Technologized Images,
Technologized Bodies
Technologized Images, Technologized Bodies

Edited by
Jeanette Edwards, Penny Harvey and Peter Wade
Contents

List of Figures and Tables vi
Preface and Acknowledgements viii

1. Technologized Images, Technologized Bodies
   Jeanette Edwards, Penny Harvey and Peter Wade
   1

2. Pharmaceutical Witnessing: Drugs for Life in an Era of Direct-to-consumer Advertising
   Joseph Dumit
   37

3. Picturing the Brain Inside, Revealing the Illness Outside: A Comparison of the Different Meanings Attributed to Brain Scans by Scientists and Patients
   Simon Cohn
   65

4. Embodied Brains: Why Science Studies Needs the Anthropology of Museums
   Anne Lorimer
   85

5. Spectacles of Reason: An Ethnography of Indian Gastroenterologists
   Stefan Ecks
   117

6. Technokids? Insulin Pumps Incorporated in Young People’s Bodies and Lives
   Griet Scheldeman
   137

7. Wearable Augmentations: Imaginaries of the Informed Body
   Ana Viseu and Lucy Suchman
   161

8. ‘Embryos Are Our Baby’: Abridging Hope, Body and Nation in Transnational Ova Donation
   Michal Nahman
   185

9. Living Differently in Time: Plasticity, Temporality and Cellular Biotechnologies
   Hannah Landecker
   211

Notes on Contributors 237
Index 241
## List of Figures and Tables

### Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Zoloft Liminality (screen shot from TV)</td>
<td>50</td>
</tr>
<tr>
<td>4.1</td>
<td>This is the entrance to the exhibit</td>
<td>80</td>
</tr>
<tr>
<td>4.2</td>
<td>These starkly monochrome photographed figures and statues run around the exhibit’s back wall</td>
<td>95</td>
</tr>
<tr>
<td>6.1</td>
<td>A well-stocked table (photograph by author)</td>
<td>148</td>
</tr>
<tr>
<td>6.2</td>
<td>Inserting the canula (photograph by author)</td>
<td>148</td>
</tr>
<tr>
<td>6.3</td>
<td>The pump is attached, ready for use (photograph by author)</td>
<td>149</td>
</tr>
<tr>
<td>6.4</td>
<td>The pump in its bright red ‘scuba-diving wetsuit’ (photograph by author)</td>
<td>149</td>
</tr>
<tr>
<td>6.5</td>
<td>William’s drawing (from memory)</td>
<td>155</td>
</tr>
<tr>
<td>6.6</td>
<td>Callum’s drawing (from memory)</td>
<td>155</td>
</tr>
<tr>
<td>6.7 and 6.8</td>
<td>In comparison, drawings by two young people for whom the pump ‘did not work’</td>
<td>156</td>
</tr>
<tr>
<td>7.1</td>
<td>Bell service technician, 2002 (Photo by Ana Viseu)</td>
<td>167</td>
</tr>
<tr>
<td>7.2</td>
<td>Sonica’s wearable computer (Photo by Ana Viseu)</td>
<td>168</td>
</tr>
<tr>
<td>7.3</td>
<td>InfoBody’s armband (By permission of Infobody)</td>
<td>173</td>
</tr>
<tr>
<td>7.4a and 7.4b</td>
<td>General Electric’s <em>Hardiman</em> produced in 1963 (by permission of General Electric); and a full-scale mock-up of an Exoskeleton system being developed by Sarcos Research Corporation (by permission of Sarcos Research Corporation)</td>
<td>176</td>
</tr>
<tr>
<td>8.1</td>
<td>‘Embryos are our baby’ (photo by Michal Nahman)</td>
<td>192</td>
</tr>
<tr>
<td>8.2</td>
<td>UFC Company Logo (by permission)</td>
<td>198</td>
</tr>
<tr>
<td>8.3</td>
<td>Preferred External Features Form (author’s translation from Hebrew)</td>
<td>203</td>
</tr>
</tbody>
</table>
Tables

2.1.  Text of TV Advert for Lilly’s Depression Kit 39
2.2.  Zoloft TV Commercial 51
Preface and Acknowledgements

This volume grew out of the Fifth Decennial Conference of the Association of Social Anthropologists of the U.K. and Commonwealth (ASA), which we organized in Manchester in July 2003 on the theme of Anthropology and Science. Our original intention was to publish two, linked volumes with the same publisher or, later, a single large volume. The constraints of today’s publishing climate eventually meant that we published a first volume as part of the Association of Social Anthropologists Monographs series: Anthropology and Science: Epistemologies in Practice (Berg 2007) and now are very pleased to publish this companion volume on technologies, images and bodies.

We would like thank all the convenors of the panels at the 2003 Decennial Conference of the Association of Social Anthropologists of the U.K. and Commonwealth (ASA) who, in addition to their notable efforts in arranging an impressive range of panels, and contributing to an exciting and intellectually stimulating event, assisted us with the initial selection of papers for this volume. We are grateful for the financial support for the Conference given by the Wenner-Gren Foundation, the University of Manchester, the British Academy and the ASA. We would like to thank Marion Berghahn and staff at the press for their unstinting enthusiasm for this project; and the anonymous readers of the book proposal and two readers of the manuscript, Rachel Prentice and Natasha Myers, for their helpful and insightful comments.

Jeanette Edwards
Penny Harvey
Peter Wade
January 2009
CHAPTER 1

Technologized Images, Technologized Bodies

Jeanette Edwards, Penny Harvey and Peter Wade

Introduction

As we write the introduction to this volume, the media reports on a dispute between athlete Oscar Pistorius and the International Association of Athletics Federation. Pistorius, whose legs are amputated at the knee, is running on carbon-composite prostheses developed at the Massachusetts Institute of Technology (MIT). In the 2007 South African Senior Track and Field Championships, Pistorius came second in the 400 metres. The Federation is deliberating whether his prostheses gave him an unfair advantage over the able-bodied runners against whom he was competing. The director of the Biomechatronics Group at MIT, Professor Hugh Herr, himself a double amputee, observes that ‘in the next decade we will have artificial legs that are better than human legs for running’. He for one, it is reported, would not swap his prosthetic legs for ‘natural’ ones.¹

This is a remarkable example of the contemporary technological capacity not only to enable disenabled bodies but also to enhance them in ways that reconstrue the ‘natural’ body and its limitations. Furthermore, the example comes to light as an ethical dilemma partly because of the ways in which the global media produce sport as spectacle. What kinds of human capacity are we called on to witness? Whose skills and tenacity are on display? What kinds of bodies are we encouraged to admire? Our interest in this volume is to look more closely at the interconnections between technologized bodies and technologized images to ask what light ethnographic work can throw on these contemporary processes of mediation.
This book explores the relationship between cultural apprehensions of the body, and the ways in which the body is mediated, imaged and imagined, at a time when visualization and communications technologies have combined to provoke new awareness of the body and of the self, new regimes of power and knowledge, new possibilities for the enhancement of human life, and new fears for its degradation and destruction. Our ethnographic explorations of what might be at stake in the current relationships between technologized images and technologized bodies are firmly based in anthropological understandings of social change – attentive to the narratives that have always surrounded the very notion of modernity, and to the complex ways in which such narratives are negotiated, circumvented or reproduced in practice.

The shift to digital imaging technologies is a key issue in this lively and densely populated field of debate. Digitalization has rendered images more easily manipulable, less stable and more ubiquitous for they are now far cheaper to reproduce and far easier to doctor. Digitalization also enables diverse data forms to be brought into contact with each other, with the potential for new synergies and points of engagement to emerge between numerical, statistical, photographic, narrative and diagrammatic forms. Contemporary social and physical mapping devices explicitly build on these potentialities (Kain and Baigent 1992; Wood and Fels 1992; Escolar 1997; Pickles 2004; Craib 2004). Beyond our interests, then, in the imaged and the enhanced body, we are also compelled to consider the virtual and the informational body. Computerized digital data produces the informational body through the increasingly routine collection and storage of data such as digital fingerprints, dental records, iris markings and DNA sequences. Networked information systems render the bodies of others accessible at a distance and people increasingly launch versions of themselves into the virtual world of avatars, gaming, dating and socializing via their identities of choice. Smart clothing, electronic tags or biometric data monitor the state of the body, regulating its movements and its health.

As might be expected there are social tensions around the transformations that these technologies appear to be propelling. In some accounts the good life is there for the making/taking, producing a flattened world of ‘equal opportunity’. Choice and agency are the core values. Where you have been and where you come from are less important than where you are going, and who you are matters less than who you could be. Any such naïve/cynical optimism is matched by the darker narratives of inequality and exclusion, the experientially immovable forces, institutions and social structures that may not be visible but which certainly render some more equal (and capable of action and choice) than others. Indeed our contemporary investments in and relationships to modern visualization technologies replay the classic hopes and fears that have characterized the dreams and spectres of modernity. But the potential contained in novel assemblages of knowledge, materials and desire give a new twist to the story.
This collection is a companion volume to *Anthropology and Science: Epistemologies in Practice* (Edwards, Harvey and Wade 2007), and both stem from the Fifth Decennial Conference of the Association of Social Anthropologists of the U.K. and the Commonwealth (ASA), held at Manchester in 2003. *Anthropology and Science* also pivots on ways of knowing, but there we place ‘science’ (broadly speaking) in relation to, and in dialogue with, contrasting and overlapping epistemologies and, with fine-grained analysis, contributors to that volume illustrate ways in which competing epistemologies co-exist. This volume continues the theme by looking more specifically at how visualization and communication technologies are implicated in what it is possible to know and in how the body mediates such knowledge. It builds on the premise that seeing and knowing are not separate or separable activities and that one does not precede or pre-empt the other (Grasseni 2007; Hallam and Ingold 2007). Uniting the chapters in this volume is a focus on the body – the body that is enhanced, augmented, diminished or otherwise modified by various technologies, including those that produce images of it which subsequently shape ways in which bodies, body parts and bodily processes are imagined.

This at a time when a number of significant social theorists have identified what amounts to an epochal change in the ways in which ‘western’ subjectivity, personhood and being-in-the-world are understood. The change is partly related to major developments in the biological and informational sciences, and has been dated more or less to the middle of the twentieth century. Without implying links of causality, the following are just some of the developments identified as impacting on the way in which human life and being are conceptualized: developments in ‘new genetics’ (Rabinow 1996), the increasing ability of biomedical science to intervene at the molecular level (Rose 2007) and the emergence of a synthetic biology, which draws together biological disciplines previously distinct and entails a re-organization of the biological sciences in the universities forging new research collaborations and interdisciplinarities (Pickstone 2000; Wilson and Pickstone 2007). Paul Rabinow, for example, predicted that the new genetics would ‘prove to be an infinitely greater force for reshaping society and life than … the revolution in physics’ (Rabinow 1992: 241). Nikolas Rose has demonstrated a shift of attention from the molar to the molecular level: ‘It is now at the molecular level that human life is understood, at the molecular level that its processes can be anatomized, and at the molecular level that life can now be engineered’ (Rose 2007: 4). Manipulation at the molecular level allows new bodily configurations or ‘emergent forms of life’ to appear and circulate and, for Rose, entails new understandings of ‘life itself’. Similarly, Nigel Thrift sees radical change in the ‘background of being’ as technology enters the interstices of everyday life and augments – in his term ‘boosts’ – ‘bare life’ (Thrift 2005; see also Agamben 1998). Social theorists, then, from
a range of disciplinary perspectives, argue that attention and intervention at the micro-level of ‘life’ marks the current era, and that the synthetic possibilities afforded by the entanglement of the various biological sciences and informatics produces a powerful sense of flux, with configurations and assemblages that are unsettled and, from many perspectives, unsettling.

Alongside attention and intervention at the micro-biological level, there is also increasing intervention at the micro-public level. A range of technologies are deployed to make public life more visible and thus more amenable to audit and accountability (see, for example, contributors to Strathern 2000). If we focus specifically for a moment on the U.K., transparency is still in vogue: public institutions such as the national health service (NHS), education at all levels, local and national governmental organizations, as well as non-governmental organizations (NGOs), are all privy to regimes of accountability which demand transparency and openness via the input of their publics through consultation. Public institutions are compelled to manage knowledge about their publics (Harvey and Knox 2007) and interdisciplinarity is promoted as a way to make knowledge more ‘social’ and curb the excesses of either the individual researcher (Corsín-Jiménez 2007) or the out-of-touch public servant (Born 2007). Of interest here is the way in which the micro-management of knowledge and the processes through which the relations that inhere in ‘things’ are made explicit appear as key features of current political and scientific domains.3

Just as in responses to the ubiquity of digital imaging technologies mentioned above, developments in biotechnology are seen either to presage (global) business as usual, entrenching familiar inequalities, or to offer the possibility of transcending and destabilizing traditional hierarchies of, for example, expertise and value (e.g., Haraway 1997; Jackson 2002; see also Edwards 2005). But while we can point to evidence that backs both of these responses and while individual scholars may lean towards one or the other, neither is the starting point for this collection. Instead its commitment is to ethnography, and the ethnographic examples presented here both disrupt and instantiate the social theory that has been influential and informative to our understanding of contemporary social worlds mediated, formulated and, on occasion, fixed (albeit temporarily) by visual technologies.

Vision and the Body 1:
The Emergence of the Modern Subject

Since Michel Foucault published *The Order of Things* in 1966 (1973), there has been a widespread recognition that the regime of knowledge which characterizes the contemporary natural, physical and social sciences is a
historically specific configuration, tied to broader social and cultural bases for engaging with the world. Some of the most compelling work to expand our understanding of how the enlightenment period was the point of emergence for these contemporary knowledge formations has drawn its insights from an analysis of how changes in visualization practices were integral to this shift. The Order of Things itself starts with an analysis of Velázquez’s painting ‘Las Meninas’, and illustrates the emergence of new ways of seeing, or a shift in ‘scopic regime’ (Crary 1990; Brennan and Jay 1996). The shift had profound implications in relation to the history of the emergence of the modern subject, and fundamental concepts such as the externalization of ‘nature’ as something upon which Man now saw himself as able to act and to transform, and the distinction between observer and observed that underpins the experimental practices of modern science. Barbara Stafford (1999) argues that the Western aesthetic imagination saw a move from an analogical mode of representation, whereby painting was an attempt to describe a world in which the physical and the spiritual were interrelated and at one with each other – being two aspects of the broader cosmos – to a contemporary, allegorical imagination which works through separations and categorizations so that, for example, man and nature are made to occupy distinct realms.

Francesco Panese (2006) takes similar insights about the analogical nature of pre-Enlightenment thought into the field of science to show how the invention of modern science (and the modern subject) was effected through a transformation in ways of looking and seeing which were implicated in the emergence of what he calls, after Shapin (1994), a new ‘regime of credibility’ (Panese 2006: 85). Late fifteenth-century texts describing the natural world tended to combine ‘empirical fact, practical magic and alchemy, secrets and folk knowledge’ (Panese 2006: 68, emphasis in original) into their imagery, but this mixing of genre was soon replaced by an organization of nature according to classifications of class or species. Scientific illustrations that had previously presented images of fantastical creatures now started to depict bodies as separable into constituent parts that could be categorized and hierarchized according to a universal scientific/analytic logic.

Subsequent shifts in representational possibilities have been well charted, including the emergence of pictorial realism (Baxandall 1972; Snyder 1980; Alpers 1983), the place of form and its dissolution in avant-garde art (Bois and Krauss 1997), the implications of the emergence of photography (Benjamin 1936) and, more recently, digital photography (Lury 1998; Kember 1998) on the visual imagination. These insights have come alongside writings on the historical specificities of instruments of expert knowing and their capacity to generate politically powerful visibilities. At each step, these writings, whether about the production of art objects, new media forms or tools of governance, tell us that the problem of modern
knowledge in any historical era has been provoked by and encapsulated in
the technical and conceptual challenges of new kinds of visualization
(Poovey 1998; Daston and Galison 2007).

Photographic technologies have been central to the exploration of the
diverse ‘scopic regimes’ (Jay 1988) that characterized modern fascination
with the visual. The history of photography is powerfully illustrative of the
debates that have surrounded image-making practices, and the social uses to
which such images have been put in the twentieth century. For many,
photography is a direct extension of previous visualization technologies such
as eye-glasses, magnifying glasses, microscopes and telescopes, whose
fundamental importance to the history of vision has been in relation to their
capacity to reveal that which is otherwise invisible to the eye, or to produce
images from otherwise inaccessible places (outer space, under the oceans,
exotic locations, underground, inside the body). Photography also allows the
leisurely contemplation of movement at speed, allows people to see in the
dark, and to witness, as if at first hand, dangerous events (war, pornography,
sport) or otherwise inaccessible people, places, events. In the documentary
tradition, then, photography has established image-making as an exploration
of the world, an exploration that does not necessarily carry a
transformational agenda, but simply allows people better to appreciate
and/or control ‘reality’ through the extended possibilities of vision. The
extension of human vision produced a new sense of documentary practice
that brought together the exploration of the previously inaccessible with a
new fascination with the everyday.

However while photographic observation has afforded access to
previously inaccessible and/or unexamined ‘realities’, the documentary
project has also been taken up as a transformational social practice, seeking
to reveal the social world with a view to changing it. In their diverse ways
the avant-garde movements, social realists and street-photographers have all
engaged in projects of social intervention and in this respect have been
perfectly in tune with the on-going elaboration of modern science and
technology as an alliance to change the world. Modernity was underwritten
by regimes of technological transformation and improvement – a
transformative project in which the new photography was enlisted from the
start in the spirit of the documentary tradition that could be used (i) to
provoke the desire for change through a politics of revelation and (ii) to
accumulate better, more disinterested knowledge through a politics of
objectivity that challenged the flawed and value-laden observations of
human observers.

As Timothy Mitchell (1988) has shown, underlying such a politics of
objectivity was a Western understanding that the world was divided into a
realm of representation (image) and a realm of reality (original) and this
distinction also corresponded to a division of the world into the West and
non-West. His observations are on the particular regimes and methods of truth and order that allowed for the world exhibitions of nineteenth-century Europe which exhibited both the colonized and Europe’s capacity to colonize. He notes the similarity between the writer and the photographer. Both intended to grasp the world as if it were an exhibition and both from a place set apart. The photographer, hidden by the black cloth and viewing the world through the camera lens, typified the ideal European presence in the Middle East, whether tourist, travel-writer or colonial worker. ‘[L]ike the authorities in the Panopticon, one could see and yet not be seen’ (Mitchell 1988: 24).10

Foucault is clearly influential here and remains key to our understanding of the emergence of modern disciplinary mechanisms of control and surveillance, which include the Panopticon to which Mitchell refers. In The Birth of the Clinic (1973), Foucault also shows how the increasing ability to plunge into the inner recesses of the body, through dissection and on the operating table, is integral to the production of a unified clinical subject. Here the move is from surface to depth. And, as in Discipline and Punish: The Birth of the Prison (1977), his interest is in the relations of power and authority that underpinned the apprehension of ‘difference’ and of ‘visibility’ – relations that have been well documented in relation to colonial politics of vision.

Another key text which begins to unravel the implications of visuality in early colonial operations is Mary Louise Pratt’s book on eighteenth- and nineteenth-century travel writing. The ‘civilizing mission’ as well as ‘the improving eye’ are central themes in her work. She is interested in how travellers and writers ‘produced’ particular visions of the world outside Europe which supported and legitimated the economic expansion of empire as well as reflecting back on its European readership a sense of its own distinctiveness and superiority. With the idioms of ‘civilizing’ and ‘improving’, Northern Europeans produced other people (for themselves) as ‘natives’, ‘reductive [and] incomplete’ and in need of ‘the rationalized exploitation that Europeans bring’ (Pratt 1992: 152). The ‘improving eye’ saw habitats and inhabitants as ‘empty’ and in need of improvement. Pratt draws out the essentializing discourse of those who come to ‘see’ as well as the insidious classificatory exercise of placing those ‘seen’ in one of Linnaeus’s six varieties of homo sapiens, or in one of a rank of castes defined by parentage and skin colour. Running through the travel writing analysed by Pratt is what she identifies as a ‘relation of mastery predicated between the seer and seen’ (Pratt 1992: 204, original emphasis). The power ‘to see’ and the position of ‘being seen’ are not simply separated out in relations of authority in the modern visual regimes, they are also and simultaneously gendered and racialized.

The role of authoritative (and scientific) images in projects of classification and control emerges very clearly by looking at visualizations of race. Early