

The Menagerie of the Senses

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The Care of the Senses

What is the right word to describe our relationship to our senses? Do I *have* my senses, as I have qualities or faculties? Do I *use* them, as one uses a tool or accessory? Am I *in* my senses (for I might sometimes be said to be out of them)? Or could it be that I simply *am* my senses? Perhaps one will give a different answer depending on which sense one is talking about, and at different times in talking about the same sense.

My concern in this paper will not be with our sensory experience in itself. Instead I will be trying to explore our relationship to our senses. So I will be asking, not about the nature or quality of the experience delivered by the senses, but rather about how we think of our senses, the ideas and feelings we have and the relations we form with them. I will be asking, in short, what sense do we make of our senses?

We can say from the outset that we never have a passive or client relationship to our senses. What our senses are, and the kind of existence we have through them, depends on their use and exercise. More specifically, it depends upon our care or management, or, to borrow a French and obsolete English word, our ‘*menage*’, of them. One must ‘have a care’ for one’s senses.

Broadly, there have been two forms in which we take care of the senses. One stresses the dangers of surrendering to or being inundated in sensuality, and consequently emphasises the need for the discipline or regulation of the senses. The history of Christian thought is particularly rich in examples of this need to leash or temper the senses, though it is to be found in classical writing too. In the most extreme forms of this attitude, the senses are to be mortified, beaten down or denied altogether.

Such attitudes must rest on the assumption that we have access to something, within us or abroad, that is either nonsensory, or sufficiently supersensory to be able to perform this vigilant office. The medieval belief in a succession of different souls or faculties, leading from the vegetable through to the animal and then the rational, is one example of this belief.

Many cultures have a theory that there is in us some distinct capacity or special muscle of the mind that enables us to form ideas and judgements about the things we sense. But how do you sense that your senses might be getting the better of you? The passionate voluptuousness into which most forms of self-denial can develop might seem to cast doubt on the belief in a nonsensory engine or regulator of the senses. Michel Serres powerfully suggests the sensory nature of all self-reflection, emphasising that, for evolved primates, the act of reflection may be inseparable from the act of touching, and that the soul itself may be considered a mode of self-touching. Where is the self, he asks? Not in the fabled, fine and private places of the philosophers or mystics – the pineal gland, the third eye – but wherever, and whenever, we make contact with, lay hands on ourselves, bringing together our most exquisitely sensitive zones, hand to hand, lip to lip, fingertip to brow. ‘Without this folding-over’, he writes, this contact of the self with itself, there would be no internal sense, no body of one’s own, or even less coenesthesia, no body image, we would live without consciousness, featureless, on the point of vanishing’ (Serres 1998, 20).

If the senses are there to be watched over, they are also themselves thought of as ways of keeping watch. A traditional medieval conception of the soul was as a city, of which the five senses formed the gateways. The senses, of which one needed to have a care, were also themselves caretakers or curators of the soul. ‘The *World* is the *Theefe*, which (like *Absolon*) *steales away the heart*. This cunningly insinuates into thy brest, beguiling the Watch or Guard, which are thy *senses*’ wrote one seventeenth-century divine (Adams 1615, 13).

Another tradition emphasises the need to educate the senses, to refine them, or extend their powers, sometimes by a removal of all restrictions, as in Rimbaud’s efforts at a ‘*dérèglement de tous les sens*’, sometimes by refinement and selective intensification. The two traditions – of limitation and intensification – can converge. A certain tradition of mystical contemplation emphasises the way through to the divine through the intensification of the senses. Another version of this form of sensory education is to be found in aesthetic theory which, from the eighteenth century onwards, typically depends either upon the promotion of one sense over others – the eighteenth-century concept of ‘taste’, for example – or the suppression of the grosser senses in order to being about greater, more refined powers of sensibility. Intriguingly, pornography – often held to be the opposite of the aesthetic – also creates intensification through narrowing or restriction: as Freud remarks, no desire without inhibition.

Both regulation and intensification require an active, productive, self-conscious care and management of the senses. This idea of management is

the primary meaning of the word ‘menagerie’ with and upon which I will be working, and was used in this primary sense in English up until the middle of the seventeenth century; the author of a history of Scotland published in around 1648 praised James Douglas, Earl of Morton for his ‘good husbandrie, and the good use he made of his parsimonie and menagerie’ (Hume 1648, 301). However, since the seventeenth century, the word ‘menagerie’ has also signified a particular form of household management, namely the care and upkeep of animals. Collections of animals were maintained by emperors and rich aristocrats in 2nd and 3rd century Rome, and Charlemagne had a menagerie, which included an elephant sent to him as a gift from Haroun-el-Raschid in Baghdad.

I suggest that the two meanings of the word ‘menagerie’, management in general, and the collection and exhibition of animals, come together in a certain strain of thinking about the senses. Animals play an indispensable, though often ignored, part in our care of the senses. While our senses mediate the world to us, animals mediate our senses to us; animals are thus the mediators of the mediation.

Zoosensoriality

In early Christian conception, the senses were commonly regarded as the lower or bestial component of man. Since classical times, it had been very common to range the senses in a hierarchy. Almost always, vision is, as we say, in poll position (writers from Aristotle onwards were fond of pointing out how apt it is that the eyes should be the highest organs of sense in an upright man), followed by hearing, the channel for understanding and obedience (a word that derives from *audire*). Thereafter, the order can vary, but the traditional hierarchy has smell in the middle, followed by taste and touch. The logic behind this ranking seems to be that the senses which can act at a distance are admired and honoured over the senses which require closer degrees of contact. For us, smell has probably declined in importance because of the deodorisation of the soul and the animalisation of smell that has steadily taken place in the chilly, inodorous cultures of the North. When, in Shakespeare’s *King Lear*, the blinded Gloucester is put out of doors, his reduction to the status of animal is emphasised by Regan’s savage taunt ‘let him smell/His way to Dover’ (*King Lear*, III.viii, 96-7). For Freud, smell signifies in particular the bestiality of sexual desire, centred on the close proximity of genitality and excrement, from which man distances and divides himself by standing erect, lifting his nostrils away from the rich fug of sexual odour. For earlier periods, smell could have a nobler signification, precisely because it could operate at a distance, and could thus seem subtle and spiritual (a word that has breath in it). This valuation of smell survives

in some areas – in religious ritual and aromatherapeutic fantasy, for example. In many of the episodes and anecdotes of supernatural experience collected in Edmund Gurney's *Phantasms of the Living* (1886), the death of a loved one far away is signalled by the onset of a sudden, distinguishing fragrance.

In the late medieval and early modern periods, animals had more particular applications to the senses. For, although the senses as such were thought of as animal in general, it was widely acknowledged that humans were outdone by particular animals in all their sensory powers. Nocturnal vision provides one example; *The Book of the Bee*, a work of Nestorian sacred history written in about A.D. 1222 by a Syrian bishop named Solomon (Shelêmôn), explains that certain animals' capacity to see at night is due to the fact that they were created on Friday evening, when it was dark (Budge 1886, 15). As Louise Vinge has shown in admirable detail, certain animals were conventionally associated with particular senses in the medieval and early modern worlds (Vinge 1975, 47-59). Thomas de Cantimpré's *Liber de naturis rerum* (1236-50) instances some of these traditional associations in naming animals who are superior to humans in each of the senses:

Nos aper auditu; linx visu, symia gustu
Vultur odoratu precellit aranea tactu

In hearing by the boar; in sight by the lynx; in taste by the ape;
In smell by the vulture; and in touch by the spider, we are outdone
(quoted, Vinge, 51)

A series of engravings by Georg Pencz, from the early sixteenth century, shows the persistence of this typology. Other animals were recruited in different renderings of the series, for example in a series of engravings by Raphael Sadler, after Martin de Vos, in which the eagle symbolises sight, the hart, or stag the powers of hearing, the dog the powers of smell, and the tortoise and the parakeet tactile sensitivity. Many of these illustrations show the refinement of the animal powers in the exercise of human arts or capacities. Thus Pencz's monkey eats an apple with its hands, while the woman in the illustration employs a fork, and the lynx stares at the woman who is looking away from it up at the stars. The difference seems to be that while animals merely employ their senses, human beings construct theirs, as and through artefacts, or construct themselves through them.

The most famous animal representations of the senses are to be found in a Franco-Flemish series of six tapestries sometimes known as *The Lady and the Unicorn*, which were produced between 1480 and 1500, and are now held in the Musée de Cluny. Animals here are used to fix in place a series of conventional representations of the senses. In *The Sense of Taste*, the lady

takes a sweetmeat or something from a bowl, while a parakeet on her left hand and a monkey at her feet share her gustatory pleasure. In the tapestry depicting the sense of hearing, a little dog in the foreground listens attentively to the music emanating from the organ the lady is playing. In *The Sense of Smell*, another monkey holds what is perhaps a piece of fruit to its nose, inviting us to read the lady's peeling of the nut, or candy as a releasing of odour. In *The Sense of Sight*, the lady holds up a mirror for her attendant unicorn. The emblematic animal here is again the lynx, which was reputed to have sharp sight, partly because of the optical suggestions of the ocelli that spot its skin.

As Michel Serres suggests in his reading of this series of tapestries in his *Les Cinq sens*, all the senses have their proper object or symbolising animal – all, that is, apart from the sense of touch. In the tapestry representing touch, the lady herself touches the horn of the unicorn, thereby acting as a bridge between the world of (albeit fabulous) nature and the world of signs (the standard she holds has the crest of the Le Viste family, a member of which commissioned the series). It seems as though the sense of touch – which is anyway to the fore in a woven work such as a tapestry – is being presented as that in which all the other senses merge, and out of which they emerge. The sense of touch predominates again in the sixth tapestry in the series, which seems to emblematises the half-open, half-closed condition of the senses, in the two images of the half-open box and the half-open tent. The two flaps of the latter are being held upon by the lion and unicorn. If the tent represents the interiority of the soul that is scooped out behind or within sensory perception, it seems telling that it should be two animals who hold open the way to this secret place of absolute desire.

Up until the seventeenth century, it was common to assert that man's superiority lay, if anywhere, in his sense of touch. Pierre Charron, a friend of Montaigne who wrote at the turn of the seventeenth century, makes this point in an interesting way in his exposition of human and animal sensory rankings:

In the Senses of Nature the beasts have as well part, as we, and sometimes excell us: for some have their hearing more quicke than man, some their sight, others their smell, others their taste: and it is held, that in the sense of Hearing, the Hart excelleth all others; of Sight, the Eagle; of Smell, the Dogge; of Taste, the Ape; of Feeling, the Tortuis: neverthelesse, the preheminance of that sense of Touch is given unto man, which of all the rest is the most brutish. Now if the Senses are the meanes to attaine unto knowledge, and that beasts have a part therein, yea sometimes the better part, why should not they have knowledge? (Charron 1608, 41)

Here it seems paradoxical that the sense in which man is most preeminent, that most distinguishes the human, should also be the one that is said to be the most brutish. This reflects the ambivalence attaching to touch itself. On the one hand, touch is the most elementary of the senses, since the thing touched must always be in immediate contact with the toucher. The association with sexuality gives touch animal associations, too. Many systems of evolutionary thinking beyond the seventeenth century continue to see touch as the most primitive sense, possessed by the protozoon before other forms of sensitivity and responsiveness to environment come about. In the early nineteenth century, the German Naturphilosoph Lorenz Oken (1847) developed an entire scheme of evolution in which he divided the animal kingdom up on the basis of which particular organs predominated in their constitution; most primitive of all were the snails, worms and arthropods, in whom touch performs the office of the subtler senses developed in more complex creatures. Oken proposed a similar typology for different kinds of human. As one might glumly predict, what Oken calls 'eye-man' predominates in Europe, while 'skin-man' predominates among Africans.

And yet, on the other hand, touch is also the most diffused of the senses, since there is no single, located organ of touch (touch seems to migrate from place to place across and even inside the body) and because all the other senses have at one time or another been construed as a mode of touch, whether direct or indirect. (Determined to reduce the senses to four, in order to match them up with the four elements, Aristotle decided that taste was in fact simply a specialised form of touch – something of which I am always reminded when I see the name of that fizzy drink called Tango.)

Man has the capacity to reform and refine the animal senses. In his *Nosce Teipsum* (1599), a long poem on the immortality of the soul, Sir John Davies also represented touch as the most extensive sense, which binds together the human frame. Though he does not make the analogy explicit, the spider to which he compares the human sense of touch appears to be the soul (we might note that the spider, unlike the other creatures represented in traditional illustrations, exercises touch at a distance, by means of the remote sensing technology furnished by its web.):

Lastly, the feeling power, which is Life's root,
Through every living part it selfe doth shed,
By sinewes, which extend from head to foot,
And like a net, all ore the body spred.

Much like a subtile spider, which doth sit

In middle of her web, which spreadeth wide:
 If ought doe touch the utmost thred of it,
 Shee feeles it instantly on every side. (Davies 1869, 1.109)

The awareness of the superiority of certain animal senses encourages the imaginative recruitment of animals to augment or transform human powers. Most early books on the nature of animals are full of beliefs about the virtues or powers that they possess, and that may be appropriated by various means. The magical book known as *The Book of Secrets*, attributed to Albertus Magnus, has many recipes for acquiring such powers and effects. Included among them is the application of a camel's blood, sewn into the skin of a spotted lizard, to produce in the user the hallucination 'that he is a gyant, & that hys head is in heaven' (Albertus Magnus 1565, sig E3^v). Similarly, 'yf a lantern anointed with ye bloud of it, be lyghtenned, it shall seeme that all men standynge aboute have Camelles headdes'. [sig E3^v-4^r.] We learn too that if the heart of a weasel, 'be eaten yet quaking it meketh a man to know thinges to come' [sig. E5^v.]

The emblematic tradition for the most part gives animals fixed significations. But one can find traces within it of more mobile forms of imagining. Often this attaches to imaginary animals. Bartholomaeus Anglicus remarks in his *De proprietatibus rerum* on the legendary powers of smell possessed by the gryphon, which he then immediately takes as a token of the power of intuition to move from outward to spiritual things

Also smelling is in Fowles, and specially in Griphons, the which, as saith *Ambrose in Exameron*, and *Isidore hb. 12. cap. 6.* have so quicke smell, that they smell carrion over or beyond the sea. In these & other works and conditions of kinde, men may wonder of the wisdom of God, that maketh us by these and by other such things to knowe somewhat and to understande: how by these things that be felt and materiall, we shall excite the inner dooing of our heart to knowe by lyttle and little the spirituall things that be above our common intelligence: and that to doe in this work is principally my end and mine intent. And this that is said of the smelling shall suffice. (Anglicus 1582, f. 20^v)

So we have found in these representations of animal senses the paradox that, while signifying the lowliness and bestiality of the senses in human beings, the senses of animals could also signify higher values and aspirations. In no creature is this paradox more marked than in the fly.

Fly-sight

That creatures formed from the dissolution of bodies, including human bodies, and from putrefaction, as lizards, frogs and flies were thought to be, should themselves have sense-capacities, seemed to many to be almost an intolerable thought. The sensory powers of the fly represented a particular scandal. Early Christian writers used the light-loving fly to contrast the merely corporeal apprehension of the light with the apprehension of the higher light of the mind. It became a traditional consolation for those losing their sight to be told that they should hold in contempt a bodily faculty that they had in common with mere flies. Didymus the Blind of Alexandria, a learned man of the fourth century, confessed to St Anthony that the loss of his sight at the age of four had been a grief to him. The saint replied that 'he wondered how a wise man could regret the loss of that which he had in common with ants and flies and gnats, and not rather rejoice that he possessed a spiritual sight like that of the saints and Apostles' (*Catholic Encyclopaedia*, 1907-12, 4.784). St Jerome offered the same brisk buck-up to a blind priest in Spain who had written to him of his spiritual difficulties:

You should not grieve that you are destitute of those bodily eyes which ants, flies, and creeping things have as well as men; rather you should rejoice that you possess that eye of which it is said in the Song of Songs, "Thou hast ravished my heart, my sister, my spouse; thou hast ravished my heart with one of thine eyes." (Jerome 1989, 157)

Daniel Bartoli sees the eye of the lizard or the fly as emblematising a kind of mortalising look. Here, the thought of what we must look like in the eye of a fly humbles and degrades human self-regard:

For whoever looks at the things that happen in front of him, with only those eyes which, like us, lizards and flies have, a corpse is a horrible spectacle and fearful to behold. What is now a corpse could a little earlier listen and look with a good and lively air and appearance, make merry and enjoy this world, just as though all his body was his alone, practically many lives and souls in one, so many senses had they, that life and that soul. Now each of these senses is a cadaver. The eyes are dead to light, the ears dead to sound, the tongue dead to words, the heart feels no affection, the face cannot express it, all is horror, smell, silence and squalor, so that a friend can hardly stand to look at him. (Bartoli 1677, 500, quoted in Camporesi 1994, 105)

The microscope was the single most important influence in transforming the deprecation of what were thought to be imperfect and accidental creatures into confirmations of the extent and orderliness of divine design.

Many early observers through the microscope reported their amazed delight at the orderliness and regularity to be found in creatures too tiny to be seen with the naked eye. Henry Baker had a particular fondness for flies, the beauty and variety of which makes them even more fitted to connect the realms of the very small and the infinitely great:

It would be endless to enumerate the different Sorts of *Flies*, which may continually be met with in the Meadows, Woods and Gardens; and impossible to describe their various Plumes and Decorations, surpassing all the Magnificence and Luxury of Dress in the Courts of the greatest Princes. Every curious Observer will find them out himself, and, with Amazement and Adoration, lift up his eyes from the *Creature* to the CREATOR. (Baker, 1742, 221)

If the thought of the fly sometimes elevates the mind to thoughts of the Almighty, it can also be recruited to figure man's (sometimes rather grandiose) sense of his own cosmic insignificance. In his *Satyricon*, Petronius puts into the mouth of Seleucus, newly arrived from the funeral of a friend, the reflection: 'how we bladders of wind strut about. We are meaner than flies: flies have their virtues, we are nothing but bubbles' (Petronius 1961, 69). The Czech poet Miroslav Holub makes the fly the vehicle for a rather different meditation on the intertwining of incompatible perspectives. Flies accompany everything that occurs in the human world, their small, repetitive cycles of life and death carrying on insistently and indifferently amid the grand and blaring events of history:

She sat on a willow trunk
watching
part of the battle of Crécy,
the shouts,
the gasps,
the groans,
the tramping and the tumbling.

During the fourteenth charge
of the French cavalry
she mated
with a brown-eyed male fly
from Vadincourt.

She rubbed her legs together
as she sat on a disembowelled horse
meditating
on the immortality of flies.

With relief she alighted
 on the blue tongue
 of the Duke of Clervaux. (1987, 52)

The volatility of scale and switch of perspective from the lower to the upper world are particularly marked in considerations of flies, partly because of the fascination provoked by the fly's eye. The compound eye of the fly is actually rather an ordinary affair, on the insect scale. The fly's eye consists only of 4000 separate ommatidia, or light/dark sensors, compared to the dragonfly, which can have up to 30,000. These have also been called lenses, facets and, prettily, 'eye-pearls' (Hooke 1665, 178). But, perhaps because it is the most familiar and frequently seen of the insects, it is the fly's eye that is emblematic of the mysteriousness of entomological vision. Many writers have speculated about how and what a fly sees. Robert Hooke sets the tone for these accounts, when describing the apparent largeness of view of the fly:

in each of these Hemispheres, I have been able to discover a Landscape of those things which lay before my window, one thing of which was a large Tree, whose trunk and top I could plainly discover, as I could also the parts of my window, and my hand and fingers, if I held it between the Window and the Object. (Hooke 1665, 175-6)

Hooke follows others in seeing the finger of the Almighty in the fashioning of the eye of the fly:

we need not doubt, but that there may be as much curiosity of contrivance and structure in every one of these Pearls, as in the eye of a Whale or Elephant, and the almighty's *Fiat* could as easily cause the existence of the one as the other; and as one day and a thousand years are the same with him, so may one eye and ten thousand. (Hooke 1665, 180)

There is a curious effect of perspective inversion in the case of the fly, since not only do human beings see a great deal of flies, flies reciprocally see a great deal of us, and in our most intimate circumstances. In an ironic encomium in praise of the fly, the Renaissance humanist writer Leon Battista Alberti refers to a story told by Pliny, Cicero, Strabo and others about the amazing powers of vision possessed by a particular lookout during the Punic wars in order to draw a lesson about the even greater optical powers of the fly: 'If, as they say, a man, whose eyes occupy only a twentieth of the area of his head, could see from Piraeus the fleet issuing from the

port of Carthage, what can the fly not see, with its enormous eyes, what can escape its curiosity?’ (Alberti 1980, 184).

The belief in the fly’s superlative powers of vision probably lies behind the belief that flies provide useful medicine or prophylactics against eye complaints. Pliny reports that the Roman Consul Mucianus carried a fly sewn into a linen pouch to protect him against eye diseases. (Pliny 1938-63, XXVIII.5, Vol 8, p. 23). Galen’s suggestion that flies beaten up with egg-yolk to form a plaster are good for maladies of the eyes was still being repeated in the 1740s (Lesser 1742, 2.188-9). The fly’s rapidity of flight and speed of reaction to movement makes it easy to regard it as a living eye.

And yet flies are also sometimes thought to be distinguished by defective vision. Aristotle thought that the insect he knew as the *muops*, or the gad-fly, died of dropsy in its eyes. (Aristotle 1910, Vol 4, V.20, 553^a). Pliny said the same thing of the *tabanus*, or stinging horse-fly. (Pliny 1938-63, XI, 43, Vol 3 (1940), p. 507). Richard Braithwaite affirms something similar of the gnat in 1634: ‘Being bred in the marshes, hee is much subiect to rewmes and grievous defluxions of the eyes, and therefore cannot abide a smoakie roome’ (Braithwaite 1634, sig F1^v). So, in magnifying the fly’s optical powers, Alberti may actually be teasing his readers with the common knowledge that in fact the fly’s vision, though immensely acute, is in fact limited in range and detail. Indeed, the fly might actually be thought to be myopic rather than far-sighted (though it is tempting to believe that Aristotle’s *muops* might have exerted an influence on the word myopia, the latter in fact has a different etymology). D’Arcy Wentworth Thompson, who, as well as being a biologist and mathematician, was also the translator of Aristotle’s *History of Animals*, argued that there was a link between these belief in the blindness of flies and the game Blind-Man’s-Buff, which is known in Greek as *muia chalke* or ‘The Brazen Fly’. Thompson suggests that in the game ‘[t]he fly is the fierce and angry Gad-fly (*Tabanus*), whose incursion into a field sets the cattle wild with fear; and the one player is “the fly,” and the rest are the cattle romping around’, and provides as evidence of this tradition that fact that the fly named by Linnaeus *Tabanus caecutiens* is called ‘blind-knagg’ in Sweden and ‘muia ceca’ in Italy, where, he claims this same phrase is used to name Blind Man’s Buff (Thompson 1923, 56). The association between flies and imperfect sight is also evidenced in the name of the condition known as ‘muscae volitantes’ (flying flies), caused by cell strands or fragments in the vitreous humour of the eye, in which the sufferer sees dancing spots or flecks.

The powers and limits of vision are a leading theme in William Golding’s *Lord of the Flies*, in which the struggle for possession of the magnifying power of Piggy’s spectacles is central to the text. Piggy’s glasses represent

not just reason, but reach, the possibility of operating at long range, in space and time, and the power of thinking through effects and consequences. Since the principal use of the glasses is to start the signal fires, the boys rely on them to keep open the possibility of contact with the civilised world they have left behind (though, for decades, sticklers have delighted in pointing out that the glasses provided to correct short sight like Piggy's cannot easily be used to focus the sun's rays). The condition of the glasses parallels the move from assisted long-sight to the immediate gratifications of instinct and appetite. Even at the beginning of the novel, Piggy's glasses are bleared - we see him naked and dripping, cleaning them with a sock (Golding 1996, 19). Later, one lens is smashed, reducing the depth of field available via stereoscopic vision. Finally, they are destroyed altogether. The loss of perspective and parallax is associated with the growing dominion of the flies in the novel. As we saw in chapter 1, the visionary Simon is given the recognition that whatever 'the Beast' is of which the children are afraid, it does not have its lair on top of the mountain, or at the far end of the island, where they go searching for it, but is much closer to home.

The flies that feature in the title themselves come into the novel's field of view only intermittently. The book pits signals against noise, with signals depending upon the establishment and articulation of various kinds of distance: the visual signal represented by the fire on the mountain, and the auditory signal represented by the conch. Against this, there is the principle of formless noise, which is at once dispersed and indistinct. The descent of the boys into savagery is marked by the replacement of the island's voluptuously exhibitionist butterflies with the sinisterly sonorous flies. Early in the novel, the boys look down from the top of the mountain, where '[t]he air was thick with butterflies, lifting, fluttering, settling' (Golding 1996, 37). The butterflies are seen again, dancing, preoccupied, in the clearing where the boys kill a sow (Golding 1996, 168-9). Once the pig's head has been set up on a stick, the vivid spectacle of the butterflies gives way to 'the buzzing of flies over the spilled guts' (Golding 1996, 169) and, by the time Simon is left alone with the talking head, '[e]ven the butterflies deserted the open space where the obscene thing grinned and dripped' (Golding 1996, 170). The flies in the novel are heard indirectly too, in the inchoate murmurings, humming and buzzings of the boys (Golding 1996, 29, 43, 90), against which Ralph and Piggy must struggle to be heard.

'If you don't blow we'll soon be animals anyway. I can't see what they're doing but I can hear.'

The dispersed figures had come together on the sand and were a dense black mass that revolved. (Golding 1996, 115)

And when the head of the pig, buzzing with flies, seems to speak to Simon, in the prelude to his seizure, it insists on this closeness: ‘“You knew, didn’t you? I’m part of you? Close, close, close! I’m the reason why it’s no go? Why things are what they are?”’ (Golding 1996, 177).

The intensity of the scrutiny required to make out the detail of the fly’s body, and of its eye, seems to be imaginatively returned in the cold and indifferent gaze it directs on us (not to mention the fact that flies are so attracted to eyes, or at least female flies, whose egg-laying function makes them attracted to the protein to be found in tears). Where the human eye requires magnification to see the fly, what it sees in the fly’s eye is our humiliating diminishment. When Fred Saxby set out his instructions for ‘how to photograph through a fly’s eye’ in 1898 (in fact his experiment used a cluster of lenses from a dragonfly’s eye), he used as a focussing object a depiction of Queen Victoria, explaining ‘is it not appropriate that the noblest and greatest monarch the world has ever seen should be the subject of a photograph through the most infinitesimal lens known to science?’ (Saxby 1898, 189).

Ted Hughes’s poem ‘Fly Inspects’ engineers a similar switching of orders of magnitude. The title summons up the ghost of the phrase ‘fly specks’, the most inconsiderable traces of the fly’s presence. Hughes’s poem seems itself to be just a series of wry jottings, but they are centred around the contrasting intensity of the fly’s attention to its environment:

Fly
Is the Sanitary Inspector. He detects every speck
With his geiger counter.
Detects it, then inspects it
Through his multiple spectacles. You see him everywhere
Bent over his microscope. (Hughes 2003, 632)

As with many of Hughes’s poems, the actions evoked redouble the action of the poem itself. The fly’s careful investigations mirror Hughes’s, the poet ‘bent over his microscope’ to inspect the fly bent over his, and the poem offers an exact mimicry of the fly’s own careful accountancy:

He costs nothing, needs no special attention,
Just gets on with the job, totting up the dirt.

All he needs is a lick of sugar
Maybe a dab of meat —
Which is fuel for his apparatus.
We never miss what he asks for. He can manage

With so little you can't even tell
Whether he's taken it. (Hughes 2003, 632-3)

The fly's job is seen as that of preservation and redemption rather than marring and corruption. It tracks down whatever has been lost to death, and its maggots refine rotten flesh into 'souvenirs/Dry-clean as dead sticks in summer dust'. The equipment of deterrence and decontamination which is normally brought to bear on the fly, and on the aliens whose threat it embodies, is here deployed by the fly itself:

In his black boiler suit, with his gas-mask,
His oxygen pack,
His crampons,
He can get anywhere, explore any wreckage,
Find the lost. (Hughes 2003, 633)

Just as the fly cleans its objects and itself, so the poem transforms its own materials. The popular imagery of technoscience is shifted into the register of the oriental and the chivalric, the large headgear of the fly suggesting first 'a freshly-barbered Sultan', then, finally, 'a knight on a dark horse'. Thus, the fly's redeeming attentions and accountings are also the poem's own. The poem learns from its inspection of the fly at work the patience necessary to see it.

The Beast in the Machine

Since the seventeenth century, a change has come about in human beings' relations to their senses. The operations of the senses have not only been enhanced and extended – through telescopes, microscopes, microphones, loudspeakers and other such devices – but also autonomised. Thus the camera seems to 'see' for itself, and the phonograph to 'hear' on its own account, independent of a sensing subject. Mechanisms of various kinds take over the role previously assigned to animals. The canary which detected dangerous levels of gas in mines is replaced by a chemically sensing device. The development of sonar equipment is made possible by the understanding of echo-location in bats and other creatures.

Of course, there are certain functions for which the prosthesis of the animal remains indispensable – in sniffer- and 'seeing-eye' dogs, for example. Truffle-hunters borrow flies' sensory capacities, keeping a lookout for the straw-coloured *Sullia gigantea*, the truffle-fly, which performs a distinctive, springing dance over the soil around the base of oak trees where it will lay its eggs and in which the odoriferous fungi can be found. Before the Second

World War, the American National Defense Research Committee funded the psychologist B.F. Skinner to do serious work on preparing what were in effect suicide pigeons to operate guided missiles. The pigeon was to be trained to sit inside the missile, pecking at keys in order to keep a target in the centre of a screen. This was plausible because the vision of pigeons has a much faster 'refresh rate' than that of humans – or, putting it the other way round, pigeons experience much less persistence of vision than we. A pigeon watching a movie shot at the conventional 26 frames per second would see a slide show of still images (this is the reason that pigeons are so good at getting out of the way of cars).

Increasingly, the animal realm has come to seem like a sensory resource, enabling us not just to hitchhike on the sensory capacities of other species, but also to develop new kinds of perception. There are often correlations between the discovery of physical forces and the discovery of the sensitivity to them possessed by animals. Thus the development of radar is followed by the discovery that certain fish that live in extremely murky or turbid waters themselves send out electrical pulses which create electromagnetic fields which yield accurate information about their environments.

The development of sensory, as opposed to merely kinetic technologies (telescopes, cameras, phonographs, microphones), produced an outbreak of speculation about the possibility of more refined, or spiritual senses. The telesensory capacities opened up by forms such as the telephone suggested the possibility of even more subtle and distant forms of communication with other worlds. Spiritualist and theosophical writings of the late nineteenth century literalised the forms of sensitivity to unseen impulses and undulations which had been evoked by scientific writers like John Tyndall.

Animals remained implicated in these processes. Early sound recordings regularly featured animal cries. The gramophone company that would become known as His Master's Voice adopted Francis Bourriaud's portrait of Nipper the Dog as its emblem. The attentively listening dog (in the original painting and early versions of the logo, it is clear that he is sitting on a coffin, presumably that of his master), embodies the promise of the parallel fidelity offered by the new recording medium.

Animals had long been thought to have the power to detect devils or malign spirits, largely because of the brutish associations of the devil. From the nineteenth century onwards, interest grew in the possibility that animals might have more positive powers of 'extrasensory' or 'ultrasensory' perception, which were dulled or undeveloped in humans. Interesting work continues on the well-attested powers of animals to detect the imminence of

phenomena such as earthquakes (elephants were reported to have been extremely unsettled in the days before the tsunami of 26 December 2004).

Even where the animal is not literally present, the mediation of the animal is retained, in idiom and metaphor, as well as in the subsidiary organs we develop to inform our sensory technologies, from the ‘cat’s-whisker’ employed in early radios, to the entomological antennae that probe the signals that pulse so ubiquitously through the electronic air. The world wide web enables us all, like Sir John Davies’s spider-soul, to tremble to the smallest, most distant touch, and to be present both within and beyond the limits of our bodies. Increasingly, sight, the dominant sense of modernity, which relies upon the separation of bodies and distributes the world into distinct subjects and objects, is being mutated by electronic forms of the ‘animal’ senses which mingle bodies and blend subjects and objects. Our emergent condition is aptly summarised in these lines from a poem called ‘Zoology Personified: Or My Own Description’, by the nineteenth-century Canadian poet M. Ethelnind Sewell:

Lavater says that every face
And physiognomy
Bears some resemblance to the race
Of beast, or bird, or bee.

But as for me, I'm in myself
Quite a menagerie:
What is imputed to *all* else,
Unites and blends *in* me! (Sewell 1840, 192)

We are wrong to think of the many technologies that extend, refine and autonomise human sensory perceptions as taking us further and further away from our natural existence and immuring us in the anthropocentric condition of what Freud called the ‘prosthetic god’. For the new organs, the new perceptions, and the new forms of sensitivity of our world continue to implicate and improvise upon the animal, changing its meaning and ours in the process. Where previous epochs had taken the animal’s senses captive for the purposes of symbolism, we have begun to enter into new forms of mixing and *mélange* with this imaginary menagerie, a condition inviting what the subtitle of Michel Serres’s *Les Cinq sens*, describes as a ‘philosophie des corps mêlés’. We might say that our perceptions have become interceptions, and that the new forms of zoosynthetic mixed body into which we are entering are helping us take leave of our senses.

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