

Auricles, Oracles, Otoacoustica: On Overhearing

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The history of devices and apparatus evidences a tenacious relation between defect and perfecting. The machines that compensate us for various kinds of disability and impediment at once remind us of our limits and encourage immoderate hopes of surpassing every limit. They at once embody and disembody, rendering us independent through ever more elaborate forms of dependency. As Jonathan Sawday has argued, machinery was thought of by many in the Renaissance as part of the mediating narrative of the *felix culpa*, the means whereby the striving to overcome humanity's fallen condition, would, via a 'secondary creation', lift it back to divinity (Sawday 2007, 3), or to what Freud, with something very different in mind, called the condition of a 'prosthetic God'. This can sometimes produce a technopathic response, for example in Paul Virilio's insistence that contemporary teletechnologies produce a paralysis that negates any difference between the disabled and the once able-bodied (Virilio 2008, 21). When it comes to the human relation to the senses, which are both the object and the medium for so much magical thinking, we can speak of a condition I have called 'omnipotence' (Connor 2014, 150), in which shortfall traffics with superflux. Auditory technology provides a particularly powerful example of this confederacy of deficit and surfeit. Thomas Edison famously connected his own poor hearing, which required him to test the sensitivity of his phonographic equipment through his teeth, with the development of a technically augmented audition that would surpass ordinary embodied hearing: 'The sound-waves thus came almost directly to my brain. They pass through only my inner ear...No one who has a normal ear can hear as well as I can' (Anon 1913, 798).

The hearing-impaired must have discovered many times over in human history that any kind of cone-shaped funnel, made up for example of a piece of rolled card or paper, will amplify the sound energy arriving at the ear. Giambattista della Porta proposed in his *Natural Magic* to follow the design of animal ears in order 'to make an Instrument, wherewith we may hear many miles'. He decided that it would be best 'to fit your Instrument to put into your ear, as Spectacles are fitted to the eyes' (Porta 1658, 401) and reasoned that it should be designed like the ear:

it is fit, that the Form of the Instrument for hearing, be large, hollow, and open, and with screws inwardly. For the first, if the sound should come in directly, it would hurt the sence; for the second, the voice coming in by windings, is beaten by the turnings in the ears, and is thereby multiplied, as we see in an Echo. (Porta 1658, 401).

In a marginal note to Francis Bacon's *Sylva Sylvarum*, Christopher Wren (the father of the architect) observed that 'ear spectacles' that he called 'otacousticons' were in use in Spain and England (Gouk 2000, 145). This semicomical name seems first have been applied to an imaginary form of this instrument, in a scene in Thomas Tomkis's comic play *Albumazar*, commissioned by Trinity College in 1615 to entertain James I during his visit to Cambridge:

Ronca: Sir, this is cal'd an *Otacousticon*.

Pandolfo: A *Cousticon*? Why 'tis a paire of Asses eares, and large ones.

Ronca: True: for in such a forme the great *Albumazar*
Hath fram'd it purposely, as fit'st receiuers
Of sounds, as spectacles like eyes for sight. (Tomkis 1615, sigs B4v-C1r)

The acousticon could suggest some interesting imaginary bodily organs. James Howell reported in his *Therologia*, a book on animal communication, or *The Parly of Beasts*, that among other capacities, 'Ther's no creture hears more perfectly then a Goat, for he hath not onely Ears, but an Acousticon Organ also in the throat' (Howell 1660, 123).

The acousticon suggested not just the possibility of augmenting hearing in the deaf but also of overcoming hearing deficit due to distance. The devices used to remedy underhearing could often produce the fear of overhearing: 'We in French do call such folke *Mouches*, that is Flies; The Romans called them *Delatores*, that is to say, Talebearers; and the Greeks called them *Acoustes*, that is to say, Hearnkers, or Spies' (Hurault 1595, 352). In a satirical pamphlet sending up the extremes both of popery and anti-popery, the Pope reassures his interlocutor that if they withdraw into a private apartment he will be safe from being spied on by statues of Peter and Paul:

Now we are enclosed within so many Walls, that we are secure from all humane notice, except it be your *Titus Thaumatergus*, and I am told, that if he lay his Ear to the Lobby of a *Presbyterian House of Commons*, he can, by virtue of that Acousticon, hear at Westminster what is whisper'd in the *Vatican*; but I think of late he hath lost his senses. (Anon 1684, 3)

Reversibility is a notable feature of all auditory devices, and devices for magnifying hearing were inverted forms of devices for boosting speech. Indeed, the word 'otoacoustic' nowadays refers, not to a device, but to a physiological phenomenon: that the ear in fact produces its own sounds, or what are called optoacoustic emissions, caused by the agitation of cochlear hairs in response to auditory stimulation – a kind of overhearing, or feedback effect.

In 1671, Samuel Morland devised a speaking tube he called a *tuba stentorophonica*, for which the principal use seems to have been hailing between ships. For all the practicality of his invention, Morland makes much of the mysterious nature of the acoustics he is trying to explicate:

what manner of Images or Species such Percussions make; with such an infinity of distinctions and varieties? and how they fly about like Atoms in the Air? and are to be found in each point of the *Medium*? (and anon vanish into nothing?) and by what stupendious agility they are conveyed to the Soul? and how that does to receive so many millions of messages from without? and to dispatch and send out as many more from within? and that in so short a space of time? the more we torment our thoughts about it, the less we understand it, and are forced to confess our Ignorance. (Morland 1671, 7)

He was convinced that his device was able not only to magnify but also to ‘multiply’ sounds (Morland 1671, 11). This is his complex explanation:

there is a *Focus* or *Polyphonismus*, but that the principal and chiefest *Focus* where the greatest *Polyphonismus* of all is, that is to say, the point where the Voice is most of all magnified or multiplied; is B.

This *Focus* (or *Polyphonismus*) being now no longer imprisoned in the Tube, dilates it self by spherical Undulations into the *Medium* (as in *Icon.* 2. may more plainly appear) till such time as it meets with some opposition; as for example, let us suppose it in the points H, E, G, F, I, from which points, and innumerable others, it is reundulated, multiplied, and reverberated throughout the Sphere of its activity: For by how much stronger the percussion is in B, so much greater is the Sphere of Undulation and Reverberation, and consequently the Voice is heard at a greater distance. (Morland 1671, 11)

The belief that the right kind of material or mechanical arrangement could allow the almost-indefinite persistence of sound is a tenacious one. Morland cites an experiment by Bernard Varenius in 1615, in which the sound of a pistol discharged from a peak in the Carpathians was prolonged for 8 minutes.

One of the most important uses conceived for this kind of speaking tube was to aid communication between ships at sea (Morland 1671, 4). A number of such tubes also survive in the form of what are known as ‘vamping horns’, which seem in fact to have been instruments used to provide a bass accompaniment in church choirs. One of them is in St Peter and St Paul’s church in Harrington, Nottinghamshire (Harris 2006, 245).

But the phantasmal investment in the idea of sound mechanically magnified or magically preserved could invert into a negative form. The author of a 1679 satirical poem which poked fun at contemporary ‘vertuosi’ evoked the speaking tube as an example of empty windiness:

Here comes you one, looks you meal-mouth’d, forsooth,
As if that Butter would not melt in’s mouth:
Yet one of’s Arguments dare but gain-say,
He proves a *Tube Stentorophonica*. (Anon 1679, 16)

In a polemical pamphlet of 1690, William Payne similarly mocks his opponent, the author of a book called *Vox Cleri*, saying that ‘*Tuba Stentorophonica*, Balaam’s *Ass prophesying*, or the like Title might have been as significant and suited it as well’ (Payne 1690, 20).

In all of this, there is a complex negotiation between sound and matter. Hearing instruments in fact exist in a complex relationship with optical instruments, which help to illustrate some of the differences in the way in which visual and auditory impairment are conventionally understood. Blindness suggests heightened sensitivity, and a kind of intuned intensity. It is often associated with visionary or supersensory capacity, associations that are much rarer in deafness. In fact, where

blindness spiritualises, deafness materialises. Where blindness suggests heightened sensitivity, even, in fact, clairvoyance, as though the ablation of the eye of ‘flesh’ could enlarge the reach of the mind’s eye, deafness suggests the insensate and inanimate condition of matter. The most common way of designating profound deafness is ‘deaf as a post’, corresponding to ‘sourd comme un pot’ in French and ‘Taub wie ein Stück Holz’, or, more simply, ‘stocktaub’ in German. Variations on this formula include ‘deaf as a dishclout’, ‘deaf as a rock’, ‘deaf as a stone’, ‘deaf as a door’ and ‘deaf as a door nail’, the latter dramatising the closeness of death and the deaf. *Surdus*, the Latin word for deaf, is cognate with Sanskrit *sva*r, heavy and OHG *swarida*, weight. Another, rather more colourful expression, and one that reminds us that industrial noise might have been implicated in deafness rather earlier than we might think, is ‘borne in a milne’ [i.e. mill]. There are occasional animate exceptions: ‘deaf as a beetle’ is known, as well as, oddly, ‘deaf as a dog’. This mode of designation may have something to do with the fantasy that, if they are unable to hear themselves, the deaf must be deprived of the reflexivity that characterises the living creature: they cannot, it may even be being suggested, even hear the thudding alliteration that characterises these attributions. Indeed, perhaps ‘deaf as a post’ is in fact be a contraction of ‘deaf as a doorpost’, pointing up the fact that doors are in fact rather noisy things, as are doorposts when doors are being slammed against them. The same relation may be hinted at between the doornail and the hammer. The noisy sea is sometimes thought of as deaf, as in the remark made by Vaster in Samuel Sheppard’s *The Honest Lawyer* ‘Father, you speake to rocks, or the surd waves’ (Sheppard 1616, sig. B2r). Occitan has the expression ‘sourd comme un topin’, where *topin* means a clay pot often provided with knobs or ‘ears’, the redundancy of which are thereby pointed up. The blind may be turned away from the world, but remain at home in the word; the deaf, on this (not all that logical) logic, are lost in the world, yet locked away from the word and so also from themselves. They are, in Sartre’s formulations, *en-soi*, and not *pour-soi*.

At the same time, deafness may seem like a superfluous condition, one that is incommensurable with other conditions of being, with the deaf person being thought of a living-dead kind of anomaly, like the mathematical ‘surd’, which is a surplus, or remainder, a quantity that cannot be rendered as a rational number, hence ‘absurd’. This association between deafness and absurdity arises because of the use in Arabic translations of the word *açamm* to render Euclid’s *alogos*, signifying at once ‘illogical’ and ‘inane’, ‘unspeakable’.

The assumption that not being able to hear yourself means not being able to make sound, means that deafness comes to be associated with muteness or dumbness: Latin *surdus* can mean making a dull or indistinct sound and can even be applied to odour, to indicate faintness or dimness. This suggests a kind of contagious redoubling of the insensate, whereby the deaf make others deaf through their muteness. In his *Psychodia Platonica* (1642) Henry More says of materialist writers who follow Lucretius in denying the immortality of the soul that ‘horrid darknesse doth their souls confound,/And foul blasphemous belch from their surd mouth resounds’ (More 1642, sig. E6v).

(None of this, let it once and for all be said, corresponds to how things are, but is a production of the densely-seething sink of desires and dreads that constitute the human relation to its own sensory capacities.)

That hearing is a reflexive sense, since humans produce sound as actively as they receive it, is embodied in the particular objects that have been developed to assist hearing. Optical instruments seem like the expression of agency: audile instruments seem to display dependency, suggesting that their user is being affected or acted on. Spectacles, monocles and even lorgnettes are capable of being digested into the body or gestural repertoire of the person who employs them. Hearing aids turn their user into a kind of apparatus, a kind of improvised desiring machine. This is perhaps why so much more embarrassment and self-consciousness has tended to attach to them than to spectacles; and why, indeed, hearing aids are much more likely to form a spectacle than visual aids. Certainly, more effort seems to have gone into disguising them than in disguising spectacles (contact lenses apart) and the idea that they might constitute the kind of stylish ornament that spectacles often can has seemed grotesquely unlikely for much of the history of hearing aids. Indeed, one of the many ways in which hearing aids have been disguised is precisely as spectacles. This seems to have changed in recent years, assisted, very likely by the increasing commonness of piercings and other forms of body modification. We seem to be moving into an era of the supplemented body.

The design and designation of the many forms of ‘ear-trumpet’ employed from the early seventeenth century onwards suggests a kind of inverted playing of an instrument, as though the world were being ‘played’ for the benefit of its user. ‘Conversation tubes’, invented by Nathaniel Pointer in 1828, allowed for a kind of proximotelephonic hook-up between interlocutors. If hearing devices are often the source of social awkwardness and comic mockery, there are signs that they could also generate some rather subtle new kinds of social technique and performance. Nathaniel Hawthorne records his visit to the very deaf Harriet Martineau in August 1854:

She is the most continual talker I ever heard; it is really like the babbling of a brook, and very lively and sensible too; and all the while she talks, she moves the bowl of her ear-trumpet from one auditor to another, so that it becomes quite an organ of intelligence and sympathy between her and yourself. The ear-trumpet seems a sensible part of her, like the antennae of some insects. If you have any little remark to make, you drop it in; and she helps you to make remarks by this delicate little appeal of the trumpet, as she slightly directs it towards you; and if you have nothing to say, the appeal is not strong enough to embarrass you. (Hawthorne 1962, 77)

The trumpet allowed one, of course, visibly to ‘listen away’. Joshua Reynolds is said to have removed his ear-trumpet, which was ‘quite a large affair, with a spiral, almost double, twist or convolution, quite as big as a tolerable cow’s horn’, whenever people bored him with talk of ‘Raphaels’ Correggios, and stuff (F.G.S. 1883, 430).

Edith Wharton recalls in her autobiography *A Backward Glance* a similar conversational ritual mediated by the ear-trumpet, as she read to her deaf

grandmother, who, ‘in lace cap and lappets, a bunch of gold charms dangling from her massive watch-chain, among the folds of a rich black silk dress, and a black japanned ear-trumpet at her ear’ seemed to the six-year old girl ‘the abstract type of an ancestress as the function was then understood’ (Wharton 1990, 812). Wharton evokes the ardours and excitements of the transmission of semi-construed sonorities between the little girl and the old lady:

I had just discovered a volume of Tennyson among my father’s books, and for hours I used to shout the “Idyls Of the King”, and “The Lord of Burleigh” through the trumpet of my long-suffering ancestress. Nor being more than six or seven years old I understood hardly anything of what I was reading, or rather I understood it in my own way, which was most often not the poet’s; as in the line from “Thee Lord of Burleigh”, “and he made a loving consort”, where I read *concert* for consort, and concluded (being already addicted to rash generalizations) that a gentleman’s first act after marriage was to give his spouse a concert, in gratitude for which “a faithful wife was she”. But I enjoyed all the sonorities as much as if I had known what they meant, and perhaps even more, since my own interpretations so often enriched the text; and probably such shrill scraps as travelled through the windings of my grandmother’s trumpet troubled her no more than they did me. To one whose preferred poetic reading was “The Christian Year”, the “Idyls of the King” must have been almost as full of mystery and obscurity as Browning was to the next generation, and the rhythmic raptures tingling through me probably woke no echo in the dear old head bent to mine. (Wharton 1990, 812)

There is an intriguing exchange of different kinds and degrees of deafness, or mishearing at work here. Aaron Worth suggestively reads the ear-trumpet and its social uses as an anticipation of late nineteenth-century electronic mediam describing it as ‘a kind of zero-degree instrument of mediation, a technological copula that both enables communication and renders it problematic, mingling it inextricably with miscommunication’ (Worth 2008, 95).

The link between deafness and the invention of auditory devices like the telephone and the phonograph is often noted (Bell’s wife was deaf and Edison himself became progressively more deaf through his life). The central principle at work here seems to be that the conductivity of sound, along with its ready convertibility into other vibrational modes, make hearing devices much more readily mediated than visual devices: you cannot easily bend light round corners, or transmit it through solid substances, while, hand-held periscopes aside, there has never been much use for mirrors in optical devices. The attempt to disguise deaf instruments also suggests or encourages a kind of chimeral mingling with the world of objects, for example in the use of fans, parasols, muffs and reticules, or items of furniture, like flower-vases, or chairs, and even royal thrones. Many examples may be seen on the website of the Bernard Becker Medical Library of the Washington School of Medicine <http://beckerexhibits.wustl.edu/did/index.htm>

At the same time, hearing aids of this kind also suggest a kind of doubling or exteriorisation of the body. If there is elegance in the parabolic curves of the ear-trumpet, there can also be a sort of indecency, as though the organs of the body had

been extruded. Electric hearing aids in particular were designed to be worn underneath clothing, and were often pictured by models in underclothing. Hearing devices seem like visual anagrams of the body's workings, suggesting the grotesque comminglings of inner and outer characteristic of medieval marginalia – especially those involving bagpipes.

The association of hearing aids with the horn that, during the early decades of the gramophone, was the standard form of sound amplification has also encouraged the suggestion of magical powers of preservation and resuscitation. Indeed, we may surmise that the auditory history of the horn may have been agitated by some of the horn's religious associations. Horns are suggestive of cuckolds, devils and priapism, but 'horn', translating Hebrew *qeren*, horn, also suggests, glory, might and salvation: Psalms 18.2 declares God to be 'my buckler, and the horn of my salvation, and my high tower'. The horn makes itself heard in the shofar, heard by the Israelites emanating from the thick cloud over Mount Sinai in Exodus – rendered in the King James Bible as: 'there were thunders and lightnings, and a thick cloud upon the mount, and the voice of the trumpet exceeding loud; so that all the people that was in the camp trembled' (Exodus 19.16). The shofar was sounded to mark the beginning of war, and in Joshua has the power both to initiate and to prosecute the war, since the very sound razes the walls of Jericho: 'And it shall come to pass, that when they make a long blast with the ram's horn, and when ye hear the sound of the trumpet, all the people shall shout with a great shout; and the wall of the city shall fall down flat, and the people shall ascend up every man straight before him' (Joshua 6.5).

The annunciatory power of the shofar carries across into the idea of the Last Trump in Revelation. Though the shofar is used for many different purposes in Judaism, Lacan finds in it the source of a deep anxiety, in the fact of a kind of signification or something like pure vocation without symbolism. Yet the history of the word trumpet involves a complex overlaying of different meanings. The trump proclaims and inaugurates. But it has also, in its association with the idea of the 'trump of fame', gathered associations with a merely hollow sonority (indeed this hollowness, of sound without sense, may also contribute to its solemnity). In card-playing, the trump card is so called perhaps because it is a contraction of 'triumph', but the word trump has also been associated, at least since the fifteenth century, with what is known as 'trumpery', from French 'trompe', trick, deceit, its meaning extended to showy trash or trinkets. We may say that the word embodies the sense of the ambivalent body of sound, that is both sonorous and yet hollow – for the emptier it is, the fuller of import it may seem to be.

The essential import of the horn seems to be emergence of something from nothing, whether this is associated with abundance, as in the horn of plenty, annunciation, or diabolical imposture. It is the sound of sounding itself, or rather, perhaps, the sound of what cannot be sounded, or got to the bottom of. All of these associations seem to be at work in the popularity of 'trumpet mediums' in the spiritualist culture of the late nineteenth century. In séances involving this kind of mediumship, trumpets would be materialised, often suspended in mid-air, with ectoplasm extruding from them, through which the voices of spirits would seem to speak. In one sense, we may see this as just another example of the commentary on contemporary communication

devices that the séance often seemed to offer. The stage version of Samuel Beckett's last play, *What Where*, employs something very like this kind of suspended trumpet in the hovering 'small megaphone at head level' (Beckett 1986, 469) from which issues the voice of the directing speaker 'Bam'.

This capacity of the trumpet, shell, or horn to suggest the production of something from nothing may have something to do with the convolution or windings that may often be a part of the horn. It may also provide a rhyme with the maze-like structures of the inner ear, the name of which, the cochlea, from Greek *κοχλίας*, means a snail-shell. The form of the shell, which is found both in the inner ear and the outer ear of the auricle once again suggests a dual capacity for both hearing and sound production, as embodied both in conversation tubes and in the apparatus of the telephone. As Michel Serres has observed, the maze-like shape of the cochlea suggests both the sinister and the sensitive:

We inherit our idea of the labyrinth from a tragic and pessimistic tradition, in which it signifies death, despair, madness. However, the maze is in fact the best model for allowing moving bodies to pass through while at the same time retracing their steps as much as possible; it gives the best odds to finite journeys with unstructured itineraries. Mazes maximize feedback. They provide a very long path within a short distance and construct the best possible matrix for completing a cycle. (Serres 2008, 143)

The body of the deaf listener is taken up in these optosonorous coilings and turbinations, which either loop round the ear, or spiral, earish, round the body, like the brass instrument invented by Edme Guillaume in 1590 known as the serpent, which would eventually be replaced by the tuba. Indeed, the largest version of the instrument, which dates from 1840, is known as an 'anaconda'. Hamlet's 'mortal coil' probably refers to a seventeenth-century usage of the word to mean a confused din, racket, or ado, as when Luce cries in *Comedy of Errors*, 'What a coil is there Dromio? Who are those at the gate?' (III.1, 48; Shakespeare 2016, 203).

The capacity of the shell to suggest the sea may come in part from the visual echo between the shell and the interior of the ear, as though in applying it to one's ear, one were enabled to overhear hearing itself ('a word in your shell-like'). The 'Sirens' chapter in Joyce's *Ulysses* is governed by this kind of echoing of auditory and visual form, as embodied in the motif of the shell which Lydia Douce has brought back from her holiday in Rostrevor, laid against the mirrors at the back of the bar. Blazes Boylan watches her doubled in the mirror of which the shell is itself a sound-mirror: 'His spellbound eyes went after, after her gliding head as it went down the bar by mirrors, gilded arch for ginger ale, hock and claret glasses shimmering, a spiky shell, where it concerted, mirrored, bronze with sunnier bronze' (Joyce 2008, 256). The flirty giggles of the two siren-like barmaids, Miss Douce and Miss Kennedy, are rendered as a piling, sinuously twisted resonance: 'Shrill, with deep laughter, after, gold after bronze, they urged each each to peal after peal, ringing in changes, bronzegold, goldbronze, shrilldeep, to laughter after laughter. And then laughed more' (Joyce 2008, 249) Observing from the next-door room, like Ulysses bound to the mast in order to hear the sweet but deathly song of the sirens, Bloom watches the shell being exchanged for listening purposes:

Bloom through the bardoor saw a shell held at their ears. He heard more faintly that that they heard, each for herself alone, then each for other, hearing the splash of waves, loudly, a silent roar.

Bronze by a weary gold, anear, afar, they listened.

Her ear too is a shell, the peeping lobe there. Been to the seaside. Lovely seaside girls. Skin tanned raw. Should have put on coldcream first make it brown. Buttered toast. O and that lotion mustn't forget. Fever near her mouth. Your head it simply. Hair braided over: shell with seaweed. Why do they hide their ears with seaweed hair? And Turks the mouth, why? Her eyes over the sheet. Yashmak. Find the way in. A cave. No admittance except on business.

The sea they think they hear. Singing. A roar. The blood it is. Souse in the ear sometimes. Well, it's a sea. Corpuscule islands. (Joyce 2008, 269-70)

'Well', thinks Leopold Bloom in the 'Sirens' chapter of *Ulysses*, 'it's a sea', Joyce here having him unconsciously allude to Phineas Fletcher's allegorical poem about the body, 'The Purple Island' (1633), which served as a model for the 'epic of the body' that Joyce set out to engineer in *Ulysses*, Fletcher's poem, in which the blood is imaged as an inland, tidal sea, is full of intricate poetic redoublings of the body's channels and cavities, including especially the ear, with its inner

Labyrinth, in hundred crooks ascending.

Such whilome was that eye-deceiving frame,
Which crafty *Daedal* with a cunning hand
Built to empound the *Cretan* Princes shame. (Fletcher 1633, 57-8)

This inner maze, lying within the sounding 'cave' of the ear, echoes the form of the proliferative undulations it receives:

As when a stone, troubling the quiet waters,
Prints in the angry stream a wrinkle round,
Which soon another and another scatters,
Till all the lake with circles now is crown'd:
All so the aire struck with some violence nigh,
Begets a world of circles in the skie;
All which infected move with sounding qualitie. (Fletcher 1633, 58)

Horns and trumpets often have magical or spectral associations. Thomas Hood's comic poem 'A Tale of a Trumpet' describes the mischief worked by a deaf old lady who buys a magical hearing trumpet from a pedlar, which enables her to hear, and disseminate gossip; this leads to her being drowned as a witch, and Hood's mock-solemn moral:

There are folks about town – to name no names –
Who much resemble that deafest of Dames!
And over their tea, and muffins, and crumpets,
Circulate many a scandalous word,
And whisper tales they could only have heard
Through some such Diabolical Trumpets! (Hood 1862-3, V.172)

Oscar Dominguez's *Jamais* (1937) suggests not only that the body might be redistributed as an auditory apparatus, which seems to be carnivorously swallowing up a body, but that it might reach back to some impossible dream-time. Oliver Reynolds's poem 'The Composer's Ear-Trumpet' imagines that Beethoven's ear-trumpet might somehow retain the sound of his work being performed – including, paradoxically, the sound of the composer's own voice, 'obdurate, deaf as granite', calling for more volume so that he can hear his own work:

Pick me up. Put me to your ear.
 No. The other way. Are you deaf?
 Now, you should be able to hear
 baton-taps and then the uncoiling clef

of the old tunes,
 fury, fugue, double-basses like sea-swell,
 molten brass, staid bassoons,
 the old music caught in a shell.

A voice cries from a dead planet.
 Shouting through clouds of hair-powder,
 it's obdurate, deaf as granite:
 'Louder. Louder. Louder.' (Reynolds 1991, 38)

Leonora Carrington employs a similar notion at the beginning of her fantastic novel *The Hearing Trumpet* (2005), in which a 90-year-old woman who is given the gift of an ornate hearing trumpet by her son and daughter-in-law, through which she hears that they are planning to place her in an institution.

Perhaps the most extended version of the fantasy of a chrononorous trumpet is to be found in Florence Landburgh's 'The Automaton Ear' in 1876. The Cambridge professor who is the story's principal character is inspired by his reading of a passage by Charles Babbage which proposes that sound, though it may seem to decay, in fact never diminishes to nothing, and sets out to adapt a hearing trumpet to the purpose of capturing and magnifying these lost sounds. Once constructed and properly 'tuned' so that the professor can choose any sounds from history that he wishes to listen to, the instrument seems to provide a kind of paradise of pure sonorous intensity. When he tests the effect of the instrument on a deaf-mute old woman, Mother Flinse, it seems to have the effect of raising her from death into a kind of transfigured life:

breathlessly I watched her face, a face I thought which looked as if it might belong to some mummy that had been withering for a thousand years. Suddenly it was convulsed as if by a galvanic shock, then the shriveled features seemed to dilate, and a great light flashed through them, transforming them almost into the radiance of youth; a strange light as of some seraph had taken possession of the wrinkled old frame and looked out at the gray eyes, making them shine with unnatural beauty. No wonder the dumb countenance reflected a brightness inexpressible, for the Spirit of Sound had just alighted with silvery wings upon a silence of seventy years. (McLandburgh 1876, 35)

When she attempts to steal the resuscitating instrument, the professor strangles her. Following her death, the instrument begins to malfunction, and seems haunted by her rasping, inhuman voice:

I compelled myself to listen, even with chattering teeth; for it was a terrible thing to hear those hoarse, haunting cries of the dumb soul – of the soul I had strangled from its body, a soul which I would have killed itself if it were possible. But my hope was vain, and the trumpet had become not only worthless to me, but an absolute horror. (McLandburgh 1876, 41)

The story ends, rather abruptly, when the professor sees old Mother Flinse walking along the road, unharmed, and recognises that he has in fact been the victim of an extended period of delusion. Published in the year in which the telephone and the phonograph were first demonstrated, ‘The Automaton Ear’ is both the enlargement of a sublime fantasy of a machine capable of overcoming every mortal impediment and the demonstration of the apparatus of that fantasy: the narrative of a fantasy machine for universal sound-retrieval is itself revealed to be an involuted machine of fantasy.

All these comminglings and communications, of the auricular with the spectacular, fullness with concavity, inner with outer, obstacle with vehicle, mega- with micro-, are anticipated in a work by John Bulwer, one of the earliest and most searching writers on deafness and sign systems. In his first two books, *Chirologia* and *Chironomia*, issued together in 1644, Bulwer set out the first systematic account of sign language, or what his subtitle called ‘speaking motions’ and ‘manuall rhetoricke’ (1644). By the time his next book, *Philocophus* (1648) appeared, Bulwer was styling himself a ‘Chirosopher’. The book is justly admired for being one of the first systematic attempts to open up the world of language to the deaf through mediation and augmentation rather than reparation. That is, rather than teaching the deaf to articulate sounds, Bulwer proposed that they be taught the art of reading the body, and specifically the lips, in what we now call real time. He writes in his preface, which is addressed to a deaf and dumb person whom he has undertaken to help with his researches, that ‘I discovered a *community* among the *Senses*, and that there was in the continent of *Humanity* a *Terra incognita* of *ocular audition*’ (Bulwer sig. A4r).

The frontispiece to the book is itself a brilliantly teasing exercise in intersensory mediation, with the expository verse that immediately follows it anticipating the metaphor of sensory anagram:

To make the *Deafe* and *Dumbe* amends,
 Illustrious Nature here descends
 To dance the *Senses* Masque; a Ball,
 Which we their *Anagram* may call. (Bulwer 1640, n.p.)

The figure kneeling by the side of the viola da gamba player, who is plainly deaf, has his mouth pressed to the ear of the head carved at the top of the instrument, thereby oralising the aural, and testifying to what Bulwer in his book will call ‘the other avenewes to the braine, as *Orall* and *Dentall Audition*’ (Bulwer 1648, sig. A5r). But there are many other sensory avenues, diversions and crossroads visualised in the image. On either side of the image, Roman figures hold shields displaying the

animals that are traditionally held to epitomise the different senses: the hart for hearing, the eagle (or griffin) for sight, the ape for taste, and the dog (or possibly bear) for smell. On the left hand side, the figures hold emblems that correspond to the animals on their shield - peacock feathers with eyes matching the eagle, an ear horn to go with the hart, a blindfold to signify the dog's olfactory power, and a cornucopia corresponding to the eating ape. But on the right hand side, the signification of the senses is doubled, with shields divided between hart and eagle, and ape with dog, and the peacock eyes and earhorn also transposed. At the top of the cope, two figures holding shields on which a spider sits in the middle of a web, signifying the power of touch, themselves reach out to touch the presiding figure of a multimammiferous Ephesian Artemis, emblematising the fecundity of such sensory exchanges. In this image, each of the senses is offered as a potential channel for each of the others; but it is language, in the form of the conjunctive injunction 'ad motum labiorum', which runs across the centre of the image, connecting ear and eye in series, that is the meta-modulator of all these modalities, making good Bulwer's recommendation of his academy of transformations to his deaf reader: 'wishing you all in good time a happy *metampsychosis* or *transmigration* of your senses, that so at least by way of *Anagram* you may enjoy them all' (Bulwer 1648, sigs. A6r-A6v).

I hope that what I have convened here might be thought of as an enjoyable kind of anagram, or, failing that, an anagram of enjoyment. In terms of its derivation, anagram is not so far away from the alogos, or absurd. I will end, palindromically (another free translation of the word anagram), where I began, with the evocation of the principle of profit through deficit. A debt or deficiency is the positive form of every aspiration. Edison's approbation of his hearing deficit as the way to a technical supplementation points to our essentially disabled and systematically self-disabling condition as human beings. Humans are creatures who are orientated towards the overcoming of impediment, even to the point of the production and prolonging of impairment in the interest of improvement (this is the governing principle of sport, for all sports are disabled sports). Bernard Stiegler has seen human beings as the life form that is devoted to the 'pursuit of life by means other than life' (Stiegler 1998, 17): I will offer you the modulation that human beings are the life form aimed at the pursuit of completion through variation, that is to say, though modulation itself, the transition or translation that is never complete, but always *in medias res*, that Horatian phrase that means, not in the middle of things, but into the middle things. Deafness is one of the defining, and therefore releasing, middle things of what we are coming to understand as a media society. We might recall that, in the *Ars poetica*, in which Horace employs the phrase *in media res* (ll. 148-9) approvingly evoking the way in which the epic poet, *semper ad eventum festinat et in medias res... auditorem rapit*, it is specifically the listener who is snatched, seized, taken up, transported, rapt, rapped, raped, untimely ripped, by the *eventum*, the arriving out of nothing.

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