Lecture

Affecting the Technoscientific Body: Stem Cells, Wheeled-luggage and Emotions

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Abstract In this paper, I will be treating the technoscientific body in terms of the emergence of emotion and emotion conventions, mainly by considering the role of affect. In this I want to pay attention to technoscience not only as a key site for the emergence of epistemic and ethical novelty, but also emotional novelty. In particular I want to focus on the role of the peculiar objects of technoscience whose affect upon bodies enables the emergence of peculiar, new emotions, and their conventionalization, that is the way in which such new emotions become warrantable. In all this I address the technoscientific body in two versions: on the one hand, there are the bodies of practicing stem cell scientists, and on the other, there are the bodies of members of the public in the transport system non-places like airports and train stations.

Keywords technoscience; body; affect; emotions; stem cells.

Introduction

In this paper, I will be treating the technoscientific body in terms of the emergence of emotion and emotion conventions, mainly by considering the role of affect. In this I want to pay attention to technoscience not only as a key site for the emergence of epistemic and ethical novelty, but also emotional novelty. In particular, I want to focus on the role of the peculiar objects of technoscience whose affect upon bodies enables the emergence of peculiar, new emotions, and their conventionalization, that is the way in which such new emotions become warrantable. In all this I address the technoscientific body in two versions: on the one hand, there are the bodies of practicing stem cell scientists, and on the other, there are the bodies of members of the public in the transport system non-places like airports and train stations.

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By way of clarification, I treat technoscience not only in terms of the more or less sequestrated spatialization of heterogeneous knowledge-production and assemblage-making (the hub of which is often the laboratory), but also more expansive spatializations traced by the artifacts of technoscience as they circulate and serve in the construction of hubs, like hospitals or airports. Put simply, I want to think about technoscience in relation to both centers of calculation and the calculation of centers. Or to put it in yet another way, I am interested in how technoscientific bodies are affected both by the *process* of making technoscientific object, and the way that more or less stable technoscientific objects have affects. Of course, in both cases I see the "object" as an actual entity that emerges from and contributes to a complex heterogeneous assemblage (Whitehead, 1978).

1. Emotions and Technoscience

Now, despite the commonsensical division between rationality and emotion, and by extension, mind and body, and the way these shake out institutionally as the parallel contrast between science and religion or anti-science say, this division is, needless to say, highly problematic. So, we can see hints of emotion in, for example, the reported trauma of paradigm change, or in the practices that go into the purging of core sets. As Jack Barbalet (2001) has noted, one can be highly passionate about what one sees as rationality or truth, as well as be highly rational about the experience and performance of emotions. In this respect, emotions are routinely accompanied by their rationalising discursive accounts that serve to warrant them.

Of course for social constructionist accounts of emotion this should come as no surprise. This is because constructionist accounts "view emotions as primarily dependent upon the definitions of situations, emotions vocabularies, and emotional beliefs, which vary across time and location" (Thoits 1989, p. 319). Thus, subjective experiences:

> are influenced not only by a society's emotion vocabulary, but by cultural beliefs about emotions (...) rules regarding what one should or should not feel or express; ideologies about emotions such as romantic love; shared understandings of the typical onsets, sequences and outcomes of emotional experiences and interactions (...) and beliefs about which emotions can and cannot be successfully controlled (Thoits 1989, p. 322).

These are "ethnopsychologies" or "emotion cultures". As various authors have noted, this background of shared assumptions serve as the medium by which displays of emotion, and emotional talk and behaviour, are warranted in situated interaction.

I have certainly witnessed this in a number of areas I have studied. For instance, in relation to ethical judgement of animal experiments, in work with Lynda Birke, we found that our scientist participants had particular versions of

what counted as appropriate emotionality. Too much emotionality – too much empathy with animals – and ethical calculation would be disrupted. What we see here are particular conventions for emotion acts being enacted. This is a version of the argumentational processes that make up core set controversy. A typical accusation is that one's opponents cannot see the "truth" because they are too committed – irrationally committed, emotionally over-invested – in their own theories, or technologies, or experimental system, or data sets. In this animal experimentation case we have a sort of ethics core set (Michael and Birke 1994a; 1994b).

Now, arguably, constructionist accounts of emotion are somewhat static and even functionalist in practice if not principle. It is rare that we see how emotions and the conventions that warrant them change. In what follows I will explore a couple of examples where there might be – and I stress "might be" – novel emotions and their conventions emerging from the ways in which technoscientific objects affect bodies – leading to the novel emotion performances of novel technoscientific bodies. I am aware that the emergent, hybrid emotions I derive in what follows can be regarded as having precedents in other areas of social life: the main point however is not so much the content of these emotions as the form of the empirical study and analysis by which we attempt to trace the specificities of their emergence.

By way of further clarification, I should note that I see affect as a broader category than emotion that reflects the machinic aspect of assemblages, in Deleuze and Guattari's terms (1980; I also draw inspiration from authors such as Massumi 2002; Bennett 2010). Thus, affect concerns the ways that bodies are impacted upon by particular circumstances – in this case how bodies as physical entities with particular corporeal, perceptual and reactive capacities are affected by technoscience, its objects and processes.

2. Technoscience-in-action and Specific Emergent Emotions

So, in this analysis I want to say something about the way that emotional bodies and their related emotion conventions change in relation to the specificities of technoscience. In work on the ethics of human embryonic stem cell research with Stephen Wainwright and Clare Williams at Kings College London, we began to see hints of the emergence of some new configurations of emotion that reflect the peculiarities of the scientific object – embryonic stem cells (see Michael, et al. 2007).

To reiterate, by "object" I minimally mean an actual entity that emerged from and contributes to an assemblage that in the case of stem cells includes heterogeneous relations ranging from the policy imperative towards translational research through to the situated recalcitrance of stem cells themselves (Michael, Wainwright and Williams 2005).

Let us consider the Lumelsky protocol – a system in which as stated in a headline from *Science* "stem cells are coaxed to produce insulin" (Lumelsky, et al.

2001). The seminal nature of the Lumelsky paper is reinforced in the editorial comment in *Science*:

> In a boost for scientists who hope to turn the potential of undifferentiated stem cells into *medical miracles*, researchers have found a way to produce insulin-producing cells from mouse embryonic stem (ES) cells. There is a ready-made demand for anyone who can achieve such *alchemy* in human cells: millions of patients with diabetes… An unlimited source of cells that can produce insulin in response to the bodies cues would…be a *hot commodity* (Vogel 2001, p. 615, my italics).

It is not difficult for those of us reared on the sociology of expectations to see the particular emotions coursing through this text. However, the key point is that the protocol, after generating frantic activity to replicate and extend it, turned out to be – that is, could be constituted as – an artifact. What was interesting was that the artifactuality should have been self-evident from the original paper – even a cursory reading of one of the key graphs would have shown that there was insulin already in the medium in which the stem cells were supposedly differentiating into beta-cells, and that there was statistically insignificant difference between the concentrations of insulin before and after the supposed differentiation.

Now, it was certainly evident from the interviews that dynamics typical of the core set seemed to operate. Some scientists accused others of getting over-excited and jumping on the bandwagon (that is, they applied conventions in which such over-excitement was illegitimate). The upshot is that bandwagon jumpers' epistemic judgment could not be trusted (i.e. they need to be excluded from the core set). However, the point I want to make is that something else was also going on. After all, the scientists who jumped on the Lumelsky bandwagon have not been abandoned – they are still working in the field (at least at the time of our research, around 5 years ago). How does this "rehabilitation" take place?

Crucial here is that chronic uncertainties characterize the field – epistemic, ethical, institutional, translational. This suggests that running alongside the dramatic narrative of seeming success and evident failure is a morass of experimental work whose success and failure is profoundly and chronically uncertain. In the core set analysis in which scientists compete for the epistemic – and, we might add, emotional – high ground, certain scientists were "discredited" partly because they were successfully accused of jumping onto the Lumelsky protocol. However, regarding this controversy in relation to the more diffuse technoscientific assemblage of chronic uncertainties, to jump onto the Lumelsky bandwagon is socially "understandable" where "understandable" connotes empathy, or sympathy. In other words, parallel to assessments of epistemic and emotional correctness or incorrectness – that is about the propositional or substantive content of knowledge – mapped by core set analysis, are feelings of "social understandability" under conditions of chronic uncertainty. Alongside the "punishment" of those who have failed in a controversy, there are ways in which they may be "pardoned", "excused" or "forgiven".

In one way this reflects the complex technoscientific object that is the human embryonic stem cell, not least in relation to the enormous uncertainty constitutive of the assemblage out of which it emerges. While our respondents did not jump onto the Lumelsky bandwagon, they might have done if circumstances had been slightly different. Indeed, they might be on a bandwagon at the present moment, but will only know it in retrospect, though they can certainly acknowledge the possibility – there is a "but for the grace of god" presumption – "it could have been me (or my lab) on that (the Lumelsky protocol) bandwagon". In a sense then, there might be an emotion convention emerging, partly structured by the (complexly defined) object of their attention, which cuts across blame and forgiveness for bandwagon-jumping, that both discredits and warrants over-excitability and over-enthusiasm.

What seems to me to be particularly interesting in this story I have told is the prospect that we are witnessing an emerging hybrid convention that warrants a complex emotion that reflects and mediates the technoscientific complexity of the stem cell object. We have something combining blame and forgiveness, and a convention that warrants contrary emotions that encompass extreme enthusiasm and caution. In other words, we have the possibility of new hybrid emotional forms and their conventions emerging in relation to this technoscientific assemblage.

Obviously, I would not want to limit the possible emergence of new emotional forms and their conventions to this particular fraction of biosciences, or to lab-based technoscience per se. The simple point is that we can perhaps look at how recent technoscientific objects – through their complexity and uncertainty – corporeally affect scientists by generating immediate problems of pinning them down physically, ethically and institutionally and thus lead to the reconfiguration of emotion and emotion conventions.

However, perhaps we can also find the affects of everyday technoscience also generating new emotions. Let me now turn to the possible affective role of a mundane technology.

3. Products of Technoscience and Emergent Emotions

Many of us will have made our way here to the conference through a series of, what the anthropologist Marc Augé (1995) calls, non-places. These are transport hubs such as airports, train and bus stations largely devoid of those qualities said to be characteristic of place – familiarity, rootedness, a sense of history and memory, 'organic-ness'. These non-places are spaces of consumption, of travelling-through, of solitariness where communication tends to take place through screens/ICTs. The notion of non-places has been critiqued in various ways (e.g. it neglects how it is a place for various workers and business travellers), most pertinently in relation Augé's the under-estimation of the heterogeneity, histories and imaginaries of the associated assemblages (Merriman 2004). Non-places are highly designed – structured by the products of technoscience: not least in the ways

that bodies are marshaled, directed, pacified, surveilled through the design of distribution, security and media systems. Within this context, I want to look at one particular technological artifact and its possible affective role in the emergence of novel emotion and their conventions: wheeled or rolling luggage.

Invented by Northwest Airlines pilot Bob Plath in 1987 to transport his bags more easily through busy airports, the Rollaboard® as it was initially called, was innovatory because in addition to the wheels, it added an extendable handle and turned the suitcase vertically onto its end (there had been other forms of wheeled luggage, in particular, a horizontal model featuring four small wheels and a strap for pulling but this was not very efficient or controllable – obviously I would take these terms to be contingent). He started making and selling these to colleagues, and by 1989 due to pressure of public demand he moved from his garage to a factory proper founding the company Travelpro in the process. By 1991 he had retired from Northwest Airlines[1].

I think many of us are familiar with this luggage technology – it is now pretty much ubiquitous. It is routinely represented as a vast improvement on previous forms of luggage. The corporeo-cultural scripts implied in its typical representation suggest a single traveller, moving through empty, or uncluttered space (Fig. 1a) smiling or meditating at the sheer convenience of it all (Fig. 1b).

Fig. 1a

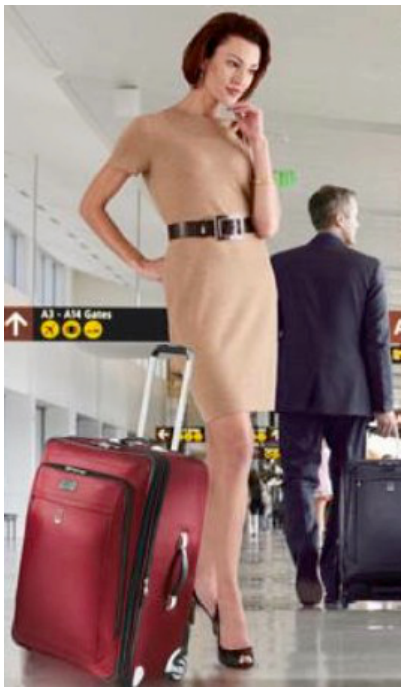

Fig. 1b

[1] See http://www.travelproluggageblog.com/tag/bob-plath.

Anecdotally, we know different, of course (Fig. 2). Moving through the concourses of busy transport hubs where crowds of travellers collect at certain points – such as around departures boards, or information points – has, arguably, become the occasion for a set of new body techniques, and emergent emotions and their conventions. The design of rolling luggage means that it usually trails behind the body rather than at its side. This means that we cannot see it directly. As such, we can monitor the immediate risks it poses (how it might potentially get entangled with others' legs and luggage) only by constantly looking over our shoulder, which means we don't look consistently where we're going. And we need to look carefully where we're going because we might get entangled in other travellers' rolling luggage. But if we do that, we increase the dangers we pose to other travelers… and so on and so forth.

Fig. 2

I am tentatively suggesting that signified in this, albeit caricatured, representation of "doing" rolling luggage within the sociotechnoscientific setting of a transport hub, are possibly emerging body techniques entailing a particular patterning of attention-and-attribution that is physico-moral-emotional. Attention/attribution is directed and distributed toward, simultaneously, the vicitimized self/guilty other (when you are banged into) and the guilty self and vicitimized other (when you bang into). My sense is that this rolling mixture of anger and apology is the stage we are at the moment.

Contrary again to the idea of a non-place, such chronic encounters might cumulatively, maybe cosmopolitically, occasion a different sort of heterogeneous patterning: a common recognition of a common condition that might serve as the

organic basis of a highly situated and contingent sense of community, and, ironically, a belonging in which conventions for these complex hybrid emotions might emerge. Of course, this scenario has flattened a range of cultural and political differences that militate against such *communitas*: some cultures take apology to a fine art; the status signified by self and other is not unimportant in the patterning of anger and apology. Nevertheless, the complex object of rolling luggage does open up certain possibilities for the emergence of these novel hybrid emotions.

Conclusion: Anecdote and Affect

Ironically, we seem to have, at least superficially, a similar emergent emotional form in relation to both Lumelsky and rolling luggage cases: hybrids emotions of, respectively, forgiveness and blame, and apology and anger. But how do we access their difference or similarity?

To be sure my accounts of the affective emergence of particular technoscientifc bodies and their emotions have been highly speculative. So, I want to finish with a possible methodological strategy for better accessing these: the anecdote. The issue is how can we access affected technoscientific bodies when our data are so often linguistic or discursive or narrative. On this score, I'm trying to work with anecdotes as a heuristic tool for accessing these processes.

Anecdotes can be formally characterized in the following way (see Michael in press, for more detail):

1. The anecdote is at once literary (obviously a constructed story) and exceeds this literary status (manifestly, it is supposed to report or document real events). Thus, it is an openly ambiguous textual form, combining the real and the constructed, holding them in tension.
2. The anecdote, as a part of an historical record, not only reports events but also acts upon them. An anecdote reports an episode from social life, but by virtue of being a particular interpretation of that episode, and by virtue of its circulation as a story and reportage, it can go on to influence subsequent events. It is performative.
3. The anecdote is a narrative about difference and sameness. As noted above, it documents an "incident", that is, something out of the ordinary. It relates an instance of difference which allows us to interrogate the sameness of the taken-for-granted.
4. The anecdote can enable us to draw broader lessons. We move from the individual to the general: from this incident to this phenomenon.
5. Anecdotes, insofar as they refer to incidents that have befallen or impacted upon their author are a means to enacting self. More crucially, such anecdotes can connote how the anecdotalised events themselves contribute to the making of their author. That is to say, the author can emerge from the "event" that renders the incident "anecdotable" as it were.

Taking all this into account, the anecdotes told of particular past events are not simply a construction of those events, but are a partial effect of those particular pasts. Prior events that become anecdotes serve in their own anecdotalization, even as the telling of those anecdotes makes those pasts recoverable or narratable or constructable. This is because those events impact, often corporeally or affectively, upon the persons involved – the events are partially constitutive of those persons. This is a complex view of the anecdote has a number of potential advantages.

Most importantly, we can see how emerging emotion performances might be grounded in particular past events. When stem cell scientists or rolling luggage users do emotion and its accounting, we can ask for anecdotes. Is there a specifiable event that triggered emotions – say in relation to a scientist friend seduced by a dubious experimental system or scientific bandwagon that goes nowhere? Is there a particular incident where a traveller felt a peculiar mixture of embarrassment and anger during the simultaneous banging into and being banged by other travellers with rolling luggage? In this way, we can partially ground these emotion acts in specific events while of course noting how these events themselves have been constituted in the present moment as anecdotalizable events that can be used in the accounting of particular enactments of affect or emotion. This does not of course deny the importance of other sorts of relations and events – it simply aims to concretize these affected technoscientific bodies in specifiable events.

But anecdotes might also work in relation to what is unclear or incomprehensible in them. They might be a way of grasping affects upon the body in the past that could not be grasped – affects mediated by the complex objects of technoscience. If such affects trigger new configurations of emotion, then perhaps the anecdote becomes an initial means to their conventionalization. So telling the personal story of the complexity of affects and the heterogeneity or hybridity of emergent emotions is also an initial way of finding their warrants. This is another instanciation of the performativity of the method, which partly constitutes that which is studied.

Another possible advantage of the anecdote is that it offers an always already mediated, voice to the nonhuman and norepresentational. The situated recalcitrance and vitality of embryonic stem cells, the contingent limits and capacities of human bodies within certain technoscientific assemblages, the local simultaneously tricksterish and standardized behaviors of mundane technologies – the anecdote is an oblique means to touching upon their role in the emergence of novel emotions and emotion conventions.

So, such anecdotal accounting is always partial and ambiguous, real and constructed – but able to hint at the affects that enable emergent emotions. But, further, our own analytic use of such anecdotes is itself no less anecdotal. The doing of social scientific research abounds with events that affect us by being physically and corporeally, as well as socially and culturally, surprising, upsetting, nonsensical, idiotic. Often such troublesome events (for example, where a participant does something that fails to make any sense within the frame of the re-

search; when a research engagement falls apart because of some technical or bodily mishap) are sanitized out of our more formal written work or presentations. Yet sometimes these events "linger" in us, sometimes they become anecdotalizable by affecting us in ways which make them subject to anecdote. And along the way, perhaps, our emotional (and epistemic) relation to our own subject matter shifts.

Thank you.

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