even though similar vegetable dyeing processes have existed since ancient times, the modern technique—which incorporates the use of masks drawn and cut—was perfected by one of the founders of photography, Sir John Herschel, as part of an exploration of image fixation. Indeed, Herschel (1842) published an expansive article on "The Solar Spectrum on Vegetable Colours," discussing his experiments with the juices of flowers, leaves, and plants, akin to a first colored "photograph," the term he coined for what had previously been simply called "solar drawings." However, anthotypes were discarded by Herschel early on precisely because of their instability, images fading over time.

In fact, in the history of photography, Herschel is usually heralded not just as the coiner of the term, but as the first to have "fixed" images using silver and other metals to print them. But it is precisely their pre-photographic and unstable character as "traces" of a solar drawing performance, rather than fixed "prints"—to use the terminology employed by Tim Ingold (2011)—that makes anthotypes captivating for an environmentalist agenda. As Abelardo Gil-Fournier and Jussi Parikka (2024) remind us in their thought-provoking *Living Surfaces*, thinking with plants as media is enabling fertile artistic experiments to discuss the current planetary condition, revising modernist notions of images as representational surfaces. This is, in fact, the proposal of Dietmar Offenhuber (2024) when discussing the need to go from the design of climate infographics to the exploration of affective "autographic" records: not repre-

3 Very much in line with the *Low Carbon Methods* group, see https://www.lowcarbonmethods.com (last accessed December 30, 2025).

senting but embodying the very transformations they wish to convey in their own media.

Having brought emulsified paper with spinach from home, in *The City of Shades*, we experimented by drawing on cardboard to create masks of tree leaves or other plants, then "solarizing" them. As long as the picture was exposed, the bleaching continued: shade appearing, then, as what paradoxically enabled the fixation of the image. But given the flickering of shades, the only way to stop the process was to keep the paper away from the sun altogether, forcing us to move beyond any representational attempt. This speculative exercise using anthotypes proved to be incredible food for thought, as it attuned us to shades as a cosmic and atmospheric entity, enabling the following two conversations.

On the one hand, anthotypes made graspable a dynamic planetary condition that is seldom discussed: shades, however transient they might be, reflect a changing relation with the sun's rays as they pass through our everyday habitats, somehow revealing the rotational movement of the Earth, the state of the atmosphere, and the role of the clouds; thus enabling an approach to the "wrinkled temporalities" of the planet, as geologist Marcia Bjornerud (2024) would call them. On the other hand, anthotypes enabled us to understand the affordances of shades as forms of protection, as well as to have a palpable and embodied instantiation of the dangers of solar exposure: unstable solarized images appeared as a practice affording environmental affectivity to the different shades of infrastructures, vegetation, or random things. In turn, this made us reflect on how different earthlings are affected differently by the sun's rays (older people and children, dogs, as well as birds, turning into our main objects of inquiry during our walks).

Our exploration with anthotypes sparked a conversation around the complex planetary dimension affecting how to redesign existing urban arenas. In using anthotypes, the drawing exercise became something akin to experiential research: a performative way of responding to environmental challenges by activating visual sensitivities that pass through the body (Drum, 2017), putting forward aesthetic experiences of image-making processes, and a sensible attention to collective making. Anthotypes, hence, enabled us to enter into relation with what might be called, in Tim Ingold's (2007) terms, the singular "weather-world" of shades. Abandoning any attempt at mimeography, or the care for the reproduction of the same, anthotypes, in their very fragile status—as "autographic" traces of a drawing performance—, may enable a planetary care for the singular and the emergent, the dynamic and the mutating: changing materials to enter into relation with a changing world, where drawing "draws us to see" differently (Causey, 2017).

Thus moving with shades, learning to be affected by them, anthotypes can—as peculiar non-modern forms of record—activate a "poetics of fading" (Roncero Palomar, 2022). These solar drawings, traces of what the sun does to our attempts at drawing shady masks, can become relevant embodied affective explorations (Boserman, 2023) of a world of shades. Inquiring with anthotypes, preparing the emulsion, the paper, the drawings, the masks, and the slow process of solarization, hence, can be thought of as "a practice of correspondence, and of care. It is a labour of love, giving back what we owe to the world for our own existence as beings within it" (Ingold, 2023, p. 23), or what could destroy us in the exacerbated solar radiation of climate change.

In contrast to modernist approaches to drawing—which mechanically cancel the body to produce fixed images[4]—anthotypes offer a performative, embodied exploration of what a shade actually is: a flickering encounter between radiation, the rotating Earth, and moving bodies. This is achieved through fluid or "mutable mobile" records (Mol & Law, 1994) that foreground an affective, processual relation to shades as "things" (Latour & Yaneva, 2017)—as flickering regions we must strive to construct, time and again, to reinvent what planetary habitability might mean in overheated and solarized urban habitats. In this way, solar drawing becomes a central practice for affectively exploring forms of planetary coexistence and correspondence in times of urban climatic mutations: it transforms the problem of urban acclimatization from an expert matter for meteorologists and climatologists, with their fixed images, into something anyone can engage with through their own bodies. Ultimately, these impermanent solar drawings are an invitation to activate the affordances of protective, shady atmospheres, helping us to take matters into our own drawing hands.

4 Or, more precisely, including the body of the drawer in mechanical devices by excluding its importance in the very act of drawing (De Meyer, 2025, pp. 38–39).

Figure 6: Shade infrastructure in Barcelona, practiced as an interesting intergenerational and interspecies protective space. Barcelona, June 2024. Photograph by the authors.

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