



THE FLORAL CLOCK, PRINCES STREET GARDENS, EDINBURGH

slice the delicate network //

Another facet of this we would like to explore is the prospect of you – after an initial discussion/thought about the works and emerging themes in the show – offering up a title for the show. We currently have a working title of ‘ACQUIRE’ which we are trying to get rid of... I think something more poetic is in order.¹

A friend of mine remarked recently that the work of a particular writer (or artist, filmmaker etc. for that matter) finds its way to you – or you to it – at the right moment. By another, perhaps less mystical phrasing, if you do happen to read or see the work before this ‘right moment’, it may seem of little significance. So little that when you come to it again, however many months or years down the line, it is as though you are reading or seeing for the first time. In this configuration – or rumination, requiring the material to be chewed more than once before it can be digested – the line is less like a linear course, and more like that of a spiral.

If this can happen with whole works of art or literature, it follows it can happen with their finer components or constituents, too. That a particular line of prose or detail of a painting skimmed over in one viewing may seem of paramount significance the next. So it was with the copy of *Elemental Passions* I began to flick through in the hopes of lighting on a name for the exhibition that has since become *Between poles and tides*. Whilst doing so, I kept an eye on the PDF images of works to be exhibited, as if to include them in their naming process. Written by feminist philosopher Luce Irigaray, *Elemental Passions* is a blend of poetic and philosophic fragments, structured by a shifting and ambiguous ‘I’ to ‘you’ address that spans reflections on sexual difference, space, corporeality, relationships, time and communication. *Irigaray is poetic, maybe there will be a line or phrase in here we can spoliate for a title.* My previous readings of the book had been more in depth, and there was something liberating, albeit taboo, about reading in this haphazard way. If we can call this – scanning, flicking, browsing – a kind of reading at all.

And so, amongst the lines I had previously annotated, it was an unmarked sliver of prose that caught my attention, one that I had no recollection of having read before:

‘...between the poles and the tides’

This part jumped out at me so forcefully that at first I overlooked its rhetorical entirety:

‘...a scansion of space and time in between the poles and the tides?’²

The word ‘scansion’ seemed dully familiar. Had I looked it up on an earlier reading? Either way, I needed to do so again:

scansion *n* the analysis of the metrical structure of verse. [from Latin: climbing up, from *scandere* to climb, SCAN]³

Employed as an analytical tool in close readings of poetry, ‘scansion’ as a noun can also be read as a description of the movement at its root (*scandere*). According to the etymological entry for its root, ‘scan’ dates to the late 14th century and seems to have always been related to poetry: ‘mark off verse in metric feet, from Late Latin *scandere* ‘to scan verse’, originally, in classical Latin, ‘to climb, rise, mount’ (the connecting notion is of the rising and falling rhythm of poetry)’. I read that it is also related to *skand* of Proto-Indo-European, meaning ‘to spring, leap climb’, that is also the source of Sanskrit *skandati* ‘hastens, leaps, jumps’; Greek *skandalon* ‘stumbling block’; Middle Irish *sescaind* ‘he sprang, jumped’ and *sceinm* ‘a bound, jump’. The sense of scan as in ‘look at closely, examine minutely’ was first recorded in the 1540s, and it’s only when I read that the opposite sense of ‘look over quickly, skim’ first recorded in 1926, that I realise ‘scan’ is itself a contronym, hiding in plain sight.⁴

Scansion is marking, annotating the undulating cadence of verse, and also the movement – meticulous or fleeting – of the eye or pencil over the page. In the first instance, we listen for or measure the individual sounds of the line, stressed and unstressed, as they climb into a collective rhythm. In the second, we scan the accumulation of discrete words until meaning, sentiment or accuracy is attained. It would be unwise to think the two modes – on the one hand rhythm, metre, and on the other, meaning, sentiment – act independently of each other. Rhythm may accelerate or tarry the emotion of the verse, whose words may fit the formal structuring of a beat or otherwise usurp its authority. In this sense, metre and content work together to form an undergirding impression of the text that registers at an affective level.

What, then, are we to make of ‘a scansion of space and time between the poles and the tides’? As the only text present in Irigaray’s work is her own, it is clear we have left the remits of formal verse. Instead, it appears to explode metrical particulars to encompass the seemingly universal ‘space and time’. While Irigaray’s elliptical prose elides specificities of what this might look like, she names and offers us a methodology: scansion. That through marking, noticing and annotating the particular, we might develop other ways of speaking about the universal.⁵

As for the ‘poles’ and ‘tides’, they appear, on first reading, deceptively familiar; ‘poles’ refer to one or all pairs of magnetic, geographic or geomagnetic points that locate North and South and orient the earth’s axis, while ‘tides’ indicate the rise and fall of sea levels caused by the gravitational forces of the sun, moon, and rotation of the earth. Given that Irigaray’s prose eschews literality, we can also scan for its material or symbolic properties. In both cases, what characterises the poles and the tides is a system of unseen (‘invisible’) forces that sustain their homeostatic networks. Life on earth without its magnetic field would be impossible; the

magnetosphere extends tens of thousands of kilometres into space and deflects harmful solar wind that would otherwise damage the earth's atmosphere, including the ozone layer. Governed by the gravitational forces of other bodies, tides generate, amongst other things, intertidal zones (the space on a beach or shoreline that is underwater at high tide, and above water at low tide) that comprise rich ecosystems for various forms of life. Pockets of seawater called tide pools proliferate within these intertidal zones and accommodate a diversity of flora and fauna, subjected though they are to hazardous conditions: at high tide, incoming waves may wash organisms back into the sea or dislodge mussels and barnacles from rocks, and at low tide the pools are vulnerable to landlocked predators.

The evocation of poles and tides, then, is an evocation of unseen forces that act on and sustain what can be objectively seen and accounted for – in this instance atmospheric integrity and intertidal ecology. Irigaray may also have chosen these examples for the *fluctuations* that characterise them; while their range and frequency can be predicted locally, tides are far from uniform in their spatial distribution. Their rhythms are determined both by the shape of the ocean floor and the shape of the coast, which vary geographically. The ‘poles’, on the other hand, are perhaps best interpreted as the magnetic poles, given that unlike their geographic counterparts they are not fixed to precise spots. The magnetic poles are prone to straying over time, and every 500,000 years or so perform a geomagnetic reversal that switches the magnetic positions of north and south.⁶ The poles and the tides, then, are characterised by mercurial movements whose very instability seems to characterise the regularity of their forces.

What, obliquely, is Irigaray trying to say through this? It would be a mistake to attempt to decipher or uncover from the text some fixed meaning, as this is exactly the kind of knowledge production and extraction the text's mimesis is trying to destabilise. In this case, the ‘poles’ the text oscillates between might also be taken as those of an argument, of reason and unreason or the black and white of binary oppositions. To further allude to this Irigaray conjures two entities whose functions are asymmetrical: the magnetic poles are unfixed and antipodally unequal, the distribution of the tides is geographically relative and dependent on other factors. The vitality of an intertwined, ecological existence is emphasised by the movement ‘in between’ these spaces, the text thus mimicking the ebb and flow of the environmental forces it names.

Returning to scansion, it seems as though Irigaray is describing an impossible project. How can humankind attempt to mark out or annotate space and time between forces that muddy the distinction between regularity and irregularity? When, increasingly, environmental destruction and traumas exacerbate their volatility? The very suggestion of this simultaneously invokes and spurns the Enlightenment mentality that thought this possible, that everything in the world was ultimately knowable and quantifiable. Theodor Adorno and Max Horkheimer describe the Enlightenment project as one that ‘behaves towards things as a dictator towards men’, and in which ‘the multiplicity of forms [was] reduced to position and arrangement, history to fact, things to matter.’⁷ It’s hard to know whether Irigaray poses scansion as

complicit with this project – an attempt to decipher and thereby quantify the ‘unknown’ acoustic qualities of a poem – or a playful break – appreciating the movement of sounds and syllables to form affective rhythms.

A preliminary application of scansion to the vagaries of time and space would seem to be in the remits of quantum physics and geography, disciplines qualified to record variations in each. But as theorists such as Bruno Latour have argued, the modern project of disciplinary distinction and specialisation stemming from the Enlightenment has proliferated the problem that disciplines now collectively face: concepts of hybridity that fall between specialist subjects and refuse easy categorisation. By way of example, on scanning (climbing, leaping, stumbling) a story in the newspaper, Latour describes how:

‘The smallest AIDS virus takes you from sex to the unconscious, then to Africa, tissue cultures, DNA and San Francisco, but the analysts, thinkers, journalists and decision-makers will slice the delicate network traced by the virus for you into tidy compartments where you will find only science, only economy, only social phenomena, only local news, only sentiment, only sex.’⁸

Each discipline will attempt to write this story from a specialist perspective, focusing on the features most pertinent to their concerns. The problem with this, in Latour’s view, is that it overlooks the course woven by the AIDS virus through various overlapping phenomena, a ‘delicate network’ that hermetic approaches will fail to grasp. The resulting fragments or ‘tidy compartments’, are too numerous to be recombined, and fall short of resembling the whole. By way of countering this splintering and to comprehend the network, Latour proposes an overhaul of anthropology. It is, he argues, the only ‘modern’ discipline that attempts this connected approach:

‘...even the most rationalist ethnographer is perfectly capable of bringing together in a single monograph the myths, ethnosciences, genealogies, political forms, techniques, religions, epics and the rites of the people she is studying.’⁹

Tracing the path of hybrids as they traverse co-ordinates and weave networks through various disciplines will, he claims, allow for greater comprehension of and action within the world.

Though their approaches remain distinct, the overlap of Latour and Irigaray is located in their desire to materialise the connections, forces, paths and dissonances between bodies – bodies that may be geological, animal, lunar, institutional etc. – rather than reinscribe these bodies within the cloisters of disciplines. Latour advocates a renovation of anthropology to undertake such a task, but it is arguable that creative practices have been relatively immune to – or have adapted by absorbing – paranoia regarding disciplinary integrity. This is perhaps due to their devaluation during and after the Enlightenment, in which ‘whatever [did] not conform to the rule of

computation and utility [was] suspect.¹⁰ Michel Serres, an important figure in the work of Latour, considers this split ‘between the scientific ideal and literary temptation’ to be a fairly recent one, ‘at least since the Enlightenment, and perhaps only since the era of the contemporary university.’¹¹ Serres advocates ‘the troubadour of knowledge’, whose principle of connectedness, he argues, has a rich lineage dating from antiquity:

‘Plato was not afraid to mix problems of geometry with quotes from Pindar; Aristotle addresses medicine and rhetoric; Lucretius writes hymns to physics; as analysts, Leibniz and Pascal write with perfection; Zola novelises genealogy; Balzac, La Fontaine, Jules Verne – what author doesn’t do it?’¹²

If, in the wake of the Enlightenment, poetry, music, visual art and literature are no longer considered capable of accessing or communicating ‘truth’ (other than that of the unconscious or emotional, perhaps, both of which are inimical to Reason) then they are, to some extent, off the veridical hook. To the doctrine of objective truth this makes creative pursuits worthless; to Latour, and the rest of us, this should be cause for excitement. Like the anthropological monograph, the process, content and exposition of creative work can move amongst disciplines and cultures, times and spaces. *Unlike* the anthropological monograph, it can do this without breaking the rules of its own discipline (which is not, however, to suggest it is above reproach).

In an exhibition like *Between poles and tides*, where the only ‘true’ connection between the works is their having been acquired by the University of Edinburgh Art Collection, such wide-ranging, peripatetic and collaborative approaches to research and process are fantastically represented. From deep time to geology, Rousseau to calculations of extra-terrestrial time, the exhibition can be taken as a microcosm in which hybridised knowledges and offshoots of specialisms proliferate. Scansion – simultaneously a tool of linguistic analysis and the climbing motion of its etymological root – emerges as a possible method of navigating the exhibited works. What follows, then, is one attempt to sketch a provisional path between works, to annotate, mark and notice, to grapple, skim and scan. It is a thoroughly amateur wandering, lacking in specialised rigour, written in the hopes that it will encourage viewers to make their own dilettantish connections.

For me, content to decipher in your wake some words in the pages of the vegetable realm, I read you, I study you, I meditate upon you, I honour you, and I love you with all my heart.

- Jean-Jacques Rousseau to Linnaeus, 21st September 1771

If, working backwards, a ‘scansion of space and time’ was set as the curatorial brief, it’s hard to imagine an artwork more fitting than Katie Paterson’s *Timepieces (Solar System)* (2014). Paterson’s clocks, a mute, modest and unassuming presence in the gallery, resound with poetic suggestion and an aura of scientific accuracy. The latter, of course, is taken as a matter of trust; if lacking in expertise to fathom what is being measured by the radii on each dial, the lay visitor to the gallery relies on Paterson’s fidelity to exactitude. It may be that the work’s monochrome and clear-cut presentation makes this all the more believable: fitting seamlessly into a scientific aesthetic (no doubt a compound of sci-fi, media representations, and the last time most non-expert audience members were in a scientific environment: their Standard Grades or GCSEs).

But, does it matter if the clocks really represent time on Venus or Mars accurately? If Jupiter is accidentally mis-calibrated and begins to lag by a few seconds, is there any consequence for the artwork? It would lose a kind of scientific authority, certainly, but the *Timepieces* are not being presented in a milieu where such authority has primary currency; the viewers’ experience of the work will be more or less the same in both scenarios. On the other hand, if the work is reduced to its poetry, it becomes frustrated. If the artist merely wanted to evoke a melancholic idea or meditation on time on other planets, there would be no need to go to the lengths clearly gone to in order to realise the work as a series of objects. For Paterson, the work as immaterial poetic fragment is incomplete, it must materialise in the world with scientific precision. The fulcrum of the *Timepieces*, then, is located in the indeterminate space between their scientific accuracy and poetic implication.

Paterson’s meticulously realised *Timepieces* call to mind another speculative timepiece, albeit one that was abandoned for its inability to be accurately realised. In his 1751 work *Philosophica Botanica*, the father of modern botany Carl Linnaeus (1707-1778) outlined his plan for an *Horologium Florae* (literally a ‘flower clock’).¹³ Certain flowers were to be planted in the shape of a clock dial, with species positioned according the hours they regularly open and close. Linnaeus observed that some flowers open and close with the weather (*meteorici*), some with day and night (*tropici*), but a third category (*aequinoctiales*) seem to obey regular hours, apparently possessed of circadian rhythms. Observers of this elaborate garden design would thus be able to tell the time from the *aequinoctales*’ positioning. For example, the

dandelion's short day begins at 5AM but has already begun to close between 8 and 9AM, whereas a white waterlily opens or 'wakes' at 7AM and lasts through to 5PM. Though there's no record of Linnaeus having planted a working flower clock, he claimed that doing so 'could put all the watchmakers in Sweden out of business', and the idea was taken up enthusiastically by botanists and horticulturalists in the following century.¹⁴

At the turn of the 20th century, Linnaeus' design was revived in another form, scarcely half a mile from Talbot Rice Gallery. In 1903, park superintendent John McHattie and Edinburgh clockmaker James Ritchie created the famous Floral Clock of West Princes Street Gardens, the first of its kind in the world. A mechanism was installed inside the base of the nearby monument to Allan Ramsay, regulating the movement of the hour hand (a minute hand was added in 1904) until 1973 when an electric motor was installed. According to the Edinburgh Guide, the Floral Clock requires scrupulous upkeep:

'With tens of thousands of small, colourful plants, the clock takes two gardeners five weeks to plant, and is trimmed, weeded and watered by one gardener for the rest of the season. The clock flowers from July until October. Plants vary each year but some of the more commonly used varieties include Lobelia, Pyrethrum, Golden Moss and succulents such as Echeveria and Sedum.'¹⁵

Despite its popularity with visitors, the Edinburgh Floral Clock seems to have lost some of the ambition and scope of Linnaeus' *Horologium Flora*; the flowers of the Floral Clock bear no relation to their nominal timepiece other than to decorate its mechanism. The connection between mechanised time and its floral garb becomes purely aesthetic; what Linnaeus conceived as a speculative hybrid of horticulture and horology, the Edinburgh clockmaker reduced to illustration. It is doubly abstracted from Linnaeus' original design that itself confused time with the *measurement of time*, 'a metrical reading on a straight line.'¹⁶

The relationship between plantlife and time has an interesting history; in the wake of Linnaean taxonomy, botany was popularised as an amateur but refined pursuit, practiced by some of the foremost intellectuals of the day. One of these, Enlightenment philosopher Jean-Jacques Rousseau (1712-1778) – of whose work several works in *Between poles* echo – took up the practice with particular zeal. His final work, *Reveries of a Solitary Walker* (1782), is a short meandering text with a structural conceit of ten 'Walks'. While some of these walks do indeed map out Rousseau's wanderings – mostly around a then-pastorally enclosed Paris – their peripatetics are more of a melancholic variety, comprising the author's musings on solitude, ageing, literary culture and falsehoods.

The Walks make frequent reference to something Rousseau calls 'botanising' (*botaniser*, in the original French), a word that has since fallen out of usage. 'Botanising' is the explicit practice of searching for and collecting specimens, but in Rousseau's prose, seems to also be a mode of acute attentiveness to his surroundings

that fertilises his understanding and opens him up to emotional experience or *reverie*. The passages on botany can also be read, obliquely, as meditations on space and time. To understand the significance of both space and time in Rousseau's work it is important to note that at the time of his writing, both were a somewhat dwindling substance for the author. Rousseau was nearing the end of his life, and, due to controversies over previously published work, had experienced exile from his native Switzerland. It is for this reason that the Fifth Walk recounts a two-month period spent seeking refuge on a small island in Lake Bienne. Extremely isolated, and populated only by the family that host him, Rousseau attests: 'Of all the places I have lived (and I have lived in some charming ones) none has made me truly so happy or left me such tender regrets as the Island of Saint-Pierre in the middle of the Lake of Bienne.'¹⁷

Rousseau's depiction of life on the island is one of uninterrupted harmony and bliss. He decides to leave his books unpacked, and instead sets out on foot each day to explore the island's flora: 'I set out to compose a *Flora Petrinsularis* and to describe every single plant on the island in enough detail to keep me busy for the rest of my days.' With a magnifying glass in one hand and a copy of Linnaeus' *Systema Naturae* in the other, he recounts a fervent attention to detail verging on obsession:

'They say a German once wrote a book about a lemon-skin; I could have written one about every grass in the meadows, every moss in the woods, every lichen covering the rocks – and I did not want to leave even one blade of grass or atom of vegetation without a full and detailed description.'¹⁸

In order to undertake this, he writes of having divided the island 'into small squares, intending to visit them in every season' to better study the flora of each. Rousseau's stay on the island was sadly limited to a few months, and though he does not provide us the results of this (supposedly) rigorous study – that calls to mind the quadrats used by today's ecologists – his later walks make frequent reference to an herbarium of samples collected throughout his life, some of which, we can presume, date back to his time on the island.

Where are Rousseau's books on the blade of grass, a particular patch of moss, or sliver of lichen? Are we to believe that had he been able to stay on the island these would have materialised? By the Seventh Walk, Rousseau seems to have reneged on the impulse. Instead of creating a world from a fragment, he has compiled a book of cuttings. Each of these act as a portal to the time and space they were collected, to which Rousseau has:

'... only to open my flower collection to be transported there. The fragments of plant life which I picked there are enough to bring back the whole magnificent spectacle. The collection is like a diary of my expeditions, which makes me set out again with renewed joy, or like an optical device which places them once again before my eyes.'¹⁹

As Rousseau imbued his herbarium samples with *souvenirs* (literally ‘remembrances’), each became a synecdochical timepiece or ‘device’ for accessing other times and spaces. The time told by Rousseau’s version of the flower clock was thus not linear but multitemporal, enticing him into memory, melancholy and the titular ‘Reveries’.

Throughout his life, Rousseau felt it necessary to find a way of marking or ‘scanning’ the times and spaces through which he lived. Writing was a large part a part of this, as was the compulsive copying of sheet music he took to in later life. But the impulse can also be seen in his meticulous partitioning of Saint-Pierre into squares, his penchant for classification and ‘botanising’. These may appear to be at odds with the man whose radical philosophy was so influential to the French Revolution, but are encompassed by Rousseau’s belief in the democratic virtues of botany that cost ‘neither money nor care’: ‘Plants have been placed within our reach by nature herself; they spring up beneath our feet, in our hands so to speak, and even if their essential parts are sometimes so small as to be invisible to the naked eye, the instruments which bring them nearer to us are far simpler to use than those of the astronomer.²⁰

Yet in his lithograph *Both the Garden Style* (1987), Ian Hamilton Finlay points what appears to be an accusatory finger at Rousseau. Beneath the image of a guillotine twined with honeysuckle, Finlay’s text reads:

Both the garden style called ‘sentimental’, and the French revolution came from Rousseau. The garden trellis, and the guillotine, are alike entwined with the honeysuckle of the new ‘sensibility’.

Taken from his ‘Detached Sentences on Gardening’, the text is characteristic of Finlay’s encyclopaedic references to classical and intellectual traditions that exceed the apparent brevity of the artwork. The guillotine, emblematic of the failed promises of the Revolution, is evoked alongside the garden trellis, as if their respective violence and ‘sentimental’ benignity are not just interdependent or mutually productive, but perhaps interchangeable. In this equivocation, Finlay disturbs the ‘democratic’ surface of Rousseau’s ‘idle’ botanising to reveal the imperialistic violences that would come to be enacted in the name of botanical acquisition, such as colonial plant-hunting and Linnaean classification that both relied on and reinforced heteronormativity.²¹

Furthermore, it appears that Rousseau’s account of his time on Saint-Pierre is a fragment of the whole. As W.G. Sebald elucidates in an essay written ‘On the occasion of a visit to the Île Saint-Pierre’, Rousseau’s archives show that during his stay on the island he was in fact engaged in writing a short treatise on Corsican independence. At the time, the Corsican people were engaged in a struggle against the ruling Genoese; Rousseau encouraged them to found a new society rooted in agriculture, and to abandon monetary economy in favour of a bartering system. Sebald relates that for Rousseau, the Corsica project was a ‘utopian dream in which bourgeois society, increasingly determined by the manufacture of goods and the accumulation of private wealth, is promised a return to more innocent times.’²²

Written on his own island utopia and addressed to another, it is important to read Rousseau's utopian political project alongside the botanically-induced 'reveries' recorded in the Fifth Walk, to examine the contradictions thrown up:

'The separation we habitually create between empirical science and psychological inwardness is not reflected by Rousseau's writing; in fact, the process of classification is a panacea, first as a substitution for academic work and then as an agent of purification for his imagination.'²³

In addition to the treatise on Corsica, Sebald intimates that Rousseau also maintained his extensive correspondence with other thinkers and acquaintances during his time on Saint-Pierre. Amongst these are many botanical exchanges that have been collected as *Letters on the Elements of Botany* addressed to one Mme Delessert in Lyon, with the intention of instructing her daughters in the art of botany. An archive of correspondence with the Duchess of Portland on similar matters also exists, to whom Rousseau appointed himself as a 'herborist' or sample collector. As we have already seen, Rousseau imbued the practice of botany with democratic and redeeming virtues, and 'forms part of Rousseau's project for a moral social order'.²⁴

With Rousseau's idealisation of nature in mind, it is perhaps surprising, as a contemporary reader, to discover the vitriol with which he rails against the geological bedmates of his beloved plant life:

'The mineral kingdom possesses no intrinsic charm or attraction: buried deep in the bosom of the earth its riches seem to have been placed far from the eyes of men so as not to arouse their cupidity.'

²⁵

In Rousseau's logic, the collection and classification of minerals is, if anything, anti-democratic and 'unnatural', because unlike plants, 'those true riches which lie more easily within man's reach', the extraction of minerals requires 'ingenuity, drudgery and toil'. Dismissive not only of the process, Rousseau also sees fit to condemn those who attempt it: 'He flees the sun and the light, which he is no longer worthy of seeing, he buries himself alive, and rightly so, since he no longer deserves the right of day'.²⁶

In which case, it would be interesting to know what Rousseau would make of the blurred boundary between geology and biology presented by Ilana Halperin in *Physical Geology (new landmass)* (2013). It depicts a constellation of unique 'body stones' usually formed in the kidneys, bladder or gallbladder. Spending time with these objects has led Halperin to an understanding of the body as a 'geological agent', one that is also implicated, on a molecular level, in the processes of geological formation that shape our environment. In relation to this, Halperin recalls a visit to an Icelandic volcano on their shared 30th birthday, to celebrate the moment they both came into existence. Knowing that the volcano's life will exceed her own, Halperin says, becomes an artefact of 'domestic deep time', a way of understanding the geological processes our lives are folded into.²⁷

This interweaving of the body with deep time bears little resemblance to Rousseau's fearsome contrast of innocent, botanising humanity on the one hand, and chthonic penetration and extraction on the other. He is derisive of those would-be naturalists engaged in 'picking up sand and stones', who 'are usually rich and ignorant people who only want the pleasure of showing off their science', but amongst these snipes, a deep-seated fear of imminent industrialisation becomes apparent: 'Then quarries, pits, forges, furnaces and a world of anvils, hammers, smoke and flame take the place of the sweet images of rustic labour.'²⁸ The extraction of resources through industrial processes presented a threat to his vision of an agrarian idyll, briefly tasted on Saint-Pierre, and idealised in his treaty on Corsican independence. His disdain for all things lithic is also interesting given that his retreat to the island of Saint-Pierre (itself lithic in name – *pierre* being French for 'stone' or 'rock', from the Latin *petra*) was directly prompted by his being violently stoned by the villagers of Môtiers. Rousseau's diagnosis of destructive extraction has proved to be portentous, but his suggested remedy – of insular retreat – is perhaps personally motivated but typically anti-modern.

Halperin's collaboration with geological forces, such as the intricate cave cast formed over a period of ten months in the St Nectaire calcifying springs in France, exemplifies a relationship at the human/geology interface counterintuitive to the violent extraction prophesied by Rousseau, one that now wreaks unimaginable destruction on the planet. Rather than manipulate raw material to fit her designs, Halperin's methods proceed from an ongoing meditation on the processes and properties of the material itself. As a result, the cave cast – completed in what for us is 'slow time' – allows us to glimpse its ephemerality in the scope of deep or geological time. Demonstrated within Halperin's methods is a set of practices that might be extrapolated and put to planetary use: those of ethics, collaboration, and – to Rousseau's horror – ingenuity.

It is important to caveat this with an emphasis on grief, as well as those features of geology we can supplement with our own corporeal or psychological equivalents: schisms, ruptures and cracks; pressure, faults and collisions. Far from a romanticised or idealised view of geology – akin to Rousseau's view of botany – Halperin's work provides room for inevitable pain and violence without allowing them to dominate the narrative; her drawings of body stones for example, communicate diversity, beauty and wonder alongside the painful process of their formation.

It would be unfair to evaluate Rousseau on the terms of today's scientific knowledge, of homeostatic systems sustained by febrile forces, and more recently, of humanity's disruption of these, termed 'the Anthropocene'. Yet there has been widespread speculation about an apparent understanding of this dynamic in classical sources, dating to pre-Socratic theories of flux, which as Adorno and Horkheimer claim, 'preserve the moment of transition'.²⁹ According to such theories, all existence is imbricated in 'a cosmic cycle of eternal change, growth and decay, in which two personified cosmic forces, Love and Strife, engage in an eternal battle for supremacy'.³⁰ These 'cosmic forces' call us back to Irigaray's contronymic movement

between poles and tides, as well as processes of geological formation – from the fleshy production of body stones to the orogenic crumpling of tectonic plates.

During her artist's talk at Talbot Rice Gallery, Halperin alluded to the essential movement and transition of these forces by quoting from Ovid's Metamorphoses: *Omnia mutantur, nihil interit*; 'All things change, nothing perishes.'³¹ This notion is particularly poignant when read in relation to Rousseau's plant/mineral duality, that his beloved former is also *biomass*: over time transformed into fossil fuels, the lifeblood of industrialisation. It begs the question of which aspects of 'botanising' are worth reviving; can we engage in enchantment and reverie, without sentimentality or retreat? Can we practice attention and care without a need to control, categorise and manipulate? Can we read objects, things, beings, not just in their isolated acquisition, but in terms of the relations – circuitous, fragile, rudimentary – between them?

'*Between* has always struck me as a preposition of prime importance.'³²

¹ Email excerpt dated 22/9/16 from Stuart Fallon, curator of *Between poles and tides*

² Luce Irigaray, *Elemental Passions*, trans. Joanne Collie and Judith Still (London: The Athlone Press, 1992), 63

³ *Collins English Dictionary*, (Glasgow: Harper Collins 2010)

⁴ Entry for ‘scan’ <http://www.etymonline.com/index.php>

⁵ Irigaray’s project, it should be noted, is predicated on a need to develop or recover ways of speaking other than the patriarchal language that has dominated Western discourse to date. Such a language, she argues, is ordered by distinct, dialectical opposites that simultaneously suppress two voices: the feminine, and the material. In *Elemental Passions* and elsewhere, Irigaray attempts to counteract this by merging the two perspectives in a contrived linguistics, to ally that which has been traditionally excluded from metaphysics. Instead of arguing explicitly against this exclusion, which in Irigaray’s view would play into the patriarchal tradition of dichotomies, *Elemental Passions* performs the feminist tactic of ‘mimesis’, in which the text impersonates the invisibility, passivity and objectification that comprise women’s estrangement from theory in an attempt to ‘jam the theoretical machinery itself.’ (*This Sex Which Is Not One*, [1985], 77) Irigaray’s project is therefore ethical and epistemological in scope, but linguistic in method. It is this tactic of ‘mimesis’ that has provoked accusations of ‘biological essentialism’ in which the category ‘woman’ is both defined by and reduced to some natural ‘essence’. Implicit in Irigaray’s selection of relational, asymmetrical ‘poles’ and ‘tides’ are the correlative aspects of women’s bodies, particularly their reproductive functions, which, she argues, have not received fair or truthful representation. Elsewhere she refers to a ‘placental economy’ (*Je, Tu, Nous*, [1990]), which focuses on the exchange of vital resources between mother and foetus where ‘otherness is tolerated within the self, rather than assimilated, excluded or neglected.’ (Irigaray, Rachel Jones, [2011], 161) The placenta is described as a mediating space that binds two or more organisms together.

⁶ N.B. Geographic north and geographic south remain the same

⁷ Theodor W. Adorno and Max Horkheimer, *Dialectic of Enlightenment*, trans. John Cumming (London and New York: Verso, 1979), 9,7

⁸ Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, Massachussets: Harvard University Press, 1993), 2

⁹ *Ibid.*, 7

¹⁰ Adorno & Horkheimer, *Dialectic*, 6

¹¹ Michel Serres and Bruno Latour, *Conversations on Science, Culture, and Time*, (Ann Arbor: The University of Michigan Press, 1995), 29

¹² Serres, 183; 28

¹³ I am grateful to Katy Lewis-Hood for alerting me to Linnaeus’ flower clock

¹⁴ Joshua Foer, ‘A Minor History Of / Time without Clocks’, *Cabinet* Issue 29, Spring 2008

¹⁵ Edinburgh Guide <http://www.edinburghguide.com/venue/floralclock>

¹⁶ Serres, *Conversations*, 60

¹⁷ Jean-Jacques Rousseau, *Reveries of the Solitary Walker*, trans. Peter France (London: Penguin Books, 1979), 81

¹⁸ *Ibid.*, 84

¹⁹ *Ibid.*, 120

²⁰ *Ibid.*, 115

²¹ ‘...the gendering of essential sex characteristics in Linnaean botanical writing suggests that the science relied on a prior assumption about human courtship and

sexuality to construct its account of plant sexuality.' Amy M. King, *Bloom: The Botanical Vernacular in the English Novel* (New York: Oxford University Press, 2003), 21

²² W.G. Sebald, *A Place In The Country*, trans. Jo Catling (London, Penguin Books, 2014), 52

²³ King, *Bloom*, 49

²⁴ Alexandra Cook, 'Botanical Exchanges: Jean-Jacques Rousseau and the Duchess of Portland', *History of European Ideas*, 33:2, 142-156 (Routledge, 2007), 150

²⁵ Rousseau, *Reveries*, 113

²⁶ Ibid., 113

²⁷ All quotations here taken from Halperin's artist's talk at TRG on the evening of 23/2/17

²⁸ Rousseau, *Reveries*, 113

²⁹ Adorno and Horkheimer, *Dialectic*, 6, cf. Serres, *Conversations*, chapter on 'Method' 43-76

³⁰ Entry for 'Empedocles' <http://www.iep.utm.edu/>

³¹ J.K. Hoyt & K.L. Roberts ed. *Hoyt's New Cyclopedia Of Practical Quotations* (New York and London: Funk and Wagnalls Company, 1922), 93-96

³² Serres, *Conversations*, 64

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w w w . e d i n p h o t o . o r g . u k

tempus fugit // ‘time flies’

Daisy Lafarge
March 2017
c/o Talbot Rice Gallery