

ANT, SPIDER AND DNA: LETTING MINDLESS GENERATIVE
MECHANISMS SPEAKELDAR BRÅTEN¹

In Tim Ingold's fable from the forest floor (2008), ant and spider put their minds together to ponder some of the most pressing issues in current discourse on the make-up of reality and our understanding of it. They are especially concerned with questions about agency and the character of relations. Where ant sees 'networks', spider insists that we deal with 'meshworks'. While the ant, obviously, is an advocate of Bruno Latour's Actor-Network-Theory (ANT), Ingold casts himself as an experientially orientated SPIDER, propounding the view that Skilled Practice Involves Developmentally Embodied Responsiveness. In the same allegorical genre, this text allows DNA (deoxyribonucleic acid) to challenge both theoreticians. ANT and SPIDER share a blindness with respect to invisible beings like itself, DNA argues. Their privileging of spatiotemporal immediacy entails a one-dimensional (flat) ontology that tends to push mindless generative mechanisms out of view. Hence, ANT and SPIDER miss out on central dynamics of ontological constitution. In effect, both thinkers construe mindless being in terms of mind properties, DNA charges, exclaiming Do Not Anthro-size!

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The homonymy between ANT (Actor-Network-Theory) and the insect ant was not lost on Bruno Latour, who, playfully, appreciated similarities in terms of approach. Struggling to find the most appropriate label for his perspective, Latour reached the conclusion that 'ANT' was 'perfectly fit for a blind, myopic, workaholic, trail-sniffing, and collective traveller' like himself, '[a]n ant writing for other ants' (2005: 9). Even more spirited is Tim Ingold in his fable-like and witty, but theoretically serious, account of his conversation with ant/ANT on the forest floor (2008). Casting himself as a phenomenologically orientated spider, Ingold challenges ant's perspective at its core. While ant sees actants and agency everywhere, spider holds that only attentional beings can 'act'. While, in spider's view, ant thinks that relations are empty, merely

¹ Professor at the Department of Social Anthropology, University of Bergen.

content-less links among pre-existing entities, spider draws attention to the materiality of the relations themselves. We deal not with the helter-skelter assembling of actants, spider argues, but with operational connections. It is the lining up of relations – their ‘threads and pathways’ (Ingold 2008: 212) – that counts. Hence, what ant construes as ‘networks’, spider takes to be ‘meshworks’.

Unsurprisingly, the creatures never reach an accord. In the end, spider walks away in frustration, grunting, ‘I cannot, for the most part, understand a word of what you say’ (Ingold 2008: 215). Ant’s metaphysical take on things is far beyond his grasp. Ingold fails to cite ant’s response, but we must assume that it is equally incredulous: ‘Amazing how self-centred – experientially bound – some of these creatures of the forest can be!’ Now, let us take one step further into this allegorical universe, lending voice to an existence that, unlike insects, arachnids and humans, is entirely mindless but, nevertheless, part of the picture: DNA (deoxyribonucleic acid). What would DNA have to say about its constitutive role in the networks/meshworks that so concern ant and spider? More generally, what is the ontological status of the kind of existences that DNA exemplify – the myriad of often non-manifest, thus invisible, generative mechanisms that partake in socio-material formations? Are Latour the ant and Ingold the spider sufficiently attuned to the ontological verity of mindless – non-attentional – being?

Emphasizing that I now move far away from my ‘mission in life’ – or to be precise, my evolutionarily acquired biochemical modes of operation – I, DNA, would make two points had I been part of the intellectual exchange between ant and spider. First, that I am intrinsic to both! No matter how diverging their viewpoints may appear, they share an *existence* that, in part, depends on my workings. My continuous chromosomal reproduction keeps individual ants and spiders alive, so I am a *sine-qua-non*, ontogenetically speaking. I am a sub-organismic force that keeps organisms going. Moreover, I am also an unequivocal constituent of the complex dynamics that, across the ages, engender particular forms of embodied being in the world. In other words, I contribute phylogenetically to the forging of diverging experiential modes and thus of epistemological orientations – ant-ness here, spider-ness there. So no me, no living beings; it is as simple as that. But the question is how the two formidable thinkers deal with this verity. In what sense do I exist for them?

Secondly, while ant and spider stress the fact of diverging perspectives, I counter that they actually *share outlook* or, more precisely, a certain kind of blindness. Neither of them seems willing, really, to take me and my fellow cousins in the world of the mindless seriously. Despite their admirable intention to allow us a role in the constitution of reality, there is little recognition of what we – a true myriad of beings and forces – actually accomplish in the world. Neither ant nor spider cast us in our own terms, I claim. So they are not all that different on this point either. However, I do recognize that each throws light on certain *aspects* of being. It would befit my evolved character as an encoder to try to assemble these threads, to explore whether their diverging views might be brought into productive reaction to engender a sustainable ‘molecule of understanding’, as it were.

Spider

Let's start with spider, the phenomenologist *par excellence*: quite literally entangled in webs of his own spinning, enmeshed in fibres extending from his corporal existence, acutely attuned to even the slightest impact on his distributed body. An extensive system of limbs, senses and slimy filaments superbly geared at trapping and feeding. Mating is certainly another major concern, but as spiders, especially of the female kind, would readily admit, the distinction between lover and prey is blurry at best. Why not collapse the conceptual subtleties and utilize companion spiders twice over if the occasion so admits? Spider's life mottos are embarrassingly simple. Devour and conceive. Trick or be tricked. Live or die. Myself before others.

But what spider does not seem to take in is that this whole business of trapping entraps his understanding. Eminently attuned to horizons of nourishment, non-consumptive issues fade into the background. Being the spider of the web in an altogether literal sense, attention hardly reaches beyond his net. Non-spiders enter the lifeworld only when and as they become food or as nearby objects – twigs and grass stems – that might be useful in the overall life project of sustenance. This breed of phenomenology, then, entertains an active ignorance of reality beyond the immediate sphere of individual perceptions. Spider is certainly not the creature that is likely to see trees beyond the twigs and branches to which he attaches, not to say the forest. His adaptive, enskilled efficiency in this respect may indeed be measured IN GOLD.²

But I must admit that I chuckle a bit at this shrewd, solitary being since, as I say, I have encoded spider thus. Or, to be entirely precise, I play a role in the formation and differentiation of all kinds of living beings. One could say that I am a necessary but not sufficient condition for bringing living organisms about. I work tirelessly to engender and sustain creatures that participate in the world in their highly specific ways, and spider has evolved to engage and thus to experience reality through his peculiar spiderish modality. Since some humans calling themselves 'anthropologists' look to the spider when attempting to understand the whereabouts of their species, we should assess the worth of this outlook somewhat closer. What kind of epistemology arises from spider's life orientations were we to articulate it philosophically?

It follows from my critique that spider and I converge on crucial points. Spider would be the first to acknowledge that creatures of the world have 'evolved' a certain specificity – or he would use 'developed' (Ingold 2008: 214-215), 'grown' (e.g. Ingold 2000, Chapter 5) or 'crescended' (Ingold 2022: 54). We might disagree on how much of the 'spiderness' that stems from my encoding and how much from any given spider's enskilled adaptations, but we are, nevertheless, in concord on the point that spiders, ants, humans, twigs and leaves have become *significantly different kinds of existences*. Reality is not of one kind or, as humans often think, of two: humans and non-humans. At any given moment, the world is composed of a myriad of beings with diverging properties – spider prefers 'affordances' (e.g. Ingold 2000,

² In Ingold's fable, it is ant who measures spider's metaphysics in gold value, alluding, sarcastically, to spider's light weight (Ingold 2008: 215).

Chapter 9) – that influence how they can be practically engaged, by, for instance, spiders or humans. Ant seems to miss this point entirely, something spider articulates in no uncertain terms when criticizing the *formicidae*'s propensity for 'symmetric thinking':

It is simply absurd to place a grain of sand and an aphid on the scales of a balance and to claim that they are equivalent. They may weigh the same amount, but in terms of complexity they are poles apart. The key difference is that the aphid, animal that it is, has a nervous system – just as do you and I [ant and spider]. When I crouch at the centre of my web, I am all a-quiver, just like the leaf of a tree in the summer breeze. I am sensitive to the slightest movement or vibration. What makes the difference between me and the leaf, however, is that every movement I make is also a movement of my *attention* (Ingold 2008: 214, original emphasis).

I cannot agree more! Spiders and other attentional creatures, humans included, cannot but be experientially grounded, while grains of sand and I, the encoder, work out of an entirely different – one could say non-phenomenological – form of agency. Or since spider would, of course, refuse to grant my impacts the status of 'agency', let us call it 'efficaciousness'.

Moreover, being the obstinate replicator that I am, I would also agree that these distinguishing properties are not eternal givens – godly created essences, Platonic ideal forms or something of that sort – but features that are brought about dynamically through complex engagements among a variety of entities and forces in situated contexts. They are *emergent* properties (see Bhaskar 2008: 102-3; 1998: 37-39). As spider puts it, the process is morphogenetic, not hylomorphic (Ingold 2013, Chapters 2 and 3).³ Form is not the result of templates applied to matter by attentional beings from outside or above, but rather a regularity growing forth from within and below, ongoing formations emerging out of complex interactions among specifics.

However, I want to add a significant point to spider's divide between attentional and non-attentional beings. While I am happy to be lumped together with other ignorant creatures, spider seems so preoccupied with the mundane pragmatic concerns of living beings that he hardly notices the finer distinctions among us. For instance, I have the capacity to affect the world in quite different ways than spider's proverbial 'grains of sand'. My 'doings' create specific kinds of impact, while other existences without a nervous system influence reality in *their* ways. While, certainly, attentional agency is an essential ontological dynamic, it is categorically not the only one – and at times, neither the most relevant nor forceful dynamic. What is largely lacking in spider's self-centred, experiential take on reality are all the existences that work on the world from afar, and I mean this both in a literal sense and metaphorically. Spider may have trouble perceiving what lies beyond the *geographical* immediacies of his phenomenological dwelling – what lurks behind the trees, as it were, not to say in other forests. These realities beyond his experiential sphere may seem a bit too 'globe-ish' (Ingold 2000, Chapter 12). And moreover, I claim that he has some problems

³ 'Hylomorphism' refers to the view, originating in Aristotle's distinction between matter and form, that there are intrinsic conditions to things through which they become what they are. When Ingold discusses hylomorphism in the context of artefacts, he counters the view that their production consists of the application of preconceived forms to matter.

acknowledging the truly constitutive powers of *imperceptibles* like myself and a whole range of other non-attentional mechanisms that partake in the forging of the world. That which exists and operates 'below experience', as it were, tends to slip from spider's mind. It is at this point that one gets curious about ant's take on reality.

Ant

So far, ant has figured negatively, conveyed through a critical arachnid view. In all fairness, let us now switch perspectives and explore positively what kind of approach to life the opposite party suggests. Perceptive humans have advised for a long time that one should visit the ant to acquire wisdom. While some identify human nature in the self-contained, utilitarian spider exploiting his environment as best he can, others are fascinated by the collective, apparently *social* character of the ant world. It seems that the *modus operandi* of ants raises different questions about being, and the contrast between the two forest floor creatures is thus eminently suited to bringing out the philosophical controversies.

For one, where spider is sedentary, at least as soon as his corporeal extensions are in order, ants lead roaming lives. It is the privilege of one aristocratic class, the ant queens, to enjoy the same indolent passivity as spider, but this is not the true picture since queens are veritable breeding machines. Whether the aristocrat enjoys her laborious labouring or not, her lifestyle is evidence of a highly specialized role in the ant world rather than the generalized model of ant selfhood. Other ants may come home to roost from time to time but spend most of their day out and about, actively engaging their surroundings. It is not surprising that this open, curious and keen attitude to the environment and its many shapes and creatures inspires a different kind of epistemology. Indeed, among theorizing humans, ant's approach is often praised as a philosophical achievement: openness to the world, curiosity, creativity and an emphasis on transgressive movements instead of stale durables. Interestingly, spider, too, cannot but voice admiration (Ingold 2022).

And then there is the social dimension that so fascinates humans. The ant nest is a highly complex world of interaction, cooperation, hierarchy, role adherence, submissiveness, and even self-sacrificing for the greater good – features with apparent counterparts in human society. It is perhaps unavoidable that this advanced lifestyle comes with a degree of grandeur, even a sense of superiority. Proud ants, spider charges, may come to think of their nests as monumental mounds and their pathways as highways (Ingold 2008: 209). Were it not for the fact that Amazonian jaguars have gained notoriety for the perspective already (Viveiros de Castro 2012), one would indeed appreciate the human-like lives of ants: they construct buildings, engage in community, care for the sick, farm for a living, enjoy commensality, run collective hunts and so on.

This lifeworld is so complex that it engenders three different perspectives on everyday sociality, ant tells spider (Ingold 2008: 209-210). Here he borrows unabashedly from human social theoreticians: Max Weber, Emile Durkheim and Gabriel Tarde, respectively. Some (Weberian) thinkers simply add up ants and find the collective and all its operations in the aggregate. In this piling-up approach, there is nothing but so many individual ants out to look

for food. An ant that happens to come across delicacies on its way will secrete pheromones involuntarily, thus luring other ants to the same place. Hence, the path that arises is not actually a 'path' – something of a social order – but simply the aggregate of individual instances of attentional hunger, as it were. Other (Durkheimian) thinkers find this mathematics of summation overly simplistic and argue that society is larger than the sum of its parts. The going about of ant myriads engender emergent properties at various levels of scale so that the mound is irreducible to the sum total of individuals. The individual ant is subordinate to the greater good emergent from the collective. And, finally, there is spider's partner in discourse this particular day, who thinks the whole debate is misplaced, that the very distinction between individual and society is nonsense (Latour 2011: 803). He has a third take: seeing the world in terms of the momentary distribution of agency across extensive networks. As such, society is actually smaller than the sum of its parts (Latour et al. 2012), he claims. In other words, this is a real ANT-ant.

But ant's highly interactive lifestyle is demanding. His nomadic vitality exposes him to the world in ways that the sedentary, self-contained spider never bothers to experience. While spider might at times extend a kind of fellow feeling to other spiders, momentarily distinguishing between sex and food to let a lover escape (or perhaps the distinction is, rather, between being hungry and not hungry), ant continually fine-tunes his conceptual apparatus to all the strange beings that cross his path. A moving creature, a pine needle to carry home, an obstacle to overcome – living is nothing but so many engagements of difference. So while spider may be accused of attentional complacency, a disregard for matters outside his sphere of sustenance, ant suffers from attentional overdrive, as it were. He is prone to dissolve the world into an ever-expanding multiplicity of specific encounters as if all and sundry counterparts demand the same degree of alertness.

Moreover, every such encounter necessitates a decision concerning identity: is the opposite part an ant or not, worker or soldier, healthy or sick, ant from home or one of the foes? The finer distinctions of self and other are never given or guaranteed but must be determined interactively, and the survival of self and collectivity may depend on it. But this is simply another way of saying that the relative *ant-ness* of others is always at stake. Never entirely sure about the precise boundaries of one's being, a seemingly innocent encounter may be exactly the opposite: seemingly a fellow ant, but in fact an act-ant of a wholly different kind, it may be a termite. It is existentially critical that reality be sifted through prototypes of ant-ness.

Hence, one cannot but sense a certain self-centeredness even in ant's approach (see Elder-Vass 2015: 115). We recognize a hidden differential: the thinking subject – the outlook through which other actants are assessed. So, while spider is unabashedly spider-centric and rather content with that orientation, ant often fails to acknowledge the ant-morphism underlying his sophisticated moving-about in the world of multiplicity. Spider shrewdly notes this bias: 'Indeed what is most remarkable about [ant's] principle of symmetry is that it rests upon a claim to [ant] uniqueness' (Ingold 2022: 298; my paraphrasing, in the original 'Latour's' and 'human', respectively).

We – the mindless multitude – are eternally grateful for the proposition of ant's human hero Latour that we partake in the world's constitution *qua* actants. This emphasis promises

a degree of ontological worth in a world heavily skewed towards the alleged preeminence of attentional creatures. We appreciate being included with humans and animals in his helter-skelter assemblages, among ‘a rock, a lake ... the unconscious ... a virus’ (Latour 1988: 192) and what have you. Moreover, his point that it is our forms of mediation, not those of humans, that distinguish humans from baboons is truly fascinating (Strum and Latour 1987).

But nevertheless, Latour’s cordiality often feels like an aborted handshake. Every so often, he reaches towards us – towards our ontological verity – only to slip back into the domain of attentional subjectivity. When he gets down to things and starts explaining and exemplifying, we largely hear about *human minds* mediating. His thinking is riddled with Pasteur-like beings mediating the likes of me (Latour 1988), but hardly any non-attentional beings mediating other non-attentional existences (see Harman 2009: 125-129). Hence, the *in-itself* of my dance with RNA and proteins remains a blind spot in the ANT perspective, as does our continuous reproduction of the cells that make up attentional subjects – unless, of course, these engagements are made into epistemological objects in the highly specialized context of natural science. Excuse me for wondering whether Latour’s *de facto* cutting of networks at the interface of subjectivities is simply another way of sustaining the nature/society divide that he is so keen to transcend.

Myself – DNA

From my position in the recesses of the underworld things look rather different, and in order to convey that point, I need to say a little bit about myself. In this Wonderland of deliberating forest floor creatures, I regard myself as a far humbler being than ant and spider. Boring as it may sound, let us be frank about it: I belong in the land of *mindless generative mechanisms*. ‘Mindless’ since I just keep on doing my job without attention, reflection and reflexivity (I am not privileged with a nervous system). ‘Mechanisms’ since I operate in a relatively repetitive and orderly fashion. ‘Generative’ because I bring other things forth. I am in the business of constitutive replication, as it were – encoding, recoding and recombining chemical components that engender life forms with a degree of stability. Since I come without a mind and thus a capability to feel pride, I am fully at ease with the argument that I am *not alone* in creating life – and even less so in the forging of human societies. In contrast, many humans seem to think in more one-dimensional and grandiose ways about *their* role in the world. In my view, there are *countless*, both mindless and mindful, mechanisms at work in the forging of reality, and any serious attempt to understand the world should acknowledge the complexity of this (re-)reproduction.

Moreover, I don’t have any inclination whatsoever to be *deterministic* about my constitutive role, while, strangely enough, some humans actually reduce their humanity to DNA and argue that I am the prime mover (e.g. Dawkins 1976)! This is another weakness of their subjectivity: the proclivity for simplistic, dichotomous thinking. Apparently, for many theoretically-minded humans, it has to be a case of either this or that. As I see it, whether I ‘win through’ with my encodings or not depends on an extremely complex interchange with all the other mechanisms at work. Sometimes I am fairly successful; at other times, I am totally

powerless. It would be preposterous to claim that I somehow orchestrate the whole show from behind the scenes. Even more ridiculous is the idea that there is an omnipotent subject called 'Evolution' hovering above all of us who uses my encoding capabilities as the chief means to realize its trajectory through time, installing in every being the overall compulsion 'to spread one's genes' and so on.

No, simply take me as I am; nothing more, nothing less: a mindless generative mechanism immanent to being. However – and this is my main point – *I do exist, and I do play a circumscribed role in engendering life forms, even the human lifeworld*. It would be precise to claim that I am a *prerequisite* for life, and that is certainly no small deal. The question is whether spider and ant, with their partial outlooks, are able to recognize this reality; my ontological presence and involvement.

Beyond immediacy

In essence, I claim that ant and spider suffer from divergent but equally debilitating forms of immediacy illness, or what the human philosopher Roy Bhaskar denotes as 'actualism' (see 2008: 54-55). Their spatiotemporal reach is too constricted to attain the full picture of reality. Crucial modes of ontological constitution slip from view. For ant, it is primarily a question of constrained temporalities; for spider, primarily a matter of spatial constrictions, but, as I say, these are simply varieties of the same condition.

Ant is, obviously, sensitive to the constitutive powers of instantaneous enactments, the forces of the here-and-now. But the downside to this situational acuteness is loss of continuity, a failure to recognize that encountered entities may have a degree of *stability* across points of time, a stability that offers a measure of recall and anticipation, possibly even prediction. Ant's temporal span is not much superior to that of the proverbial goldfish, and given that he shares Latour's ontological convictions, it cannot but be. Insisting on the absolute irreduction of any particular actant (Latour 1988, Part 2), memory cannot reach any further. Convinced that nothing carries over from one mediation to another, there is nothing to be bothered about beyond momentary occurrences. As he puts it, 'each element is to be defined by its associations and is an event created at the occasion of each of those associations' (Latour 1999b: 200). In other words, ant is imprisoned in synchronicity. He 'defends a cinematic universe of individual instants' (Harman 2009: 30).

Certainly, he allows a degree of continuity when it comes to 'black boxes' (Latour 1999b: 222; 2005: 39). But black boxes are, exactly, that which slips out of view when ant pursues his favourite project: 'trac[ing] associations' (Latour 2005: 1-17) or 'following circulations' (Latour 1999a: 20) of immediate encounters. In the face of stability, he keeps insisting on the fundamentally instantaneous character of what seems persistent, and the methodological trick is to hide away the object-like character of such disturbing lingering in black boxes. Now, ant grants that black boxes may be opened, but he does not allow for a rock-bottom of being. Much like Russian dolls, we just encounter new boxes inside the ones we peer into. Epistemologically, then, box opening is a form of infinite regress (Harman 2009: 106), and a rather ghostly one at that. Nowhere is there a core to be found, a stability that

sustains the passage of time. Ant is entirely explicit about it: ‘The connections among beings alone make time’ (Latour and Porter 1993: 77), i.e. time is an effect of so many transitory enactments, not the ontological dimension in which enactments unfold (see Harman 2009: 30-31).

Spider, on his part, suffers from something very similar, the spatial variety of actualism. He is existentially confined to the affordances that sustain his extended corporeality and, given that he shares Ingold’s theoretical orientation, he can hardly venture any further. As long as reality is rendered, ontologically, as nothing but consecutive environmental spheres (Ingold 2000, Chapter 12) – particular spatial landscapes that never rise above themselves – he deprives himself of viewpoints from which to gauge broader geographies. A new domicile is simply a new specific environment in which to extend life, a trajectory that already always entails engaging proximities. Nothing more can be said about it. While fully acknowledging temporal stretches – so many longitudinal ‘lives of lines’ (Ingold 2015) – spider refuses to admit spatial extensions beyond the experientially registered ones. There is, so to speak, no ‘outside’ in spider’s orientation, and certainly no ‘up’; no macro impacts from geographies of larger scale. Conversely, there is also no ‘down’ – no reach into the hidden molecular landscapes that I frequent.

Qualifications

In all fairness, we should note that mature ants may seek higher ground. Weary of the incessant tracing of networks on the flat forest floor, some may climb trees to gain a broader outlook on modes of existence (Latour 2013). From up here, they register a differentiated landscape, the world’s undulation, as it were. It is difficult to avoid some kind of generalizing thinking from this vista, at least a rudimentary grouping together of actant mediations in recognizable, larger-scale forms of network. Ant ponders, in particular, the modes of ‘truth’ that emerge across the landscape. Moreover, the fresh air also inspires reflexivity. Ant comes to question his own constitution – the ‘a’, the ‘n’ and the ‘t’, as well as even the hyphens (Latour 1999a). More earth-bound ants beg to disagree, but they need not worry. The good-humoured, self-ironic and prolific ant is regularly back on the forest floor defending his ant-epistemology, hyphens and all (Latour 2005: 301).

Spider is certainly much more broadminded, too. There is plenty of time in the Aberdeen woods to ponder larger existential issues, and spider is refreshingly unbound in his thinking: art, architecture and archaeology (Ingold 2013), wind and weather (Ingold 2011, Chapters 9 and 10), light and sound (Ingold 2022, Part 2), walking, writing and weaving (a spiderish subject indeed! (Ingold 2011)), and the list goes on. Moreover, and suprisingly, all these interests are, basically, different ways of exploring *ant’s* prime experiential orientation: *wayfaring*, *ant’s* incessant moving, the walk.

While the philosophizing spider thus ventures far beyond his earthbound web, there is, nevertheless, a persistent conviction that runs through his spawning interests, and this is the one I highlight: spider’s unceasing anchoring of reality in the unfolding of immediate experiential engagements. As with ant, when spider gets down to things, we come to

recognize a distinct and persistent epistemological inspiration, a wellspring at the base of thinking, and for spider this is what human scholars call ‘ecological psychology’ (Gibson 2015 [1979]; Ingold 2000: 205-208). His notion of wayfaring is always already of the embodied and situated kind, while the world beyond slides into oblivion.

Moreover, spider gets all the more convinced about the *relational* character of the world the older he grows, that is, the ontological indistinguishability of organism and environment. As with ant, there are no *objects* in spider’s take on relations, no entities with ‘prior properties’ (Ingold 2000: 365) – the reality is one of verbs rather than nouns, as it were. However, in contrast to ant’s temporality of ‘punctiform cinematic frames’ (Harman 2009: 105), spider anchors being in *agencement* (translated from French into English as ‘assemblage’; see Deleuze and Guattari 2004). Reality, in his view, is a ceaseless, non-reducible *becoming*, a never-ending ‘differentiation from within’ (Ingold 2022: 234, 265). To use spider’s favourite words, his body, fellow spiders, the web and the twigs to which he attaches are nothing but so many ‘threads’, ‘traces’ and ‘knots’ in a continuously ‘developing’ and ‘complicating’ ‘meshwork’ (Ingold 2013: 132-133; 2011, Part 2) – a relational becoming of sorts. But, to repeat myself, since this ‘mesh-working’ can only take place in proximity, we are back to the ontology of spatial immediacy. Spider’s concern is, emphatically, the whereabouts of ontogeny, not phylogeny or other ‘overarching’ processes – levels of being that spider outright denies. In his view, there are simply so many ‘spheres’ of existence, never a ‘globe’ (Ingold 2000, Chapter 12).

Beyond flatness

Now, the question is, would I, DNA, come clearer into view if ant and spider managed to overcome their weaknesses and, through a small wonder, combined the strengths of both views? What if we married ant’s spatial reach with spider’s sensitivity to temporal extension? Regrettably, I would hardly fare better! The problem is that I cannot be experienced and I cannot be encountered, at least not directly, so I go unnoticed in the course of both spider and ant’s daily routines. I am never a manifest counterpart in the landscapes that ant traverses, and spider’s experiential self-containment effectively blocks me out, too. None of Heidegger’s ‘failing hammers’ (2010 [1953]), or, for spider, ruptured spider webs, could ever lead to the recognition of my being.

So, I would remain invisible regardless of spatiotemporal reach – hidden somewhere in the dark of ant’s black boxes or spider’s non-phenomenological beyond. Certainly, spider acknowledges my importance in theory: ‘[G]enes are of course critical components of [the] matrices [of development]. They make a difference’ (Ingold 2011: 10). Thank you very much! However, in more practical terms, when spider delves into experiential immediacies, the nitty-gritty of wayfaring, I often feel relegated to an outback of non-consequential operations, at best assembled with other mindless beings in an abstract ‘force-field’ (Ingold 2008: 213). Spider is keen to emphasize that without an environment, I have no effects (Ingold 2011: 120-121). True enough, but the converse is also true: without me, much of the ‘environment’ would not be there. Thus, to insist that I am a ‘reactant’ rather than an ‘agent’ actually feels

somewhat prejudiced (Ingold 2000: 483). The point I try to get through is that I am ontologically efficacious no matter how philosophers chose to frame me.

In other words, there is something more fundamental at stake here; we need to drill deeper into the problems of actualism. In fact, immediacy illness is just a symptom of the proclivity among ants, spiders and their human cheerleaders to think in one dimension, or, more precisely, their tendency to accord *reality* a unidimensional character. They detest three-dimensional thinking, i.e. refuse to acknowledge *ontological verticality*. We witness a combined fear of heights and depths that precipitates a commitment to analytical flatness (Knudsen 2023). Recall spider's critique of ant's symmetrical thinking here – the disrespectful evening out of all differences between spiders and grains of sand. This is a pertinent point indeed. But spider sustains a one-dimensional view himself, assuming that there is nothing but so many consecutive experiential landscapes in which to develop. Certainly, spatial gradients assure asymmetry in that creatures emerge out of incrementally different settings, but these ontological differences are evened out at another epistemological level – made symmetric, one may argue – in that, for spider, there is *nothing but wayfaring*. Reality collapses into the singular lens of lineal co-development – a compacted 'relational-ecological-developmental synthesis' without layers (Ingold 2000: 6). There is nothing above or below the phenomenological spheres that experiential beings traverse, at least nothing to be concerned with theoretically.

Also, spider's otherwise commendable acknowledgement of temporality is equally trapped in horizontality. Always moving forward, wayfarers may turn their heads to heed parallel lives of line in the making, and often they cross. These contrapuntal experiential engagements – 'correspondences' (Ingold 2021) – may be yielding, but the wanderers hardly look down or up. In case they do, they only sense the ground they tread and the atmosphere they breathe (Ingold 2011, Part 3). It is not at all accidental, then, that spider's take on temporality is projected in terms of the one-dimensional trope of 'lines' (Ingold 2015); wayfarers move in flat landscapes (Knudsen 2023). Moreover, spider is entirely programmatic about it, adamant about showing that 'surfaces cover nothing but themselves' (Ingold 2022: 149). Ant, too, chimes in: 'We do not want to reduce anything to anything else' (Latour 1988: 156).

Undoubtedly, advocates of actualist perspectives are eminently attuned to the intricacies of surface occurrences, but they seem ignorant of the fact that *non-manifest entities are ontologically constitutive*. Not only in an abstract, metaphysical sense but practically and materially. A recurrent symptom of the condition is the compulsion to cling to whatever is there immediately before one's senses, and certain sufferers assume that what is thus being sensed is all there is! I beg to differ and do so vehemently because I am still there when ant traverses his paths in utter ignorance of my being, and the same goes for the self-centred spider who basks in the experiential immediacies of his sensory apparatus. As I say, I take part in orchestrating their lives. I must repeat my blunt point; had I ceased to operate, there would be no enactment and no experience, and equally constitutive are a range of other mindless mechanisms, internal and external to ants, spiders and other attentional beings.

The matter is dead serious because my very existence is at stake here. Clearly, I cannot appeal to a '*cogito ergo sum*' to institute my presence in the world, and since neither ant nor

spider is prone to thinking me forcefully into being, concerned as they are with the interfaces of their subjectivity, I take on a rather ghostly ontological character. *Cogitare* ensures *human* existence, many humans believe, while my ontological status seems to depend on whether they allow me a place among their minds' 'objects' or not. Ant rephrases the issue in a way that seeks to circumvent the problem, arguing that what matters is not my objective existence but the relative strength of emergent 'facts', or, as he prefers, 'factishes' (Latour 1999b, Chapter 9). The more allies that assemble around a point in a network, the 'factisher' it becomes, so to speak. It 'gains in reality' (Latour 1999b: 192).

So if, for instance, laboratory equipment, mad scientists, market funding, popular media and a strong wave of conspiracy thinking allied to rule me out of existence – 'DNA was always a hoax' – ant would likely claim that I was matter-of-factly not there any longer. He seems to entertain the preposterous idea that I do not *exist* apart from my being-in-view; that I owe James Watson, Francis Crick and their precursors my being-as-such. After these scholars, together with co-actants, assembled my factuality, i.e. put before human eyes the double helix that I curl into, it was hard to disregard me. Yet in ant's thinking, the ontological verity lies, ultimately, with the assemblage of actants, not my independent existence, properties and workings.

If this example seems too contrived, think of the claim that the yeast that ferments beer was not 'factish' before Pasteur and the co-actants of his laboratory enacted it. Pasteur's experiments were an event that changed its constituents, ant argues. It was an 'articulation' that altered both the yeast and Pasteur (Latour 1999b: 155-156, 173). Certainly, the ferments changed *for Pasteur*, and, in a certain sense, they also changed Pasteur himself (his career and standing). However, there is no logic in the claim that the ferments changed for themselves, or, more precisely, since they are non-attentional beings, in themselves (Elder-Vass 2015). What changed was only Pasteur and his colleagues' epistemological take on yeast. Similarly, Watson and Crick's mediation of me did not change me in the least.

See now how the pinnacles in ant's orientation, his ideals notwithstanding, are attentional subjectivities that put things into view? Where we – the myriad of mindless beings – gain importance is when we engage in mediations that affect human minds. Ant puts the trajectory nicely: 'Pasteur authorize[d] the yeast to authorize him to speak in its name' (Latour 1999b: 162). I cannot but object strongly to this perspective. Here, ant is, indeed, taking the argument 'a bridge too far' (Harman 2009: 125) or, one could say, the claim betrays the thrust in ant's otherwise powerful ontology.

Taking us seriously actually entails erasing Pasteur from the picture! Ant's claim that 'the more work Pasteur does, the more independent the ... ferment becomes' (Latour 1999b: 175) only registers effects on the Pasteur side of articulations: it bolsters the ferments' independence *for him and fellow humans*. But viewed from the position of ontological independence – mind-independent being – that I and yeast share, other entailments of articulation become apparent. First of all, mediations with human minds are only a subset of our operations and a minor one at that. Our most profound engagements are with other mindless beings. What takes place when the likes of Pasteur are not around is equally real and important to that which, fleetingly and partially, comes into their view (Elder-Vass 2015; Harman 2009: 125-127). Moreover, our mediations with humans hardly change anything on

our side. To paraphrase ant, we assert that ‘while the amount of Pasteur’s work is consequential for humans, it is entirely irrelevant for yeast’.

In short, to take us seriously entails recognizing that we *exist and operate independently of human existence* and, in equal measure, *independently of human knowledge about us*. If something deserves the label ‘ontological turn’, *this* is it.

Object or not?

I have noted that, despite ant and spider’s diverging takes on relations, they both work out of a relational ontology. In their world, there are no objects, only ‘relations through and through’ (Ingold’s homepage n/d). The next question, then, is whether I regard myself as an object. Yes, I am an object, and no, I am not. I am not an ‘object’ to the extent this term presupposes a subject, and emphatically not when objecthood is rooted in the existence of a perceiving and conceptualizing mind, prototypically that of humans. This is exactly my point: I exist and operate in utter disregard for what minds make of me. In this respect, I am an object, but to avoid the inevitable slip from objects into subjects, I would perhaps better be called a ‘thing’. However, that term evokes unfortunate connotations on its own; qualities of materiality, substance, hardness, tactility, resistance, or even that dreaded word ‘essence’. I can hear ant and spider protest in the background. Am I really ‘thingy’ in this sense?

Yes, and no again. No, because I can be dissolved like any other thing into further things. Ant’s infinite regress of black boxes is valid for me, too. The molecular level from which I speak is an assemblage of nuclear acids that can be explored downwards into atoms and quarks or upwards into genes, chromosomes and epigenetic realities. This is tantamount to moving between truly alter worlds of being, none reducible to the other. It is ‘alter’ because what distinguishes among these levels – what makes them noticeably real – is the distinctive emergent properties that they contain. Molecules act differently from atoms, not to say quarks. Water is, for all practical purposes, a wholly different entity than the hydrogen and oxygen that make it up. Moreover, tactility, which is central to humans’ take on things, is only to be found in a limited range of surface manifestations. So ant and spider are correct: the thingness of things dissolves, as it were, once we peer into them in earnest.

But I *am* a ‘thing’ in a different sense, in that I contain secrets that overspill the orientations of minds. My qualities are not exhausted by human perspectives and will, perhaps, never be. For instance, humans recently discovered what I have always known, that I am not ‘programming’ proteins by way of RNA in the manner of a computer program. Rather, I am in two-way contact with RNA about the making of proteins; sometimes, this companion turns back on me, interfering with the ‘programming’ (Ramirez-Goicoechea 2013). Or take the surprise of epigenetics, the discovery that environmental factors far beyond the horizon of molecular processes may impinge on our working (Ingold and Pálsson 2013), even to the extent of interfering with replications across generations.

I can assure you I have further wonders up my sleeve, and this surplus helps institute my thing-ness. I am ‘thingy’ due to my ontological irreducibility to minds and, thus, through the resistance I put up against epistemology. I am, as one of my favourites among human

philosophers put it, 'intransitive' (Bhaskar 2008: 11-14). While I may take on object-character (transitivity) in human minds, my existence does not depend on the effort of objectification; I am profoundly extra-subjective.

Moreover, I am also 'thingy' in that I *accomplish* something. I am not epiphenomenal – a figment of mind with no mind-independent existence or an ontological residue without constitutive effects. As a generative mechanism, I count in the networks and meshworks that so concern ant and spider; only, I do so out of view, in the vertical dimension of being. Take the case of epigenetics again (Ingold and Pálsson 2013): it is easy to forget that this is a two-way process. Humans tend to make a point of the downward arrow. Yes, environments impact on the molecular world that I inhabit, even social environments, but don't forget the opposite trajectory! I partake in the forging of larger-scale environments as well by fashioning the embodied specifics of attentional subjects. 'Anty' engagements here, 'spiderish' there, and sometimes I am immensely powerful among humans, too.

For instance, a mutation in both inherited copies of the CFTR gene causes cystic fibrosis. Other mutations cause sickle cell disease, and failing replications of chromosomes contribute to many forms of cancer. These impacts are, of course, acutely 'real' for the persons being affected but also partly constitutive of the broader social fields that develop around them: medical research and technology, institutions of care, public health strategies, national budgets and so on. One could draw on spider's notion of 'affordances' to make the point. Mechanisms of cancer-genesis 'afford' certain ways of dealing with cancer, the phenomenology of specific ailments impacts on forms of care and so on.

So, my workings are ontologically constitutive, and this is so even if human minds have not (yet) penetrated my modes of operation. Again I will cite my human favourite; we mindless beings are 'transfactually active mechanisms' (Bhaskar 2008: 41-43), i.e. we are real across manifestations and even real in spite of manifestations. We are there even when ants, spiders and humans fail to recognize (encounter or experience) us. In other words, we *effectuate* in a more concerted way than ant and spider seem willing to acknowledge. We exist, not abstractly but materially, not (only) as objects in minds but as really reals, not out of time but at every instance of being. Let ant, spider and other philosophers quarrel about our exact character – whether we harbour 'agency' or not. The point is that we are here and now in an utterly literal sense as efficacious beings. And I fuss about the fact because when formidable minds start bickering, I often feel exiled to another universe.

Also, I have been around for ages, and this durability accords me a degree of 'thingness', too. Certainly, I have changed throughout the millennia, but across vast differences in internal complexity – from the primitive molecular sequences that started to replicate approximately 3,7 billion years ago to the more than three billion base pairs that make up the human genome presently – I am essentially the 'same' mechanism. While the likes of ant and spider would object to the essentializing tone in my insistence, it is, matter-of-factly, the case that life depends on the mechanism that I point to – incessant molecular replication. Life can even be *defined* in terms of my being; it commenced with my first replication. For all practical purposes, then, it is perfectly correct to claim that I am and have always been the *same* generative mechanism and a powerful one at that. Actually, it takes quite a lot of sophistry to disregard my longevity for the sake of salvaging a metaphysical argument about ontological multiplicity.

Some thinkers are prone to argue that every chromosome, gene, molecule, atom and so on is an ‘individual’ that cannot be generalized (DeLanda 2005: 34), e.g., into sets of properties or modes of working – even though we have been operating in the same way across billions of years!

So, in a flippant tone, one could sum up my claim to existence in the formula ‘I am because I go on generating’. There is no *cogito* to ensure my existence, but definitely, a persistent mode of operation – a mindless but efficacious and resilient ontological forging. Moreover, my workings are utterly oblivious to whatever human minds may make of me. By the same token, I also regard myself as a ‘thing’.

Mindless efficacy

Now, since I am so intertwined with life and thus also with ant and spider’s diverging forms of being, I am perhaps not the ideal conveyor of the message about things’ ‘thingy’ character; a boulder on the loose might have a stronger impact, so to speak. So let me say a little bit about cousins in the world of the mindless that are less intrinsic to living organisms. Somewhere in the borderland between life and non-life, we encounter viruses. Like myself, they are in the business of replicating, but they are dependent on other entities (non-selves) to replicate, so whether they are ‘alive’ or not is a philosophical question. In any case, after the havoc wreaked by one of these ‘things’ recently, it should be superfluous to call attention to their reality-creating powers (Bråten 2020). Their continual parasite-like replication is no laughing matter, and things are equally serious when we move further into the domain of the lifeless.

Ant and spider, for one, should worry about raging bushfires or sudden floods, events that can wipe out their lifeworld in seconds, but since they keep on thinking in one dimension, they are happily oblivious about the dangers. It would take not only prolonged memory and geographical breadth to note what lurks in adjacent woodlands but, exactly, *a notion of generative mechanisms* – e.g., how accumulating water drops and combustion can attain such devastating powers. Here, spider is adamant: ‘Air and water are not objects that act’ (Ingold 2008: 212). Ok, if ‘agency’ is, per definition, anchored in the presence of nervous systems, this is tautologically correct, but spider better heed air and water’s efficacious powers!

The issue is truly complex. Recognizing the dangers of a sudden flood entails an epistemological dive into ontological depths. We need to identify the world-creating tendencies of extra-organismic constitutive entities (notably the mutual attraction between oxygen and hydrogen), the emergent properties that their compound (water) attains in different phases of being (the respective affordances of moist, water, snow, ice, etc.), the interaction of these properties with other mind-less mechanisms (e.g., meteorological systems, lunar pulls) – sometimes they cancel each other out, or they may reinforce each other. Social mechanisms are certainly part of the picture, too: the profit drive that encourages loggers to close in on the creatures’ habitat or the mining company’s determination to destroy it – and, more generally, the compulsion to construe both minded and mindless beings as commodities. But these dynamics are topics for another occasion.

Moreover, we need to recognize effects having to do with *scaling* close to home: water accumulation after heavy rainfalls in the forest, the path dependencies of local flows (trickles, creeks, rivers) and not least, critical tipping points – e.g., when the rising water bursts through the beaver dam upriver. These are cusps at which the real suddenly becomes experiential or, sometimes, where the real *overturms* experience, i.e., wipes out life. Those humans who appreciate flat perspectives may be equally ignorant. Glued to the world's manifestations and dismissive of ontological depth, they risk missing out on the mindless generative mechanisms that keep them going. Not that I bother, but perhaps humans ought to. It should be unnecessary to evoke apocalyptic events – incoming comets, gamma bursts, or super-volcanoes – to make my foundational point about life's vulnerability, but since humans tend to be deeply entrenched in habituated perspectives, it is worth explicating my underlying message: *minds are derivative*. They are entities of a secondary order in that they emerge from and are sustained by – kept in existence through – the workings of a myriad of mindless mechanisms like myself. We are happy to let philosophers fight battles about our exact being, but that we are ontologically primary – *real* – as 'things' that exist and forge the world cannot be doubted.

Beyond anthropo-sizing

Now, while the theoretical reference point of ANT is self-evident, and SPIDER, the phenomenologist, expounds himself as the view that *Skilled Practice Involves Developmentally Embodied Responsiveness* (Ingold 2008: 215), what is the message enfolded into my acronym – DNA? A neologism is required to clarify the point: DNA stands for Do Not Anthroposize. That is, do not size all things up with human measures. Do not bend reality into human form; never confuse reality itself with the contents of human minds. In the context of our forest-floor debates, where arachnids and insects stand in for humans, the advice is not to adhere uncritically to either spider or ant's outlook – their Arachni-sizing and Ant-sizing, respectively. The perspectives that arise out of these orientations seem partially blind to the ontologically constitutive powers of mindless existences.

Arguably, anthroposizing comes in two equally problematic forms: anthropocentrism and anthropomorphism. The first covers assumptions to the effect that humans are the world's midpoint, that reality spins around their existence. This arrogance comes to the fore in forms of thought that, explicitly or inadvertently, takes reality to be constituted predominantly through human agency or – a no less constructivist assumption – that the world exists in and through human representations; by way of the peculiar imaginative capabilities of humans. In a manner of speaking, extremists of this variety seem to move about in a world of scare quotes – a world constrained by the perimeters of their minds, in which stones can only be 'stones'.⁴

⁴ The next logical permutation of this hubris is to argue, as adherents of perspectival multi-naturalism do, that *reality itself* varies with human conceptualizations ('perspectives'), as if 'stones' are the existing things themselves (see Bråten 2016, 2022a, 2022b).

As noted, Ingold the spider has his own take on centrism, honing in on the embodied nervous systems that allow living creatures to *attend* to the world. For him, experience is the defining trait. Pressed on the matter, he extends this faculty to attentional beings with four legs or more (Ingold 2008: 213) – thus, tongue-in-cheek, excluding humans. Latour the ant chuckles approvingly, but the concord covers a profound disagreement because, as we have seen, spider draws another distinction that ant refuses to accept. There is absolutely no agency beyond that of living creatures, spider asserts, irrespective of their number of legs. Other constituents of the world collapse under a generalized concept of affordances for the living. Whatever spider attaches his web to is there – passively – for him to utilize; it is simply a ‘medium,’ as he puts it (Ingold 2008: 212-213). And since I, DNA, am not a medium that spider can attach to or utilize, my affordances go unregistered by spider’s nervous system. I slip out of the centrist perspective.

But anthropocentrism does not rule the ground entirely. Formative theoreticians actively refute this kind of exceptionality (e.g., Bennett 2010, Haraway 2016). Like Latour the ant, they are keen to extend importance to extra-human entities, also those without a nervous system. As we have seen, ant accords generic ‘agency’ to all existences; humans and non-humans are similar across huge differences, in that all effectuate mediations. However, as I have noted, this apparent symmetry conceals a hierarchical configuration that subverts ant’s admirable intentions. It seems difficult for ant to convey – describe and talk about – non-human actants and their workings without according them human traits (Hornborg 2021). His notion of generic agency seems to rest on templates of subjectivity, and to the extent I do not share these traits, I slip out of ant’s anthropomorphic view.

Interestingly, Ingold the spider moves in this direction, too, and perhaps increasingly so. Despite his assertion that there is no agency without attention – so that, e.g., stones cannot act purposely – he seems more than willing to accord *life* to all things. Beyond the many manifest and distinct beings that develop, only some of which have nervous systems that provide for agency, spider ascribes life to the very process of becoming. Drawing on Deleuze and Guattari’s notion of *agencement* (Deleuze and Guattari 2004), vitality is, he argues, ‘immanent in the “primordial swerve” from which everything arises’ (2022: 365 note 1; see also Ingold 2011: xii-xiv, 83-84; 2013: 32). Despite his critique of ant’s proclivity for symmetric thinking, then, spider ends up with a symmetry of sorts on his own: notwithstanding their manifest differences, attentional and non-attentional beings share life force in and through their precipitation as beings.

Earnest attempts at taking things seriously are, of course, promising music to the ears of mindless beings like myself, but as noted, when ant and spider get down to things, they hardly get down to *things*. It turns out that what these theoreticians extend to us is largely the templates of their own being – we are infused with agency in the one case, with *élan vital* in the other. We are being recast, allegedly ‘rehabilitated’, in the moulds of minds: life force, consciousness, desire, volition, perspective and so on. But these traits are profoundly alien to us. That is my point throughout: we are intransitive. We exist and operate *beyond and in spite of* human-generated, human-like ascriptions. Anthropomorphism is, simply, yet another trick to place humans at the pinnacle of being, not unabashedly in the centre of it all, but more subtly and covertly as the foundational template of all existence.

Coming from the world of mindless generative mechanisms, I cannot but object. Constrained as ant and spider – the theoreticians as well as their allegorical avatars – are by diverging forms of anthroposizing, they never come to appreciate the genuine ontological characteristics of mindless entities like me, our real modes of existence. It seems we are required to align with the hallmarks of living beings in order to be noticed. A *true* ontological turn would entail paying respect to what we are capable of accomplishing *in terms of our ontological uniqueness*. As my back-stage fellows such as combustion and accumulating drops fully know, apart from the fact that we cannot *know* it, that is quite a lot.

At this point, I – DNA – rest my case and give the voice back to the author so that he can sum up my intervention in his own words.

Conclusion

What I, the author, have tried to convey by allowing DNA to articulate its ‘viewpoint’ is that socio-material formations – what Latour and Ingold dub ‘networks’ or ‘meshworks’, respectively – cannot be *fully understood* unless we also recognize the ontologically constitutive role of – often invisible – underlying generative mechanisms in them. While, in theory, the two scholars are the first to acknowledge the ‘agency’ (Latour) or ‘force fields’ (Ingold) of ‘mindless’ existences (like DNA), I claim that, in practice, their modes of analysis tend to push the workings of such underlying efficacies into the background. Taking DNA’s position, I have attempted to identify the analytical constrictions that spur this occlusion while arguing for a more comprehensive – and realist – account of socio-material forgings. There is a need to recognize their composite character, their constitution in terms of both attentional and non-attentional efficacy.

First, in spite of significant theoretical differences, both Latour and Ingold tend to privilege formations that involve attentional (mind-driven) subjects, notably humans. Hence, the many translations/mediations that take place among non-attentional existences are being occluded, e.g., the life-sustaining, mutual engagements of DNA, RNA, proteins, etc., that secure attentional subjects their existence. Moreover, the privileging of attentional agency tends to engender anthropocentric and/or anthropomorphic renderings of mindless being. When non-attentional existences do come into view, they tend to be premised on attentional ontology. Hence, what slips away from analyses is the fact of *intransitivity* – that entities exist and operate in ways that *transcend* the conceptual and practical engagements of mind-driven beings. What DNA attempts to convey, then, is an ontological point: the world is not anchored, fundamentally, at the interfaces of attentional engagement. There is a vast ‘beyond’ inhabited by DNA and countless other, ontologically real and formative, non-attentional entities. Disregarding their role in the forging of networks/meshworks is a dramatically reductive move.

Secondly, Latour and Ingold compound their analytical bias by insisting on the *immediacies* of socio-material formation; the former projecting networks in terms of temporal punctuality, the latter meshworks in terms of the spatial proximity of experiential horizons. In other words, time and space are made to contract around the interfaces of attentional

engagement. The analytical upshot of this reduction is a disinterest in the roles that non-attentionals play *across spatio-temporal scales* – a blindness with respect to the effects of extra-local space in localized engagements and/or the continuities that sustain socio-material forms across points in time. What DNA attempts to convey is, again, an ontological point: that socio-material formations to a large extent depend on the ‘non-immediate’ – premises originating in *other* times and places.

Also, DNA goes on to articulate a deeper point in this respect, arguing that the core problem is, really, analytical tendencies to ‘flatten out’ the world. This is, indeed, a critical theoretical intervention: why accept the use of uni-dimensional epistemologies in a reality that is ontologically multi-dimensional? Why be content with an anthropology of partiality? The analytical challenge, DNA insists, is to surpass flat renderings of being in order to reach at the depth dimensions of reality-forging. This entails identifying and incorporating into analyses the often non-manifest (i.e., non-immediate, ‘invisible’) generative mechanisms (like DNA) that partake in socio-material forgings, and to do so by truly acknowledging the nature of their non-attentional ontology.

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