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Sensorium

Hold Your Tongue

The consideration of a topology of the senses is derived from an apprehension of the limitations of geometric systems. Why and how could sensory organisation be conceived of topologically? The derangement of the senses prescribed by Rimbaud and constitutive of much of 20th century artistic experimentation is of course a speculative attempt at the synthesis of a condition experienced involuntarily by some people. As a non-synaesethete, my own vain attempts to approximate this condition are documented elsewhere in this book. For now let us look at a 17th century play in which the five senses and then a sixth are characterised. The character Communis Sensus says the following lines:

"(COMMUNIS SENSUS) The number of the Senses in this little world is answerable to the first bodies in the great world: now since there be but five in the Universe, the four elements and the pure substance of the heavens, therefore there can be but five Senses in our Microcosm, correspondent to those, as the sight to the heavens, hearing to the air, touching to the earth, smelling to the fire, tasting to the water; by which five means only the understanding is able to apprehend the knowledge of all corporal substances: wherefore we judge you to be no Sense simply; only thus much we from henceforth pronounce, that all women for your sake, shall have six Senses, seeing, hearing, tasting, smelling, touching, and the last and feminine sense, the sense of speaking." (Tomkis 1607)

In the concluding lines to Thomas Tomkis 17th century play *Lingua* quoted above, the character Communis Sensus grants the stock prating female character Lingua what he describes as the 'sixth' sense of speaking. Lingua is bound and held captive in a grotesque enactment of the admonition of talkative women and forced very literally to hold her tongue, which is synecdochically (and, arguably, mereotopologically), both her tongue and her entire being. The idea of a 'sixth' sense is a common one, though this is often considered as a more mystical or psychic internal sense linked to the 'inner' vision championed by philosophers such as Plato or Democritus at the expense of external optical vision. We could see this as one attempt at a topological defamiliarisation of our conventional sensory segmentation.

From Deforming to Devouring

Deformation is the spatiotemporal process to which topological shapes are subjected, and during which their properties remain an invariant. Conventionally this deformation can take place in three ways while the properties of the shape remain identical: these are stretching, folding and bending. The most famous example is the torus (the doughnut) which can become a coffee cup if the skin of the torus is deformed. These two shapes are not the same geometrically, but they are homeomorphic: they share the same form, the same properties. Topological shapes retain their properties under continuous deformation. Even a topological shape can have a dimension added. A Klein bottle is the addition of a dimension to the more commonly understood Möbius strip.

In the Cartesian division of body and mind or soul, it would appear that the human body contains three-dimensional properties: size, weight, shape, colour and motion through space and time. Mental, emotional or spiritual properties would exist outside of this sphere: consciousness, intentionality. In the now widespread critique of Cartesian dualism which has proliferated since the time of Immanuel Kant, these very different systems are superimposed upon, within, through one another. Is it possible, then, to consider the self as topological? In terms of multiple systems working upon systems and the reliance of different kinds of perception and figuration, perhaps it does make sense to speak of a topological self beyond that of Lacanian discourse. Lacan's perception of the topological subject is a development of Freud's conception of the topographical psyche. According to Lacan, human subjectivity has the structure of a topological space; Extimacy for Lacan contains the inside and the outside; it is exteriority within and interiority without. The torus shape expresses this because its insides are its outsides. Similarly, the Möbius strip is simultaneously both inside and outside; there is no separation.

The link between psychoanalysis and topology is made explicit in Lacan's seminars, but is implicit in other thinkers such as R.D. Laing and Melanie Klein. In Laing's poem below from his collection Knots (1970), the geometrically impossible possibility of simultaneous devouring or consuming between two lovers is presented in the terms of predation and prey; of desire as the desire to imbibe, and its opposite: the fear of being imbibed.

> She is devoured, by him being being devoured
> by
> her devouring desire to be devoured
> He is devoured by her being devoured
> by him not devouring her
> He is being devoured
> by his dread of being devoured
> She is being devoured
> by her desire to be devoured
> His dread of being devoured
> arises from his dread of being devoured by
> his devouring
> Her desire to be devoured
> arises from her dread of her desire to
> devour (Laing 1970: 18)

The movement of this poem is emblematic of each lover's devouring of the other. It would appear that the ultimate goal of the two lovers described in Laing's poem would indeed be a simultaneous devouring. The fact that optically we can't perceive this and visually we might struggle to draw it doesn't mean we must reject it as a possibility. Topological objects rely on a general understanding that their rendering in 3D space will always be radically insufficient.

It has been understood for a good number of decades that language contains more possibilities than drawing 3D images on a 2D piece of paper, though computer mappings offer more options with the addition of time giving the illusion that what we are seeing in a pixelated topological model on our screen is in fact a shape under continuous deformation.

If we are now feeling more convinced of the usefulness of topological models for thinking about sensory systems, what then is required to think this? A sensory system would retain its properties regardless of deformation, but what would sensory deformation look, sound, smell, taste or feel like? One answer to this could be synaesthetic entanglements as the 'deformation' or defamiliarisation of sensory segmentation. In terms of the history of philosophy, even the five senses separated and segmented are looked upon with suspicion in favour of idealised internal perception, clear and distinct. Plato distrusted external vision in favour of the mind's eye. According to later doxographers Democritus was apparently so impressed by Plato's reasoning here that he blinded himself in order to 'see' better. The link between ocularcentrism and Enlightenment reasoning is clear even from the vision-based word 'enlightenment' itself.

Eyes as Tendrils / Tendrils as Eyes

Why does ocularcentrism prevail? The distance required to focus and perceive visually arguably provides the basis of the subject-object dualism typical of western metaphysics. As well as a distancing function, the eye also distinguishes and separates, as Juhani Pallasmaa notes: "the gradually growing hegemony of the eye seems to be parallel with the development of Western ego-consciousness and the gradually increasing separation of the self and the world; vision separates us from the world whereas the other senses unite us with it" (Pallasmaa 2012: 28)

Metaphysical love poetry would have it rather differently; the eyes of the lovers in Donne's poem *The Ecstasy* become like vines or tendrils which almost horrifically leap out of their sockets and twist around one another. "Our eye-beams twisted, and did thread / Our eyes upon one double string" (Donne 1994: 34). This both materialises and animates vision; vision is complexified.

If our eyes can be tentacles then can our tentacles be eyes? An octopus diffracts the haptic and the optic through its very being—through its tentacularity as Haraway would call it. Peter Godfrey-Smith argues that the birth of social behaviour can be sourced in the phenomenon of quorum sensing, which happens at a bacterial level. This is the name for the process wherein a bacterium both produces and senses a chemical. In terms of natural history, this can be traced back to the Cambrian period and marks the beginning of the entanglement of one animal's life in another because it meant that the

animal's mind evolved in response to other minds. In Godfrey-Smith's account of cephapolodic consciousness derived from biologist Detlev Arendt, two nervous systems—one on the surface and one on the inside—met in a jellyfishlike animal in the Cambrian period. He calls this the bilaterian body plan. The animal we know today as the octopus, however, according to Godfrey-Smith, has an entirely different sense of embodied sensory existence, living "outide the usual brain/body divide." (Godfrey-Smith 2016: 76) Not only this, but if an octopus or a cuttlefish senses or decides something, its colour changes in an instant. These animals display their mood and attitude towards other beings through the colour of their skin. The skin of an octopus contains specialised cells called chromatophores, which make colours more or less visible to the brain inside. The skin of an octopus also contains opsins, which are pigmented light-sensitive proteins in the eyes. Interestingly, as Godfrey-Smith observes, octopuses also go through elaborate displays of colour change when seemingly unobserved. So as well as this display of "ongoing chromatic chatter," octopuses also see with their skin (Godfrey-Smith 2016: 128).

As well as cephalopods, we can also apprehend spiders as sensory virtuosi. Eva Hayward presents a comparative and compelling account of the optic/haptic world of the spider:

"These silken lines reference the skeletization of surface, the web is an extension of the surface affects of the spider; it feels with its web." (Hayward 2010: 231)

The link between the spider and the city is that it creates its own environment; its own city; through its own sensory organs. "The web emerges through the spider's sensuous milieu; it builds with the world through the aperture of its sensorium." (Hayward 2010: 232) Hayward here is discussing trans-becoming in terms of environmental and intra-sensory entanglements; she weaves spiders, streets and transsexuals together. Hayward points out that some of the effects of the non-human hormonal drug Premarin affects one's proprioceptive sense just as much as one's external presentation: "vision is distorted, one is disoriented by racking focus; haptic senses, to touch, are reworked making handled things feel like never before; sense of taste is refracted through hormonally changed buds; smells redefine space." (Hayward 2010: 229) There is the sense of an overspilling and consequent blurring between subject and environment in all these senses. Hayward links this blurring with Susan Stryker's account of BDSM practices which, in her words, enact a poiesis which collapses the boundary between "the embodied self, its world and others." (Stryker 2008: 39) Stryker narrates a flogging scene at a San Francisco sex party and turns to Bergson's *Matter and Memory* wherein the stimulus/response system does not register the internal/external corporeal boundary but rather "a continuous movement in which a force's vector is prolonged and deflected into the movements of living matter; it is a wave transmitting itself through various media." (Stryker 2008: 41) The continuous movement is what is felt through and between and within both the spider and the web, "an optic skin, a connective tissue, building a home that senses in order that the spider might feed, entrap, and make more of herself." (Hayward 2010: 243) The transposition from one sense to another—

from optics to haptics, for example—is precisely what Hayward adumbrates with "fingeryeyes," derived from observing cup corals at the Long Marine Laboratory. "Crossing the animating impact of nerve organs, fingeryeyes diffract seeing through touching; optical grasping, or tactful eyes, haptically and visually orient the sensual body across mediums." (Hayward 2010a: 581–2) The fingeryeyes splice haptic and optic perception; Hayward here learns from coralline sense. The cross-species mutation described in terms of the engagement between Hayward's fingeryeyes and the corals is itself a kind of synaesthesia, in the senses of multiple sensory becomings.

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