

Unsettling Conditions? Motility, human division and (post)human imperatives

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My aim this morning is to explore how two contrasting debates on the posthuman open up different challenges to contemporary understandings of the human. This aim is twofold. First I unpick the different sets of conditions of possibility offered by these radically diverse theories on the posthuman. Secondly, drawing on my ethnographies of medicine and science, I go on to illustrate how their different trajectories create very different imperatives for us in conducting our institutions as well as our everyday lives. I then hold these challenges against humanism's binding binaries on the one hand and the creation of new liberatory imaginaries of hybridity and connection on the other.

The first trajectory in the posthuman debate concerns the entanglement of technology and culture. Here the key idea is that our extension with technology is *enhancing*: our technologies allow us to do more and do things better. Perspectives here tend to be caught in what Strathern (1995) calls the 'culture of enhancement' – the imperative that we can always do more and become better. 'Technologies of enhancement' then are those technologies that supposedly extend and enhance human power.

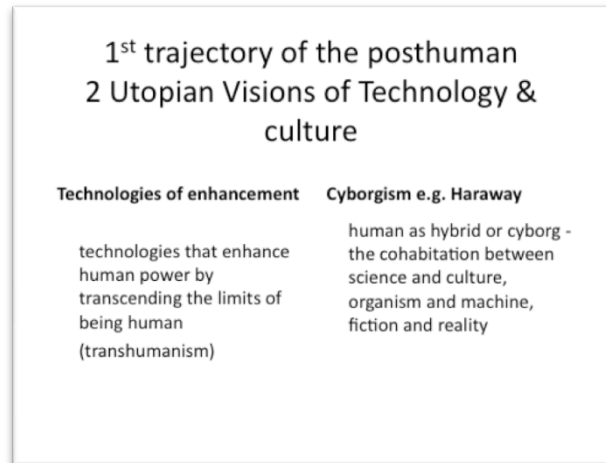


Fig. 1

There are two Utopian imaginaries to be untangled here (fig. 1) – since both imagine the enhancement of human power in terms of extension. On the one hand ‘transhumanism’ imagines technology (fig. 2), as getting us out of the constraints imposed by the limits imposed by what are imagined as natural body-world relations. Here the human becomes suprahuman with an intensification of the human as exceptional. This is crucial for example, because it is a mantra of performance related pay that only the ‘exceptional’ should be rewarded.

Posthumanism (or transhumanism to use the standard term) is the view that we **ought to** try to develop - in ways that are safe and ethical - technological means that will enable the exploration of the **posthuman realm of possible modes of being**. Transhumanists believe that all people should have access to such technologies. The choice of whether to use them, however, should normally rest with the individual.

(Nik Bostrom, Professor In Philosophy at Oxford – this quote is from his blog Posthumanism - <http://www.posthumanism.com/> accessed October 2013 – **my emphases**)

Fig. 2

The second, advocated for example by Haraway (1991) in her Cyborg manifesto, celebrates human-technology relations as a form of hybridity. ‘Cyborgism’ helps undo those dualisms that underpin the figure of the enlightenment human by deconstructing such boundaries as those between human and machine, body and mind, self and other, culture and nature. If the tendency of the first vision of the posthuman-technology relation is to create a figure of

the posthuman that can through technology master the world, the upshot of the second is that we have never been modern or human in the enlightenment sense but that we need to embrace the entanglement of technology, science, and culture in ways that enable a much more libratory ontology because it will change the dominat politics of contemporary life.

Both utopian visions - of human-technology hybrids and of the human that dream of extending people's powers to carve out their own futures - run up against a lineage (fig. 3) going back to Heidegger and Foucault – one that unpicks notions of the discrete, self-contained and autonomous individual, but nonetheless views the fall or disappearance of the human as dangerous and even dystopian.

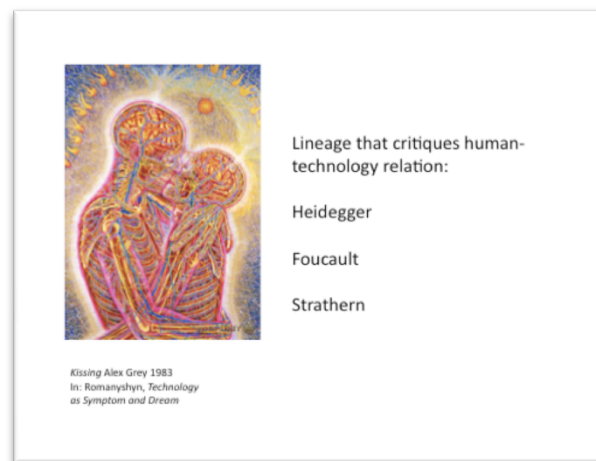


Fig. 3

Drawing on ideas of relational extension that de-centre the subject, my field studies (Latimer 1995, 1997a,b,c&d, 1999, 2000 a&b) show how the proliferation of technologies inside health care are not so much medical as they create materials for managing how care is conducted (see also Charles-Jones et al 2003; Hillman et al, 2010; White et al 2012). Supporting Strathern's critique of the culture of enhancement – and her observation (1991) that technology works us as much as we work it - my findings suggest many technologies of enhancement actually diminish people's power. They are turned on practitioners and patients alike in ways that exaggerate the individuation of responsibility and intensify the precarity of identity and belonging.

The second trajectory (fig. 4), contrastingly, derives from the DNA revolution in biology and the mapping of the genome, and constructs itself around the promise of a fresh start.



Fig. 4

Specifically, post-genomic imaginaries are seen to have the potential to change the conditions of possibility for the production and reproduction of humanism’s central figure: the autonomous individual capable of living the ethical life. There are Utopian visions that once again stress mastery over the stuff of life – and choices over the creation of new kinds of species. But there are also other visions in these new biologies, visions that stress substance in common, affording possibilities for connection, and thus offering new biosocialities that undo division in humanism’s dualisms. In my recent field studies of the sciences of genetic medicine and ageing biology, I highlight how humanist and posthumanist imperatives need not collide but can actually work together in ways that reject any totalising narrative (Latimer 2013 a,b,c; Latimer & Miele 2013). Instead of a new start that abandons the dividing practices that hold human exceptionalism in place, we see cultural performances within the clinic and the laboratory that are adept at shifting people, and their grounds, as well as non-human others, back and forth, across both human and posthuman imaginaries.

What comes into view in my work across both of these trajectories of the posthuman debate is an elicitation for humans to be ‘*motile*’ (Latimer, 2001, 2000a, 2007, 2004; 2013; Latimer & Munro 2006; Latimer & Munro, 2009; Latimer & Puig de la Bellacasa 2012), as much as mobile, moved by human and posthuman imperatives alike. Motility is certainly a human characteristic, as central as mobility is to our avoiding getting stuck in particular identities, or conditions. However its limits and pitfalls are far from being understood and, as such, its

elicitation is likely to augment appropriation and exploitation. The over-riding imperative for the moment is for us, as individuals or as group, to be on call, continuously switching extensions and shifting the world to hand; an endless condition of never being allowed to settle.

The 'post'human debate on technology

The first longstanding trajectory of the posthuman debate arises out of concerns over technology. I need not detain us further with rehearsing the Utopian views about technology, nor go into its dystopian versions. The dream of becoming a master of the universe is the subject of many fine films, just as bringing cyborgs to life has become a staple in the Hollywood diet. What is more important to note is that the critique of humanism's vision of technology being at our beck and call has a lineage from Heidegger and Foucault through to Marilyn Strathern. In contrast to posthumanist visions proffered by technologies of enhancement, this is not however a matter of individual human subjects using technologies to extend and transcend their powers. Rather than perpetuate the division between the individual subject and materials of extension as objects – objects that he/she can seemingly pick up or put down at will – this critique suggests how humans are always and already in extension with technology.

Let me just take a moment to emphasise that it is *how* they are in extension that is crucial. For Heidegger (in *The Question Concerning Technology*), different versions of modernity are constituted by the ways in which we construct our relation to the world. This relation can be an instrumental one, one of domination, in which humans extract from nature what they want to enhance their powers. Building dams across rivers for power, designing bridges for speed, and creating abattoirs for killing, all exemplify this 'attitude'¹. This relation is instituted in the very idea of technology being a *mastery over* particular modes of ordering. This relation to the world that technology institutes is problematic for Heidegger, extending as it does to mastery over other humans who come to exist merely as standing reserves. Not only does he see the world being made to fit the picture of it that the technology imagines,

¹ I am using the term attitude following Foucault (1984), and his idea of the flaneur as embodying an attitude or relation to the world.

he is also arguing that technology forces humans to stand in advance, acting on (themselves, others, nature etc) rather than being in the world. Romanyshyn in his fine book *Technology as Symptom and Dream* helps unravel some of the ways that this relation puts us out of the world.

Foucault, in his turn, has explored many sets of technologies. His analysis of *episteme* in *The Order of Things* (1994 [1970]) excavated different technologies of knowledge, his earlier analysis of discourse examined technologies of representation such as the medical gaze (Foucault 2003), and his genealogy of punishment described technologies of surveillance (Foucault 1995), notably Bentham's Panopticon, while his study of ethos and care covered the technologies of self including the confession (Foucault 1986). Later he centred more on technologies associated with governing – including forms of inscription such as statistics and record keeping (Foucault 2000, 2000a, 2004). Biomedicine is particularly complicit in these forms of governing, since it provides the normalising technologies against which individual bodies and populations of bodies can be held and so helps to make infractions and deviations visible.

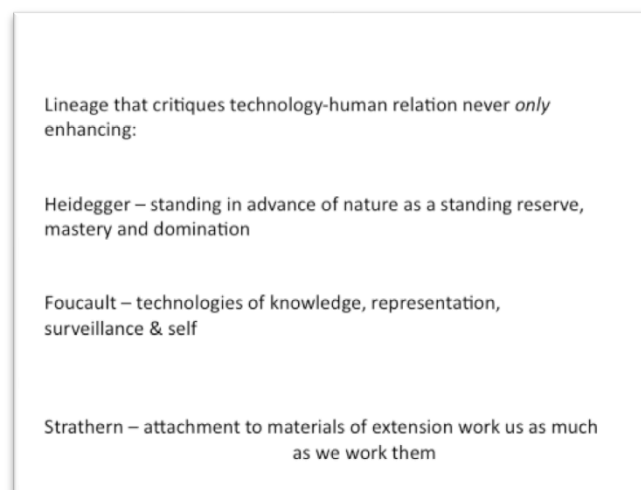


Fig. 5

Informed by this lineage – rather than in any way being beholden to it - Strathern (1991,1995) proposes a theory of how extension with cultural materials bodies forth relations. Notably, she does not set up the artefacts of technology against the artefacts of culture. This would merely be to create the kind of division that has plagued philosophical and cultural debate. That she is alive to the deleterious effects of technology, however, is evidenced by her refrain in *Partial Connections*, that technologies work us as much as we

work them. Indeed, in respect of the technologies associated with audit cultures (1997, 2000), she shows how they can be turned on us, going so far as to suggest that ‘audit does more than monitor—it has a life of its own that jeopardizes the life it audits.’ (1997, pp. 305). I return to this theme later, but it is helpful first to outline the main points at which I follow her.

Upturning conventional notions of prosthetics, such as an artificial limb, Strathern (1991) points out that extension involves attachment in a double sense. Yes, attachment involves material additions but these, in turn, have to be understood also in terms of affiliation. Incorporation of materials, which includes such things as incantations as much as a headress or spade, thus involves a ‘doubling’ of parts. As well as aiding range and reach, attachment incarnates meaning in its fullest sense. It generates affect, rather than being merely the representative move of letting one part stand for another, the signifier for the signified.¹ In this way what passes for culture is essentially permissive, rather than definitively proscriptive. What matters in Strathern’s analysis is to understand that different relations are made present – and thus brought into circulation - less by people attaching themselves directly to each other (whatever this could mean) and more by virtue of performances created by persons attaching (or detaching) themselves to material devices.

What I want to stress from my own work is how this process of attaching to and detaching from different kinds of technology does more than make ‘visible’ identities already available to self and others. The relations brought into view are *motile*; the ‘worlds’ they create depend in turn on how, and when, different materials are attached, or detached (Latimer 1997, 1999, 2001, in press; Munro 1996b; Strathern 1991). At one moment, for example, people might ‘figure’ themselves as ‘parent’, say, reading the school report of the child, the next moment they may reappear as ‘friends’, ‘allies’ or ‘family’, clinking glasses to celebrate appearing together in a parent-child school debate. Ahead of relations, there are no prior ‘persons’, or ‘individuals’. As much as the cutting of any other figure, becoming visible *as* a person (or *as* an individual) involves rituals of extension.

It is important to understand here the very different ontology involved in these ideas of extension. There is no sense in Strathern’s work of different parts settling into wholes (e.g.

1992b and 2009) – in the sense of cyborg hybridity. Further, reading significance off materials, as Douglas and Isherwood (1980), among others, have explicated, is all part of expressing identity and making displays of belonging. Within the theory of extension, however, the argument is quite different. The suggestion is not that there are well-understood symbols that are universally shared in any one group. Rather it is that any incorporation of materials is literally an *in-car-nation*, an incarnation that actually changes the bodies (and therefore the persons) involved, and thereby the relations being created. It is by incorporating the materials of culture that people, in Strathern's analysis, are literally altering their forms, and with this the relations that are being made manifest. It is through extension, as materialised in specific relations, that the social body is given presence. In addition, there is no sense that attachment and detachment to and from cultural materials are matters of individual choice – *on the contrary*.



Fig. 6

In summary, then, these rather different post-humanist positions come together to caution against any too hasty notions that extension with technology is automatically enhancing. To the contrary, as I am now going to show, technologies that work on the ground rarely work alone and may need to be understood more as intersecting and piggy backing on each other.

By the beside

In my own early field studies of older people in acute care hospitals (2000, 2004) I located myself at the bedside of older people and observed who and what came and went, and how they came and interacted or not with the patient, and I also followed what went from the bedside – the virtual representations of patients in accounts and records – through all the processes and occasions, the rituals and the ad hoc moments, through which the hospital was organized – ward rounds, nursing hands overs, team meetings, nursing and medical notes and letters, conversations in the office or at the nurses station.

I have shown how the proliferation of technologies inside contemporary health care are not only medical. Rather there has been a proliferation of technologies for managing how care is conducted. In particular, alongside the usual kinds of materials we would expect to see nurses and doctors attach and detach patients to and from there are other kinds of technologies that work alongside clinical technologies. Critically it is the movement between these technologies that is of interest. Specifically, I have shown how nurses shift between different forms of extension – they attach to and from not just the instruments for observing patients, such as thermometers and sphygmometers, or for administering medical regimes to patients, such as drug trolleys and IV infusions, or for keeping the body clean, such as wash bowels and bathing equipment, they also attach to new technologies of enhancement for ordering their work – such as the nursing process, collaborative care planning, care pathways and so on and so forth.

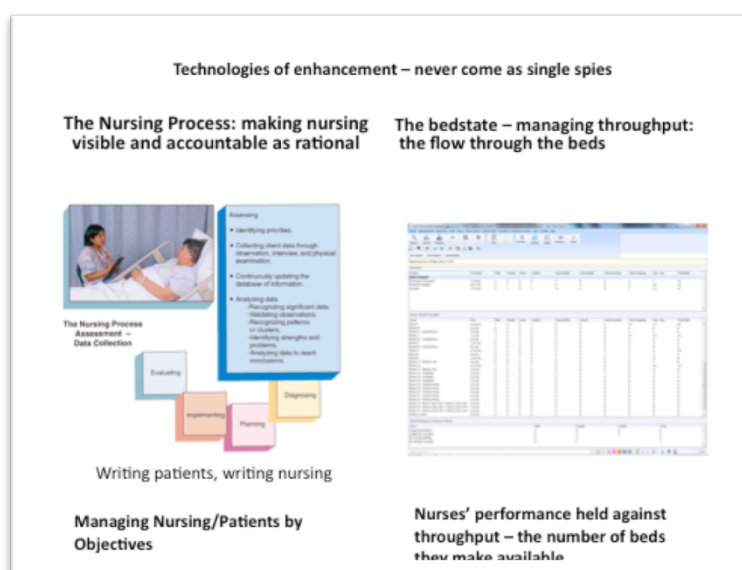


Fig. 7

The nursing process that figured in my earliest ethnography *The Conduct of Care* - was introduced by the profession to individuate patient care, extend the nursing gaze to the social and functional aspects of the patient, and to enhance nursing and make it more visible and accountable, *transparent*, as professional work. It is a way of assessing patients across a field of categories which included social and functional details (sleep bowel mobility communication social life) as well as medical ones as at the same time it was making their work visible against particular parameters of what counts as rational and ordered work – the identification of problems, the appointment of objectives, the construction of a plan of care and evaluation of outcomes. Thus the specific form of the nursing process – the modes of inscription – were ordered along the lines of management by objectives – so that in attaching to the nursing process nurses were aligning with and being exercised by a particular relation: the relation between processes of objectification and an inscription device through which the patient becomes a target to managed, not just cured or cared for.

Thus we can understand that in incorporating the nursing process as one of their belongings, nurses' were perhaps unwittingly also aligning with, and helping to circulate, the agendas that the technology bodies forth. Critically, however, as Callon and Law (Callon 1986; Callon and Law 1982) press, the program that technologies embody are never imply diffused – they are not just enrolled but also translated, as at the same time as they are transformative. The nursing process for example had been introduced as at the same time as the introduction of other strategic managerial technologies aimed at increasing throughput of patients and reducing the amount of time spent in hospital (Latimer 1995). The agenda of increasing throughput and reducing waiting times was made present in the nurses world by the bed state – a technology rather like double entry book keeping that was difficult to refute as it reduced a patients stay in hospital to the number of days they had occupied a bed and held these against supposed norms for their particular diagnosis: it disposed of all the complexity. For example, the complexity surrounding the older patient with more than one diagnosis, and with increasingly likely disability and social problems. Nurses were being called to reconcile these two technologies – the nursing process and the bed state.

In aligning with the nursing process nurses were not just given perspective, a sovereign domain from which to see, but were also put in alignment with a particular relation of subject and object, and the possibility to stand in advance and create a plan through which to make the world – the patient and their body, the nurses and their care – fit the plan. Although as Foucault asserted such technologies always fail they also have their effects – in this case the nursing process was adopted as a technology to enhance nursing, individualize patient care and help make nurses visible as doing more than women’s work or medical orders, that is as rational and accountable work. But it also attaches nurses to forms of inscription through which their work and they as well as patients become available and open as individuals to inspection – as such it is an instrument of an audit culture because the instrument is made and used by those whose work is to be made transparent. It also puts them into a specific kind of relation to the patient – through processes of objectification the nursing process does not just give nurses’ a gaze but the patient, reduced to parts whose significance is decided elsewhere, is subjected. What gets disposed of are those activities which do not fit - the messy world of flesh and emotion, tacit knowledge, intuition, or any of the affective dimensions of care.

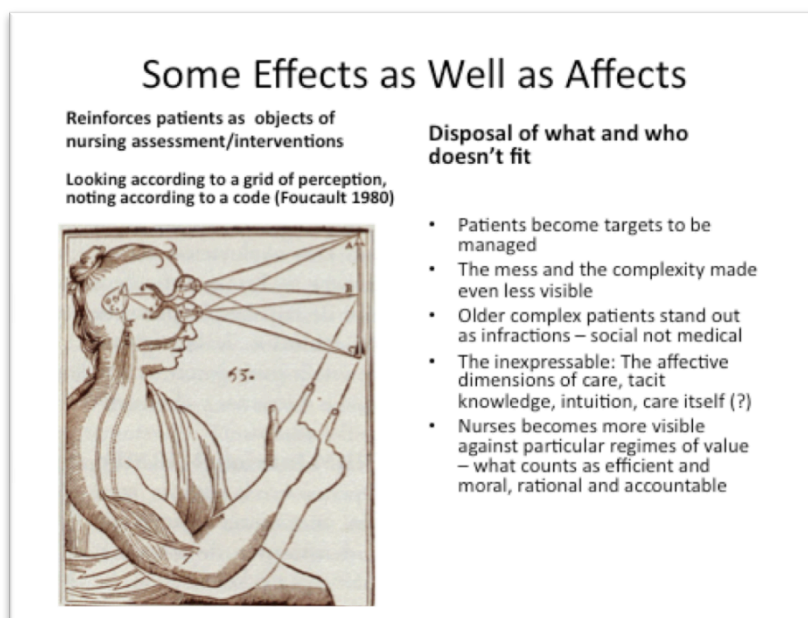


Fig. 8

In this sense then attachment to such a technology as at the same time as it enhances nurses’ visibility and institutes a mode of ordering it actually makes the identity of nurses and patients even more precarious because it excludes all those aspects that do not fit the managerial model that it circulates. Critically, in the case study mentioned above shifting

between the nursing process and the bedside nurses translation of the nursing assessment was into a method for identifying those patients who did not fit the hospital regime – those patients who had too many problems, were too slow, who weighed down the wards and blocked the beds. Drawing on their extended nursing gaze nurses could supply the grounds for shifting patients’ identities to legitimate their disposal as inappropriate to the place - shift their identities from people in need of acute medical care to people who were social not medical. In so doing they fulfilled their commitment to free up the beds for those patients who really needed to be in such a facility. Nurses’ performance, held against technologies of managing, including the bedside on one side and the nursing process on the other, becomes partially visible, for a moment, as accomplishing what Strathern (2000) suggests is the program embedded by audit technologies: the jointing of the moral and efficient.

I have suggested elsewhere that it is these kinds of developments in health care that have made patients the potential enemy of the system. Always at risk of getting in the way of managerial and medical agendas that dispose of all but the most minimal and functional of care practices, the effects for patients exemplifies what Rudge (2011) describes as the violence of the well-run system. For example, the bedside of older people becomes a site of organizational politics, with those older people who could read the ethos enacted by nurses’ conduct, giving a cultural performance of ‘response-ability’ by lying low and effacing themselves (Latimer 1999). Supporting Strathern’s critique of the audit culture - and her observation that technology works us as much as we work it - my findings suggested that inside institutions being subjected to managerial agendas many technologies diminish people’s power; many are turned on practitioners and patients alike in ways that exaggerate the individuation of responsibility to intensify the precarity of identity and belonging².

So as at the same time then that we are never out of technology, in this lineage the technology-human relation is one that is turned on persons – reinforcing the figure of the individual – who is accountable, and responsible for choosing the right way to go along and

² The recent Francis report of compassionless care in the NHS does not however help unravel the ways in which the technologies in play have these kinds of desultory effects and affects.

get along, as at the same time any sense of the centred sovereign subject of enlightenment thought is deposed: it is in this sense then a more dystopian vision, a post-humanist vision perhaps, one which stresses how technologies can both turn, and be turned on, us.

The entanglement of 'nature' and technology

Let me now turn to the second trajectory: the revolution in post-genomic molecular biology. Again there are two Utopian visions here.

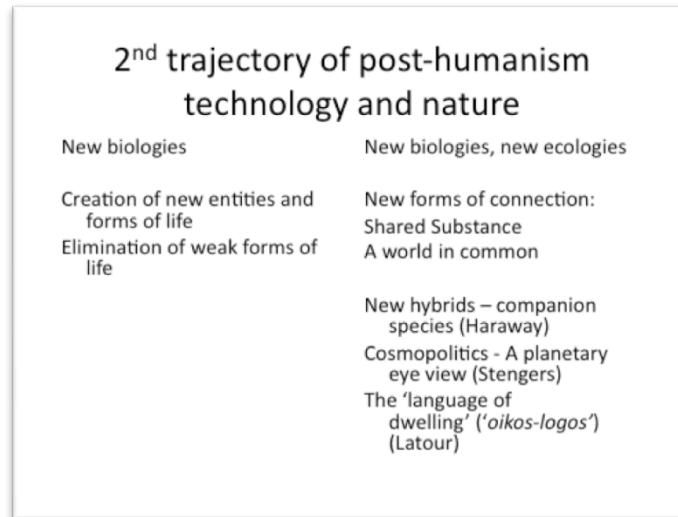


Fig. 9

The first imagines us being able to extend our powers over the stuff of life itself – and that this is desirable; in this perspective we can make ourselves from new – and anything becomes possible, because we are not bounded by previous boundaries, instead we have the chance to make a fresh start.

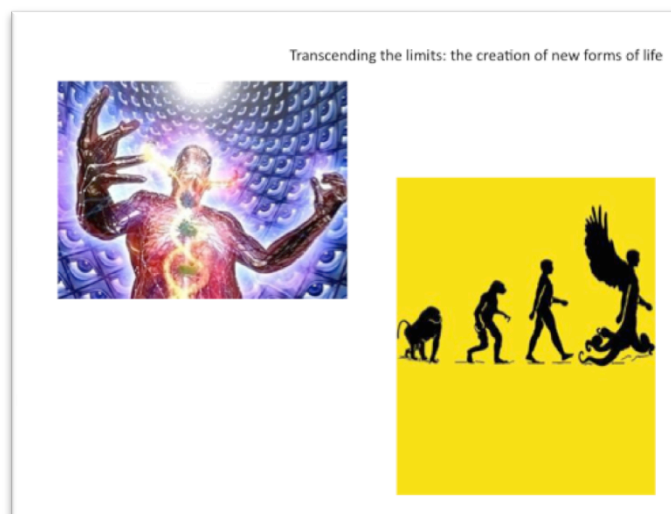


Fig. 10

For example Rheinberger holds that

What is new about molecular biological writing is that we now gain access to the texture, and hence the calculation, instruction and legislation of the human individual's organic existence, that is to a script that until now it has been the privilege of evolution to write, to rewrite and to alter. (Rheinberger, 2000, p.28)

The second Utopian vision afforded by the new biologies also concerns the breaking up of old boundaries, but here new understandings in biology are enrolled to help stress greater connection between humans and other non-humans with whom we share the planet. In place of the division between human and animal and earth and air – gained by placing us at the top of the tree of evolution - there is new knowledge about relatedness between different kinds stemming from discoveries about 'substance' in common (shared DNA etc) as well as ecological alertness to our sharing worlds in common. 'Post-modern biology' as Melley terms it (2002: 51) harbours significant possibilities for biopolitics, especially in terms of conceptions of humanness.

In particular, commentators suggest how 'geneticization' of the body could lead to a revolution in our ways of conceiving persons as individual, and the destruction of the figure of the human in all its exceptionality (see also Latimer, 2013 a and b). As Hayles so beautifully puts it:

What is the posthuman? Think of it as a point of view characterised by the following assumptions. First, the posthuman view privileges informational pattern over material instantiation, so that embodiment in biological substrate is seen as an accident of history rather than an inevitability of life. Second, the posthuman view considers consciousness, regarded as the seat of human identity in the Western tradition long before Descartes thought he was a mind thinking, as an epiphenomenon, as an evolutionary upstart trying to claim that it is the whole show when in actuality it is only a minor side show. Third, the posthuman view thinks of the body as the original prosthesis we all learn to manipulate, so that extending or

replacing the body with other prostheses becomes a continuation of a process that began before we were born. (Hayles, 1999: 2-3)

In the shift to molecular biology, Hayles is suggesting that we can find a contemporary destruction of the Enlightenment concept of the human because there is an undermining of the three pillars that underpin human exceptionalism: 1) the uniqueness of the body-individual, 2) the supremacy of consciousness and 3) the human-other dualism.

Within the posthuman perspective afforded by post genomic biology – and the emphasis on the stuff of life in common - we can find a re-inclusion of animals and other kinds into the social. While some anthropologists might rightly claim to have never excluded them in the first place, for most these ‘ontologies of connection’ mean a breakdown of old divisions, such as self/other and culture/nature, as well as human/animal.

Once humans are included in these wider connections – and are thus treated as a part of nature itself – then the human-technology relation that puts humans as outside the world, (discussed by Heidegger and Romashynyn – see above) is upset. This re-inclusion of humans not only begins to undermine the hallowed pursuit of mastery over nature. It starts to trouble assumptions that everything beneath the human (animals, the land) is simply available for either production or extraction. It unsettles those relations to nature discussed in relation to Heidegger above that make appropriation and exploitation possible.

It is of course for such reasons that Donna Haraway (2003), who I originally placed in the first trajectory, issued her Companion Species manifesto:

Cyborgs and companion species each bring together the human and non-human, the organic and technological, carbon and silicon, freedom and structure, history and myth, the rich and the poor, the state and the subject, diversity and depletion, modernity and postmodernity, and nature and culture in unexpected ways. (p.4)

Haraway's agenda is far-reaching. Like Bruno Latour she proposes attention to a new kind of heterogeneous idea of the social, and to a new kind of actor, the human-non-human hybrid, as 'associations' between 'beings' (Latour, 1998). This bringing humans and non-humans together involves a rethinking not just of a 'politics of nature', as Latour (2004) terms it, but of a 'politics of culture' (Latimer and Birke, 2009) in ways that might take us far beyond that already achieved by attention to gender or orientalism, or even technology.



fig.11

Specifically, stressing connection rather than division between humans and other kinds helps incorporate the idea that we inhabit what Bruno Latour (2004) calls 'worlds in common', worlds populated by human/non-human relations, encouraging us to learn how to speak in the 'language of dwelling' ('oikos-logos') (p. 213). At the same time then as these theorists do not stand against science, these new philosophies offer critiques of science as needing to change their orientation and outlook, by becoming what Isabelle Stengers has called 'cosmopolitical' (Stengers, 2010) or more-than-human. For Stengers, cosmopolitics is a 'planet eye-level' (undated) that can help counteract the problem of turning modern science into technoscience, as a general model of objectivity, rationality and universality. So here a vision of is also enhancing – enhancing of new kinds of care for nature, others and ourselves – of which we are now to see ourselves as just one amongst many extensions of naturecultures. Within this perspective posthumanism is not just a matter of being more than human to quote Stengers and Sarah Whatmore (2013), it is about being better than human(ism).

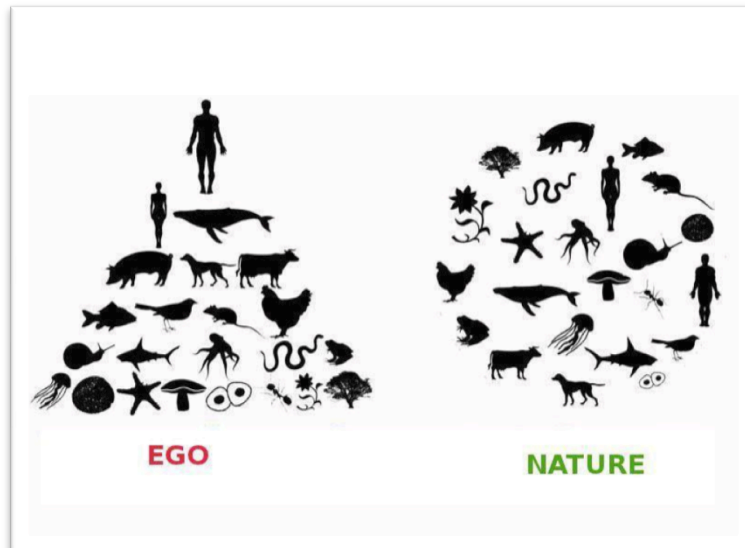


Fig. 12

Getting into science

I have been holding some of these debates against my ethnographies of ageing and of genetic medicine. The core research material of the latter (Latimer 2005/6/7/8/9/13a&b) comes from a longitudinal study of an evolving discursive practice in medical genetics known as *dysmorphology*. This is the study of abnormal forms, historically called congenital abnormalities. Thus dysmorphology locates itself in those effects in persons identified as "existing from birth" and as relating to *genitus*, or "begetting". As it happens, dysmorphology's roots are in paediatrics and the objects and subjects of clinical practice are mainly children and their families. Indeed many clinical geneticists I met were trained in paediatrics and the underpinning discourses in the clinic are the science of growth and form in humans, such as embryology, and conceptions of child development.

Critically, dysmorphology is concerned with the description and recognition of 'syndromes'. At the time of the study there were over 3,000 syndromes recorded in databases, and many of these descriptions were still in the making. So the book is to some extent about shape and form in contemporary medicine; and, further, how deviations from normal human development are being identified and named. 'Dysmorph' literally means misshapen, and is concerned with begetting when the coming together of processes of reproduction go wrong and do so in ways that produce abnormal forms. It should be noted that these syndromes typically involve very small numbers of

people, and come under the new rubric *rare disorders*. Consequently, the availability of molecular and cytogenic tests was limited. In addition, diagnosis was very protracted and more often than not uncertain and undecideable.

I show in my book (2013a) how in its partial alignment with science on the one hand and the family on the other, genetic medicine manages to reinvogorate its power as a guardian of humanistic health care; as a social insitution that installs the family as the site of reproductive risk and mothers and fathers as reflexive calculators; and as a science that installs itself as the centre of discretion, able to differentiate between the genetic and non the genetic as explanatory grounds for the troubles that body-persons display.

Rather than any totalizing effects what I have found is motility – shifts between different discourses and extensions, technologies and meanings, shifts that shift identities and move the world. I found doctors shifting (fig.13) between the front stage of science (at the whiteboard performing themselves as scientists to the discipline), and the backstage of the home and the clinic, recreating themselves as human, and immersing themselves in the fleshy world of the bodies of children, and their families.



Fig. 13

I found that their discourses and practices created images of post-genomic entities – genotype-phenotype relations – in which, for a moment, diseases are imagined as distributed across different persons who are biologically related (fig.14). But I also found

moments where these same persons are refigured very much as the humans of enlightenment thought – figured as needing to know, as having agency and as having consciousness that transcended their bodily forms.



Fig. 14

But what I want to focus on now is how family is enacted and made subject to reformation in the genetics clinic. Family in the genetics clinic is produced as made up of stuff that may or may not harbour genetics aberrations. But family members – parents, children and their siblings are also produced as people who may reproduce in the future – to be constituted at moments as future parents who need to know about their dna. This is accomplished through how children and their parents are made participant in and immersed in the processes and practices of the clinic in ways that associate reproduction and procreation with disease, malformations and disabilities.

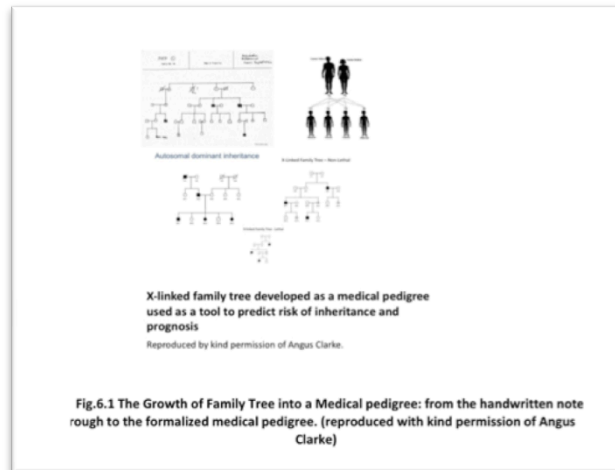


Fig. 15

This is done through engaging family members in the production of evidence: the creation of the family tree (fig. 15) – the work of creating the family tree involves family members in producing histories of themselves and other family members across different generations – health and medical histories, alongside pregnancy histories and reproductive histories and, critically, social histories; as well as photographs of different family members (fig. 16).



Fig. 16

Sometimes histories of reproduction and pregnancy are also elicited alongside the examination of a baby or child, and the identification of abnormalities in both the form of the child – how they look as well as in terms of their functioning. In this way parents and other family members are attached to the technology of the clinic. Through these associations and juxtapositions, connections are made, and the genetic, as something that is

distributed across different persons as a possible explanation for a child's troubles, is brought into the here and now.

As I have asserted elsewhere it is in this way that the clinic becomes a site of crossing between the molecular (the abstract representation of genomes as codes and letters) and the molar (the fleshy and partial expression of the genotype – the phenotype) (fig. 17).

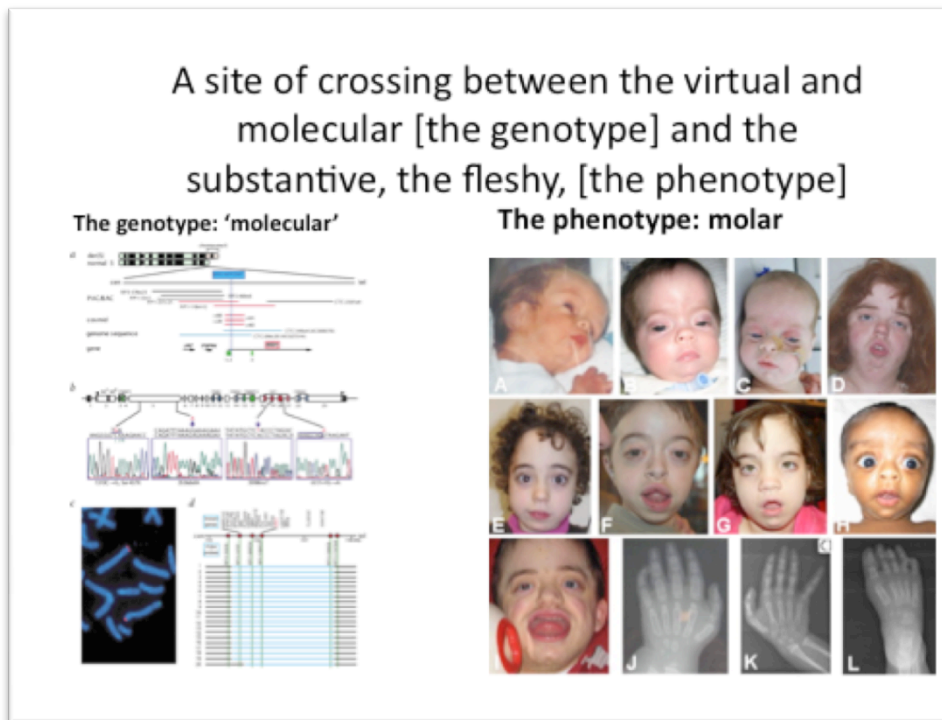


Fig. 17

The clinic thus gives material extension to the possibility that the child's troubles are due to their genetic substance, a substance that may be shared with some other members of the family.

What is interesting here is how participation in these processes and practices elicit shifts in parents' identity-work, shifts between different forms of extension and different kinds of identities. For example, at moments they may participate in the processes of objectification through which their child's troubles are named and identified as just that – troubles; the next they may perform themselves as good citizen-parents of public health networks responsible for socializing their child and managing their health; and the next as the loving mother or father of a suffering child, the one who stays up all night comforting or watching over them. Critically however submersion in the genetics clinic makes these kinds of

grounds less firm: it takes the ground from underneath parent's feet as sovereign subjects of contemporary humanist thinking - subjects whose capacity to choose what is good displays that it is they who are in control of their children's futures.

For example, the family tree, in configuring the relationship between family, reproduction and the health and development of children, simply confounds health promotion discourse with its emphasis on lifestyle choice. Specifically, in the genetics clinic, parents are not particularly figured as consumers who can simply choose a lifestyle to promote the health of their children. Rather, they are figured more as biological beings, whose bodies connect to other bodies as complex sites of reproduction. Here for example, is Kevin's father:

Father: Just thinking of anything else really about why, like I said, I have got such a big family and cousins you know, why didn't it happen to somebody else in the family, why me. You do think that. Me myself now, I've got four brothers and they have got big families, and why on my side? And the other thing is we've always been the fittest . . . before Kevin was born we had Tim obviously, we were always the fit family because we're always doing things, running, going on holidays abroad, everything sporty and then it happens to you, so you think 'why me'? You know, it shouldn't happen to people like me because we've always had a lifestyle sort of busy and always doing things, no 'it's not going to happen to us', but it does happen, happens to everybody, no matter how fit you think you are or you know, it happens to you (my emphasis).

In Kevin's father's account we can hear that he knows what every parent knows: that he is himself under surveillance even while he is surveying others, in this case his brothers as parents. But we also hear more than this: the questioning, the disappointment, and the bafflement. Kevin's father cannot understand *why him?* He was the very one amongst his brothers who most chose ways to live that would produce a 'fit' family. As far as he is concerned, he is the one who has been active in promoting a healthy lifestyle for his family. The logic is that, as a consequence of his choices, they should all be healthy. It also moves him to reassert his belonging – he is not just one of two parents, managing the lifestyle of his cellular family, he is one of many brothers, his children have cousins, and so on and so forth. In the usual relations between medicine and the family, the health and conduct of children's bodies are the material semiotics through which parents are judged. Under the usual deal through which parental identity is accomplished, he should have had healthy children: his

children should look good on him. But he hasn't. Instead, he has got Kevin. His bewilderment expresses something else – that he feels that this is something out of his control.

The clinic in genetic medicine makes people like Kevin's father very vulnerable because it takes some of the ground from under his feet as an agent: he is confronted by the view that making (good) lifestyle choices is not enough to make good children. Within his account we can hear how parents like him are exercised by both surveillance and a notion that they should be able to do and be good parents through the lifestyle choices they make. Yet we also hear that there is something about a genetic problem with a child that seems to confound autonomy and the power of choice. While the clinic in dysmorphology helps reinstitute parents as family members, it reminds them they are procreators, people who *make* families.

As at the same time as the ground is taken from under their feet, the clinic also exercises them in ways and attaches them to technologies that give a new perspective on their child's and their own substance. Parents are thus reinstalled as *procreators*, as people who inherit the stuff of life from previous generations and pass this on when they make children, including those parts that are creating problems:

Sally's Mother: But you blame yourself, you know you blame yourselves, like we had done it, it's our fault she got this because it's genetic, that's what you've got to remember, it's genetic, it's come from the family, that's how I connected . . . genetic is followed down the family, we were trying to think who had anything wrong with them in the past. [Sally's was diagnosed with *Cri du chat* syndrome, a new genetic mutation, soon after birth]

When parents become engaged in surveying and assessing their child, they take part in processes for gauging their child's health and development. In this way they become enrolled in technologies that help visualise their child's health, including measures of assessment and practices of comparison. Thus, through the processes of 'becoming informed', parents are at moments moved by the clinic to help hold specific aspects of their child against the technologies of a 'normalising judgement' (Foucault 1976). In so doing they are engaged in those dividing practices through which abnormality and difference are accomplished, and they seem to be performing a different kind of parent to the one who is

tired and up all night with a hyperactive child, or one who is attempting to encourage and support their child's socialization and development through practices of control and stimulation. These parents are consumers of expert and scientific discourses, willing and able to talk the talk of the clinic.

Yet in the specific moments in which they are being encouraged to engage in these discourses, they are also being exercised and moved by the epistemological practices of the clinic. These epistemologies may hold a child's diagnosis in a space of deferral, uncertainty, and undecideability. Thus in being engaged in the processes through which they are becoming informed, parents are entangled in motility - the motility that shifts them between connecting practices and practices of division, between definition on the one hand, and undecideability and deferral on the other.

We should be careful here. This kind of motility is not to be conflated with Victor Turner's (1967) liminoid space of sequestration, the occupation of a space in between two status positions. While a space of motility heightens the parents' susceptibility to the exercise of power, it is accomplishing something different to the Ndembu rites of passage. Unlike the neophytes of the Ndembu, the parents are being moved about through participation, rather than sequestration and subjection.

Parents are shifted back and forth between a space of definition on the one hand, in which they are helping to see how their child's troubles can be known as a belonging to a medical category (connection), and a space of deferral on the other, in which the category is not yet fully known (division).

The hinge between connection and division, definition and deferral is the promise of a future of knowledge, provided the right path, the path that the parents have already experienced in the framing of what is already known, is followed. Whether to follow or not is of course left up to the parents themselves.

This is a process of becoming informed in ways that bring into view their identity not just as the parent of the present child, but of future children, and the possibility of being a future

parent of another child like the one they already have – so that for the briefest of moments they abandon their attachment to their son or daughter and express the hope or the desire not to reproduce another like them. As one father having performed himself as ready and available to the technologies of the clinic that help get to the bottom of his son Johnny's troubles, at the moment that the genetic comes into view as a possible explanation for what is wrong with Johnny, is the same moment when he detaches from Johnny:

Father: . . . Also a question was 'What's the risk of recurrence?'

Dr White: Unfortunately, the children I know don't have siblings. I don't know, about 6 (a 6% chance). He (Johnny) doesn't have any other problems. DCX is normal, the gene is normal. I'll ask a research group in Italy I work with to look into this. Then we are left with the uncertainty, this is a unique situation, I may need to check if there were any other siblings.

Father: Of course we'd like to (have another baby), but for obvious reasons we don't want another Johnny, he's a lot of work.

CG: You're still young.

What I want to argue then is how immersion in this world of the new genetics shifts people between different extensions, different technologies, in ways that incite their sense that their own flesh as procreative, and at the moment of reproduction, becomes a site of risk.

Here then rather than biological connection which involves the inclusion of all other forms of life as envisaged in posthuman imaginaries around the new genetics, what we find in the clinic are moments like these, moments of connection and moments of division: attachment to connecting practices through which the genetic is given presence in the here and now, and dividing practices through which some others are to be excluded from the fold, in this case any reproductions of Johnny.

At the same time then as the clinic immerses them in its dividing practices in which some children are for a moment figured as disposable, their immersion in the technologies of the clinic shows parents a way to manage that risk: they at least are reinvigorated as humans who with the right knowledge provided by the clinic can make the right choices.

So one moment parents are figured through their immersion in the clinic as connected biologically to others, as made up of stuff distributed across different persons, as a kind of

posthuman imaginary. The next they are figured as not in control in any of the usual ways of the stuff that goes into producing the malformation and troubles experienced by their child. And the next they are refigured as all too human – as individuals who need to know what the clinic can offer them and who need to make informed choices - they are reinstated as persons with the capacity to choose the future – in order to put a stop on the reproduction of those others who are not to be included in the fold of the human however biologically connected. And critically as we have seen in the extracts about Kevin, Sally and Johnny, the people who come to the clinic are being incited to make themselves ready and available to such shifts extensions.



Fig. 18

Discussion

Let me now return now to my opening. In both these ethnographies there is an entanglement with technology. In the first technologies of enhancement entangle with culture in the world of hospitals in ways to supposedly reorder care or at least make nurses work more visible and accountable. I suggested however how the entanglement of different technologies produces worlds in which accountability is individuated and patients become targets to be managed, as at the same time particular ways of working or being sick get made invisible or problematic.

In the second there was an entanglement of technology and nature in my study of genetic medicine. Here I found parents shifted between different cultural performances through which they become more attached to the ways of knowing offered in the clinic and to an idea of themselves as sites of risky reproduction. However, as much as biological connectivity is performed in the clinic, there are other dividing practices in play that separate out those humans who are desirable from those who are not: biological relatedness does not presuppose social closeness. The clinic in identifying features and parts of children as clinically problematic – as abnormal and or diseased – helps legitimate the need for such dividing practices – for not reproducing such kinds into the future.

In the genetic clinic then people are moved in and out of DNA, one moment the affect of their genome, the next as an expression of a genotype that is distributed across many different persons, then the next they are figured as the individuals of humanist thought, autonomous, unique and capable of transcending their bodily parts.

Thus what I want to press is how to avoid totalizing discourses we need to follow when materials come and go, when people are in extension, when they are attached, and to what, where and how, and when they detach, to attach to other kinds of materials, and be figured on other kinds of grounds.

Extending Marilyn Strathern's ideas of relational extension that de-centre the subject, I have described the relations that come into play in the different ways in which technology-human relations are brought into the here and now. For me what comes into view is not hybrids, or even worlds of connectivity but how in each of these worlds is the elicitation for people to be motile: people need to be ready and available to shift extensions, for example, between connecting and dividing practices, and in doing so shift the figure they cut as well as the worlds they help make up. The elicitation is for persons to be motile as much as mobile. This is not the same as the fluidity so favoured by debates on the conditions of post-modernity (e.g. Bauman – there is nothing fluid here. Rather attachment to and from technologies are not just extensions but alignments and enrolments in agendas, often fabricated far from the plane of action – so that switches in extension also appear as switches in alignment – all about knowing how, when and where - the conditions of possibility of never being allowed

to settle, of always being on call – not the fluidity of postmodernism but the motility necessary to be socially mobile – or what Rolland Munro and I call elsewhere automotility (Latimer & Munro 2006) – the excitation to be ready and available, on call.

The over-riding imperative then of the post-human condition is to be on call, continuously switching extensions and shifting the world to hand; an endless condition of never being allowed to settle.

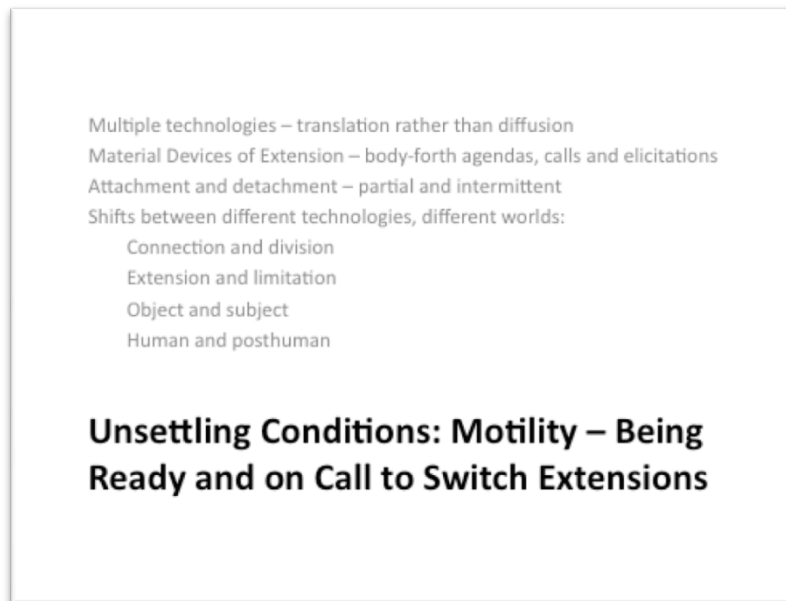


Fig. finale

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ⁱ Dramaturgically, in order to 'play' their part and figure their relations anew, people must also become 'their parts', this time understood in terms of their co-option of lines, gestures, props and costumes. However, as becomes clear below, Strathern (1991) is throwing her net much wider than thinking of relations purely in terms of people.