

Thirteen Figurings: Reflections on Termites, From Below

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Abstract: *This image essay is a creative reflection back upon The Encyclopaedia Isoptera: An encyclopaedia of the arts, sciences, literature and general information about termites, which was mostly written by the artist between 1997 and 1998, and forward to what termite art might undo today. Without access to living termites and, predating multispecies ethnographies, the Encyclopaedia Isoptera was an investigation into the limits of knowledge around termites. Looking back, it can be seen that certain strategies in the Encyclopaedia, such as looking at superseded or alternative knowledge, was a way of interrogating the boundaries of the sensible/insensible, and parallels more recent explorations of entangled boundaries between humans and others. Looking forward, I propose that response to, and responsibility for, unloved others can occur via respect for difference and indifference to form what Neimanis refers to as strange kinships (Neimanis 117). Entangling ourselves with the alternative (destructive, cryptic, potentially immortal, coprophagous) acts of termites can open up environmental art to different emotional registers and facilitate critical hope. 'Living with' termites may go some way to addressing the tendency towards adopting apocalyptic thinking in environmental art and the 'environmental procrastination' currently seen in climate change debates.*

Keywords: *Termites, social insects, superorganism, archive, environmental art, art and science, insensible, strange kinship, groundswell, indifference, environmental procrastination*

Introduction

The insensible, I want to suggest, is the agitation, the provocation, the curiosity, the desire that draws out the work of intelligibility, that makes us practice politics as writing [artmaking], thinking and practicing with others, in order to bring to sense that which we know, but do not know...

(Yusoff “Insensible Worlds” 9).

No matter what I might think, I am not a termite. In 1974, Thomas Nagel argued that we can *imagine* as a human how it would be to be a bat, but we are unable to know how it is for the bat to experience being a bat (Nagel 438). The issue of an *animal* phenomenology has been subject to debate and is a question that I have long thought about as an artist, of course along with other artists¹. But I am not a termite. What are the implications then of being *affected* by something that you are not? There are two ways of thinking this *forward*— that I am not *I*, or that not is *not* not. I seek to enquire, after Derrida, into the abyssal rupture ‘between those who call themselves men [sic] and what so-called men, those who name themselves men, call the animals’ (Derrida 399). Furthermore, I suggest that considering this liminal zone contributes to understandings of broader concerns, such as response and responsibility, and the condition of ethics and activism within environmental art and contemporary art. This will be explored visually (and in an speculative-accretionary approach) through *thinking with* some artworks with termites.

The relationships between human and nonhuman can be worked through as a multispecies ethnography (e.g. Kirksey and Helmreich); In her book *The Companion Species Manifesto: Dogs, People, and Significant Otherness*, Donna Haraway asks us to inhabit a contact zone between human and animal: as two species touching (Haraway *Companion Species*). Ron Broglio sees it as two *surfaces* rubbing up against each other (Broglio “A Left-Handed Primer” 117). Broglio suggests how we might examine the way artists negotiate a pigeon language— a Creole between the two worlds – and a way of thinking the *unthought*. Broglio’s surfaces of interaction (Broglio *Surface Encounters* xxiv) parallel Derrida’s abyssal rupture: the latter being one that has convoluted and multiple boundaries, beyond which is a ‘heterogeneous multiplicity of the living’ (Derrida 399). Wood (138) notes the role of animals ‘symbolically deployed as boundary negotiating operators’ at the rupture. But more specifically in my art practice, I take on board Neimanis’ interpretation of describing the complexity of human/nonhuman in terms of a Deleuzian repeating one another, but different. Based on my own experience of artmaking, I propose that humans need to move beyond a concern for the Other that is based only on affection and identification through familiarity, to a *stranger kinship*: that you might be able to gain more from a serious investigation of what is not only unknown, but *insensible* (Yusoff “Insensible Worlds” 209). I will explore this through the re-examination of an artwork that I made eighteen years ago, and how it has both led to, and is in contrast with, more recent artistic interdigitations with termites.

¹ Including those practising in a wide range of media: Snæbjörnsdóttir and Wilson, Olly and Suzi, Marcus Coates, Kate James, Rachel Berwick and Nina Katchadourian — see Snæbjörnsdóttir; Olly and Suzi; Davies; Coates; Currin and Rugoff.

The Encyclopaedia Isoptera: An encyclopaedia of the arts, sciences, literature and general information about termites

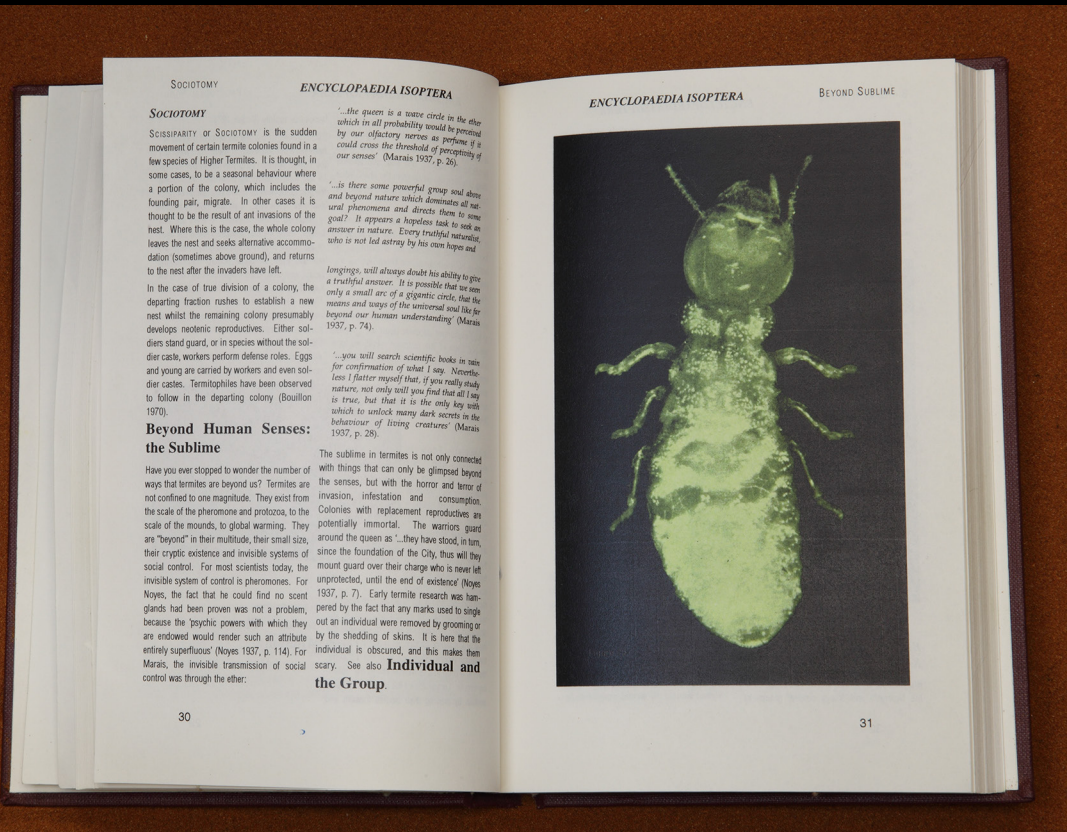


Figure 1 *Encyclopaedia Isoptera: An encyclopaedia of the arts, sciences, literature and general information about termites* (Phillips 1998)

Figure 1 shows the *Encyclopaedia*. It is 244 pages long. It also had a form as a website. It was made mostly between 1997-1998 when I was living in Britain and didn't have access to live termites. It was based on research via books, museum collections, interviews and academic papers². It contains basic biology. It contains a summary of how western culture's understanding of termites has changed over time. It contains special investigation of texts around the late nineteenth century and up to the Second World War, when a lot of books were written about termites (for example, those by Noyes; Snyder; Kofoid et al.; Marais; Hill; Maeterlinck). I inserted as much knowledge as I could find about non-western cultural understandings about termites. It contains a lot of trivia and anecdotes about termites, and sometimes these were drolly humorous (undermining the seriousness of the endeavour). In another time and place I might have made a different type of artwork, but I wanted to combine art and science, to make a measure of the entire world of termites in as many dimensions as possible. My interest was in channelling and conveying the sense of wonder that can be generated by 'unloved others' (Rose

² This was prior to academic databases, the Internet as we know it today, and prior to online Print On Demand publishers such as Blurb.

and van Dooren 'Introduction' 1). Using the format of an annotated image essay and alluding to the format of the *Encyclopaedia Isoptera*, I will now discuss some of my initial interests in termites and follow with how recent reflection on the artworks has brought issues around ethics and responsibility in environmental art back to the fore.

Eusociality

Eusocial species are multigenerational family groups in which the majority of individuals cooperate to aid relatively few reproductive members. Apart from a few other insects and shrimp species and two mole rat species, termites, ants, bees, and wasps form the majority of eusocial animals. Termites live in groups, build nests, and have different forms of workers: reproductives and soldiers. For some human writers, the control of workers and the inflexible structure of insect societies have been unappealing metaphors, but others have been more positive in seeing the metaphorical possibilities of cohabitation³. Below I will revisit this, but here I will draw a link to concepts of 'living with'. The social colony is full of bodies mingling and depending upon each other.

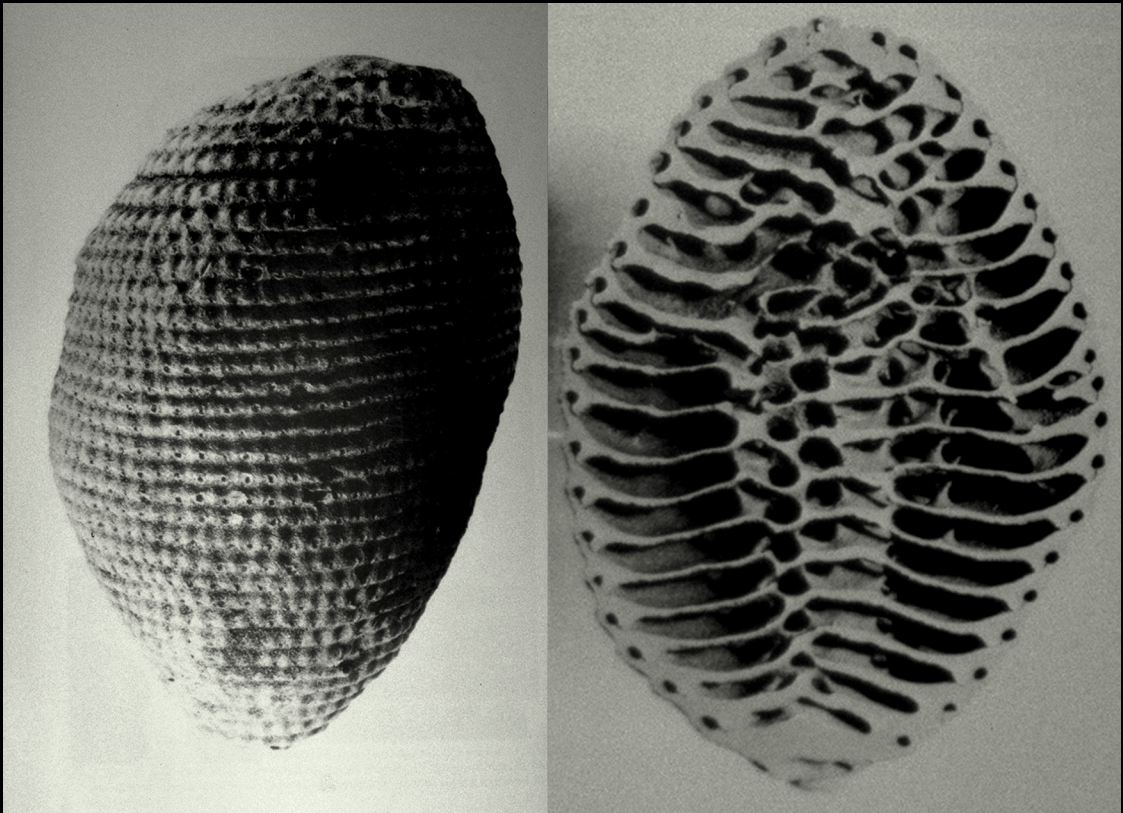


Figure 2 Two *Apicotermes* nests (Bouillon; Noirot)

³ See Hollingsworth *Poetics of the Hive: Insect Metaphor in Literature*, and Kosek 'Ecologies of Empire' for divergent interpretations.



Figure 3 *The Termite Graveyard* (Snyder)

Termite graveyard

Isoptera are not Hymenoptera. Termites are not bees, or ants, or wasps. The social insects are all richly endowed with metaphors, and none more so than the bee. Bee culture (human and nonhuman) has been richly metaphorised (and researched), leading to a range of contemporary art responses. Artists and bees have worked together to build artworks (designer control: prompted or scaffolded by the human — e.g. from Nigel Helyer's work to Pierre Huyghe's *Untilled* at Documenta13). Artists have explored multispecies ethnographies and made works responding to the serious issue of colony collapse disorder⁴. But evolutionarily, termites share more characteristics with cockroaches. They are consumers of detritus, of live trees and grass and dead wood. In *western* cultures, termites are not seen as beneficial (as pollinators, or providers of honey). They cause destruction⁵. They break down. They rapaciously consume. They lay waste. As detrital/wood feeders, they are at the heartwood of material being/material thinking.

Of course much of the attention in western cultures has been on the destructive nature of termites on wooden structures. Figure 3 shows an early form of testing of different wood types that were called termite graveyards. But one of the consequences of the use of anti-termite cyclodiene (organochlorine) insecticides (aldrin, dieldrin, chlordane and heptachlor) chemicals post Second World War up until 1995 (in Australia) has been their return as toxins in breast milk (Natural Resource Defence Council), subject to bioaccumulation. Western Culture's battle against the termite returns as ghosts in the flesh.

⁴ e.g. see the recent interdisciplinary work of Kosut and Moore; Moore and Kosut.

⁵

Some ancient termite knocked on wood,
And tasted it, and found it good,
And that is why your Cousin May
Fell through the parlour floor today.

Termite breath — termite farts

METHANE: When it was found that methane gas was an important contributor to global warming, studies were performed to determine the contribution of termites. Methane is produced as the organic matter collected by termites is broken down. Lower Termites with protozoa produce more methane than Mastotermitinae, soil feeders produce more than grass feeders, and rain forest termites account for more methane than species in other areas (Pearce). Early estimates were that termites produced as much as one fifth of the world's methane. However this has been discounted and it is now considered unlikely that termites are significant producers of methane (Martius et al.).

(Phillips Encyclopaedia Isoptera: An Encyclopaedia of the Arts, Sciences, Literature and General Information About Termites)

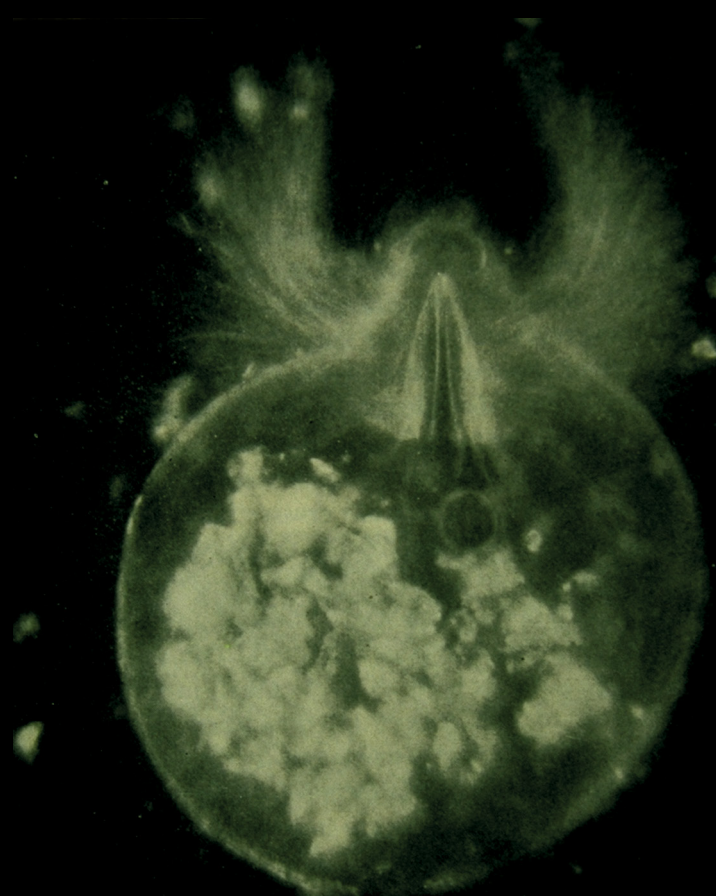


Figure 4 Celestial Termite protozoa (Snyder)

Studies conducted in 2010 by the US EPA (Environmental Protection Authority) estimated that termites emit 3.5% of the total world methane production. Whilst considerably smaller than other enteric ruminant sources (e.g. cattle), and dwarfed by anthropocentric sources, it is a reminder of the invisible world of biogeochemical processes: from the local to the global, and also of the Anthropocene world that humans (and nonhumans) now live in.

Termite guts

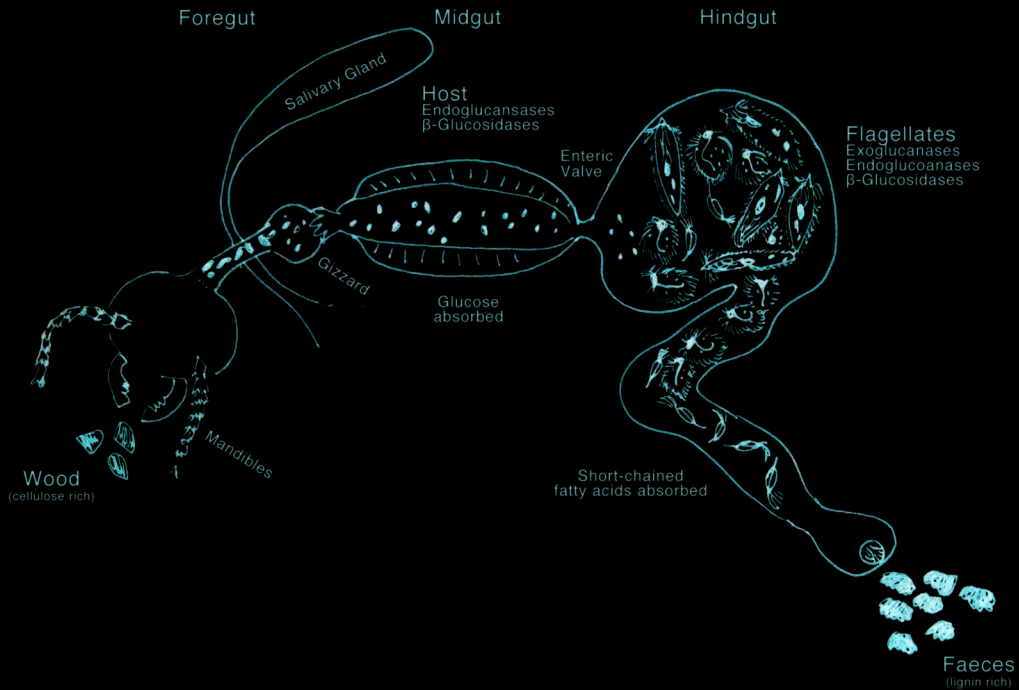


Figure 5 The dual-cellulolytic systems of termites (adapted from Brune).

A shrinking of scales here from global to inside a termite: her fore- and mid-gut are places of grinding and adding enzymes. The hindgut is a thriving community of symbiotic bacteria, archaea and specialised protozoa. According to the biologist Betty Dexter Dyer, who focuses on microbial evolution, each termite lineage has its own range of microbial symbionts forming a microscopic world that is:

exceptionally charismatic... It turns out that the microorganisms in the termite hind-guts are extravagantly, baroquely, morphologically exciting. They have different shapes and all kinds of different appendages ... It's absolutely teeming with microorganisms, like Grand Central Station at rush hour, with organisms going every which way.

(Wheaton Quarterly)

Early researchers were able to identify the importance of hind gut communities, particularly for lower termites. Since the 1990s, increasing research has been done on further symbioses including the bacteria that live *on* or *in* the protozoa⁶. What constitutes the 'surface' of termites themselves involves convolutions of inner and outer bodily surfaces.

Whilst science has extended our senses to encounter these communities that waste and transform wastes⁷, one can see today that there is still a sense of the wondrous unknown. This

⁶ 'a kind of obligate confederacy' of *Mixotricha paradoxa* thousands of spirochetes that enable it to swim plus at least three more symbionts, blurring of the boundary between the one and the many, the self and the Other (Haraway 'Cyborgs and Symbionts' xviii).

⁷ Dirty, fart, wasting and transforming waste.

glimpse into another world of diversity inside the termite body calls to mind Kathryn Yusoff's discussion of anonymous extinction – the loss of species before their discovery⁸ – as part of her argument for an ethics of the insensible:

While the making sensible of biotic subjects is a basic tenet of conservation practices and taxonomic orders, every attempt to do so simultaneously acknowledges the impossibility of such a project through the excess of 'insensible subjects' that always await description, nomination, or apprehension.

(Yusoff 'Insensible Worlds' 209)

Shit

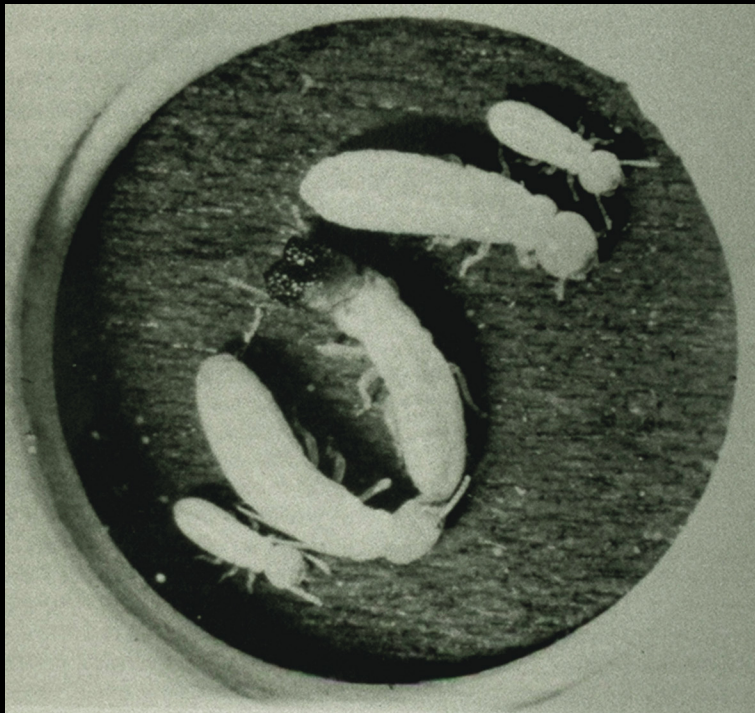


Figure 6 Proctodeal feeding (McMahan)

Termites are proctodeal feeders. They also use faeces (frass) and partially digested material to build all manner of structures:

8

So, naturalists observe, a flea
Has smaller fleas that on him prey;
And these have smaller still to bite 'em,
And so proceed ad infinitum.

Siphonaptera, a nursery rhyme that bears a strong resemblance to some lines in Jonathan Swift's *On Poetry: a Rhapsody* 1733

Termites eat shit. Termites build with shit. There is an obvious connection between the dirt and mud and earth of termites and the abject. There is also the contradiction that termites can build and retain a certain sort of order out of shit.

(Phillips *Encyclopaedia Isoptera: An Encyclopaedia of the Arts, Sciences, Literature and General Information About Termites*)

Termites are materially affective agents. They deal with (our) taboo surfaces and remind us of our limitations. The *Encyclopaedia* confirms that we are not termites through its inventory of differences such as this.

Exformation

So what is to become of the *Encyclopaedia Isoptera*? The *Encyclopaedia* described the multifaceted surfaces of termite worlds. At the same time it built up a multidisciplinary description of the surfaces of encounter, it ‘acknowledges the impossibility of such a project’ (Yusoff ‘Invisible Worlds’ 209). The *Encyclopaedia* is an archive and an *unarchive*. As much as I tried writing it, it escaped me: even in the days before online databases – at 244 pages – it was too small to contain all of termite science – let alone other things. As much as anything, I was trying to bring to the surface gaps in the archive and the ways in which creating a sensible universe was being undermined. Indeed, I got obsessed with the obsolete or trivial knowledge about termites that was disappearing. Looking back at archives, others have remarked that it is the trivia, the things accidentally preserved, the things that scrape through, that may become important in retrospect. The ‘poetics of archival exclusion’ point out that any attempt to determine in the archive what will be useful in the future is doomed (Greetham 19). Artist Agnieszka Kurant works with exformation or *explicitly* discarded information ‘the unknown unknowns of knowledge ... The notion of negative information’ (Russ 47). Termites eat books (amongst other things) and edit human knowledge, but humans *cannot* control what they edit out. I have 850 romance novels partially eaten by termites.

Queen in the biscuit tin

Noyes (writing in 1937, 122) once employed a Zulu witch-doctor to find the location of a queen termite. The witch doctor crawled around his camp for ten minutes with his head to the ground before selecting a location between the tents of his camp, and duly proclaiming that the termite would be found ‘the length of a hoe’s haft below.’ The queen termite was found at this point. The hole was carefully filled in and the queen carefully placed in a large biscuit tin with holes in the bottom the size of a two inch nail. The tin was covered in a damp sack and left. On the first night the queen was not touched. On the second night the termites found their way to the queen and had built a partial cell around her. She had been fed. On the next morning the conditions looked much the same. At dawn the next day the queen had vanished⁹.

(Phillips *Encyclopaedia Isoptera: An Encyclopaedia of the Arts, Sciences, Literature and General Information About Termites*)

⁹Time does not permit me to discuss here the links between termites and colonialism of which there are many. The *Encyclopaedia Isoptera* inventories numerous visual examples. For examples of negative insect metaphors used to promote political estrangements, see Hollingsworth, ‘The Force of the Entomological Other: Insects as Instruments of Intolerant Thought and Oppressive Action’.

Aeroplanes in sheds, airfields, air conditioner units, aluminium, ammunition boxes, Ancient Temples in Asia, animal fodder, apple trees, archaeological remains, asbestos, asparagus, asphalt, asters, avocados, aubergines, Australian Museum (in 1896), balls (composition billiards, football, croquet, golf, tennis), balsa wood, bamboo poles, banana, bandages, new banknotes inside strongboxes of the local bank of Diego Suarez, banyan tree, barges, bark, barley, barrels, baskets (of roots), bats (baseball and cricket bats), wet batteries containing sulphuric acid, beans, plant benches, bearers, ber (*Zizyphus mauritiana*), Bibles (covers and text) and other books (including books left on a counter overnight, Latin Grammar and Voyage of Sir Francis Drake), bitumen, wooden barrels of bitumen, blankets, blocks (toy), blueprints, bobbins, bonds, bones (eroded), boots, bougainvillea, bowls, boxes (box of candles on second story of a house, cardboard, carton, chalkboard boxes, boxes stored on concrete floors, grape boxes, wooden boxes containing currants from Greece, softwood, wood), bridges, brinjal, buildings, bungee jumps, cabbage, cables (underground -- electrical, railway, telephone or telegraph), electric cables controlling the locks of the Panama Canal, cacao, cacti, wooden camera, camphor, canoes, dugout canoes, canvas, carpets, carrots, packing cases (containing mica and scotch whiskey), cassava, castor, cauliflower, cave paintings, ceiling boards, cement, certificates from school and employment, charcoal, chests, chicken shelters, chiku (*Sapota acharis*), chilies, chrysanthemum, church, church organ, discarded cigarette box, citrus fruit, clocks, cloth and clothing (cotton, linen, jute, silk, rayon), clove, coat, coat hangers, cocoa, coconuts, coffins (including elaborate Chinese coffins in Fukien), coins (eroded when buried for safe keeping in China), commercial fruit-bearing trees (orchard trees, loquat, mulberry, passion fruit, grapevine, jack, cashew, lichee), composition board, composers desk at a printing works, conduits (including wooden conduit in municipal heating system, Hamburg), contents of a chest, cord, cork (cork from wine bottles, corks sealed with lead) and cork insulation board, cotton plants, cotton bales, cotton seed bales, cross-sticks from the game Pit's Mouth, organic cushioning material, dahlias, dam liners (plastic), date palms, deal board suspended above the ground between iron droppers, documents, doors, boarded doors, door jambs, drawing boards, dredges, drums (musical), wooden cable, wire and rope drums, floating dry-docks, the dung of herbivores (dry cow, horse, elephant), ebonite, electrical equipment, bases of electrical light fittings, hardwood electric light poles, electrotype blocks, fabric, fence posts, ferry boat plying on the Tweed River, fibreboard, file baskets, file boxes, or file cases, official files, school-children's pictures of film and football stars, fig trees, flooring boards, floors, flour, flowers, foam rubber, plant fruits, fruit piled on the ground, furniture (antique chest, beds, bedsteads, book-cases, bureaus, chairs, chests, cupboards, deck chairs, desks, iceboxes, office tables, sewing machine cabinet, softwood tables, stools, tables, tabletops, X-ray cabinets, washstands, etc.), furs, ganja (*Cannabis sativa*), geraniums, glass (eroded), goat enclosures, gourds (used as bubble pipes, beer cups, scoops, and as vessels for water, beer and rum), grains, gram, wooden gramophone, granaries, grasses, greenhouse of a palace near Vienna in the 19th century, grave poles, groundnuts, groundpea (*Voandzeia subterranea*), guava, guns (wood eaten and metal corroded in the Philippines, gun butts in Africa), haft of pick, handkerchiefs, handles (brush, carpenters tools, hammer, spades, of axes, adzes, hoes), hay, hides, horn, hose (cotton-jacketed rubber fire hose), human excrement, hunting bows, ice, insulation (sawdust in ice houses full of ice, rubber and tar cloth on wires and cables, and insulation or wallboard of wood pulp or fibre), insulator pegs, telephone insulator spindle, ivory elephant tusks (in storage in Africa, marred by grooving), joists, Australian hardwood floor joists, junks, jute plants, khaki tunic, knives, labels, granary and chicken ladders, lawns, lead, lead sheathed cables, wooden box inside a lead covered subterranean power cable, leather, leather boots, leaves, lemon trees, lichens, Lignum vitae from San Domingo, lime, lime mortar (between bricks in the foundations of buildings), linoleum, linotype blocks, logs (imported, of cattle kraals), Longwood (Napoleon's residence on St Helena), lumber (in piles), macadamia, maize, mango, manuscripts, matting, mattress, melons, metals (etched), some metal foils, microscope slides, millet plants, bulrush millet, Japanese Mint (*Mentha arvensis*), mohwa, paper money, mortar and pestles, mud huts, mulberry, mushrooms, mummies (in graves in Egypt), National Registration cards (proof of Zambian citizenship), native curio labelled as from 'New Guinea,' neem, newspapers, nuts, oak, oat, wooden oil derricks, oil palms, oil soaked soil and wood, old buildings, olives, motor omnibus, oranges, organs, paddy, village palisades, palms, palm matting, pamphlets, paper (writing and insulation, bundles of printing paper, quantity of paper stored in a damp cupboard, ancient manuscripts of Egyptian Antiquity, newspaper used as wrapping paper, writing-paper, paper prints on tins, and travelling trunks), parquetry floors, particle board, pasteboard, pawpaw, pecan, pepper trees, pigeon pea, pear trees, pews (in churches), phonographs and records, photographs, pianos, pictures and frames, picture rails, peppers (house and harbour), pigeon coop, pigsty, pineapple, plans (of vessels in navy yards), plants (alkaloid (tea) latex (rubber), resinous (pine) shade and ornamental, woody), wall plaster, plastic water pipes and sanitary fittings, plastic/synthetic fibres (plasticised polyvinyl chloride, low density polythene, polystyrene, polyurethane foams, cellulose esters -- but not nylon) plywood, Poinciana, poles, poles of dwelling houses and men's shelters, and those used as frames for reed mats enclosing homesteads, mooring posts and piles in Port Jackson and Venice, porridge stirrers, pomegranate, poppy, postbags previously held for some time in Mexico, postcards, potatoes (Irish and sweet), powder (both black and smokeless, stored in boxes), prints, props (mine), pulses, pumpkins, radios, railway cars (freight and passenger, in Hawaii and India), railway stations, rattles, razor blades corroded in Hawaii, redwood, things made of reed and grass, relics in museums, religious shrines, ribbon belting, rice, riverbanks, reservoir and dam walls, rollers (shade), the roofing of native dwellings, roots, ropes (coir, jute, moonj grass, sunn hemp), rose, rubber, rubber trees, rubbish tips, rugs, flour sacks, jute sacking, old sacks, saddlery and other leather goods, saguaro cactus, bagged salt, sansa, seeds, seemal, wooden sewerage pipes, sewing machines, shafts of spears and arrows, shell, shotgun shells, shelves, wooden ships, hoes (including half a dozen pairs of shoes, old shoes), sisal, wooden skiffs, skulls (eroded in graves), sleepers (railway and tramway), soil around plants sent to the Arnold Arboretum in Forest Hills, Massachusetts, sorghum, soursap, soya bean, spoons, stamps (postage and revenue), staves, staves of water tanks, stems, steps of a building, sticks (label), straw from unbaked bricks, stumps, sugar, sugar beet, sugarcane, suitcase, summer house, sunflowers, sunn-hemp, Swedish matchbox, tablecloths, tamarind, tape (paper and tennis court cloth), tar and tar paper (used in waterproofing), taro, tea, teak, teff, tents (Singapore and wooden and bamboo pegs), textiles, thatched grass roofs of houses, ties (railway), tile (artificial composition), timber, tin cans (in Singapore, containing kerosene oil, eroded so that oil leaked out), tomatoes, tortoise droppings, wooden towers, the town of Sri Hardgobindapur, toy (rag dog in Panama), traps of all kinds (termites also release the triggers), trunks, plant tubs, wooden plant tubs sent to the Royal Palace at Schoenbrunn near Vienna, twine, typewriters, underwear, UNIP membership cards (Zambia), vegetable fibres, vegetation (in various stages of decomposition, humification, or mineralisation), a selection of the churches, palaces, libraries and wooden bridges of Venice, verandahs, whole villages in Lower Egypt (later abandoned), vines, vineyards, violin case and violin, wall studs, wallboard, wallpaper, walls, rubber washers in fruit jars, water tanks, wharves, wheat crops, bagged wheat stored on earthen floor, willows, window frames, window shutters, plant wood (spring wood, autumn wood, dead dying or still living), wood attached to ornamental orchids, wooden items brought to South America by slaves from Africa (hypothesized), woodwork of a motorcar, wool, works of art, xylophones, yams, yarn and yeast cakes (in Texas).

Previous page Figure 7: Items of note eaten by termites, taken from various books about termites



Figure 8 African hand (Marais)

Termite queens in some species can live for up to 50 years or more and with supplementary reproductives generated from within, colonies are potentially immortal¹⁰: The warriors guard around the queen as ‘...they have stood, in turn, since the foundation of the City, thus will they mount guard over their charge who is never left unprotected, until the end of existence’ (Noyes 7).

Termites are not confined to one magnitude. They exist from the scale of the pheromone and protozoa, to the scale of the mounds, to global warming. Early termite research was hampered by the fact that any marks used to single out an individual were removed by grooming or by the shedding of skins. It is here that the individual is obscured, making them uncanny. They are ‘beyond’ in their multitude, their small size, blindness and their cryptic existence. Indeed because of their eusociality, there were distinct links to late 19th and early 20th century discussions around vitalism¹¹ (Huneman and Wolfe 149). Prior to the discovery of pheromones, there was no obvious method of transmissions through a colony, yet a colony was seen as having invisible systems of social control and was capable of sophisticated architectural constructions.

¹⁰ For commentary on insects and the feminine grotesque, see Sleight.

¹¹ Here I am referring to both the discredited scientific hypothesis that ‘living organisms are fundamentally different from non-living entities because they contain some non-physical element or are governed by different principles than are inanimate things’ (Bechtel and Richardson para 1) and the philosophical parallel that living things contain an immaterial soul that differentiates them from nonliving materials.

The soul of the white ant

Termites are closely linked to the concept of the superorganism: the colony acts as an organism and regulates itself at that scale. Individual organisms without a centralised brain or nervous system can behave cooperatively together as one larger organism (through acting as a quasi self-organising system). Evolution (selection) can be hypothesized to take place at the level of the group. As such the superorganism concept has a long and chequered history, at times problematic when this behaviour is interpreted as an analogical explanation for human behaviour or when vitalist explanations were employed. In the late 1960s and early 1970s there were considerably heated discussions when group selection was ‘widely rejected in the 1960s and other theoretical frameworks were developed to explain the evolution of altruism and cooperation in more individualistic terms’ (Wilson and Wilson 382). For Noyes, the fact that he could find no scent glands in a termite was not a problem because the ‘psychic powers with which they are endowed would render such an attribute entirely superfluous’ (Noyes 114). In his landmark ethological text *The Soul of the White Ant*, South African Eugene Marais (Marais, first published in Afrikaans in 1925) believed that scent emanated from the queen (and not from psychic emanations) but also that there was a ‘soul’ of the Whiteant – in the sense that the colony as a whole was an organised body.

Different Yardsticks



Figure 9 *Different Yardsticks* (Hill; Snyder)

In 1948 American biologist Snyder wrote:

...what is the controlling element in the colony? We can answer only: inherited instinct, or response to either internal or external stimuli, 'trophic' behaviour, or reaction tendencies. The spirit of the colony of ruling master mind is not an individual or even a caste but the collective instincts of a group of individuals and castes. If we attempt to go further among insects, we incur the danger of becoming anthropocentric, or of interpreting the reactions of lower animals in terms of experiences characteristic of human beings and imputing human motives and feelings to other animals in explaining observed behaviour. Insects have not manlike facilities; we cannot credit them with reasoning power, nor do they react in the same manner as does man. They see differently and their senses of touch, taste, and smell function quite differently... Man cannot measure all creation by his own yardstick!

(Snyder 7)

Evident here is an attitude that echoes the Nagel quotation that came a quarter of a century later. But within the structure of the *Encyclopaedia Isoptera* I 'sited' both quasi-vitalist/non science and orthodox western science possibilities together (and hence the doubling in Figure 9). The ironic, humorous and self-deprecating undertones in the *Encyclopaedia* should also be noted.

Looking back, I can recognise now how I was grappling with termites being simultaneously *mysterious* and *indifferent* to us: mysterious in the sense of having an 'interior' that is ultimately inaccessible (the animal that is represented but never captured in the *Encyclopaedia*); indifference in that the eternally active colonies carry on their lives independently of human observers. It is of benefit to reconsider indifference as something that humans should hold onto. If the nonhuman's difference *and* indifference is smothered, we can be accused of 'not giving animals their due in being different from us' (Broglia *Surface Encounters* 124). For contemporary art, this is an important ethical-aesthetic issue that artists such as Snæbjörnsdóttir and Wilson and Marcus Coates have directly addressed. Recognising indifference allows Others to continue their lives unconcerned with ours (that is, unheeding of human worlds). I share a concern for extending ethical engagement to not just the visible: but more widely to 'who or what 'appears' (in both the sense of 'manifesting itself' *and* 'seeming to matter') to share the world in ways that call forth our concern' (Smith 25, my italics). Both Neimanis and Yusoff discuss what it means to take into account not only those whom we feel affection and kinship for, but acknowledging the stranger's right to exist: a 'mode of relating that is indifferent to 'us' and that holds fast to that indifference' without any disavowal of responsibility (Yusoff, 'Insensible Worlds' 209)¹². Returning to 'I am not a termite', then the not is *not* not: by maintaining relationships with strangers, what it means to be *not* human is *not confined* in reference to the human. Mystery and indifference are welcomed at the same time. The condition of *not* being a termite (she or he) is being reshaped. The termite artworks are ways of examining this reshaping.

¹² Timothy Morton advances a related argument in naming Others as 'strange strangers' in the sense that there is an essential need to maintain uncanniness in any intimacy (Morton).

Building from Below¹³

One term missing from the *Encyclopaedia Isoptera* was stigmergy. I have no idea why I overlooked it in my research (it was coined in 1959 by French biologist Pierre-Paul Grassé). If one individual worker places a pellet of faeces (building material) in an area, it is likely that other workers will too. Each worker's efforts triggers and gives direction to its neighbour but no distinct teams are found.

Further evidence in support of our explanation of stigmergy in worker behaviour was provided by the observation of the individual conduct of builder workers. She revealed to us, without any doubt, that they do not build in constituting teams. The worker simply, individually and automatically respond to stimuli acting on it¹⁴.

(Grassé 65)

Complex forms can be generated from reinforcing simple behaviours; the surrounding environment influences subsequent behaviours. Stigmergy has therefore become a key concept in self organisation theory, leading to emergence behaviours and has been utilised in swarming theory and artificial intelligence programming¹⁵. More loosely, it has been used by the Occupy Movement to describe forms of 'human socialization in which coordination is achieved not by social negotiation or administration or consensus, but entirely by independent individual action against the background of a common social medium' (Carson para 2).

Figure 10 Termites travelling upwards in the evening and termites travelling downwards in the morning
(Bugnion)

13 A termite walks into a pub and pulls up a stool. Looks around and says, 'Is the bar tender here?'

14 Stigmergy acts at the level of the superorganism. 'Une autre preuve à l'appui de notre explication par la stigmergie du comportement bâtisseur a été fournie par l'observation de la conduite individuelle des ouvriers maçons. Elle nous a révélé, sans contestation possible, que ceux-ci ne bâtissent pas en constituant équipes. L'ouvrier se contente de répondre individuellement et automatiquement aux stimuli qui s'exercent sur lui.'

15 Metaphors that I won't specifically discuss here are those associated with ideas of swarming and distributed intelligence explored in programming, artificial intelligence and military technology, but see Kosek 'Ecologies of Empire'.

Even without sampling self-organisation theories, I reflect upon the impact of the *Encyclopaedia Isoptera* in retrospect. In his own world of film, critic Manny Farber remarked upon the difference between earnest termite art and the more spectacular white elephant Hollywood productions: ‘A peculiar fact about termite-tapeworm-fungus-moss art is that it goes always forward eating its own boundaries, and, like as not, leaves nothing in its path other than the signs of eager, industrious, unkempt activity’ (Farber 135, originally published in *Film Culture* in 1962). With hindsight I have an inkling the *Encyclopaedia Isoptera* was (or is) leading me in directions towards critical hope: a slender thread here, that is the possibility of an emancipatory condition.

Holobionts

Just recently in the sciences, Bordenstein & Theis set out a ten-point plan for evidence-based research into the hypotheses of holobionts and hologenomes. The latter are the total genetic identity of the holobiont: ‘animals and plants are no longer heralded as autonomous entities but rather as biomolecular networks composed of the host plus its associated microbes’ (Bordenstein and Theis para 1). Here we return to the guts of the termite: boundaries of what constitutes an organism and how it moves through the world as a genetic have again been questioned¹⁶.

We can envisage the holobiont as a collection of life that travels together but is still variable. These ideas may prove to have profound impact on the way biological research takes place. Bordenstein and Theis strongly argue that such holistic concepts are *not* a return to the superorganism, are testable and can sit within orthodox (reductionist) evolutionary theory: holding onto to a scientific understanding of evolution but expand the notion of what an organism might be. Taken in a wider context it would seem that such ideas reflect the general increase in the complexity of thinking required. More speculatively, it points us towards the possibility of how to think two things at once:

The test of a first-rate intelligence is the ability to hold two opposed ideas in mind at the same time and still retain the ability to function.

F. Scott Fitzgerald (‘The Crack-up’, first published in 1936, in Fitzgerald 1956 69)

Desert Romance

People who know me give me termite-eaten things. For this is how most of us discover termites. They are blind and cryptic, dry-hating organisms and humans are more likely to encounter the emptiness that they have created, the holes, than the animals themselves. Hence these haunted things. Ron Broglio discusses Coetzee’s *Lives of Animals*:

When Coetzee’s protagonist Elizabeth Costello is asked if life means less to animals than to humans, she retorts that animals do not respond to us in words but rather with gestures of the living flesh. Its argument from its flesh is the animal’s ‘whole being’.

(Broglio ‘Living Flesh’, 112)

16 Great fleas have little fleas upon their backs to bite ‘em,
And little fleas have lesser fleas, and so ad infinitum.
And the great fleas themselves, in turn, have greater fleas to go on,
While these again have greater still, and greater still, and so on.

For the termite, then this living flesh includes the mounds, nests and trails they create for their fragile bodies. The termite is seen, not through the hive, not through the forager, not through the product (honey) or service (pollination), but through these gestures, through the holes and absences, as a convoluted set of surfaces.



Figure 11. A sample of the remains of romance novels buried for one year in a desert sand dune (photo, the author)

On returning to Australia in 2000 I buried 850 romance novels in a desert sand dune. Not knowing what would happen, I returned a year later to see what remained. When I dug them up, everywhere there were stories of fictional love that had been consumed and fragmented. The termites had pulled apart the optimistic endings and waylaid the progress of the (mostly) heterosexual female narratives. The she-said he-said she-said romantic accounts fell away into inscrutable archipelagos of text. The firm boundaries of the novels' characters had dissolved into multiple subject positions. The human-to-human narratives of emotional commitment had been converted into 'love' by/of Others. The artwork represented a shift from the representational

and ironic-categorical (the *Encyclopaedia*) to non-representational and co-constitutive strategies. With its gaps and elisions, the scattering of tattered papers no longer signify 'like' to (wards) the animal but allow a glimpse into the unknowable depths of the Other. My false conceit (but fond hope) was/is that the termite's Umwelt might have been influenced by the consumed words and that this might be transmitted down through the generations. In truth the termites were probably indifferent to what words were eaten as two Umwelten collided¹⁷. Nevertheless I hold to both ideas at the same time.



Figure 12 *Tender Leavings* (detail, photo the author)

These fragments have continued to haunt me. The boxes of remains have followed me and fifteen years later they have recently been exhibited as the installation, *Tender Leavings* (Phillips *Tender Leavings*, exhibited in Wagga Wagga and Perth). In this work the fragmented texts are scattered over a black background. What the human viewer is left with on this sparse visual field is the liberated fragment: exformation, un-control, chance and disassembling. Contrast this with the *Encyclopaedia Isoptera* whose controlled form, despite the inclusion of minutiae and annotations, lacked direct co-creation with termites and could not cross the borders of different life forms in a materially affective way.

¹⁷The surface encounters of Broglio (*Surface Encounters*).

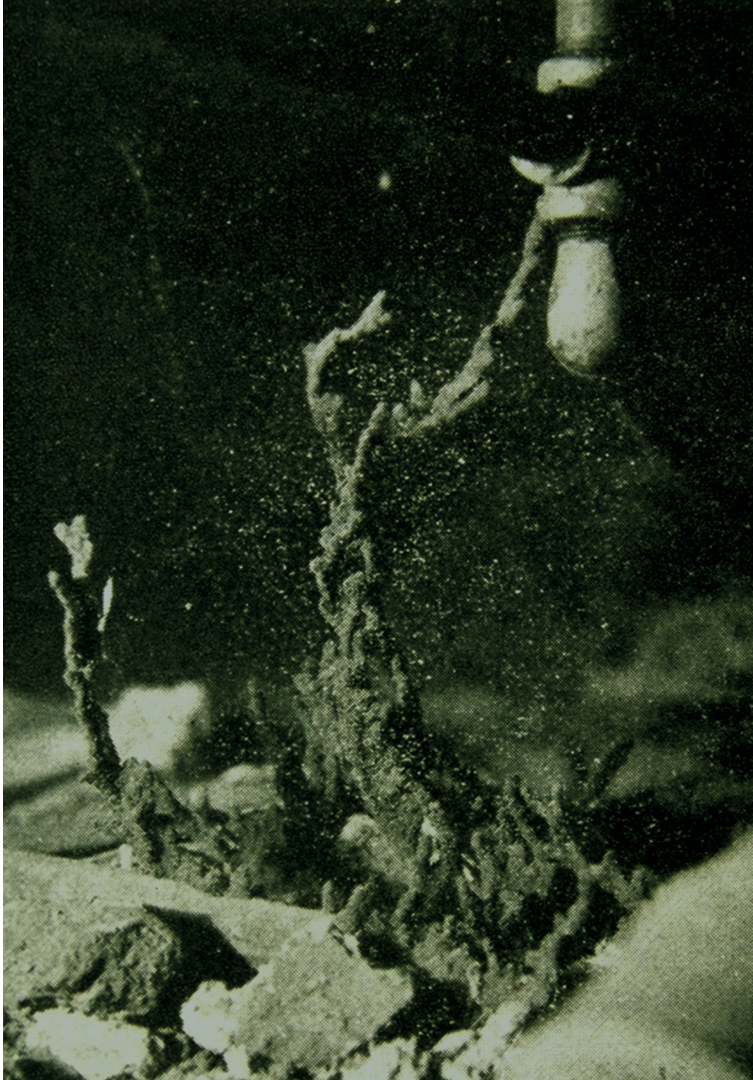


Figure 13 *Building from below* (Synder)

Termite futures — some thoughts

Returning to the statement ‘I am not a termite’ some realignment of this statement has happened since the time of Nagel¹⁸. Over the last forty years the general re-examination in the humanities of what constitutes ‘I’ and ‘Other’ has moved on from Cartesian dualism to reflect a more entangled existence¹⁹. The ‘I is not I’ as it is no longer a singular, coherent and oppositional ‘I’ and this parallels the questioning of a fixed nature/culture boundary. The position of the artist has changed:

18 It should be noted that Nagel was *not* interested in the Umwelt of the bat, his argument were against reductionist theories in the cognitive sciences that attempt to divide up phenomena of mind into units of inert matter and standard processes.

19 Of particular note in Karen Barad’s conception of intra-action (‘Posthumanist Performativity’) and the shift to a distributed agency. In other words, agency is composed of actions, reconfigurings, doings and beings that come about in the phenomena of intra-action.

...the environmental artist, no longer a 'visionary' or critic who holds a mirror to our follies (and thus stands outside, despite their rhetorical inclusion 'in' nature), but as caught up in an open-ended network of participants in a matter of concern.

(Potter n.p.)

We can see that Derrida's abyssal rupture is indeed a zone of shifting boundaries and of 'mutual emergence and transformation' (Boyd 9). Reflection upon the nature of the *Encyclopaedia Isoptera* and *Tender Leavings* leads to the question: is it possible to create a framework for working *forward* towards new worlds and new 'acts' in art and in human life more generally²⁰? Contrasting the accretion of information in the *Encyclopaedia Isoptera* with the fragmented materiality of the remains in *Tender Leavings*, I speculate *across* the shifting boundaries between termite and human worlds as follows:

Termites show how the boundaries between the inner and outer natures of an organism are fluid and how the effects of actions (human and nonhuman) cross scales and boundaries. Termites are both unlike humans and, on a day-to-day basis, indifferent to humans, but it is possible to have a 'strange kinship' (Neimanis): we can repeat one another, but not swallow up difference: 'things cohabiting, but retaining their heterogeneity' (Pierre Huyghe, quoted in Barikin and Lynn 10). In their holes and absences, termites are indifferent exformationists, creating new 'anticipatory archives'²¹. Largely invisible until it is too late, termites are specialists in hidden presence. The termites, and the termite artworks, preserve the inaccessibility of full and transparent comprehension of other *Umwelten*.

Termites show how unloved others can still be part of an enlarged framework of responsiveness²² and responsibility²³. The spheres of responsiveness have been extended to the insect Other. Responsibility entails holding fast to difference *and* indifference. This provides a framework for continuing responsibility in the face of environmental procrastination (for example, evident around climate change, see Phillips 'Zombie Environmentalism') and acts as a counterpoint to apocalyptic thinking. For conservationists and environmental artists alike, juggling response and responsibility, difference and indifference provides a way of responding to past losses *whilst proposing future options*. With regard to the state of the global and local environments, shallow love and grief are not enough. As argued by others²⁴ love that is only for charismatic species needs to be reconfigured into a wider regard. I also posit that lone grief (unaccompanied by complexity) brings stoppage, and an ethic that is *ongoing* is needed²⁵. Unlike grief, an *active* or critical *hope*²⁶, is a non-passive envisioning of *What-Is-Desired-But-Not-(Yet)-*

20 And hence be ethical-political-aesthetic.

21 See DeSilvey, Naylor and Sackett and the *Penguin Anticipatory Archive* described in Phillips 'Artistic Practices and Ecoaesthetics in Post-Sustainable Worlds.'

22 Barad defines responsibility as

...a relation always already integral to the world's ongoing intra-active becoming and not-becoming. It is an iterative (re)opening up to, an enabling of responsiveness. Not through the realisation of some existing possibility, but through the iterative reworking of im/possibility, an ongoing rupturing, a cross-cutting of topological reconfiguring of the space of responsibility (Barad 'Quantum Entanglements' 265).

23 See Yusoff 'Invisible Worlds'; Neimanis.

24 For example, the 'Unloved Others' themed issue of *Australian Humanities Review* edited by Rose and van Dooren.

25 Reflecting upon my reading of van Dooren and Rose, I hold that over-concentration on static mourning (being held in this state) is ultimately a stoppage, but I do agree that complex mourning might be useful.

26 cf. the writings of Paulo Freire.

Existing. The slow progress of the multitude of a termite colony is a hopeful example of ongoing movement in the face of paralysis.

As constant processors of vegetative material, the termite colony, when considered as a whole, potentially spans timescales greater than humans. Timeframes are enlarged to reflect biological ‘deep time’ (Yusoff ‘Geologic Life’ 780). In the long term humans need to not only to live with termites, but also find strategies to extend this sense of duration, building lasting intra-actions that have an enduring ethical framework. In light of biodiversity loss and climate change, Yusoff argues that we need engagements with nonhumans that are not only politico-ethical engagements but that, more urgently, can conceive forward into future generations—what Yusoff calls, ‘a call to be responsible beyond the present and presence’ (Yusoff ‘Invisible Worlds’ 212). Her framework can be utilised for a more ethical and engaged art practice: a need to *sense the insensible—with a continuing responsibility* (paralleling how in intra-actions, responsibility is distributed among the constitutive entities of a phenomena). This is a call for an expansion of the temporal duration as well as the spatial scale of ethical understanding. Responsibility continues on, below our feet and into the future.

Environmental art has particular dilemmas arising from tensions between the ethical, political and aesthetic domains. The contemporary art world’s economic cycle constantly requires new works. Linda Williams notes environmental art’s uncomfortable position in relation to the dominant forces of late capitalism (19). Environmental artists are faced with justifying the production of more art objects for consumption in an already materially crowded world. The art they produce has a relationship with pragmatic instrumentalism which is at odds with the history of modernist art (and art for art’s sake). Because of its close relationship with activism and ‘being overtly engaged with both scientific and political ecology,’ environmental art is a minor genre in the contemporary artworld as a whole (Boettger 107). Furthermore, environmental art has, in the past, suffered from its philosophical reliance on outdated concepts such as a balance of nature²⁷.

But termites work with creating *and* removing materials. Kontturi reminds us that ethics should be ‘attentive to the material becoming of art’ (59). Termites consume wastes and transform them. They have created new bodies of holes and substances: we must be attentive to both the left remains and the Termite-Ma²⁸. Termites build slowly. This parallels with slow art practice (e.g. slow art collective) and aspects of what is called socially engaged art or ‘art as social practice’ (see for example, Thompson), that call for slower, sustained co-constituted engagements (albeit the majority of examples are only with other humans). Furthermore, as new environmental artworks are constructed and perceived as ‘both human and non-human – its milieu is at once socio-technical, material, political, poetic, and aesthetic. . .’ (Potter n.p.), they are necessarily political: ‘because of their material ways, they suggest new ways of thinking and being that contest our conventional views, and as such, direct us towards a future’ (Kontturi 59).

²⁷ See Kricher, Simus for the ‘new ecology’ and Anonymous Artist (who has made both good and bad environmental art).

²⁸ Ma is a concept in Japanese aesthetics: ‘the observer must observe all aspects of the surroundings and feel the beauty that lies in the spaces that are unoccupied by material objects or living things. It cannot be captured and identified by a stationary moment’ (Prusinski 29).

Termites are blind builders *from below*. Out of decay, new structures are built upwards. For humans, small social actions from below can be combined to create larger social effects. And as actions take place, they shape following actions. Even something as alien and non-charismatic as termites, whose ecological functions are for the most part antithetical to human structures, can still shape human worlds. This presents an example of how to maintain a critical aesthetic position of canny, creeping dissent, from below. I employ the term groundswell here for that sense of growing, self-organised social movement coming from underneath: the very floorboards are being eaten. As Rebecca Solnit reminds us, change seldom comes from the centre stage, but more often from within the darkness of the attending audience (Solnit 34).

Conclusion

I have described how the *Encyclopaedia Isoptera* showed the *difference* of termites (that I am *not* a termite). But sitting at the edge of knowledge, the *Encyclopaedia* was an anticipatory archive in the sense that, despite its limitations (born of when it was made), it pointed towards unfreezing the ethical stalemate of environmental art – that mix of despair for a lost past and a poorly conceptualised activism – that beds uneasily with mainstream contemporary art (Anonymous Artist (who has made both good and bad environmental art)). I have described how *Tender Leavings* more successfully mirrored the re-envisioning of the Subject since the time of Nagel's paper, and how co-creation of fragments has brought to the fore the conditions of entanglement, being comfortable with strangeness (that the not is *not* not), and the necessity of holding onto mystery and indifference at the same time.

Here in this essay I have attempted to write with– and shaped by– termites. Reflecting upon my creative research, 'living with' termites points towards a freeing up of the uncritical earnestness that can sometimes hamper environmental art (Phillips 'Artistic Practices and Ecoaesthetics in Post-Sustainable Worlds'). It is possible to open up environmental art to different emotional registers, rather than just mourning. These include curiosity and wonder, love, hope and attentiveness to strange kin. Termites are unsettlers and transformers, turning ruptures into potentials; and when these attributes are taken on by humans (absorbed and enacted upon in deliberately creative and visionary ways²⁹) as I have experimented with here, the termite acts can help envision/reconfigure new (and ongoing) 'worlds' that were impossible to conceive of yesterday³⁰. By making use of affective materialities and active and socially animating aesthetic acts, anticipatory assemblages can unfold.

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²⁹ Having too many possessions in my life, I will be getting termites to eat them.

³⁰ 'im/possibilities are reconfigured and reconfiguring with each intra-action' (Barad 'Quantum Entanglements' 268).

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