

Encounters with otherness: Towards a participatory way of knowing

Holistic Science MSc dissertation
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“A story is a way to say something
that can’t be said any other way”

Flannery O’Connor



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Encounter number one:

Scenting my way in.

Summer 2014, Devon, England

I decided to saunter my way into the college by paying attention to smells. Craig Holdrege introduced us to this exercise at the beginning of our MSc, as a way of opening up perception: going out into the world and choosing one sense to see the day through. Today, I chose smell. As I walked along the river, the day was full of news—dry, hot floweriness; fresh water; wet dog, hot in the sun; brackish, stagnant water; pungent fox mixed with green grass (where is it?); lavender—hot, accompanied by a summery buzz of bees.

I'm approaching the college when I spot him on the path. Tiny, furry, very still. Yet clearly, clearly alive, whiskery life vibrating out of him. I stop, but not quite slow or fast enough, and he disappears off the path and into the tall grasses. Not too fast though, not too scared. I bend down, peer into the greenage and spot him straight away, surrounded by green grass and stalky dryness. His eyes are so small. I wonder how well he sees. Is he looking at me right now? He's looking to the side but aware of me, very still, whiskers vibrating. I sit, breathe quiet and deep, and wait. Eventually, he moves, nose first, and disappears.

I spot the topside of a broad furry green leaf moving, a motion different from the sway with wind. Someone in there. A pair of eyes, a snout. I thought he might be a shrew but he's not, his nose is rounded and much shorter, his eyes tiny, his fur coat brown and golden at the eartips where it meets the sun, vibrating. A harvest mouse? A baby harvest mouse.

Led by his nose, he moves off the grass and onto the concrete path. Suddenly, running on concrete, he seems awkward. I smile. His walk is ungainly, like he doesn't know what to do with his back legs. Onwards into the grass again. I kneel down, the pebbly concrete path hard under my knees. Barely have I had time to adjust my position and he's on the move again, rustling through the greenage. Scuttle, scuttle, scuttle and he's off the grass and onto the path, slower now. He brushes past my hand then run, run, then slower now, into the grasses again. I'm

on all fours, trying to keep up. I spot him under a leaf again—he's nibbling on something, twiggy vegetation (they eat the dry stuff?). His little paws are pinkish red with long fingers, a silvery white almost transparent coating of hair. His paws move fast, his whiskers move fast, the whole of him seems to vibrate, as if perpetually listening. Funny I should run into this wee creature on a day when I'm smelling the world. I wonder if he smells me more than he sees. I'm pretty sure of it, so much of him nose. I can smell heat on concrete, dry grass, a faint whiff of urine. How much more can he? Can he smell the different grasses the way I say can see them?

He's relaxed now. No, relaxed isn't the word, I wonder if it's ever the word, for a rodent. What I mean is, he's slowed down. I'm still on all fours on the bike path, hands splayed, feet apart. A strange picture to passers by, I think for a moment. He brushes past the outside of my indicator finger, then turns rightwards and contours my hand, along behind my arm and inbetween my legs. He rests awhile in the folds of my trousers. A few seconds and he's off again, around my red shoes and back into the grasses. It seems exhausting, rodent life. And yet... he is remarkably unafraid of me, brushing past, exploring what's around, eating even.

A woman approaches on foot and stops, her neck stretched forwards. ‘What it is?’ she mouths. A mouse I whisper, a baby mouse. Oooh. She coos and approaches, lightfooted, not too close. ‘I saw a dead.. shrew or something on the path this morning’; she speaks in a low tone. ‘I wonder if it was his mother’. Suddenly, I look at the little creature differently. His ungainliness when he runs, his apparent lack of fear, back and forth along a perimeter of 10 meters or so, suddenly seem... different. Sad. We both look at him, hidden among the grasses again. He starts moving, I follow, the woman moves on. I put my hand out close to the wee creature. I must appear enormous, gigantic, so much larger than he seems small to me. His head stills for a moment, then he moves towards me and swiftly past. His body brushes against my hand; it's silky smooth and light as a bird, as if hollow. I crawl after him, noticing again his back legs—feet and lower leg bending to the ground then lifting ungainly.

He moves back into the grasses and I notice his movement, graceful now— perhaps the concrete path is as uncomfortable for him as it is for me. I notice also—how have

I not done so before?—his tail, which is very short. He... can't be a mouse. I peer at him closer, as if that would improve my knowledge of rodents. He's moving fast amongst the grasses, then he disappears into a clump of snail-sparkly leaves and won't come out. I take this as his cue and take my leave.

Post Scriptum: This little creature was a field vole, *Microtus agrestis*. They have smaller ears than mice, and smaller eyes, more rounded muzzles and shorter tails. And I a zoologist.

Introduction:

This piece of work started with a series of encounters with other ways of being, the ‘more than human world’, as David Abram puts it (1996). For three months, I made a daily practice of sauntering through Dartington estate in Devon and sometimes farther afield, letting otherness catch my being, then recording the interaction.

The core question I set out to ask was ‘How do I meet otherness in a rigorous manner on its own terms?’ As a zoologist, this is a question I have asked myself before. I was, for a few years, involved in animal behaviour research in the academic world. I found that the doing of the science took me away from my study subjects rather than bringing me closer to them. After months of science on a particular species, I would find I knew a lot about them that was factual, but did not understand more about their way of being in the world; sometimes, I found I understood less, as though being was drowned in a sea of facts.

This quality of being in the world that is unique to every species is a fascinating question: what is the quality of coherence that makes a dog undeniably a dog, from a chihuahua to a german shepherd? What is their quality of oneness? This question matters because we are surrounded by otherness, we live in and of it. We humans are but a drop in an ocean of earthly being. If we understand other ways of being, we will respect and value them more and, in doing so, become better participants in the world we live in. We live better alongside that which we know and understand.

There are certain questions for which conventional scientific methodology is not the right medium, and oneness or quality of being is one of them. I came to Schumacher College to learn about a different way of science, that can address these questions rigorously and within a community of practice where the work of others can validate our own.

In this dissertation I address two questions. One is methodological: How can we encounter the quality of otherness on its own terms—not our own—and share our findings rigorously? For this I discuss Goethean science: a participatory science of qualities practiced through the subject. My substantive question is related to the first one: What is the nature of the quality of oneness that is present in all beings, and expressed differently

in each of them? The two questions combine into: ‘How do I find my way into encountering the nature of robin, damselfly, orchid?’

I chose to write a first person narrative account for three reasons. Firstly, because one of the problems with modern science is the passive, impersonal way we talk about it. By virtue of the methodology—detached objectivity—the scientist is removed from the science, and from the sharing of the science with others. The intention behind this is a striving towards objectivity, to get ourselves out of the way of seeing. It has a fundamental problem, however: that we, us as subjects and seers, are the only way we have to access the world and that no matter how much we try to remove ourselves, we are still there, trying to remove ourselves. Secondly, because experiential narrative is in keeping with the phenomenological tradition within which I am working, where the focus of investigation is on direct experience as lived. Thirdly, because the direct experience of the practicing scientist matters. Science is a human narrative of the world and scientists are transformed as citizens in the doing of their science. The science we have is an expression of our society and, engaged with at the level of process as well as outcome, can reflect our society’s state of being back to us for reflection.

For these three reasons, I have chosen to place myself firmly in: this account of a movement through science is with and through me. My focus and intention however are firmly placed on the other: I am attempting to become a vehicle through which otherness can express itself—in participation with me. I do not pretend to have definitive answers to my questions, but I have a journey and a series of encounters to share.

The dissertation is divided into three parts: Part I takes place in 2002, when I went to Namibia as a biologist, studying the behavioural ecology of baboons. Here I narrate my experience of doing quantitative science and discuss it in light of my current focus on qualitative, participatory science. From Part I, I invite the reader to dive straight into the experiential. Part II consists of a series of encounters with otherness, where I practice different aspects of Goethean science methodology with a demoiselle, a butterfly, a robin and an orchid. This part takes place mostly in Devon in the summer of 2014. In Part III, I go on a journey with Goethean science, prompted by my experience of practice in Part II. I discuss the nature of biological form and how Goethean science methodology may help us get to the core nature.

Part I and Part II are divided into chapters, which follow from one another so that the chapter numeration in part III follows from where Part I left off. Part II is divided into encounters, which are numbered independently from chapters.

The dissertation is bookended with experiential encounters: an exact perceptual encounter with a vole precedes this introduction. Two bite-sized encounters bring it to a close: one grounded in exact sense perception, one grounded in exact sense imagination, both of which—as Goethe proposes—we need if we are to encounter other ways of being meaningfully.

PART I

Tsaobis Leopard Park

Namibia, 2002

“I do not know if I have knowledge,
but I have an experience to communicate”
Laurens Van den Post

“Each of us has inherited a capacity to feel our way into the being of another, but our fast-paced urban lifestyle rarely encourages us to do so . During my life with baboons I discovered that, plunged back into the wild world from which we emerged, ancient skills come alive, and once again human and animal minds meet on equal ground”.

Barbara Smuts, 2001, p.295



Chapter 1

Years ago I found myself in the semi-desert plains of southern Africa, clipboard in hand, a few kilogram's worth of sound recording equipment heavy on my back, following a troop of chacma baboons as they lived their lives. The landscape there is stripped to essentials: expanses of sandy rock and dry grasses extending up into koppies—scrubby, scraggly hills—and down again into valleys of sand. Here and there, bare bones: the elongated face of a hemsbok stuck on a wire fence, hollow sockets facing the ground; the heavy browbone of a baboon tilted sideways into the sand, a fang protruding out of its jaws; dead tree branches bleached silvery white in the sun. On the dry riverbed—an expanse of clayed up soil, cratered and crackly under my feet—the occasional flower is a bright orange delight in this expanse of muted dryness. I followed the baboons from dawn to dusk, collecting data to answer well researched questions that I had brought with me from a book-laden desk in eastern England. I was then working within behavioural ecology, a scientific discipline which studies of the evolution of animals' living habits in relation to the ecological context they have evolved in¹. As our project had funding to study reproductive strategies in baboons, I was to get very familiar with the sexual habits of this troop of relatives.

Unlike humans, who have concealed ovulation—it's not possible to tell by looking at a woman where in her cycle she is—baboon females advertise ovulation flamboyantly. Coming into heat, females' bottoms swell up bright pink and they walk around with blister-like swellings on their back, raw and warty-looking. These swellings, so strange and exaggerated, have fascinated evolutionary biologists for a long time. Why did they evolve? And what for? They appear in primates in different evolutionary family branches, which means they have arisen independently more than once in evolution. This suggests a distinct survival or reproductive advantage. Yet there appears to be no obvious link to ecological pressures. Do they serve to increase competition among baboon males for females? To increase the likelihood that a female will get pregnant? To advertise a female's reproductive 'quality'? So that the females can manipulate paternity certainty? There are almost as many hypotheses as there are minds put to it. Our group was testing a theory that there is a conflict of interests between the males and the females, what is called an

¹ To find out more about the science of Behavioural Ecology, see Nick Davies' 'Introduction to Behavioural Ecology' (2012). For the best (and unusually personal) account I have read of a scientist's experience with animals during fieldwork, see Smuts, 2001.

evolutionary arm's race—males want to know the exact timing of a female's ovulation so that they can guard the female from the attention of other males: they want paternity certainty. Females want to advertise ovulation precisely enough to attract males and get pregnant, but not so precisely that one male can muster the strength and patience to guard her all the time and keep her to himself. They want most of the males in their troop to have a probability, however small, of being the parent. Male baboons can be aggressive towards babies whom they know not to be their own, so mating with many males could make a female's baby safer when it is born. The result of this arm's race is that the female develops a swelling that lasts for a few days around ovulation; she advertises her fertility but conceals the precise timing. However, information about the timing of ovulation might be hidden—or rather on display—in the swelling itself, which is most engorged, pinkest and plumpest at ovulation, and slightly deflated around it. Males might know how to read this information, although they are presumed not to be aware of this—they are simply more attracted to a particular 'look' on the female.

I had a series of predictions deriving from this arm's race theory: that swellings change measurably throughout the cycle; that males inspect the changes; that males guard the females more closely around ovulation; that females mate with multiple males; that the dominant male in the troop does not father all babies, but does father most. I collected a lot of data on the private lives of baboons, clipboard in right hand, GPS in left, binoculars round my neck, camera and sound recording equipment in bag, along with five litres of water and little plastic vials to collect poo samples for analysis back in a lab.

Chapter 2.

Before I started collecting my data, I had to habituate the baboons to me, allowing them to get used to my presence so I could then ‘fade into the background’ and become the unobtrusive, boring—to baboon eyes—data collector a good scientist should be. Week after week of track, find, follow, track, find, follow, a dynamic sort of interbeing was growing in the space between me and the baboons, and it was happening without conscious invitation. I found myself once falling asleep with the troop at their usual nap time, their soft, low-pitched collective rhythmic grunting lulling me to sleep. I woke up with their barking, high pitched, urgent: ‘moving on, moving on, moving on’. On the move, I felt an expanded sort of being, a oneness with what was around. Movement with the troop seemed simply to happen to me sometimes. Eyes closed, I knew the mood of the troop by the sound of the air around me. I felt myself synchronising with their activity, an uninvited occurrence. My study, so serious back in England, started feeling comical now. What did it matter how many times male X approached female Y and what the outcome was? What would that tell me? The experience of sharing being, step after step after step, was what seemed relevant to understanding, an invisible barrier becoming more and more permeable. My data collection routine started to feel vaguely ridiculous. This beautiful alien world, a life stripped down to the bones, was opening itself to me and where was I? Nose down in a flip-chart, or fiddling with buttons to record a mating call.

Pre-fieldwork, behavioural ecology had felt like a holistic kind of science. Social and environmental context—place—was the starting point to understanding how animals are in the world, and the species’ evolutionary past—their story—was key to understanding them now. Everything in behavioural ecology was seen in relation. Yet the practice of the methodology had a remarkably fragmented feel. Even as I wrote the last chapter, recalling and explaining the project I was involved in, I found myself easily sucked back into a place where the baboons I knew disappeared and I was left with ambulatory theories, strolling around an arid landscape.

Immeshed as it is in the current scientific paradigm of individualism, the relation that is at the heart of behavioural ecology is seen as merely instrumental—a means to the end of understanding individual choices, which in themselves are a means to explaining natural or sexual selection, those invisible forces driving evolution. The methodology in

behavioural ecology is, in standard scientific tradition, one of detachment—the observer should aim, as closely as possible, to become an object, an instrument for measurement, non-interactive and devoid of individuality. Fading into objects, we cannot participate with the study subject; there is no opportunity for conversation. Although it studies relationship, ecology is concerned with the quantities of things: how many times baboon female X mates with male Y for example, how many days her cycle, how many cm and mm wide her sexual swelling measures today, how bright its colour, measured in units. The quality of her relationships is only relevant if quantifiable—for example, spending 8.7 minutes more time grooming male X than Y, or 10 more minutes total more in proximity to him, on average. The methodology is hypothesis driven, leaving no open spaces: the scientist comes up with a hypothesis, defines what behaviours he needs to measure in order to test the hypothesis, measures the behaviours, performs statistical tests on the measurements, confirms or denies hypothesis and, if denied, refines it to try again with another study. Although a form of open receptivity to the animals' lives does make an appearance at this stage—the scientist's feeling for the study subject is, implicitly or explicitly, used to develop new hypotheses—this part of the process is never reported in studies. We talk about new hypotheses as being formulated in dialogue with the data and the work of other researchers, not with the animal subjects of the study. We then top this all off by using passive language to report the statistically significant findings, a language which deadens the experience of being with the animals: female Z was found to have mated 5 times with male Y, who was found to have spent 20 minutes total time engaged in inspection of her swelling and an average of 5.7 minutes per mating with a standard deviation of ± 3 minutes around the mean. For all their scientific rigour, studies that yield no statistically significant results are generally not published—so there is great pressure to know a certain amount about the validity of the hypothesis before starting, which undermines the nature of the process.

Animals involved in science—for they are involved in science—are not granted the right to not have their lives instrumentalised and manipulated in the service of someone else's (intellectual) interest. And what is that interest? Our desire to explain life, to grasp it, to get inside it and see how it works. What is evolutionary biology but that an attempt to understand how we come to be who and how we are, alive in the world in this particular way? Yet, in the pursuit of understanding of the essence of life, we extract, abstract and subtract from lives; we explain life away. This not an anti-science treatise: my life as I know it is inextricably immeshed with modern science. What I am pointing out here is the

paradoxical nature of our pursuit. In our quest to understand life and our being in the world, we are losing something: the quality of aliveness itself, a conscious participation with being, a respect for its manifold forms and manifestations. Who is this way of animal science serving?

Chapter 3.

It's a particularly hot day and most of the troop is bent headed down over bushes, foraging quietly, their steady grunts quiet like the low buzz of calmly busy bees. A few meters from me, a male's right leg is stretching, little by little, as a female grooms his back. Nearby, another male is fully splayed out mid-groom.

I sit on the cakey sand, watching, fiddling with my bootlaces. I've been growing confused and a little weary. Walking into the lives of these baboons without mutuality feels wrong. The moment I walk away from open presence and into the science, I feel distance growing between us. Every time I collect data, take out my GPS, my clipboard, my timer, every time I press thumb to lever, put pencil-tick to paper... I feel myself falling further from their lives. Approached like this the baboons become object-like things, getting in the way of my data: Why must X go and hide behind that bush, why must Y vocalise between data collection slots? Their existence starts to become reduced to daysfull of numbers on a page.

A young female starts moving in my direction, her body swaying as she walks, her tail curving up slightly away from her body, then down again like the handle of an old-fashioned umbrella. Her name is Clamydia. My research group named her jokingly, observing her enthusiastic pursuit of male attention, and the name has stuck. She lies down on her belly, two meters or so from me, and starts twirling a leaf between finger and thumb, twirling, twirling, apparently as indifferent to my presence as she is to everything else that is (not) going on today. I feel, for a moment, profoundly connected: to this creature, to her family and to this land opening itself to me. How can I report this moment in my study? It seems paradoxical: The less I extract, the more I understand.

We move towards new foraging ground. A berry off a bush here, an insect there, brown tails like moving loops against silvery green grass. We climb up a koppie, a rocky scramble for me, then down the other side: a valley opens out in front of us, a basin of dryness and shrubby browns, the dusty violet of dune-like mountains a circle around us in the distance. The troop slows down and finds foraging patches, their low steady grunts slowing my thoughts until they happen here and there inbetween silvery grey grass, violet dunes, a dome of blue, the buzz of an insect. I am surrounded by dryness, by rock and layers of muted colour, by a sense of the depths of time. A bird of prey is gliding in the distance, the

sky is vast and completely clear, a wash of blue. A question comes to me, sweeping:

'How does the troop move like this, as one, loosely and seamlessly?'

It comes as a feeling with a questionmark at the end, a sense of a many-oned being that is loose around the edges but always cohering to itself, the feeling of seamless movement through space. It comes as an embodied feeling of spaciousness inside, an expansion and clarity, and it comes with a pang—a mystery broader and deeper than I know how to sit with. What is the nature of form, cohering into being? And how can we participate in that coherence?

Part II

Participating with otherness

Devon, Summer 2014

“Nothing forbids us to seek a loving approach
to what lies beyond our reach”

Johan Wolfgang von Goethe (1749-1832)



“The observer who approaches nature open
to the possibility that it might have something to say
may experience its living principles”

"How difficult it is...to refrain from replacing the thing with its sign,
to keep the object alive before us instead of killing it with the word"

Johan Wolfgang von Goethe (1749-1832)

Methodology:

Over three months, from May to August 2014, I participate with the being of a number of creatures around Dartington Estate, the 1,200 acre estate within which Schumacher College is nested. Dartington is full of contrasts and a strange kind of magic, with its rolling green hills and well-groomed gardens where live abandoned old buildings, their endless dark corridors glimpsable through cracks in boarded up windows, caked up with dust. Ancient trees surround you as you walk, and by an old church tower with no church there lives a knarly old yew whose life is whispered to be close to 2000 years, coming to life with the romans. A few steps onwards, there is the hall itself, now a wedding and conference venue with a whitewashed pub and a café that serves tea in teabags and flapjacks in plastic wrappers. Around the hall, bony Freisian cows graze the fields and expanses of monocrops—wheat and other grains—fill the farmland. Down the hill through Schumacher College, and wooded paths lead down to the river Dart where deer drink and Kingsfisher appears, a sudden wash of blue, to those who dwell quietly.

What follows is a series of encounters with place and with other ways of being. I committed to making room inside myself for otherness. Sometimes I followed a Goethean process according to steps learnt from Margaret Colquhoun; sometimes my structure was looser, letting the otherness show me where I should go. Always, my intention was placed upon otherness and my faculties—senses, imagination—were turned outward. Unlike previous work with animals, my intention was not to fade into the background, but neither was the intention to be seen, or felt, or heard. It was, put simply, to be there and be engaged, receptive, open and responsive.

Because I had control over my actions and intention but not my state of mind, I started most encounters by drawing a ‘mood picture’, followed by a ‘mood of place’ picture. This is a practice I developed in dialogue with Margaret’s teachings, and it helped me keep a visual record of the quality of my being that day, as well as the (qualitative) difference between my representation of my mood and my representation of the mood of the place. Because my being was here the vehicle for otherness, I felt a record of its state when the dialogue took place was important. I also felt that this drawing practice helped ground me in the place: it helped me commit to an encounter.

The core methodological study—of an orchid at Dartington Hall, repeated most days over the course of a month—was done jointly with a friend and MSc colleague, Richard Widows, who shared with me the first part of this summer’s Goethan journey. When working together, we sat side by side and drew or wrote, then shared our impressions. In the course of this study, we also dug out a plant of the same species, examined the roots and did a leaf and flower sequence, sharing our thoughts. Most of this study was non verbal and drawing (alongside silent observation) was key to the process.

Where I followed a methodological Goethean process, I used a modification of Margaret Colquhoun’s method, as communicated to me personally². 1) Encounter (or Wonder), 2) Exact Sensorial Perception, 3) Exact Sensorial Imagination or Fantasy. These three core steps sometimes led me to 4) Seeing in Beholding (Gesture) and 5) Becoming One With (Intuition). I will discuss Goethean science methodology in Part III.

I allowed considerable flexibility, sometimes following only part of the sequence (for instance, stages 1 and 2 only) and often moving back and forth between stages 2) and 3), always attempting to make the movement fluid, a flitter through open doors rather than a climbing of steps. Flexibility is in keeping with Goethe’s teachings, which are not prescriptive and focus on an organic kind of seeing, led by the phenomenon: ‘A living thing cannot be measured by something external to itself’, Goethe says; ‘if it must be measured, it must provide its own gauge’ (Goethe in Miller, 1995, p.8). I worked here with wild animals, who often don’t stay around long enough to allow for a stepwise approach. I found that the practice of exact sensorial perception itself naturally led me into an exact kind imagination, where I started feeling my way into the being of the other.

In some cases I drew as a way of seeing with the phenomenon, in other cases—if it was raining, or I stumbled across an encounter when I didn’t have drawing material to hand—I didn’t. In all but one encounter I wrote with the phenomenon and with the process, something I thought of as a sort of verbal drawing, a drawing with language. I tried to craft language to what I was seeing and also to let language guide my seeing; to let language itself be the movement into and with the phenomenon.

² For more information about Colquhoun’s approach to Goethean methodology, refer to her book “New Eyes for Plants” (1996). For other approaches see Craig Holdrege in ‘Thinking Like a Plant’ (2013) and Henri Bortoft in ‘The Wholeness of Nature’ (1996)

In the following pages I am seeing *with* other ways of being. I am including here a selection of the drawings as process. The drawings are not illustrations of the text, they are methodological.

Encounter number two:

A world of wings

—Exact sensorial perception—(and a flight into theory...)

Binoculars in hand, I enter an enchanted forest. The creature rests on a web of entangled bracken, all of it a forward attention. Two enormous black spherical eyes, devoid of depth, sitting far apart from one another either side of a compact black face, where the only other prominent feature is a mouth, closed. Extending backwards from this small triangle of a face—eye, eye, mouth—is a bulky thorax followed by a twig-like abdomen, an iridescent blue knitting needle, curving at the rear end to a sharp point. Clustered underneath its face, six black legs, thick as hair. Immediately behind the eyes and mouth, its body is at its most colourful, a wash of yellow, lime green, turquoise blue, violet—and out of this electric 80s disco of a thorax, four wings, folded flat against its body, the most delicate wings and a lovely shape too, like the broad open ears of an antelope almost, a kudu ear, stretched out and elongated, that combination of delicacy and precision. Transparent orangey-brown and thin like crepe paper, its wings fan out for brief seconds here and there to reveal flowy hair-like veins dancing towards a ridge where a blue thread, iridescent and clearly delineated, travels all around to meet the thorax again where it is met with a shout of orange, the first hint of the dark brown wash of the wing itself. I have entered the Japanese imaginary surely, a Miyazaki land. Who else would combine such exquisite beauty and delicate craft with the patience of this creature who perches at the edge of a leaf for minutes at a time, appearing to feel the air, then flies off in a circle only to find the exact same spot again; and again; and again. It is eating now, an ant it looks like, part of its body dropping out of its mouth, mandibles moving fast on the lower jaw. Its whole stance is pouncy, body lifted high on spidery attentive legs, body occasionally quivering. This creature IS ballet, but of the dark kind—a black swan ballet. There is something eerie about the way it flies in smaller or wider circles, always landing on the same spot, overlooking its field like a hawk. It's called a demoiselle I know—a subspecies of damselfly, one of two found in the UK. On my walks around the estate, I've seen demoiselles only down here, along this stretch of the river Dart. When I first found out the creature's name, I thought it suited. Now, after spending quite some time in

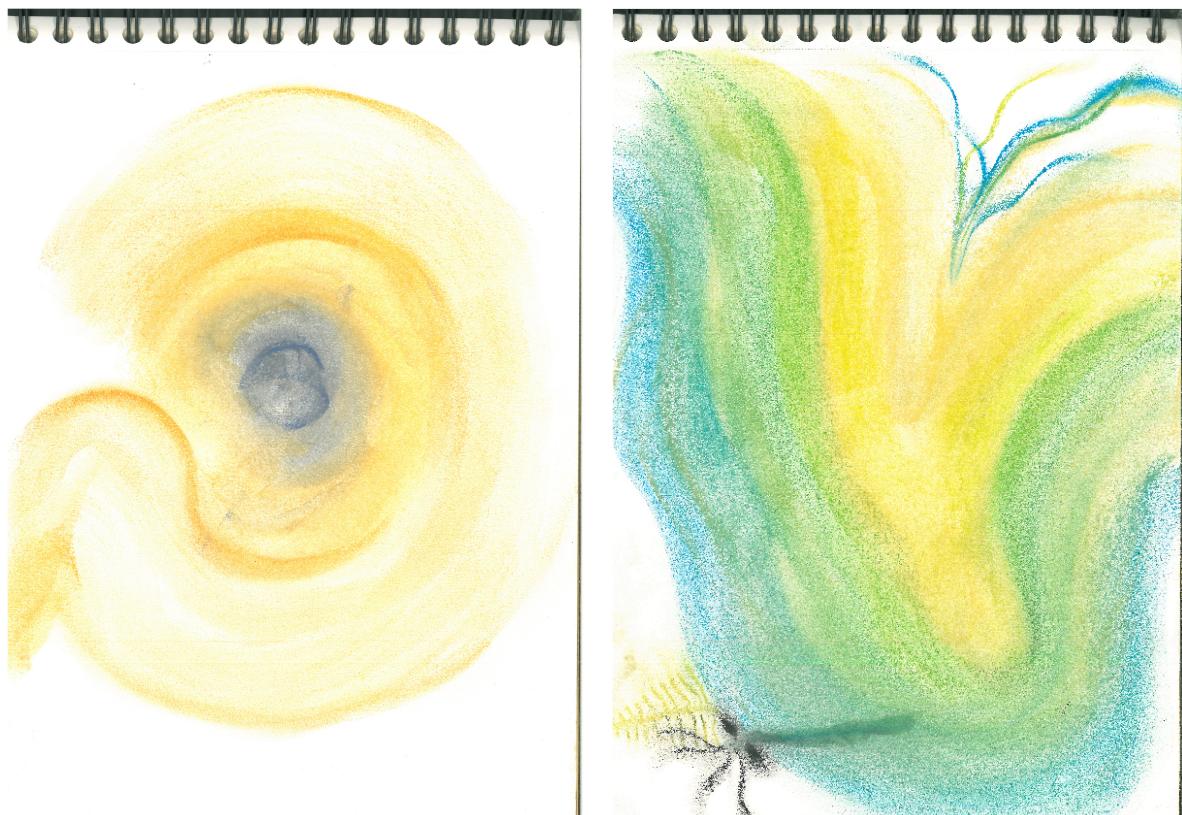
its company... the name's too dainty and ladylike. I know it enough not to accept a given name, and not enough to name it myself.

A few days later I'm back at the same spot by the river in demoiselle country. I wonder if these creatures are highly territorial—as I walk along the path, bracken long grass to my right, I spot one, two, three demoiselles. Four, five. I sit by one of them and watch, binoculars in hand. It's a deep violet colour, the most beautiful of all I've seen, and unlike most others, who have brownish wings, its wings are violet too. It rests at the edge of a bracken, overlooking the lower grasses, and stares on into some proximity in the distance I cannot assess—its eyes are not eyes I can see with, I name them as eyes only through analogy. Like all the demoiselles I've seen so far, it keeps its wings flat against its body but periodically, now, fans them out—one two three four five times, like a lady at a Shakespeare play on a hot day, holding a paper fan. The sun shines bright on delicately woven, blue threaded wings. I get up, keep walking. The next one I see is peacock blue, and the one after that a pearlescent kind of green with copper wings. This one appears to have damage to its wings—white patches. Later I spot two, three of this same green and copper colour and realise they all have this extra adornment, a white spot on each wing, towards the rear. When it fans out her wings—infrequently, this one—all four spots are clearly distinctive. I realise suddenly that demoiselles must be sexually dimorphic, which is zoologist lingo for saying that males and females look different: one greenish copper, the other blueish violet. This one—greenish—must be the female. The blue ones are flashier, they stand out a lot more. In nature, with few exceptions, one of which is our own, more adorned means male. I think about Zahavi's handicap principle (Zahavi, 1975)—that exaggerated adornments like the male peacock's tail (or train as we call it) evolved through sexual selection by being costly to the signaler. A male's train shows the females that he is fit enough to be able to survive whilst incurring the nutritional cost of his tail (a lot of good nutrition goes into that colourbust of a plumage), and being more visible to predators than duller males. He's so fit, he advertises, that he can run faster than others, despite the extra weight. Being flashy is dangerous and expensive and for that reason, the peacock hens like it. Theory goes, it shows them they're mating 'good genes'. The males are saying "I'm so fit and healthy, that I can carry this beautiful tail for the pleasure of your senses and still survive". Of course this is all just a way of putting it; the male is advertising without any conscious awareness of it, and the female is receiving the

message and, hopefully, responding to it by mating, without conscious awareness too. It's a self-reinforcing process through positive feedback, flashy-tailed male after flashy-tailed male who survives, despite his flash, being more likely to reproduce, because females are evolving a stronger and stronger preference for this flash, as their joint offspring are more successful in the gene pool: the male babies by growing into flashy-tailed adults, the female babies by growing into adults who like flash. Runaway selection this is called, leading to flashier and flashier males and thus more and more striking differences between the morphology of the male and female.

I bring myself back and sit awhile, looking. I'm distracted. An image comes to mind, of a male peacock announcing itself, fanning out its train, uoohh! an an an an!, and out of every eyespot—all those colours—flies off one of these demoiselles and off they go, finding a fern to rest on. The peacock, spotting the loss of his formerly majestic train, doesn't run off into the bush but rather hops on the spot in joy at his sudden liberation from the responsibility he holds in all those debates in evolutionary biology, slide after leading slide. Hmm. I'd better move on for the day. I find it difficult to see the demoiselle now: instead of fern and creature and eyes and wings and colours, I see a series of question marks.

Post scriptum: After the encounter, I did a little research. The beautiful demoiselle, *Calopteryx virgo*, is locally abundant in South West England. It likes cool, rapidly flowing streams so it will most often be spotted around small forest streams, perching on trees and bushes from where it can chase passing insects. Demoiselles are indeed sexually dimorphic: males have a metallic blue body and dark-coloured wings, and the females have a green body and brown wings. Once mates are chosen, whatever reason that may be for, males and females form a copulation wheel. The female curls her abdomen around to bring her genitals in touch with the male's sperm, and their bodies become entwined into a heart shape.



Encounter number three:

—Exact sensing and exact imagining—

Rooted being

1. Encounter

We went round the church tower, up the grassy slope and into a wildflower meadow, an expanse of green speckled in white. Rich's step, ahead of me, startled someone—a heavy rustle through the nettles. A rabbit? A fox? I stood, grounded myself to the grass and looked around. In the middle of the field, a speck of purple, a tiny figure. 'I want to go there' I said, pointing and looking at the sea of nettle that stood between me and the purple. Rich smiled. 'I spotted it too' he said, and we walked into the nettle field.

'Looks like an orchid' says Rich, and, I can see that too—wee purple mouths around a green stem, inviting. At the base of the stem, longish leaves, spotted like the skin of a salamander: the leaves green, the spots purple, the two colours blending in. Immediately around there are daisies, a carpet of grass and a spider, weaving a web. An ant crawls onto my finger, a bee flies by.

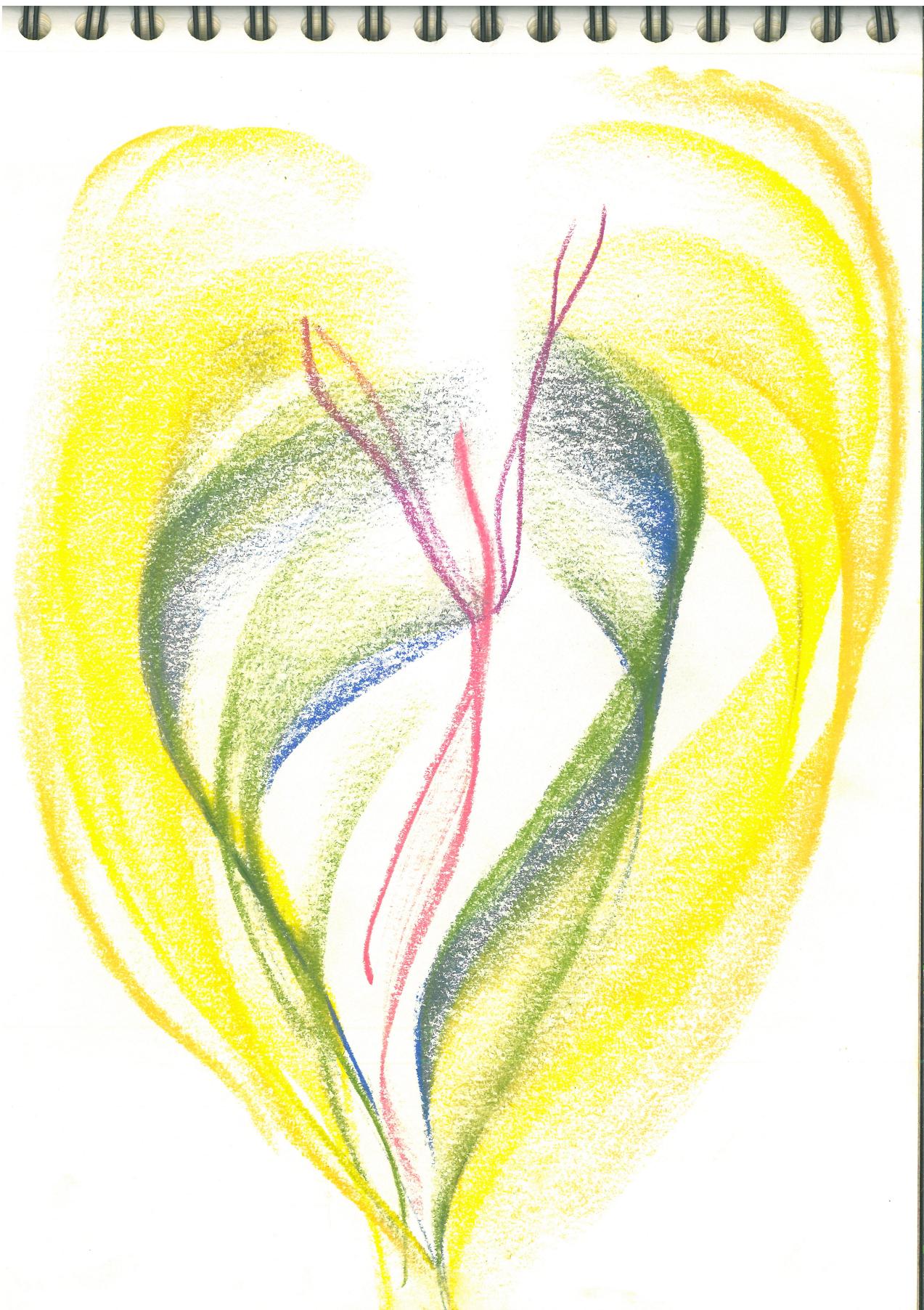
2. Exact sense perception: above ground

For days and hours thereon, I draw. I do 'mood of place' drawings; exact sensorial perception of the plant in context; exact sensorial perception of the plant alone. Some of the mood of place drawings, I recognise in hindsight, are gesture drawings.



1.







3. Exact sense perception: roots

We dig out a specimen that lived a few meters from our study flower on the wildflower meadow. This plant was smaller, more compact, its flowers a deeper purple and its leaves had no spots. After digging the plant out with a spade, we walked to the house, cleared out the kitchen table and, after an initial drawing, took the root apart.



Each one of its fleshy protuberances is like a...homunculus, or a bird in flight. The smell is sweet and earthy, and the feel is fleshy and cold to the touch. There are three fleshy bulbs, parallel to each other, attached to the base of the plant's stem. Two of them (either side of the third) have, at the point where they attach to the stem, a teardrop shaped white tip. The third is sandwiched inbetween. Two of the... homunculi, either side of the centre, come off fairly easily; they were attached only at the tip, a teardrop shaped white head. They are firm and plump. The third fleshy lobe—in the middle—is crinkly. It is firmly attached and it takes some effort to pull it out. Once we do pull it out, we are left with the stem, around which there are many small root branches, tentacle-like. The ‘tentacles’ are quite malleable, easy to bend whereas the two bulbous lobes are not. The stem now, seen from below, looks spider-like. The inside of the stem at the root tip has two colours and textures: a smooth white circle around the outside, yellow and bitty, stringlike, in an inside circle.

We then do a leaf sequence, gently detaching each leaf off the stem and putting them in sequence, starting from the earthmost point towards the flower. We repeat the process with the flowers.



4. Feeling into the being of plant

In the flowerspike alone, I can see all of life: at its lowermost point, closest to the ground, the flowers are turning brown, tending towards the earth. In the middle portion, the three-lipped flowers are in full-bloomed, silky, velvety, dancy maturity. At the top, closest to the sky, some flowers have not yet opened, that is, they are flowers to be.

At the base of the stem, at the earthmost position, lie the oldest leaves, browning now. These are the firstborn leaves. The least mature are now the ones we call the oldest, because they have been around for longest. Oldest in time yet youngest in maturity. I wonder briefly what it would be like to grow like a plant, all of our developmental stages looping round our spinal cord, on display for all to see.

Climbing up the stem, the flower is growing, maturing, moving towards its fulfillment. When she reaches her fulfillment, she draws into herself again and, when it's time to go, gives of herself to the earth. I feel one of the seeds in formation, a small green sac with a browned flower at the outermost tip. Rich, speaking of the plant this stage, said: 'It's like the whole flower's being sucked back into leaf'.

I move on to the leaves and notice that the small leaves halfway through the stem look like they're peels off the stem, they are stem. Although the leaves are spotted violet, the underside of the leaves is not spotted, only the uppermost part, facing the sun. It is as though the stem was peeled and revealed inside a wash of colour from within.

5. Narrating exact sensorial perception and exact sensorial imagination

Having been away for a week, I returned today to the site of our plant. The field has been strimmed, everything cut down to a stump, one centimeter off the ground. Our plant has been...hmm, recycled. Transformed. There was no strong or palpable feeling attached to this, it was an experience of the matter of fact—perhaps because the study felt over anyway, although I came back often to sit with the plant. I stood there, and looked. I remembered how the field was before, the tall grasses, the shades of green, and yellow and white from the flowers, our plant in the middle... I remembered coming here for the first time, with Rich, and being drawn to her. I remembered her gesture, her dance, her movement, the feeling inside me, filling my chest. I remember now the last time I saw her, a week ago, a dead bee resting on one of her flowers. She had buds at the top of the flowerspike still. At the base all of her had contracted into seed and on one of the drying flowers, a dead bee. It seemed fitting.

I get up and walk to a nearby site where many other of these orchids live. Most of the flowers are completely dried out, although some have buds still at the top. I examine one awhile, then I sit, close my eyes and move into my flower in my imagination. I start with exact sense perception: the stalk is firm, smooth to the touch yet ridgy. The leaves, broad at the base and expanding then contracting as I move up the stem, expanding again, into flowers this time. The leaves are green with spots of a pale purple in them. I open my eyes, get some help from this sister plant, then close my eyes again. The stem is ridgier toward the top, then the flowers appear—a narrow, long, pointy leaf, green in the middle and outlined in purple. Sitting at the base of the leaf, as it meets the stem, a seedpod which was once a flower. The dried out flower sits at the outermost end of the seedpod. I remember Rich's words: it's as though the whole flower is being sucked into the seed. I open the seedpod in my mind, as I have done when we dug out a specimen. Inside it there are three long strips of... a whitish consistency.

The flow stops. Open my eyes, reach for the plant before me, feel around it. I let go, close my eyes again. The dry flowers are soft yet brittle to the touch. The plump flowers are of a dainty, silky-velvety smoothness. When I hold the whole head of the

flower together, I feel it all in my palm: scratchy softness, silky smoothness. The scratchiness is playful, tickling my palm. I open my eyes, move towards the top of the plant, the top of the spike. Undeniably more alive: plump, smooth, springy. Yet... the lower flowersacks hold the most potential for life. Life, contracting into itself to bring about the new, which then expands into the soil, taking root. Or moving elsewhere by way of wind, or bird, or human.

I bring myself back, open my eyes, curl my fingers gently around the flower awhile. I remember the day during my study when my flower... moved within me, or I with it. Rich was there, we'd just gone through exact sensorial perception together. I closed my eyes and tried to move into exact sensorial imagination. Re-create behind my eyes, as much detail as I can, there she is, but fleeting. Never mind. Now imagine into her growth. Gone. Try again, and again, moving in and out of grasp. And then... a wash of colour, a wash of light. A slow, slow movement, an opening in my chest, a cold expansion, like windlight. Purple green yellow taking over, everything is stretching towards and everything is being stretched, like a dance but it is not a dance, it is a reaching and being reached for. Everything is colour and light and everything is... unfolding with colour and light. It is a dance. A wash of tears come to my eyes now, I am feeling... a bodily memory. I didn't write the experience at the time, it wasn't wordable. I came back into the now with Rich's voice I remember, 'feeling... dislocated, expanded—but also indrawn: I didn't want to talk. I signed to Rich, sat a minute, then tried to draw the feeling. Nothing. I closed my eyes, made movements on paper with the pastel, mimicking what I felt, feeling under pressure—I was due for lunch. I opened my eyes. Argh. Again. Better or worse? I then remembered a moment in one of Martin Shaw's stories, the white stag: that fleeting insight that should never be chased or held. I feel relief, I don't have to... do anything. I close my notebook, get up, Rich and I walk off, start talking.

I sit by this flower here, so much like ours and unmistakably not it. I focus on it again. A bumble bee flies around me now, so loud. This flower has dried out, unopened flowers interspersed with open flowers throughout. There are more buds towards the spike, but all the way down from the third topmost row there are open flowers interweaving with dried out ones. Death and life, sitting alongside. Stretched across the drying flowers and the buds, a spider, weaving a web.

Notes:

This flower was a common spotted orchid, Dactylorhiza fuchsii, or a hybrid between a common spotted orchid and a southern marsh orchid, Dactylorhiza praetermissa. The plant we dug up and drew was a Southern Marsh Orchid, which has spotless leaves. I did not seek any information about the plant until the study was completed.

Encounter number four:

—Exact sense perception—

A flutter of transformation

I'm sitting in Brian's garden at Schumacher College on one of the tree stumps we sat on our first week in college, when we made a fire and all huddled round, getting to know each other. It was nighttime and the world around had disappeared into the darkness so that only us were left, faces made orange in the light of the fire, the blue of the flames making us swim. My head rests on a shoulder, music travels from a guitar and the universe is here.

This morning, almost a year later, the ash pit is grey and dusty in front of me, enclosed in a circle of stones. As I sit awhile, sipping my coffee, a butterfly lands on the ashes, soft as air and a wash of colours. I pick up my binoculars,

and find her through the viewer. This close up, I can see her proboscis, long, thin and curled in on itself, fern-like. She unfurls it then cleans it with her legs: first one then the other, delicate. Again, and again. Her wings flutter lightly in the breeze. All around us, birds are chirruping their song.

She's a silent wash of rusty orange, four wings either side of a furry, golden brown body. On her hind wings, two eyes—black-rimmed lilac irises on a white circle. Between them, a furry body makes a nose of sorts, so that on and off a forest creature appears, an owl perhaps, staring straight at me. Her forewings hold another set of eyes, wide set this time, a wash of lilac and yellow surrounded by black stripes, tiger-like. I am stared at by a tiger, then by an owl again, then... —a twig. She closes her wings and becomes a blade of tree bark, dark, dull and textured, moving gently in the wind. Anonymous. Wings outwards and out again, and the effect is astonishing, a sudden shout of colour—rusty orange, brown, yellow, lilac, gold. With a sudden narrowing of tiger eyes, she flies off the ashes up into the air and down again, then up, landing on a neighbouring butterfly bush, a buddleia. I zoom in again. The lilac in the miniature flowers of the buddleia, lilac petals and yolk core, is a perfect match to the the butterfly's eyespots, as if they were taking

colour from one another. As she extends her proboscis and buries it inside the folds of the flower's lilacness, I feel like I am drinking in beauty.

'This species of butterfly and the buddleia may have co-evolved' I think, the butterfly feeding on the flower's yolk nectar, nourishing its short life with sweet scentedness; the flower acquiring legs to spread her seed. Flowers are astonishing. From their rooted lives, unable to travel, able only to reach for, towards light, towards the earth's core, they let the help they need find them. Drawn into an enlivened place by their presence—their beauty, their smell—we humans brush past and take their essence with us and onto a neighbouring or not so neighbouring spot of earth. Guided by a mysterious sensory world which we cannot access, insects come to her and harvest. The buddleia's feet are the feet of butterflies, bees, the hands and noses of humans.

Used as I am to jumping into explanation: co-evolution, predator defense (what are those eyespots for?), it is a pleasure now to simply dwell in what I see, to drink it in. I have a few visitors—a wood pigeon just now, inspecting the grass in that heavy, half comical half graceful way they have. A blackbird, a beakful of yellow eye, watching me. I get distracted by them, but return to today's creature. Her antenna are still as she drinks. They are long and black, and topped by a gold tip. Her forewings have gold markings along the topmost edge, which I can see only from this angle. 'A showoff' I think suddenly, in every exquisite detail. Tintin vignettes float to mind, and Bianca Castafiori, a dreadful of jewels and always so loud that every glass in the house breaks, sending Captain Haddock into a rage. This creature's quiet exuberance seems like a gift, a gift to this place, which year after year witnesses the magic of ordinary souls, finding themselves in otherness, huddled round the breath of fire or sitting quietly with a bush and a butterfly and a bird.

The butterfly comes back to rest on the ash. I wonder what it is about the ash that attracts her. It is a bright grey dust, alive in the sun. I reach out from my treestump and touch the ashes with my fingertips—the feeling is soft, a mixture between clay and powdery velvet. I like it.

‘Sounds like a peacock butterfly’, said Stephan (Harding) as I talked to him over lunch; ‘they’re very common;’

‘which doesn’t take anything away from their being extraordinary, of course’, he adds, after a pause.

Post scriptum: A few weeks later as I sit by the river observing various creatures in the grasses, I find a caterpillar on my trousers. It’s a feisty creature with a mat body and a shiny face. As I bend over it with my hand lens, it rears up its head to meet me, touching the surface of the lens and immediately retreating. I feel a pang of guilt: the lens must be—yes it is—really quite hot from the sun. I leave it be, there on my leg. For a while, it does nothing. Then it lifts its body into a low archway and moves off, slowly, back onto ground. I wonder what colours it’s holding inside, ready for outing.

Encounter number five:

—Exact sense perception—

Being with feathers

Note: This encounter was part of a study of the courtyard at Schumacher College as a place where different ways of being—limbed, winged, rooted—come together and ‘interanimate’ (Seamon, 2013) each other and place itself. The full study is outside the scope of this dissertation.

Despite the bustle—people’s voices traveling towards me, the clatter of cutlery against plates—the courtyard is still today. The stillness is in the air, a hot day, full of summer. The cooing of pigeons, the chirruping and clicking of birds, the occasional buzz of a fly or wasp near me. In the background, leaves rustling with the air. Butterflies fly past frequently, one white, most an orangey brown—admiral butterflies I think, dancing with the breeze. Everything that is green, moves, yet conversation seems still. One house martin flies past, two. A few minutes later, ten or so of them right above me, doing that swallowy thing which is like dancing, gliding and playing at once.

I take out my sketchbook and pastels—a wash of colour—and start drawing a mood picture: a blue centre today, surrounded by orange threads. Suddenly, behind me, a sliver of sound, a fairy cough. I have a feeling I know who this is and I turn my head around, slowly. A metre behind my left ear, perched on a branch, a robin, all roundedness and breast. We have met before. A few days ago he hopped onto my foot, a feathery weight, eyeing me this way and that as I smiled. We look at each other now. He tilts his head for a moment, then straightens it, looking full at me. His eyes are so wide set, either side of a delicate beak. Inquisitive eyes. He’s still, but I sense movement in his being, a take-off possible at any moment. His claws hang down from the thin branch he’s perched on; they remind me of aye-ayes, with those long, delicate fingers. His breast is plump and pale red, his plumage white and grey and, as he turns around for a second—a full turn and back to front—pale yellow and a light brown. His face is tiny, all beak and eyes and he turns it occasionally, left, right, back to centre. What a way he has of looking at me, so direct, so... unlike a mammal. It’s a piercing look, yet not proddy nor threatening in any way. He opens

his beak ram wide—a wash of yellow. I start whistling. He looks. I whistle some more. He looks. A chirrup. I continue, all the time swiveling softly as my neck can't hold this owl-aspiring position much longer. He stretches now—right wing outwards and back again, then a slight shuffling, an adjusting of position, and right leg stretch—outwards, then back again. I don't recall seeing a bird stretch before, I'm touched by his trust. He poops, a wee drop of white falling onto the long blade-like leaves below. I continue whistling, softly, sometimes changing the tune. One, two three times I think he is about to fly off—he crouches his body backwards, tensing it against the branch, but every time he releases again.

We're done with the soul-gazing, or he is. He becomes very attentive to everything else going on in the courtyard now, his head moving here and there in response to sounds, sometimes his body moving too. Human voices; lunchtime is on, although I didn't hear a gong. Dee's voice—look. Jane's voice—look. Philip's voice—he doesn't look now, momentarily distracted. Rob's voice—he looks again.

Hanging right next to him is a thin piece of rope , about half a cm in diameter. I follow the rope upwards, wondering whether it goes right up to the coach house window, a welcome call to the wee creatures of this courtyard.

Perhaps I could take a photo, I think now. My phone is in my bag, only a few centimeters from my hand. I hesitate awhile, then—he seems so relaxed—reach slowly for my phone, opening the zip, taking the flat rectangle out. He lets me take a photo, then crouches backwards into the branch and flies off.

I follow him with my eyes, a sudden sadness.I think of how some human cultures refuse photographs, believing they entrap the spirit. I understand what they mean. The photo I took, though perfectly accurate is... a little flat, holding little of robin and a more of my sudden desire to capture a moment. Thank you Robin my friend, for gently flying off at just the right moment. I too prefer a good conversation.



PART III

Schumacher College, Devon

2013 and 2014

“We encounter the real only from within the depths of itself”
David Abram (2013, p.124)



Chapter 4—Seeing form as meaning

4.1—'Minimum effort, maximum grace': embodied meaning

It's late on a cold night and I'm kneading a loaf of sourdough in the kitchen at Schumacher College, lifting the sticky mass into the air. Today's dough fascinates me: it's liquid enough that I have to pour it into a stewpot for baking as it will not hold together, treacle through my fingers in blobs when I try to hold it. Yet when I push it this way and that, the mass coheres to itself. I've made it from a culture of bacteria and fungi we keep dormant in a bowl inside the college's walk-in fridge, periodically taking it out and springing it to life by feeding with flour and warm water, awakening the creatures inside. As I press my palm to the dough and pull it towards me, it moves as one visco-elastic liquid form, which holds together as long as I keep moving, my hand along the inside of the bowl and under, lifting it gently, folding it back in. When I stop, it moulds itself back into the bowl appearing to be simply a mix of ingredients sharing a space. As I slide my hand in again, feeling the dough, I remember:

—a moment in the classroom, thirty or so of us forming a circle, our voice being passed around person to person like one expanding breath, and a sudden understanding arising in me—a liquid sharpness: this is form, coming-into-being; we're experiencing an ease of movement that can only come from internal coherence. The feeling is expansive, a quality of light all around. For a sustained breath, it feels like we are holding order and disorder in a movement of grace. Brian Goodwin's words suddenly float to mind: 'minimum effort, maximum grace' (Goodwin, 2007)—

Holistic biologist Brian Goodwin described an organism as a minimally effortful, maximally graceful embodiment of meaning. The organism expresses universal meaning through its form (its morphology) and through what it does in the world (its behaviour). Why? Because organisms are functional, internally coherent wholes which belong to a place and interact with others in that place in a constructive way, cooperative and competitive at once. Their interactions are creative and sustainable, and, once their lifecycle is over, organisms are recyclable within their habitat. This imbues them with beauty. Evolution has meaning, Brian argued, it is not a blind process: its meaning is immanent, not transcendental. It is expressed in nature's forms themselves³. Seeking in

³ Goodwin's thoughts on form, here adapted into my own words, were taken from a lecture he gave at the Centre for Sustainability (CFS), no longer available online. For more on Goowdin's ideas on form in Nature, see his book *Nature's Due* (2007)

the form and behaviour of all earthly creatures different expressions of universal meaning spoke to me powerfully and intuitively. This concrete meaning we can participate in.

4.2—The gap between DNA and organism: finding metaphors

In our 21st century story, organisms are generated by information in the DNA inside our genes, which is transcribed by RNA into proteins, which interact with each other to give rise to the muscles that make up our finished form, our body. This is an oversimplistic description of what is a complex and wondrous process, but the point here is the essence of our narrative: the quality of aliveness that immediately identifies an organism as such has become a byproduct of molecular interactions.

This is an understanding of form which is arrived at by reason alone. Logos, Goodwin pointed out—reasoned thought—has taken hold of the story we tell about who we are in the world⁴. Imagining coming-into-being as a mechanical process, a highly sophisticated molecular factory building proteins from a raw material of DNA available in the nucleus, we have come to see life as having object-like properties. Such is the power of metaphor in the human mind. Thus we see the meaning we experience in our lives as separate from the fleshy, earthly reality of our existence—depending on our culture and beliefs, meaning is ‘imposed’ by consciousness or by outside, disembodied forces.

The factory-like view of life does not do justice to the intricacies of our existence: the gap that lies between DNA and an embodied organism is vast, ambiguous and utterly reliant on a dialogue with context for resolution. The ambiguity embedded in DNA is resolved creatively in placetime; that is to say, DNA is context sensitive and needs a culture to translate it into being. Developing organisms are coherent, but that coherence is not rigidity but rather a ‘flexible, creative unfolding in the world at every moment in time’⁵. Evolutionary ecologist Mark Riegner (2013, p.7) puts this beautifully: “it is clear that, when an acorn germinates, an oak—and nothing else—will subsequently grow; that is constraint. But the particular form a given oak takes, from a potentially infinite number of possibilities, will depend on how the environmental conditions—soil chemistry, slope, sun exposure, wind, snow loading, animal damage, etc.—influence the expression of the

⁴ Goodwin’s thoughts on form, here adapted into my own words, came to me via a lecture he gave at the Centre for Sustainability (CFS), no longer available for download. For more on Goodwin’s ideas on form in Nature, see his book *Nature’s Due* (2007).

⁵ *ibid*

genotype, the outcome of which cannot be precisely predicted”.

Henri David Thoreau once famously said that every perception of truth is the detection of analogy. Our mind, it seems, instinctively reaches for the graspable to help us understand what lies beyond our reach. Can we reach for a different metaphor to explore the gap between the genome and the concrete reality of a living oak?

If we turn from Logos to Mythos we will see an organism as unfolding story, a story both universal and particular: ancestry unfolding into here and now, moment by moment. Every organism is an unfolding story; the carrier of the seed of his story and of a story wider than his own; and a co-creator in the metanarrative of his place. By story here I mean a myth, or a fairy tale: a story with no author that is both universal and contextual, a story that coheres to itself overtime—is consistent across each telling—but holds enough ambiguity to enflesh itself in a context sensitive way every time it is told. Although myths and fairy tales have some form of abstract existence—we have a vague ungraspable feeling for, say, the shape of ‘Little Red Riding Hood’—they carry meaning only in the embodied form of each telling, which happens perforce in a place and of a time.

4.3 -The Myth of Proteus, the shapeshifter

I will take the myth of Proteus, the shapeshifting truthgod of the seas, as an example.

At midday he rose from the flood and slept in the shadows of the rock of the coast. Around him lay the monsters of the deep, which he was charged with tending. He was famous for his gift of prophecy, but it was a painful art, which he was reluctant to employ. The only way anyone could compel him to foretell the future was by pouncing on him while he slept in the open. It was in order to escape the necessity of prophesying that he changed his shape, from lion to serpent to panther to swine to running water to fire to leafy tree-a series of transformations (...). If he saw that his struggles were useless, he resumed his ordinary appearance, spoke the truth and plunged back into the sea.

-as told by Stanley Kuntz in the USA, 1965 (p.96)

The life-voyager wishing to be taught by Proteus must, "grasp him steadfastly and press him yet the more," and at length he will appear in his proper shape. But this wily god never discloses even to the skillful questioner the whole content of his wisdom. He will reply only to the question put to him, and what he discloses will be great or trivial, according to the question asked. "So often as the sun in his course stands high in mid heaven, then forth from the brine comes the ancient one of the sea, whose speech is sooth, before the breath of the West Wind he comes, and the sea's dark ripple covers him. And when he is got forth, he lies down to sleep in the hollow of the caves. And around him the seals, the brood of the fair daughter of the brine, sleep all in a flock, stolen forth from the grey sea water, and bitter is the scent they breathe of the deeps of the salt sea.

-as told by Joseph Campbell in the USA in 1949

*all names, all voices, Slip-Shape, this is Proteus,
whoever that is, the shepherd of the seals,
driving my many selves from cave to cave...*

-as told by the river Dart through Alice Oswald in Devon, England (2002, p.48)



-as depicted by Erasmus Francisci (1627-1694) in Germany
(*Der höllische Proteus*).

Every telling of Proteus is different, and every telling is the same. Much like Proteus himself, no mythtelling holds the complete meaning of a myth and yet the meaning of the myth is manifest only in each telling.

There are many parallels between the nature of DNA itself and the nature of myth. Like myth, the nature of DNA is ambiguous, flexible rigidity—bare bones, ready to be fleshed out into a context. Like myth, DNA too must dialogue with a place and time in order to come alive into meaning—literally.

—Might we get a little closer to the gap between genes and organism, DNA and meaning,

by entering a dialogue with the myth tellers, who understand how a myth needs to enter into a time and place in order come alive, embodied? And how each embodiment—one of its many forms—is the only realm in which the meaning of the myth can be swam in and glimpsed, only to be retold again, differently and the same?

Encounter number six:

Southern African winter, 2002

as recalled in August, 2014

Note: This encounter does not follow Goethean methodology

I was on the ground, looking up at a cliff the baboons had just climbed onto, wondering how I was going to follow, when I sensed a noise coming from behind me, a hint of a breath. Before I knew it I had turned around, my neck twisted full, my body rigid. A few meters behind me, a young colt, fire coloured, a white star on his forehead, flanks and shoulders shiny against silvery green grass, all of him impending movement, sniffing the air.

We looked at each other and I could feel the tension, the conflict within. I lowered myself into a crouch, the rocky cliff behind me, facing the plains. He didn't move. I didn't move. A hint of movement now, a sniffing of air. One step forwards now, right knee bent, barely touching the ground. He holds the position, a hint of movement to his mane. My thighs ache, my hips ache, I don't move. Every breath of mine, I remember, sounds too loud in my ears.

He takes a hesitant step, sniffing, stopping, always on the edge of bolting. I keep on crouching and hold eye contact, soft; I whisper maybe, I'm not sure. Slowly, he is closer—as close as a meter perhaps, sniffing the air around me. I sniff back, and I remember his nose, all soft and dewy, and his nostrils flared; all of him now is smell, and wind and plains. I must have whispered, I remember his ears moving forwards in tune with my voice. It lasted no time at all I'm sure but time stretched, so aware was I of every tension, of every breath.

I slowly moved my right arm forward, palm upwards, my lower back stretching. He lowered his head and sniffed, and just as we were about to touch—I could almost feel his velvety softness—he moved back a pace. I waited, palm outstretched, but he eventually turned round and moved away; calmly, slowly, turning around one more time.

I looked with him into the distance. Against a blue sky and violet mountains, I spotted the rest of the herd, two of them facing our way, watching. I had seen this herd before, always a fleeting moment, feral horses galloping across the plains. They seemed different creatures altogether from the domestic: powerful, confident, purposeful. The way their bodies moved in their environment, all muscle and movement, manes flying... there was something joyful in it, the pure wild.

Afterwards, I felt exhilarated, shaky. I had felt no fear, only an encounter-long breath, pure heightened presence. I lost the baboons that day—by the time I went round the koppie and climbed the level side, the baboons were gone—but data did not seem important compared to what I had experienced: a fleeting connection with wilderness. Two creatures, curious about each other, meeting one on one in the wild.



Chapter 5—Stepping into the gap

5.1—Meeting Goethe

‘How can we meet something in its livingness?’ David Seamon was the teacher on the Holistic Science short course I joined in 2013, my introduction to Schumacher College. Here, now, in a low-ceilinged classroom, David shares with a small group of us the vision of German poet and playwright Johann Wolfgang von Goethe (1749-1832) for a participatory way of science. Already in the 18th century, Goethe felt that modern (post-Descartian) science was impeding our understanding of nature (Tantillo, 2002, p.1), developing as it was around core values of detachment (objectivity) and quantification⁶. As David explained, Goethe saw the essential aspects of nature as unquantifiable and sought instead to participate in nature’s qualities, to “open himself to the things of nature, to listen to what they say” (Seamon, 2005). For this he proposed a “seeing grounded in the observer’s direct experience” (*ibid*), what he called “a delicate empiricism” (zarte Empirie) (Goethe in Miller 1995, p.307)—an empiricism which “makes itself utterly identical with the object, thereby becoming true theory”(*ibid*). "Natural objects", he wrote, "should be sought and investigated as they are and not to suit observers" (Goethe 1971).

What Goethe proposes is not a subjective engagement in the manner conventionally—and often erroneously—attributed to poets, of using the qualities of the thing observed to speak of oneself. Goethe proposes seeing with the observer’s subject into the qualities of the thing itself. Observer and observed become intentionally entangled in the act of seeing so that observing becomes participating whilst maintaining the intention of observation. In the words of Henri Bortoft, “there is a process of responsive evocation” (“we neither discover an objective reality neither do we invent a subjective reality but there is a responsive evocation”⁷). John Shotter (2005) speaks of ‘withness thinking’; and I like to think of a ‘withness seeing’, or seeing-with the phenomenon.

“Participants must be active in their seeing”, David said. “They must not just observe what they see but plunge into the looking—they must, literally, “pay attention” so that they see

⁶ For Goethe’s thoughts on hypothesis-driven science, refer to his essay ‘The Experimenter as Mediator Between Subject and Object’ in Miller, 1995, p. 11-17

⁷ Schumacher College Holistic Science MSc, 2010 lecture series. For more on Bortoft’s discussion of Goethe see Bortoft, 1996

with intention rather than just have a visual impression (Seamon, 2005, p.91)⁸

Thus plunged into seeing-with the phenomenon, we open ourselves to consciously ‘seeing meaning directly’⁹. If we understand meaning as immanent in the form and behaviour of an organism, then by seeing-with the phenomenon, we can know the meaning which we otherwise experience without knowing.

What binds all living forms on earth? Growth: movement: a continuous dynamic unfolding: a dance with space and time. A horse gallops across the plains, an orchid reaches upwards into the light, a baby becomes a toddler, a ballet dancer extends her arms upwards, her fingers reaching towards the sky. This dance happens at different timescales, some easier for us to perceive directly than others:

Humans can easily access spatiotemporal movement in animals, but we see it less directly in plants. An organism’s form or morphology, the coherent but dynamic arrangement of molecules we experience as existing in space, is more sense perceptible to us than growth, which we experience as occurring in time. In behaviour, which we witness easily in an animal and only with great patience in a plant, we most readily see the organism’s play with space and time together¹⁰—a gallop, a pounce, an unfolding of leaves into the light. The power of Goethe’s work lies in guiding us towards seeing with the phenomenon into this dynamic unfolding.

⁸ Goethe did not ignore the difficulties of being a subject plunging into looking: “Our individuality, no matter how clear cut, depends on the time and place in which it is set” so “our (scientific) efforts will not prosper until we come to know ourselves and our true character” (in Miller, 1995, p. 138)

⁹ Schumacher College Holistic Science MSc, 2010 lecture series

¹⁰ This is simplistic as morphology, behaviour and growth are all actions on the spacetime continuum and merge into each once we experience biological form as truly dynamic, but I find it helps explain the movement of Goethean science

5.2—Goethean methodology

The two stages at the core of Goethean science methodology—Exact Sensorial Perception and Exact Sensorial Imagination (Phantasie)—guide us into the space and time existence of form respectively. Through exploration with our senses we can feel our way quite obviously around being in space. When examining a plant, for example, we feel its contour, its texture, its length, its width, its smell. We sit with its presence and take it in. Drawing can help us feel our way into this arrangement in space.

Feeling our way into the time-existence of a plant is more difficult for us, and to begin this movement, Goethe enlists the help of the imagination. We re-create in our mind's eye what we have perceived directly, in as much detail as we can, with all our senses; we bring the plant to life in our mind. Here we normally notice what we have not paid attention to: we go back to sensing, fill in the gaps, then move back into the imagination. We are anchoring our imagination to the real, which helps us think concretely and livingly, as opposed to sailing into abstract thinking. In the words of Craig Holdrege , “we are using our mental capacities to get closer to the concrete” (Holdrege, 2013).

To move further into the timelife of the plant, we look at several specimens of the same species at different stages of development (or at the same plant overtime), then we move into the imagination to “move the plant within us” (Holdrege, 2013). Goethe describes this process in the following words :“If I look at the created object, inquire into its creation, and follow this process back as far as I can, I will find a series of steps. Since these are not actually seen together before me, I must visualize them in my memory so that they form a certain ideal whole. At first I will tend to think in terms of steps, but nature leaves no gaps, and thus, in the end, I will have to see this progression of uninterrupted activity as a whole” (Goethe, 1795, in Miller 1995, p. 75).

Moving back and forth between the two stages fluidifies our seeing. Eventually, our thinking becomes living (Holdrege, 2013), we shift our attention from facts into relations and connections (Holdrege, 2013) and we go from experiencing static to ever-becoming form, where ‘maximum beauty is to be found’ (Lispector, 1943, my translation from the Portuguese). This necessity to ‘transcend our current form of thought’ (Holdrege, 2013, p. 32), to transform the scientist, is at the heart of Goethean science. Here are Goethe’s words

on the subject: “If we wish to achieve a living perception of nature, we must strive to keep ourselves as mobile and flexible as the examples she herself provides”.

Andreas Suchantke describes Exact Sensorial Fantasy as a “breaking through from the organism’s sense-perceptible, external form or space form (space-gestalt) to the process of its formation, which is an expression of its time-form (time-gestalt)” (Suchantke, 2010 in Keith Francis). With enough practice of this process, we come to a dynamic seeing in which the fixed spatial form comes alive and an organism becomes a succession in time, “something that is held fast but for an instant” (Goethe, *in* Brady 1987, p. 274).

5.3—The archetype

Proteus

idea

ur-phenomenon

Moving with the phenomenon into that ‘maximum beauty to be found in succession’ (Lispector, 1943), we may experience a feeling of union. Brazilian writer Clarice Lispector writes repeatedly in her novel “Near to the Wild Heart” that ‘movement explains the form’ (1943, my translation). The way she expresses this says as much as the words themselves:

“It felt so high and pure to shout out: movement explains form!”

I recognise the elation, as I have experienced something similar during exact sensorial imagination with an orchid after many, many hours of exact sensorial perception:

I closed my eyes and tried to move into exact sensorial imagination. Re-create behind my eyes, as much detail as I can, there she is, but fleeting, nevermind, now imagine into her growth. Gone, try again, and again, moving in and out of grasp. And then... a wash of colour, a wash of light. A slow, slow movement, an opening in my chest, a cold expansion, like windlight. Purple green yellow taking over, everything is stretching towards and everything is being stretched, like a dance but it is not a dance, it is a reaching and being reached for. Everything is colour and light and is... unfolding with colour and light.

Goethe believed that no explanation could lie beyond this concrete experience of meaning, which he didn’t give a fixed name but called idea, symbol, archetype, governing principle, ur-phenomenon (Urphänomen)—or the Proteus. Mark Riegner (2013) describes the archetype as “the idea which unifies—but does not generalise—the diversity of forms”.

The archetype can be experienced at different levels: at the individual level, it expresses the

'belonging togetherness' of all parts¹¹. For example, all developmental stages of a plant or animal—their movement through time—form together a coherent whole. Similarly, all spatial parts of a plant or an animal: leaves, stems and flower; or viscera and bones and limbs, form a coherent whole. At the species level, the archetype is the 'belonging togetherness' of all individuals. At the kingdom level—e.g. animalness—the archetype is the 'belonging togetherness' of all lifeforms of that kingdom.

The archetype is not a fact but a relationship, a "gathering together of what already belongs together even while apart" (Relph, 1983, 201 in Seamon, 2005, p.96)¹². It is a concrete, bodily-cognitive experience of meaning. Like the myth of Proteus, Goethe's archetype is both fixed and ever-changing:

"On the whole we will find our general archetype to be unchanging, although we have first have to (...) examine it in detail. (...) But now that we have endured in the realm of what is enduring, we must also change our views along with ever-changing nature. We must learn many movements so that we grow deft enough to follow the archetype in all its versatility, and so that this Proteus never slips from our grasp (Goethe in Miller, 1995, p.121)".

I interpret Goethe's words here to express the challenges posed to the observer by the fact that, although the archetype of—say—orchid is generally unchanging, every orchid will express the archetype differently. We as observers must be deft (flexible) and 'learn many movements' (pay attention to many orchids) if we are to recognise its unchanging essence and 'follow it in all its versatility', never letting this essence slip from our grasp. We have a paradox: no individual orchid holds the complete meaning of Orchid and yet the meaning of Orchid is manifest only in each individual orchid. As observers, we must immerse ourselves in the depths of one and the breadth of many.

11 Margaret Colquhoun's expression, personal communication

12 an expression I am borrowing from a different context: according to Seamon, in the original, Relph is referring to the practice of phenomenology .

Chapter 6—Metamorphic thinking

6.1—The challenge of Goethe

Goethe's archetype is difficult to understand. Craig Holdrege (2014) warns that: "Nothing is easier than to misunderstand than what Goethe is talking about with his discovery of the archetypal plant. He did not mean a general scheme; he did not mean something metaphysical; he did not mean some physical genetic potency in the germ of the plant. He meant something that becomes visible to the mind's eye as it actively studies the phenomena of plant life. This is a thinking that is perceiving and a perceiving that is thinking".

Goethe's narration of a dialogue with fellow German poet Schiller shows that his proposal was difficult also at the time. After Goethe drew for Schiller an archetypal plant, Schiller shook his head and said, "That is not an observation from experience. That is an idea." "Taken aback and somewhat annoyed", Goethe writes, "I paused. I collected my wits, however, and replied, "Then I may rejoice that I have ideas without knowing it and can even see them with my own eyes" "(Goethe in Miller, 1995, p. 20).

Henri Bortoft explains this difficulty by pointing out that "there is an epistemological reversal in Goethe's objective thinking (...) The organising idea (...) comes from the phenomenon itself, instead of the self-assertive thinking of the investigating scientist. It is not imposed on nature but received from nature". (Bortoft, 1996, p.240, 241). Mark Rieger (2013) makes a similar point, that Goethe's way of thinking requires a different kind of cognition: "our practice of analytical thinking falls short of what is necessary to apprehend the dynamic thinking implicit in Goethe's way of understanding nature".

The difficulty in Goethe's thinking is not due to outdatedness but to a qualitative leap: Goethe's way of thinking is metamorphic, a mimic of nature. At the heart of Goethe's seeing is form's continuous transformation in meeting the world:

"If we look at all these Gestalten (forms), especially the organic ones, we will discover that nothing in them is permanent, nothing at rest or defined—everything is in a flux of continual motion. When something has acquired a form it metamorphoses immediately into a new one (Goethe in Miller, 1995, pp. 63-4)."

In order to meet that continuous unfolding the seer must himself transform: and again: and again. Goethe is evolutionary in essence, not only in his views of nature but in his process of thinking *with* nature.

6.2 Goethe and Darwin¹³

Both Darwin's and Goethe's views on form's change over time are dialogical: Goethe uses the term metamorphosis, Darwin the term adaptation. Goethe's metamorphosis concerns individual development in meeting the world whereas Darwin's adaptation focuses on populations or species changing over time in dialogue with their environment (although the level of selection is the individual). As Riegner (2013) points out, Goethe's method could be brought into the study of the evolution of species over time, for example by arranging a temporal series of fossil forms sequentially, similar to what I did during the orchid encounter, and inviting the form's movement into our imagination, as a means to arrive at the potential shape of missing forms—the gaps in our evolutionary story.

One key difference between Goethe and Darwin is that whereas Darwin's evolution is driven by outside forces like mutation and natural selection, acting on internal drivers (morphology, behaviour), Goethe seems, with the archetype, to point at a constraining force which is acting from without-within, 'the higher nature inside nature'. Goethe's archetype appears to me to be suggested as... both mover and moved, dancer and the dance, a constraint that sets form free.

His poem 'Nature and Art' I see as referring to both the practice of seeing and the heart of Nature herself. I transcribe it here in two interpretations from the German original. In the original poem Goethe uses the word Bildung in the first line of the third verse, translated here as culture by David Luke and as refinement by John Irons. Bildung is a term Goethe used to refer to the constant transformation and schooling of the scientist that his method requires.

13 For recent discussions of Goethe's work in the context of modern evolution, see Holdrege, 2014 and Riegner, 2013.

*NATURE AND ART, Johan Wolfgang von Goethe,
interpreted by David Luke (1999)*

*Nature and Art, they go their separate ways,
It seems; yet all at once they find each other.
Even I no longer am a foe to either;
Both equally attract me nowadays.*

*Some honest toil's required; then, phase by phase,
When diligence and wit have worked together
To tie us fast to Art with their good tether,
Nature again may set our hearts ablaze.*

*All culture is like this; the unfettered mind,
The boundless spirit's mere imagination,
For pure perfection's heights will strive in vain.*

*To achieve great things, we must be self-confined:
Mastery is revealed in limitation.
And law alone can set us free again*

*NATURE AND ART, Johan Wolfgang von Goethe,
interpreted by John Irons (2011)*

*Nature and art, they seem to shun each other
Yet in a trice can draw back close once more;
The aversion's gone too that I felt before,
Both equally attract me, I discover.*

*An honest effort's all that we require!
Only when we've assigned art clear-cut hours,
With full exertion of our mental powers,
Is nature free our hearts once more to inspire.*

*Such is the case with all forms of refinement:
In vain will spirits lacking due constraint
Seek the perfection of pure elevation.*

*He who'd do great things must display restraint;
The master shows himself first in confinement,
And law alone can grant us liberation.*

Chapter 6.3—Metamorphic seeing

Is Goethe's Proteus a relational or unifying idea which 'only comes to expression only through its numerous' tellings? The mastery which 'shows itself first in confinement', ready to set form free?

Goethe is proposing a way of participating with the dynamics of nature which he kins to mathematics in rigour¹⁴ (Goethe *in* Miller, 1995, p.16), and which I kin to poetics in the doing, expanding the self. It seems to me that he is proposing a method for conscious participation in the impulse that informs the development of form; the gap which bridges DNA and living organism.

David Abram (2010), writing on Spinoza's views (whom Goethe was influenced by), describes this impulse as: "the vast encompassing intelligence that was known inwardly (to some) as God and outwardly (to all) as nature". Andreas Suchantke speaks of it as "the prime source of evolutionary impulses", "the inner line (...) of the whole of evolution, revealing facets of itself in the various species, genera, and families of organisms (Suchantke, 2010 *in* Francis)".

Whatever the nature of that gap, it is not a gap that can be approached with a ruler. Were I to show up for a myth telling notebook in hand, ready to record how many times the carrier—let's say Schumacher College's own Martin Shaw—spoke the word 'god' and the word 'sea' and the word 'shifter'; and how much time he spent looking northwards in the room, how much time south; how often he tapped his foot or drummed his drum...; and if I recorded every 30 seconds which word he was on, and made a note of the bend of his posture... Come the end I would know quite a lot about Martin Shaw and Proteus; and at the same time I would know nothing much about either. It all depends on what it was I was looking for.

14 in rigour but not in method.

“Goethe articulated biological understanding as the direct beholding of what constitutes the living wholeness of the organism. It’s a form of knowing that allowed—or compelled—him to speak of a “Proteus” or “archetype” that informs the life of the organism. Volumes have been written about this central feature of Goethe’s science (...). What’s been done much less is to practice this way of knowing, since only through practice do its real challenges and its real promise become experience”

Craig Holdrege, 2014 *in Goethe and the Evolution of Science.*

“Science is a form of participation in the phenomena and the way the phenomena appear is also a function of the way we look at them. This does not mean that what we find is subjective but that perspective or point of view belongs to the way something appears. Therefore we need to be just as aware of our point of view as we are of its object.”

Craig Holdrege, 2014 *in Goethe and the Evolution of Science*

Encounter number seven:

—Exact imagining and exact sensing—

Worlds within worlds

I come here looking for demoiselles, hooked on their strangeness, and I find something else instead. A whistleshriek, insistent from the sky. I don't go to it straight away. I'm on a mission and I don't quite take it in—but the shriek persists. 'Meeyu, meeyu, meeyu'. I look up—a dark, winged figure, cut out against a traveling blue horizon, gliding. All of it is wings, mountain-like, either side of a steerer of sorts. It glides back and forth, in and out of trees, and I follow, binoculars in hand. It stops, hovering now. I hover too. The sky's blueness sinks upwards and away from me, making room for traveling clouds, some a pure white, painful almost, some pregnant, heavy with grayness. Heavy or light, ominous or inviting, all are traveling gods of the sky, frayed and cottony. Air, breath, wings. I stare at the bird —'a sparrow hawk I think', said a lady in passing—and I climb onto its wings. 'Take me with you' I ask, and it doesn't stop flying. I slide my way into its feathered body and, hands extended outwards, we're off. We glide a little, the wind is cool on my abdomen, cool on my throat. My mouth has beaked. In flight, my body has no weight, my feel is the feel of the wind, impacting then moving through me, and around. We stop and hover awhile. I'm aware of my body again now, all of me is a focuspoint, my spirit back on the ground. I dive headfirst and my body slips out, re-delivered.

I sit down and close my eyes, feel the wind, cold and light. I feel the ground, hard and cool in the shade. An aeroplane flies by in the distance. I get up and walk up a path, through a gate and back round to the river, sit on his bank. Everywhere, air is speaking, feeling me through—face, ears ,hair, neck, into my sleeves and out. Around, leaves branches and trees speak back, the river gloggs and gloggs, slowly. The steamtrain whistles. Voices in the distance, human voices, the cries of birds.

Right now I am a silent one, listening.

A few days ago, on a beach in Cornwall, I came across a most alien creature. A friend and I were walking along the shore, bare feet digging through rivulets of

soaken sand and puddled water, the rippling foaminess of blue to my left, the rockfaces to my right bringing me into the presence of time. Beth and I were chatting away, dissertation talk, when Beth stopped. ‘What IS this?’ I had almost walked past, immersed in the depths of a sentence. The thing was... extraordinary. An amorphous blue blob around the edges, amoeba-like almost, contoured a transparent core through which I could see an elliptical pattern, like liquid fingerprints. In the centre, a thin, transparent... sail. I stared. ‘Is it... real?’ I leaned down, held the sail gently between finger and thumb. A flexible hardness, like very thin cartilage.

I notice its sail is at an angle, crosswise across the body. I touch again, then pick it up. It offers the faintest of resistance, some attachment to the sandy water. The edges are gelatinous, irregular. The core... an elliptical constellation drawn into a liquid white sky. I turn it around—underneath, a brownish mass of... feet? Hairs? Hundreds of them, some sort of feelers. I spot a tubular structure amidst the feet—a siphon. A siphonophore, then, a filterer of the sea. Undeniably biological. I turn it upside down and touch its underside. It’s... squidgy velvety and bitty all at once, like a soft, sunken sea carpet. A little gloopy too. Beth touches it too. ‘Oh dear’, she cries, finding a handful of.. feet on her fingers. I place it on my hand, then hold my hand up against the light. Like this, against a blue sky, the sail is not quite transparent—I can see nothing through it, even if it appears colourless. It has... substance of its own. All around the rim of the sail, a magenta hue. We stand there awhile, staring at this creature through the light, cut out a against a blue sky, the sea its home. A few feet to our right and we would enter a land this being is of but where we are only guests, allowed only the surface of things. I peer at it again, for long minutes. A universe I must be forever on the outside of. I put it back, sink my feet into the sand and look around. I’m surrounded by cliffs and by sea; by infinity and time. This being inherited the salt kingdom. I am a creature of fire: breath is my home. I put it back where it belongs, take Beth’s arm and we walk, along the shore then upwards into the sand, which gives way to concrete pavement and then on to grassy fields. Our home.

Notes: The winged creature was the small bird of prey sparrow hawk, Accipiter nisus. The alien creature was a by-the-wind sailor, velella velella, a miniature

relative of the fearsome Portuguese-man-of-war . It is a siphonophore which floats the seas on its sail, feeding on plankton. Velella velella is not classified as an organism but a colony consisting of many polyps connected by a canal system which enables the colony to share food.”



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