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Petrichor: on correspondence between the ground and the sky

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Petrichor is an installation and artistic research protocol that intertwines alchemic practices, contemporary art and urban anthropology. It follows the whispers of petrichor – the subtle scent that rises from the ground after a light summer rain – to investigate the place of soils and ecological processes in cities. Petrichor emerges in the interplay between the activity of soil bacteria and its incitement by a warming sun, atmospheric conditions that trap ozone close to the ground, the misting caused by rain and, of course, a sentient being attentive enough to perceive the perfume that is the fruit of this interplay. As a tangible manifestation of this intricate relationship, petrichor lures us into an understanding of the ground not as a boundary between the earth and the atmosphere, but as the zone of their interpenetration. Tim Ingold has recently criticised the concept of ‘interaction’ because it entails a meeting between parties with well-defined identities already in place. He suggests turning instead to ‘correspondence’, which is about how beings and things go along in perpetual processes of joint becoming. In this regard, soil is ‘where the earth with its materials and the atmosphere with its weather meet and carry on their eternal conversation.’¹ Petrichor unfolds from this ongoing correspondence.

In the 19th century, when the open-air mingling of mud and waste was still commonplace in the unpaved streets of European cities, vapours and odours arising from urban soils were a matter of great concern for doctors and hygienists who suspected them of corrupting the minds and bodies of city dwellers.² Some of them undertook to analyse, inventory and classify these odours, developing a true olfactory archaeology of urban miasma.³ Chemist Michel-Eugène Chevreul, for instance, collected mud samples from the streets of Paris, sealed them in glass flasks, and let them macerate before smelling them so as to study the formation of their smell.

Towards the end of the century, the ground of cities gradually became sealed under pavement and other hard-surfacing materials, while urban water was confined into subterranean sewers and rivers and waste was exported into periurban landfills. These socio-material changes in the metabolism of cities initiated a strict separation between soil and the atmosphere, stifling the ecological processes that enabled the genesis of new soil in cities. Olfactory classifications of urban soils lost their purpose as the rich olfactory palette of cities became silenced at last. A few decades later, pedology – modern soil science – emerged in Europe and North America. The new discipline focused on rural soils, seeing cities as ‘non-soil’ places, and set out to classify soils on the basis of predominantly visual criteria (through the use of devices such as the Munsell colour chart, used to spot and compare changes in soil colour for example).⁴ With

its aura of detachment and objectivity, the sense of sight came to dominate scientific description of the world.⁵



Fig 1. Becoming attentive to soil entanglements through smell. Centre Tignous d'Art Contemporain, Montreuil, France, 2019.

The *Petrichor* artistic research protocol is a thought experiment about 19th-century olfactory studies on Paris's soils. It unfolds from a series of contrafactual hypotheses: What if the early urban soil science of Chevreul and his like-minded peers had flourished? What if the sense of smell had prevailed over sight in modern apprehension of soils and the world? What understanding of cities do we gain by paying attention to processes that give rise to the ephemeral smells that traverse them rather than its solid forms and volumes?

Between 2015 and 2019, over a hundred gardeners, students, activists, inhabitants, refugees and researchers participated in collective walks amidst Paris and its bordering territories. Together, we nurtured an attention to the organic processes that thrive in the cracks of buildings and pavement, giving rise to a rich catalogue of urban petrichors. Imagining ourselves in the shoes of those early pioneers of soil smell science, we extracted the odour from collected samples through a process of hydrodistillation, in a workshop turned into alchemical laboratory.



Fig 2. *The Petrichor installation. Domaine départemental de Chamarande, France, 2016.*

With the Petrichor protocol we freely re-enacted a moment in the history of urbanisation, taking the smells of the soil as our guide and exploring how early attempts at studying them can speak to us today. Progressively shaping the first olfactory palette of Paris soils, this collective endeavour brought us back to the enigma of ‘the smell of the soil after the rain’. As petrichor emerges in the fragile intermingling between soil and atmospheric processes, it leads us to consider how the ground and the sky, two entities that modern thinking about the city has tended to separate, may once again be brought into correspondence with one another. The Petrichor protocol therefore opens up a reflection on the potentialities of the urban soil which, because it emerged in relations in which we are implicated, also calls for a reflection on the conditions of our urban existences.

1. Tim Ingold, *Correspondences* (Cambridge: Polity Press, 2020), 90.
2. Alain Corbin, *The Foul and the Fragrant: Odor and the French Social Imagination* (Cambridge, MA: Harvard University Press, 1986).
3. Michel Eugène Chevreul, *Mémoire Sur Plusieurs Réactions Chimiques Qui Intéressent L'hygiène Des Cités Populeuses* (Paris: Société impériale et centrale d'agriculture, 1854).
4. Germain Meulemans, ‘Urban pedogeneses: the making of city soils from hard surfacing to the urban soil sciences’. *Environmental Humanities*, 12/1 (2020), 250-266.
5. Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007).