

Vital animation: *De anima* and therapeutic tools

The future of the human body, as a source of *vital* ~ necessary and animate ~ raw materials, amongst other animate and inanimate raw materials, relies in part on the ability to, and methods by which, its *vital animation* is maintained.

But how might we appreciate such vital animation. Western thought has concerned itself with what might, if anything, constitute the distinction between what is living, what has become dead and what has never been alive, at least since Aristotle wrote *De anima*. In making a critical analysis to Aristotle's discussion of the *potentialities* and actual *capacities* of a living thing, namely its *psuchia* (ensoulment ~ that is *what kind of thing it is and what it is to be that kind of thing*) we may facilitate our discussion of present and future-present medical somatechnics; and seek to ask:

- Can technologies animate or do they merely imitate; what might constitute this distinction?
- Does it matter how biotechnologies come into *being* vitally animate?
- Do in fact some medical technologies animate the body synonymously, as with original body parts; where as others only imitate the original homonymously ~ 'in name only'.
- Do inanimate automata become enlivened through (human) bodily integration? And if we are to use human and other 'flesh' as a resource that (re)animates ~ as with transplantation and gene therapy ~ are recipients therefore *heterogeneously ensouled*?

"For Aristotle the *psuchē* is the particular form of a living thing, the capacities which characterise what it is to be that thing when alive. These capacities are an amalgam of the *capacity to change* ~ as in the *actual* movements of growth; and the *capacity for change* ~ as in a *potentiality* for an actuality. ... Remembering that, the *psuchē* is not that which renders the thing alive, rather *psuchē* is what a living thing possesses ~ being *vital* ~ as in necessary and animated.

In *De Anima 2, 1* Aristotle posits that: "if the eye were a living creature, its soul would be its (capacity for) vision" (1957b: 71). The eye in fact does not need to be seeing, it may be asleep, but it must possess the capacity to see. The "if" of this statement is crucial, for of course the eye is not capable of being an independent living creature. ... For an eye can only exist as a functioning eye, with a *psuchē*, within a living body. ...

Aristotle goes on to note: "Some bodily parts, however, are neither prior nor posterior. Such are those indispensable parts in which the definition or essence immediately resides, e.g. the heart or the brain – whichever you like" (Aristotle, *Metaphysica 2, 10*: 1956: 191). This opens up the question of just where, to what extent, and how the *psuchē* pervades a living body; with Aristotle offering various possibilities. However, the clear suggestion is, that some body parts, namely the heart and the brain and may be some other organs, are *indispensable* to the living thing, in comparison to say a finger. And that:

"there is no need of soul (*psuchē*) in each part, but since it is situated in a central origin of authority (as in the heart or its correspondent) over the body, the other parts live by their structural attachment to it and perform their own functions in the course of nature" (Aristotle, *Motu Animalium 10*: 1961: 477).

Thus, *indispensable* parts possess *psuchē* in and of themselves. By attachment to them other *dispensable* parts come in contact with *psuchē* via their integration into the whole. This possession of the capacity for being "such and such a thing" is then only properly expressed when integrated into the living whole. This is referred to as being in the "right relationship" for the conditions of life; a *vital*, necessary and animating, integration.

Interestingly, Aristotle is somewhat ambiguous as to whether severed parts and dead bodies are in some respects the same as their vital counterparts. ... The point he makes, is that although living and recently dead bodies or severed parts may be composed of the same matter; recently dead bodies and severed parts will lack the *psuchē* form of a living thing, as they are no longer in the "right relation" to the living body. But as to exactly when or how the *psuchē* is lost, following the loss of the vital integration is ambiguous. So, the possession of *psuchē* can only be expressed when body parts are in the right relation to, vitally integrated

within a living body. Reiterating his comments on the dead finger, Aristotle posits in *De Partibus Animalium* that:

"[yet] the dead man too has the same conformation of shape, but nevertheless is not a man. Moreover, a hand cannot exist in just any condition whatsoever, such as metal or wood, except homonymously... . For it will not be able to perform the characteristic activities (*psuchē*) ..." (PA part1: 1961: 640-1).

In effect the wooden hand and the dead body or severed finger, are mere material "images" they have no mimetic qualities, no animate capacity for acting as if living. But here is the vital question, what of medical mimetics? What of prosthetic hands or transplanted organs, are they hands or organs *in name only*? Or do their mimetic capacities suggest that they are not homonymously, but synonymously hands or organs and therefore in possession of *psuchē*."

(O'Neill 2007b:179-80).

Many present and research therapies seek to harness the individual and convergent potential capacities within disparate fleshy and non-fleshy materials. To then convert these potentialities into actual therapeutic capacities. Here is just one example to consider with reference to the above; you may wish to view the video: "*TransMedics has developed the world's first commercial, portable, warm blood perfusion system that allows a new type of organ transplant, called a living organ transplant. This new technology, called an Organ Care System, is designed to maintain organs in a warm, functioning state outside of the body to optimize their health and allow continuous clinical evaluation. Hearts beat, lungs breathe, kidneys produce urine, livers produce bile*". (Transmedics homepage: http://www.transmedics.com/wt/page/organ_care, my emphasis).

Of course it is one thing for a technology to mimic the material body of the human, quite another to mimic or even assimilate its embodiment. But is that not what transplantation and many other innovative technologies now seek to achieve? If we understand embodiment as "akin to articulation in that it is inherently performative, subject to individual enactments, and therefore always to some extent improvisational (Hayles, 1999: 96-8)", then 'embodied' technologies must seek to enact the *innovative capacities* of a living being. Latour (1988) in discussing *Mixing Humans and Nonhumans Together*, states that when we design technology we delegate to it certain human tasks. This "non-human" then in turn prescribes back, how the human user will access that delegated task. For Latour technology remains significantly inflexible, in comparison to the human user, with regard to the capacity for innovative action within this delegation/prescription paradigm: in effect, querying the potential for cyborg assimilation. He sees the human capacity for innovative action, Hayles' embodiment, as that which remains distinctive about humans in comparison to non-human actors.

However, Latour's discussion of materiality does not sufficiently account for the inherent capacities of the "materials" themselves; unlike Aristotle. Although materials are chosen for the potential they offer in receiving delegation and prescribing action, they also retain *nascent capacities* which can remain unaccounted for. It is these nascent capacities that have an uncanny knack of further querying the boundaries, agency and response-ability of somatechnics.

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