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PART THREE

Virtuality: virtual bodies, virtual spaces

Introduction to part three

- Nicholas Mirzoeff

VIRTUALITY IS A BUZZWORD for the 1990s, a seemingly new way of experiencing the outside on the inside. It has become epitomized by the virtual reality helmet, worn by a user in order to interface with a three-dimensional, computer-generated environment. Some critics have wanted to call this a radical break with the past, heralding a transformation of everyday life unequalled since the Industrial Revolution. Others have insisted that there is relatively little new here, recalling a panoply of once-forgotten visual devices from the panorama to the stereoscope and zootrope that immersed the viewer in a seemingly real environment. For all the bluster, a middle way seems fairly clear. Virtuality has certainly been experienced before, perhaps as long as people have been sufficiently distracted by an artist's skill to take a picture briefly for reality. On the other hand, computer-generated environments offer the chance to interact with and change this illusory reality, an opportunity that no previous medium has been able to provide. At root, the question is the relationship between the human body and space, mediated by the sense of sight. What is the body in an age of virtuality? How can space be discussed as a changing medium rather than simply being considered as a void? These questions are addressed in the following sections.

(a) The virtual body

A decade ago, there was little published work available when I wanted to teach a thematic course on the body. Now there seems to be material on every aspect

creating new fields like disability studies. In this section, I have chosen to focus on one of these new areas of research that has in turn generated many new ideas, namely feminist approaches to scientific and technical body imaging. Here feminist scholarship has sought to reclaim a number of areas that were not previously seen as central to feminism, especially the visual itself.

Donna Haraway, a pioneer of feminist research into scientific discourse, has sought to use vision and the visual to redefine the academic totem of objectivity. In a key section of her now-classic book *Simians, Cyborgs and Women* (1991), she replaced the 'conquering gaze from nowhere' with an insistence on the 'embodied nature of all vision', challenging the orthodoxies of observational science just as Descartes challenged the complacencies of scholasticism. Haraway argues that while vision is never found in the pure state suggested by the geometric lines used in Cartesian perspective, nor is everything simply relative. Instead, she aims at a redefinition of vision that would allow for the production of what she calls 'situated knowledges'. Replacing the disembodied view from above with the individual view from somewhere, she emphasizes that 'optics is a politics of positioning . . . Struggles over what will count as rational accounts of the world are struggles over *how* to see.' Like Descartes, Haraway recognizes that understanding vision is a key example of what will be accepted as rational method. Unlike him, she overtly acknowledges that vision is always about power and positioning, meaning that any method must be partial in both senses of the term.

Following Haraway's lead – and that of other feminist scholars like Sandra Harding and Chéla Sandoval – there has arisen an exciting re-examination of vision and its apparatuses, especially in relation to the body. In her important book *Screening the Body* (1995), Lisa Cartwright has set out an alternative history of film from these perspectives:

The cinematic apparatus can be considered as a cultural technology for the discipline and management of the human body . . . [T]he long history of bodily analysis and surveillance in medicine and science is critically tied to the history of the development of cinema as a popular cultural institution and a technological apparatus.

In this extract, she shows how the photographs of the moving body produced by Etienne-Jules Marey and Eadweard Muybridge in the late nineteenth century, always a traditional starting point for film history, created a vital interaction between 'popular and professional representations of the body, as the site of human life and subjectivity'. Following the work of Michel Foucault, whose work will crop up time and again throughout this Reader, Cartwright shows that film and photography were used to demonstrate a shift in knowledge towards thinking about life in the abstract as opposed to individual living beings. The body on film revealed things that the eyes themselves could not see, using close-ups and frame enlargements to enhance natural vision. This virtual body acted in unexpected ways providing both a source of cinematic pleasure for early twentieth-century audiences and an important source of medical knowledge.

The virtual body image presented in film, television and advertising has created an impossible standard against which real people have judged their own bodies. The essays by Susan Bordo and Anne Balsamo explore how women in particular have taken often drastic steps to try and close the gap between image and reality. In this excerpt from her essay 'Reading the Slender Body' (later to form part of her book *Unbearable Weight*) Susan Bordo looks at the role of the represented body in creating the new cult of slenderness (Bordo 1990, 1993). It is only within the last century that Westerners have come to value thinness, abstaining from food and now doing exercise in order to attain this goal. Quoting Foucault, Bordo shows that the representation of slenderness comes to form a 'set of *practical* rules and regulations (some explicit, some implicit) through which the living body is "trained, shaped, obeys and responds"'. She points out that slenderness has come to mean not just being thin but also having a taut, muscular body with no visible excess. Since the early twentieth century, 'excess body weight came to be seen as reflecting moral or personal inadequacy, or lack of will'. The shape of the body is thus seen as being indicative of 'the state of the soul'. These injunctions to discipline our own bodies have such effect because they encapsulate wider social goals – the slender muscular body is seen as socially mobile and successful – while also constraining gender roles to literally fixed boundaries.

New medical technology has transformed the ability to visualize the body to such an extent that, in Anne Balsamo's striking phrase, 'these new visualization techniques transform the material body into a visual medium'. In the extract from her essay 'On the Cutting Edge' (1992), Balsamo shows that the feminist analyses of the medical classification of the female body into a series of potentially pathological fragments now have to be supplemented with an interpretation of cosmetic and reconstructive surgery. For rather than trying to delve deeper into the body, these procedures provide a short-cut around the moral aspect of physical self-discipline. By concentrating solely on the surface, plastic surgery can make individual bodies conform to an aesthetic norm: 'In this way cosmetic surgery *literally* transforms the material body into a sign of culture.' While women have long had to contend with abstract standards of femininity and beauty, cosmetic surgeons now seek to apply these standards directly on to people's faces based, in the words of a standard text on the subject, on a 'scale of harmony and balance ... The harmony and symmetry are compared to a mental, almost magical, ideal subject, which is our base concept of beauty.' Unsurprisingly, the 'ideal face' turns out to be white, Northern European.

Although many more men are now having these procedures, they are primarily aimed at women who are held to be responsible for the various 'defects' of their bodies. So strong is the pressure to 'get fixed' that some women have procedures over and over again, becoming 'scalpel slaves' in their later thirties or forties. Often, these are women with a teenage history of anorexia, showing that the compulsion to correct the body highlighted by Bordo has now become technologized. Balsamo concludes that 'the body becomes the site at which women, consciously or not

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for body-piercing, cyberpunk fantasies about technological prosthesis – and, one might add, the cosmetic surgery performance art of Orlan – she suggests that we may need to move beyond a 'neoromantic wistfulness about the natural, unmarked body' that is, after all, the guiding ideal of cosmetic surgery. Technology as a form of power is double-edged: it disciplines and empowers simultaneously. The question remains as to whether the new corporal technologies from laser eye-correction to imaging techniques and keyhole surgery can become part of a knowledge that helps individuals situate themselves physically or whether they become absorbed into the corporate medical establishment, creating an ever-more elusive and expensive version of the abstract 'normal' body.

(b) Virtual spaces

Space, it has been famously remarked, is the final frontier. If even the borders between the inside and the outside of the body are no longer as secure as they once were, the very space in which the rise of virtuality is taking place now comes into question. Space can no longer be seen as simply an empty backdrop but as a dynamic entity with a history and characteristics that vary from period to period and place to place. In his lecture 'Of Other Spaces' reprinted here (delivered in 1967 but not published until 1984), Michel Foucault called attention to the centrality of space in twentieth-century culture. Space is the key theme for 'the epoch of juxtaposition, the epoch of the near and the far, of the side-by-side, of the dispersed'. He outlined a rough history in which a medieval hierarchical notion of space was substituted by a modern theory of extended space that has in turn now been displaced by what he called the site.

Foucault's interest was especially caught by sites 'that have the curious property of being in relation with all the other sites, but in such a way as to suspect, neutralize, or invert the set of relations that they happen to designate, mirror, or reflect'. Influenced by Gaston Bachelard's ground-breaking work *The Poetics of Space*, Foucault was intrigued by certain sites that are at once central to a culture and set aside, like the cemetery, the prison, or the hospital. He called these places 'heterotopias', the opposite to utopias, which are unreal. In between the utopia and the heterotopia lies the mirror, which is both physically real and unreal:

In the mirror, I see myself there where I am not, in an unreal virtual space that opens up behind the surface . . . But it is also a heterotopia in so far as the mirror does exist in reality, where it exerts a kind of counteraction on the position I occupy.

This self-recognition in the mirror played a key role in the work of psychoanalyst Jacques Lacan, who identified what he called the mirror stage as a key moment in the formation of the subject. Foucault steers away from such discussions of identity to think of the mirror as a mediation between different forms of space, real and virtual. As he later acknowledged, this spatial thinking set the

agenda for his most famous work. *Discipline and Punish* (1977), which examines how the heterotopia of the disciplinary institution became the model for modern industrialized society.

The other essays in this section look at different historical moments of creating space and their implications, in the tradition established by Foucault's work. In his widely cited book *Techniques of the Observer* (1990), art historian Jonathan Crary identified a key model of modern extended space, the camera obscura. The camera obscura is literally a darkened room into which light is admitted through a small hole, often with a lens mounted in it. The result is that a picture of the outside world is formed upside-down on the far wall of the camera obscura, which became 'the compulsory site from which vision can be conceived or represented' from the mid-seventeenth to early nineteenth century. As such the camera obscura creates a division between the observer and the outside world: 'it is a figure for both the observer who is nominally a free sovereign individual and a privatized subject confined in a quasi-domestic space, cut off from a public exterior world.' The observer within does not see his or her own vision but a disembodied picture of the world, emphasizing the Enlightenment belief in a sharp distinction between the mind, which judges sensory perceptions, and the body, which merely registers them, just as the camera obscura admits light through its lens. In this view, the mind brings the results of perception into what philosopher Richard Rorty has called an 'inner area', sharply distinguished from the reality extending away from the eyes, which cannot be trusted to make accurate judgements by themselves.

Film critic Anne Friedberg has contrasted the immobility of the spectator in the camera obscura with the mobility of the gaze itself in nineteenth-century visual culture. In this extract from her remarkable book *Window Shopping: Cinema and the Postmodern* (1993), Friedberg examines what has been called the 'frenzy of the visible' that broke out in the period from the invention of photography to that of cinema (1839–95). She notes that in Foucault's analysis of the panopticon – a prison system where one guard could see all the prisoners without being seen – visibility became a system of discipline that contrasted to that of the camera obscura: 'The *seeing machine* was once a sort of dark room into which individuals spied; it has become a transparent building in which the exercise of power may be supervised by society as a whole.' Friedberg introduces two crucial complicating factors to this seemingly smooth transition. First, she notes that the 'controlled light' of the panopticon was also used to create the illusions of the panorama and diorama. These theatrical presentations used a combination of lighting and scenery to provide 'a spatial and temporal mobility – if only a virtual one'. The panorama provided views of domestic and foreign cities that had previously been available only to the wealthy tourists on the Grand Tour. It was no coincidence that Louis Daguerre, the proprietor of the diorama, was also the inventor of the first practical photographic method, known as the daguerreotype. Both devices offered an escape from the everyday constraints of space and time in distinction to the panopticon, which controlled both elements. Friedberg also

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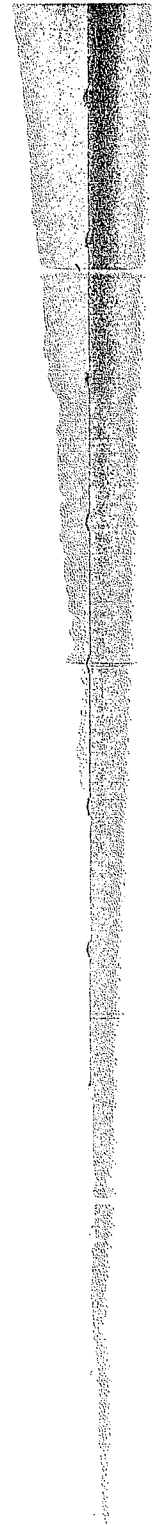
virtual, and masculine but not feminine. In short, the social ordering of space was and is contested within a particular period as well as changing from one period to the next.

It is noticeable that neither of these writers considers the possibility of a non-Western observer in Europe or of the European observer overseas. The latter figure was central to the modern understanding of space (the non-Western observer is discussed in the following section). However sceptical and divided European discourse on observation was at home, it was supremely self-confident overseas. As Europeans expanded their empires in Latin America, Africa and Asia in the nineteenth century, they came to rely above all on their individual observations of unknown landscapes. Literary critic Mary-Louise Pratt has usefully called this attitude 'the monarch-of-all-I-survey'. In the section from her book *Imperial Eyes* (1992) reprinted here, she discusses how British explorers seeking the source of the Nile in the 1860s provided extensive 'verbal paintings' of Central Africa for their readers at home. She shows that the explorers were always careful to mediate their reports by reference to familiar European sights. Here, for example, is the explorer Richard Burton describing Lake Tanganyika:

Villages, cultivated lands, the frequent canoes of the fishermen on the waters . . . give something of a variety, of movement, of life to the landscape, which . . . wants but a little of the neatness and finish of art . . . to rival, if not to excel, the most admired scenery of the classic regions.

Burton's remarks show that the lake was far from the uncultivated wilderness of colonial propaganda but he none the less insists that its lack of aesthetics renders it inferior to the European landscape. As Pratt argues: 'Discovery in this context consisted of a gesture of converting local knowledges (discourses) into European national and continental knowledges associated with European forms and relations of power.' Just as the observer in the camera obscura corrects the simple observations of the sense of sight, so does the European rectify the raw African landscape by aestheticizing it. It was important to both reader and writer that this process be authenticated by the European author actually having seen what he described, for no African report could be trusted on its own. Pratt shows that even in the Victorian period, the immense pomposity required to maintain such attitudes was open to satire and ultimately to direct criticism. Colonialism constituted the greatest venture, and ultimately the greatest failure, of the modern European spatializing of the world.

With the creation of digital imagery, the relationship between observer and observed has changed. There is no longer any necessary or logical connection between a virtual image and exterior reality. However, Geoffrey Batchen argues in his essay *Spectres of Cyberspace* that 'to look ahead it might also be necessary to look back' (Batchen 1996). Did virtual reality begin with the development of palaeolithic tools or with that of the computer? Batchen highlights the role of



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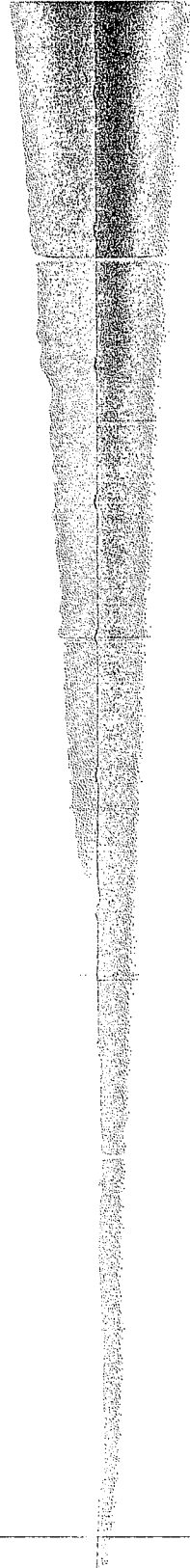
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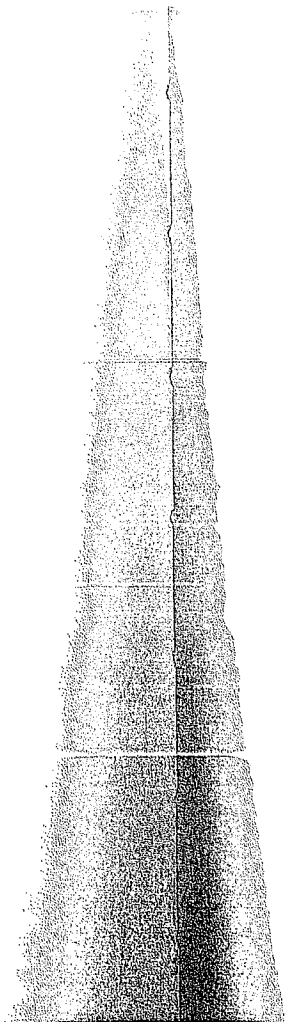
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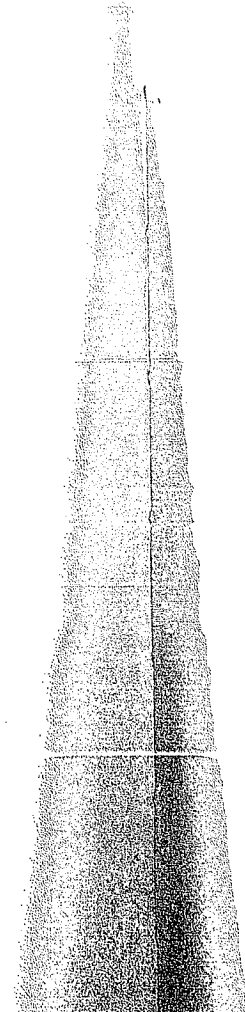
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(a) The virtual body



Donna Haraway

THE PERSISTENCE OF VISION



[I] WOULD LIKE to proceed by placing metaphorical reliance on a much maligned sensory system in feminist discourse: vision. Vision can be good for avoiding binary oppositions. I would like to insist on the embodied nature of all vision, and so reclaim the sensory system that has been used to signify a leap out of the marked body and into a conquering gaze from nowhere. This is the gaze that mythically inscribes all the marked bodies, that makes the unmarked category claim the power to see and not be seen, to represent while escaping representation. This gaze signifies the unmarked positions of Man and White, one of the many nasty tones of the word *objectivity* to feminist ears in scientific and technological, late industrial, militarized, racist, and male dominant societies, that is, there, in the belly of the monster, in the United States in the late 1980s. I would like a doctrine of embodied objectivity that accommodates paradoxical and critical feminist science projects: feminist objectivity means quite simply *situated knowledges*.

The eyes have been used to signify a perverse capacity – honed to perfection in the history of science tied to militarism, capitalism, colonialism, and male supremacy – to distance the knowing subject from everybody and everything in the interests of unfettered power. The instruments of visualization in multinationalist, postmodernist culture have compounded these meanings of dis-embodiment. The visualizing technologies are without apparent limit; the eye of any ordinary primate like us can be endlessly enhanced by sonography systems, magnetic resonance imaging, artificial intelligence-linked graphic manipulation systems, scanning electron microscopes, computer-aided tomography scanners, colour-enhancement techniques, satellite surveillance systems, home and office VDTs, cameras for every purpose

longer seems just mythically about the god-trick of seeing everything from nowhere, but to have put the myth into ordinary practice. And like the god-trick, this eye fucks the world to make techno-monsters. Zoe Sofoulis (1988) calls this the cannibal-eye of masculinist, extra-terrestrial projects for excremental second birthing.

A tribute to this ideology of direct, devouring, generative, and unrestricted vision, whose technological mediations are simultaneously celebrated and presented as utterly transparent, the volume celebrating the 100th anniversary of the National Geographic Society closes its survey of the magazine's quest literature, effected through its amazing photography, with two juxtaposed chapters. The first is on 'Space', introduced by the epigraph, 'The choice is the universe – or nothing' (Bryan 1987: 352). Indeed. This chapter recounts the exploits of the space race and displays the colour-enhanced 'snapshots' of the outer planets reassembled from digitalized signals transmitted across vast space to let the viewer 'experience' the moment of discovery in immediate vision of the 'object'. These fabulous objects come to us simultaneously as indubitable recordings of what is simply there and as heroic feats of techno-scientific production. The next chapter is the twin of outer space: 'Inner Space', introduced by the epigraph, 'The stuff of stars has come alive' (Bryan 1987: 454). Here, the reader is brought into the realm of the infinitesimal, objectified by means of radiation outside the wave lengths that 'normally' are perceived by hominid primates, i.e. the beams of lasers and scanning electron microscopes, whose signals are processed into the wonderful full-colour snapshots of defending T cells and invading viruses.

But of course that view of infinite vision is an illusion, a god-trick. I would like to suggest how our insisting metaphorically on the particularity and embodiment of all vision (though not necessarily organic embodiment and including technological mediation), and not giving in to the tempting myths of vision as a route to disembodiment and second-birthing, allows us to construct a usable, but not an innocent, doctrine of objectivity. I want a feminist writing of the body that metaphorically emphasizes vision again, because we need to reclaim that sense to find our way through all the visualizing tricks and powers of modern sciences and technologies that have transformed the objectivity debates. We need to learn in our bodies, endowed with primate colour and stereoscopic vision, how to attach the objective to our theoretical and political scanners in order to name where we are and are not, in dimensions of mental and physical space we hardly know how to name. So, not so perversely, objectivity turns out to be about particular and specific embodiment, and definitely not about the false vision promising transcendence of all limits and responsibility. The moral is simple: only partial perspective promises objective vision. This is an objective vision that initiates, rather than closes off, the problem of responsibility for the generativity of all visual practices. Partial perspective can be held accountable for both its promising and its destructive monsters. All Western cultural narratives about objectivity are allegories of the ideologies of the relations of what we call mind and body, of distance and responsibility, embedded in the science question in feminism. Feminist objectivity is about limited location and situated knowledge, not about transcendence and splitting of subject and object. In this way we might become answerable for what we learn how to see.

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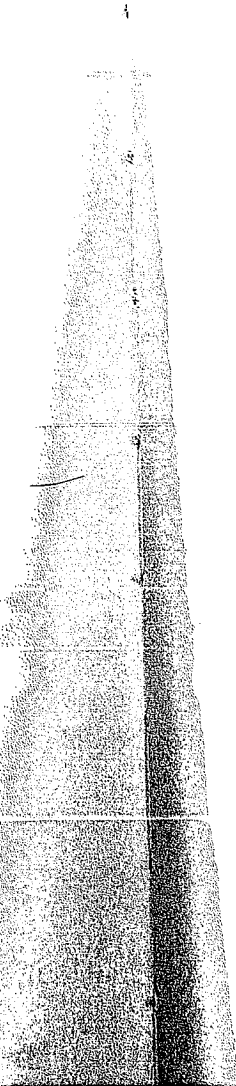
These are lessons which I learned in part walking with my dogs and wondering how the world looks without a fovea and very few retinal cells for colour vision, but with a huge neural processing and sensory area for smells. It is a lesson available from photographs of how the world looks to the compound eyes of an insect, or even from the camera eye of a spy satellite or the digitally transmitted signals of space probe-perceived differences 'near' Jupiter that have been transformed into coffee-table colour photographs. The 'eyes' made available in modern technological sciences shatter any idea of passive vision; these prosthetic devices show us that all eyes, including our own organic ones, are active perceptual systems, building in translations and specific *ways* of seeing, that is, ways of life. There is no unmediated photograph or passive camera obscura in scientific accounts of bodies and machines; there are only highly specific visual possibilities, each with a wonderfully detailed, active, partial way of organizing worlds. All these pictures of the world should not be allegories of infinite mobility and interchangeability, but of elaborate specificity and difference and the loving care people might take to learn how to see faithfully from another's point of view, even when the other is our own machine. That's not alienating distance; that's a *possible* allegory for feminist versions of objectivity. Understanding how these visual systems work, technically, socially, and psychologically ought to be a way of embodying feminist objectivity.

Many currents in feminism attempt to theorize on the grounds for trusting especially the vantage points of the subjugated; there is good reason to believe vision is better from below the brilliant space platforms of the powerful (Hartsock 1983; Sandoval n.d.; Harding 1986; Anzaldúa 1987). Linked to this suspicion, this chapter is an argument for situated and embodied knowledges and against various forms of unlocatable, and so irresponsible, knowledge claims. Irresponsible means unable to be called into account. There is a premium on establishing the capacity to see from the peripheries and the depths. But here lies a serious danger of romanticizing and/or appropriating the vision of the less powerful while claiming to see from their positions. To see from below is neither easily learned nor unproblematic, even if 'we' 'naturally' inhabit the great underground terrain of subjugated knowledges. The positionings of the subjugated are not exempt from critical re-examination, decoding, deconstruction, and interpretation; that is, from both semiological and hermeneutic modes of critical enquiry. The standpoints of the subjugated are not 'innocent' positions. On the contrary, they are preferred because in principle they are least likely to allow denial of the critical and interpretative core of all knowledge. They are savvy to modes of denial through repression, forgetting, and disappearing acts – ways of being nowhere while claiming to see comprehensively. The subjugated have a decent chance to be on to the god-trick and all its dazzling – and, therefore, blinding – illuminations. 'Subjugated' standpoints are preferred because they seem to promise more adequate, sustained, objective, transforming accounts of the world. But *how* to see from below is a problem requiring at least as much skill with bodies and language, with the mediations of vision, as the 'highest' techno-scientific visualizations.

Such preferred positioning is as hostile to various forms of relativism as to the

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possibility of webs of connections called solidarity in politics and shared conversations in epistemology. Relativism is a way of being nowhere while claiming to be everywhere equally. The 'equality' of positioning is a denial of responsibility and critical enquiry. Relativism is the perfect mirror twin of totalization in the ideologies of objectivity; both deny the stakes in location, embodiment, and partial perspective; both make it impossible to see well. Relativism and totalization are both 'god-tricks' promising vision from everywhere and nowhere equally and fully, common myths in rhetorics surrounding science. But it is precisely in the politics and epistemology of partial perspectives that the possibility of sustained, rational, objective enquiry rests.

So, with many other feminists, I want to argue for a doctrine and practice of objectivity, that privileges contestation, deconstruction, passionate construction, webbed connections, and hope for transformation of systems of knowledge and ways of seeing. But not just any partial perspective will do; we must be hostile to easy relativisms and holisms built out of summing and subsuming parts. 'Passionate detachment' (Kuhn 1982) requires more than acknowledged and self-critical partiality. We are also bound to seek perspective from those points of view that can never be known in advance, which promise something quite extraordinary, that is, knowledge potent for constructing worlds less organized by axes of domination. In such a viewpoint, the unmarked category would *really* disappear – quite a difference from simply repeating a disappearing act. The imaginary and the rational – the visionary and objective vision – hover close together. I think Harding's plea for a successor science and for postmodern sensibilities must be read to argue that this close touch of the fantastic element of hope for transformative knowledge and the severe check and stimulus of sustained critical enquiry are jointly the ground of any believable claim to objectivity or rationality not riddled with breathtaking denials and repressions. It is even possible to read the record of scientific revolutions in terms of this feminist doctrine of rationality and objectivity. Science has been utopian and visionary from the start; that is one reason 'we' need it.

A commitment to mobile positioning and to passionate detachment is dependent on the impossibility of innocent 'identity' politics and epistemologies as strategies for seeing from the standpoints of the subjugated in order to see well. One cannot 'be' either a cell or molecule – or a woman, colonized person, labourer, and so on – if one intends to see and see from these positions critically. 'Being' is much more problematic and contingent. Also, one cannot relocate in any possible vantage point without being accountable for that movement. Vision is *always* a question of the power to see – and perhaps of the violence implicit in our visualizing practices. With whose blood were my eyes crafted? These points also apply to testimony from the position of 'oneself'. We are not immediately present to ourselves. Self-knowledge requires a semiotic-material technology linking meanings and bodies. Self-identity is a bad visual system. Fusion is a bad strategy of positioning. The boys in the human sciences have called this doubt about self-presence the 'death of the subject', that single ordering point of will and consciousness. That judgement seems bizarre to me. I prefer to call this generative doubt the opening of non-isomorphic subjects, agents, and territories of stories unimaginable from the vantage point of the cyclopan, self-satiated eye of the master subject. The Western

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eye has fundamentally been a wandering eye, a travelling lens. These peregrinations have often been violent and insistent on mirrors for a conquering self — but not always. Western feminists also *inherit* some skill in learning to participate in revisualizing worlds turned upside down in earth-transforming challenges to the views of the masters. All is not to be done from scratch.

The split and contradictory self is the one who can interrogate positionings and be accountable; the one who can construct and join rational conversations and fantastic imaginings that change history. Splitting, not being, is the privileged image for feminist epistemologies of scientific knowledge. 'Splitting' in this context should be about heterogeneous multiplicities that are simultaneously necessary and incapable of being squashed into isomorphic slots or cumulative lists. This geometry pertains within and among subjects. The topography of subjectivity is multi-dimensional; so, therefore, is vision. The knowing self is partial in all its guises, never finished, whole, simply there and original; it is always constructed and stitched together imperfectly, and *therefore* able to join with another, to see together without claiming to be another. Here is the promise of objectivity: a scientific knower seeks the subject position not of identity, but of objectivity; that is, partial connection. There is no way to 'be' simultaneously in all, or wholly in any, of the privileged (subjugated) positions structured by gender, race, nation, and class. And that is a short list of critical positions. The search for such a 'full' and total position is the search for the fetishized perfect subject of oppositional history, sometimes appearing in feminist theory as the essentialized Third World Woman (Mohanty 1984). Subjugation is not grounds for an ontology; it might be a visual clue. Vision requires instruments of vision; an optics is a politics of positioning. Instruments of vision mediate standpoints; there is no immediate vision from the standpoints of the subjugated. Identity, including self-identity, does not produce science; critical positioning does, that is, objectivity. Only those occupying the positions of the dominators are self-identical, unmarked, disembodied, unmediated, transcendent, born again. It is unfortunately possible for the subjugated to lust for and even scramble into that subject position — and then disappear from view. Knowledge from the point of view of the unmarked is truly fantastic, distorted, and so irrational. The only position from which objectivity could not possibly be practiced and honoured is the standpoint of the master, the Man, the One God, whose eye produces, appropriates, and orders all difference. No one ever accused the God of monotheism of objectivity, only of indifference. The god-trick is self-identical, and we have mistaken that for creativity and knowledge, omniscience even.

Positioning is, therefore, the key practice grounding knowledge organized around the imagery of vision, as so much Western scientific and philosophic discourse is organized. Positioning implies responsibility for our enabling practices. It follows that politics and ethics ground struggles for the contests over what may count as rational knowledge. That is, admitted or not, politics and ethics ground struggles over knowledge projects in the exact, natural, social, and human sciences. Otherwise, rationality is simply impossible, an optical illusion projected from

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have more than one point of view? Who gets blinkered? Who wears blinkers? Who interprets the visual field? What other sensory powers do we wish to cultivate besides vision? Moral and political discourse should be the paradigm of rational discourse in the imagery and technologies of vision. Sandra Harding's claim, or observation, that movements of social revolution have most contributed to improvements in science might be read as a claim about the knowledge consequences of new technologies of positioning. But I wish Harding had spent more time remembering that social and scientific revolutions have not always been liberatory, even if they have always been visionary. Perhaps this point could be captured in other phrase: the science question in the military. Struggles over what will count as rational accounts of the world are struggles over *how* to see. The terms of vision: the science question in colonialism; the science question in exterminism (Sofoulis 1988); the science question in feminism.

The issue in politically engaged attacks on various empiricisms, reductionisms, or other versions of scientific authority should not be relativism, but location. A dichotomous chart expressing this point might look like this:

universal rationality	ethnophilosophies
common language	heteroglossia
new organon	deconstruction
unified field theory	oppositional positioning
world system	local knowledges
master theory	webbed accounts

But a dichotomous chart misrepresents in a critical way the positions of embodied objectivity which I am trying to sketch. The primary distortion is the illusion of symmetry in the chart's dichotomy, making any position appear, first, simply alternative and, second, mutually exclusive. A map of tensions and resonances between the fixed ends of a charged dichotomy better represents the potent politics and epistemologies of embodied, therefore accountable, objectivity. For example, local knowledges have also to be in tension with the productive structurings that force unequal translations and exchanges – material and semiotic – within the webs of knowledge and power. Webs *can* have the property of systematicity, even of centrally structured global systems with deep filaments and tenacious tendrils into time, space, and consciousness, the dimensions of world history. Feminist accountability requires a knowledge tuned to resonance, not to dichotomy. Gender is a field of structured and structuring difference, where the tones of extreme localization, of the intimately personal and individualized body, vibrate in the same field with global high-tension emissions. Feminist embodiment, then, is not about fixed location in a reified body, female or otherwise, but about nodes in fields, inflections in orientations, and responsibility for difference in material-semiotic fields of meaning. Embodiment is significant prosthesis; objectivity cannot be about fixed vision when what counts as an object is precisely what world history turns out to be about.

How should one be positioned in order to see in this situation of tensions, resonances, transformations, resistances, and complicities? Here, primate vision is

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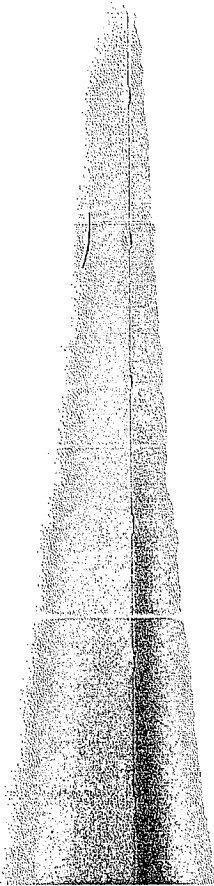
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not immediately a very powerful metaphor or technology for feminist political-epistemological clarification, since it seems to present to consciousness already processed and objectified fields; things seem already fixed and distanced. But the visual metaphor allows one to go beyond fixed appearances, which are only the end products. The metaphor invites us to investigate the varied apparatuses of visual production, including the prosthetic technologies interfaced with our biological eyes and brains. And here we find highly particular machineries for processing regions of the electromagnetic spectrum into our pictures of the world. It is in the intricacies of these visualization technologies in which we are embedded that we will find metaphors and means for understanding and intervening in the patterns of objectification in the world, that is, the patterns of reality for which we must be accountable. In these metaphors, we find means for appreciating simultaneously *both* the concrete, 'real' aspect and the aspect of semiosis and production in what we call scientific knowledge.

I am arguing for politics and epistemologies of location, positioning, and situating, where partiality and not universality is the condition of being heard to make rational knowledge claims. These are claims on people's lives; the view from a body, always a complex, contradictory, structuring and structured body, versus the view from above, from nowhere, from simplicity. Only the god-trick is forbidden. Here is a criterion for deciding the science question in militarism, that dream science/technology of perfect language, perfect communication, final order.

Feminism loves another science: the sciences and politics of interpretation, translation, stuttering, and the partly understood. Feminism is about the sciences of the multiple subject with (at least) double vision. Feminism is about a critical vision consequent upon a critical positioning in inhomogeneous gendered social space. Translation is always interpretative, critical, and partial. Here is a ground for conversation, rationality, and objectivity – which is power-sensitive, not pluralist, 'conversation'. It is not even the mythic cartoons of physics and mathematics – incorrectly caricatured in anti-science ideology as exact, hyper-simple knowledges – that have come to represent the hostile other to feminist paradigmatic models of scientific knowledge, but the dreams of the perfectly known in high-technology, permanently militarized scientific productions and positionings, the god-trick of a Star Wars paradigm of rational knowledge. So location is about vulnerability; location resists the politics of closure, finality, or, to borrow from Althusser, feminist objectivity resists 'simplification in the last instance'. That is because feminist embodiment resists fixation and is insatiably curious about the webs of differential positioning. There is no single feminist standpoint because our maps require too many dimensions for that metaphor to ground our visions. But the feminist standpoint theorists' goal of an epistemology and politics of engaged, accountable positioning remains eminently potent. The goal is better accounts of the world, that is, 'science'.

Above all, rational knowledge does not pretend to disengagement: to be from everywhere and so nowhere, to be free from interpretation, from being repre-



hermeneutics:semiology::critical interpretation:codes.

Decoding and transcoding plus translation and criticism: all are necessary. So science becomes the paradigmatic model not of closure, but of that which is contestable and contested. Science becomes the myth not of what escapes human agency and responsibility in a realm above the fray, but rather of accountability and responsibility for translations and solidarities linking the cacophonous visions and visionary voices that characterize the knowledges of the subjugated. A splitting of senses, a confusion of voice and sight, rather than clear and distinct ideas, become the metaphor for the ground of the rational. We seek not the knowledges ruled by phallogocentrism (nostalgia for the presence of the one true Word) and disembodied vision, but those ruled by partial sight and limited voice. We do not seek partiality for its own sake, but for the sake of the connections and unexpected openings that situated knowledges make possible. The only way to find a larger vision is to be somewhere in particular. The science question in feminism is about objectivity as positioned rationality. Its images are not the products of escape and transcendence of limits, i.e. the view from above, but the joining of partial views and halting voices into a collective subject position that promises a vision of the means of ongoing finite embodiment, of living within limits and contradictions, i.e. of views from somewhere.

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