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The Material Foundation of Virtual Subjectivity

There is no such thing as a truly virtual reality.

We who dwell in post-industrial societies live in a world that is not only technologically-driven, but also lucratively and unjustly so. The global economy manifests itself through a number of both global and local events, that is to say it operates through 'G-local' power effects. I would describe these as the simultaneity of opposite social effects, resulting in extreme polarization in terms of access to the benefits of the technological revolution between the haves and the have nots. The flow of capital undeterred by topological constraints simultaneously de-materializes social realities and hardens their structural injustices. Advanced technologies are central to the shifts in power relations that mark the era of globalization. They are heavily material constructions and their 'virtuality' is densely embedded and embodied.

It is worth stressing another important point, namely that the most distinctive trait of contemporary culture and society is the convergence between different branches of technology. Thus, it is not very useful to maintain the distinction between bio-technologies and genetic engineering on the one hand and information and communication technologies on the other. They are equally co-present in driving home the spectacular effects of contemporary technological transformations, especially in terms of their impact on the gendered human subjects.

Thus, cyborgs, in the sense of dominant representations are also material bodies that are technologically mediated. They include not only pumped-up white bodies like that of Schwarzenegger in *Terminator*, or the highly trained fit bodies of army jet-fighters; but also the anonymous masses of underpaid and exploited bodies of mostly women and children in off-shore production plants and in those increasing pockets of underpaid labor within advanced economies, who fuel the technologically-driven global economy.

All technologies have a strong 'bio-power' effect, in that they affect bodies and immerse them in social relations of power, inclusion and exclusion (Bryld and Lykke 1999). One of the interesting thinkers of bio-power is Michel Fou-

cault who argues critically in favor of in-depth analysis of bodily materialism: power over life and over all that lives is at the heart of contemporary technological culture.

In terms of relations of bio-power, I have argued (Braidotti 2002) that globalization perpetuates the ancient habit that consists in consuming the others, in the predatory and rapacious manner perfected by advanced capitalism. As Vandana Shiva points out (1997), within globalization we must distinguish between different modes of mobility. "One group is mobile on a world scale, with no country, no home, but the whole world as its property; the other has lost even the mobility within rootedness, lives in refugee camps, resettlement colonies and reserves" (1997, 98).

Women, young girls and other 'disposable' bodies, racialized or marked off by age and marginality, come to be inscribed with particularly ruthless violence in this regime of power. Their experience of utter dispossession of the very roots of their embodied and embedded position suggests that the logic of advanced capitalism is one of repeated and structurally enforced eviction (Sassen 1996).

This points to the schizophrenic character of advanced capitalism, as Deleuze and Guattari put it, namely the paradox of high levels of mobility of capital flows and of some sectors of the economic elites on the one hand, and on the other, high levels of centralization and great immobility for most of the population.

Massive concentrations of infrastructures exist alongside complex, worldwide dispersal. The technologically-driven advanced culture that prides itself in being called the virtual space of the 'Information Society' is in reality a concrete, material infrastructure that is concentrated upon the sedentary global city. This 'global city' contains within its heterogeneous social space samples of very advanced as well as remains of very archaic forms of economic and social organization. Highly sophisticated information centers co-exist alongside re-territorialized migrant cultures that cater for all sorts of other needs. This means huge disparities in the access to the capital and the technologies that make the new economy work. The global economy is also marked by flows of population in terms of labor migration. Sassen pleads these racialized elements to be re-integrated at the heart of the analysis of global economic culture, so as to see them as localized instances of the world flow of capital, thereby "placing them right there at the center along with the internationalization of capital as a fundamental aspect of globalisation." (1996, 21).

A similar line is taken by Zilla Eisenstein (1998) in her critique of globalization. She argues that this is a system that contains structural inequalities that legitimate exploitative and brutal power-relations. Eisenstein explores ways of enlarging the practice of democracy in the global era, so as to respect diversity, while embracing issues such as community, responsibility and the principle of non-profit. The link between individualism and consumers' culture is empha-

sized, and through her critical reading of the role of the media, Eisenstein demystifies the myth of consumer society as open, free and democratic. Quoting Benjamin Barber, Eisenstein describes such myths as "a universalized culture of videology, infotainment and Holly-world" (1998, 105).

The critique of this social imaginary that amalgamates citizenship with consumerism and sells cheap promises of human liberation through endless consumption is central to Eisenstein's politics. In opposition to it, she stresses the continuing patterns of both racial and sexist oppression and the important role they play in structuring the global economy. The disadvantaged position of girls and women from developing countries, as well as from ethnic minorities within the developed countries, is especially crucial, following a racial-patriarchal division of labor "that disproportionately locates women and girls, especially those of color, in low-wage assembly and information jobs and in sexual ghettos elsewhere in the market. Meanwhile, women are still expected to continue rearing children and performing familial labor" (Eisenstein 1998, 134). Developing forms of resistance against such a universal pattern of domination is a top political priority.

The global economy does not function in a linear manner, but is rather web-like, scattered and poly-centered. This creates a few methodological difficulties for the social critic, because it translates into a heteroglossia of data which makes both classical and modernist social theories inadequate to cope with the complexities. Thus, we need to adopt non-linearity as a major principle and to develop cartographies of power that account for the paradoxes and contradictions of the era of globalization, and which do not take shortcuts through its complexities.

Globalization is not monolithic, but rather an internally modified process which is especially differentiated along gender and ethnic lines. A crisis in theoretical representation accompanies this process of transformation of late postmodernity. From a philosophical angle, post-modernity, as a historical moment, marks the decline of some of the fundamental premises of the Enlightenment, namely the progress of mankind through a self-regulatory and teleologically ordained use of reason and of scientific rationality allegedly aimed at the 'perfectibility' of Man. The emancipatory project of modernity entails a view of "the knowing subject" (Lloyd 1985) which excludes several 'boundary markers' also known as 'constitutive others'. These are: the sexualized other, also known as women, the ethnic or racialized others and the natural otherness. They constitute the three inter-connected facets of structural otherness or difference as pejoration, which simultaneously construct and are excluded in modernity. They play an important – albeit specular – role in the definition of the norm, the normal, the norm-active view of the subject. They represent a category of devalued otherness which historically has been perceived as different in the sense of being 'less than' (Beauvoir 1949; Irigaray 1974; Deleuze 1980). Paradoxically, this

pejorative difference, or 'less-ness' has been instrumental to the institution of masculine self-assertion (Woolf 1977), or 'Logic of the Same' (Trigaray 1974).

The structural 'others' of the subject of modernity re-emerge in post-modernity as the indication, expression or symptoms – conservatives would say the 'cause' – of the crisis at a time when the project of modernity shows great strain, if not actual exhaustion. They also propose powerful, affirmative and, in my opinion, highly necessary re-readings of subjectivity after the decline of naturalized and dialectically ordained humanistic paradigms. This results in the emergence of several, multi-layered and complex discourses around powers and bodies. 'Bio-power', understood as power over living matter *per se* is a good enough shorthand definition of a complex problem in the new world order. In such a fast-expanding and socially contested field, however, the very notion of *bios* or life is called into question in a variety of ways. This can be translated in terms of an eco-philosophy, and hence as an ethical concern for sustainability and consequently for future generations.

Crucial to my argument is the idea that we need schemes of thought and figurations that enable us to account in empowering and positive terms for the changes and transformations currently on the way. We already live in emancipated (post-feminist), multi-ethnic societies with high degrees of technological intervention. Yet contemporary culture is unable to represent these realities adequately. It favors instead the predictably plaintive refrains about the end of ideologies, run concurrently with the apology of the 'new'. Nostalgia and hyper-consumerism join hands, under the expressionless gaze of neo-liberal restoration.

1. Politics of location or: Feminist materialism

Figurations or adequate forms of social imaginary require a methodology. One of the innovative methods proposed by feminist theory is the politics of location. This refers to a way of making sense of diversity among women within the category of 'sexual difference' understood as the binary opposite of the phallogocentric subject. In feminism, these ideas are coupled with that of epistemological and political accountability which is understood as the practice that consists in unveiling the power locations which one inevitably inhabits as the site of one's identity. The practice of accountability (for one's embodied and embedded locations) as a relational, collective activity of undoing power differentials is linked to two crucial notions: memory and narratives. They activate the process of putting into words, that is to say bringing into symbolic representation, that which by definition escapes consciousness.

A 'location' in fact, is not a self-appointed and self-designed subject-position. It is a collectively shared and constructed, jointly occupied spatio-temporal territory. A great deal of our location, in other words, escapes self-scrutiny in that it is so familiar, so close, that one does not even see it. The 'politics of location' consequently refers to a process of consciousness-raising that requires a political awakening (Grewal and Kaplan 1994) and hence the intervention of others. 'Politics of locations' are cartographies of power which rest on a form of self-criticism, a critical, genealogical self-narrative; they are relational and outside-directed. This means that 'embodied' accounts illuminate and transform our knowledge of ourselves and of the world. Thus, black women's texts and experiences make white women see the limitations of our locations, truths and discourses. Feminist knowledge is an inter-active process that brings out aspects of our existence, especially our own implication with power, that we had not noticed before. In Deleuzian languages, it 'de-territorializes' us, i.e. it estranges us from the familiar, the intimate, the known and casts an external light upon it. In Foucault's language, it is micro-politics, and it starts with the embodied self. Feminists, however, knew this well before either Foucault or Deleuze theorized it in their philosophy.

Where 'figurations' of alternative feminist subjectivity, like the woman-is/the lesbian/the cyborg/the inappropriate(d) other/the nomadic feminist etc. differ from classical 'metaphors' is precisely in calling into play a sense of accountability for one's locations. They express materially embedded cartographies and as such are self-reflexive and not parasitic upon a process of metaphorization of 'others'. Self-reflexivity is, moreover, not an individual activity, but an interactive process which relies upon a social network of changes. The figurations that emerge from this process act as the spot-light that illuminates aspects of one's practice which were blind spots before. By extension, a new figuration of the subject (nomadic, cyborg, Black, etc.) functions like a conceptual persona. As such, it is no metaphor, but rather on the critical level, materially embedded and embodies accounts of one's power-relations. On the creative level, it expresses the rate of change, transformation or affirmative deconstruction of the power one inhabits. 'Figurations' are materially embodied stages of metamorphosis of a subject position towards all that the phallogocentric system does not want it to become.

A range of new, alternative subjectivities has indeed emerged in the shifty landscapes of post-modernity. They are contested, multi-layered and internally contradictory subject-positions, which does not make them any less ridden with power-relations. They are hybrid and in-between social categories for whom traditional descriptions in terms of sociological categories such as 'marginals', 'migrants', or 'minorities' are grossly inadequate. Looked at from the angle of 'different others' this inflationary production of different differences simultaneously expresses the logic of capitalist exploitation, but also the emerging sub-

jectivities of positive and self-defined others. It all depends on one's locations or situated perspectives. Far from seeing this as a form of relativism, I see it as an embedded and embodied form of enfolded materialism. Put in a more feminist frame with Irigaray: the differences proliferating in late postmodern or advanced capitalism are the 'others' of the Same. Translated into a Deleuzian perspective: these differences whether they are large or quantitatively small, are not qualitative and consequently do not alter the logic or the power of that Same, the Magis fragmented, but that does not make it any less central, or dominating. It is important to resist the uncritical reproduction of Sameness on a molecular, global or planetary scale. I don't want to conceptualize differences in a Hegelian framework of dialectical inter-dependence and mutual consumption of self and other. I do see them instead as being disengaged from this chain of reversals in order to engage in quite a different logic: a nomadic, or rhizomatic one. Again, the challenge is how to inscribe these theoretical shifts in a more materialist perspective that deals with the groundwork of subjectivity as an embedded and embodied perspective.

2. The limits of social constructionism

The feminist attempts to re-configure the position of the 'knowing subject' – and the specific forms of accountability *s/he* is endowed with, occur in a context where the boundaries of scientific discourses are being shifted in a radical manner. The age of post-modernity sets trans-disciplinary high on the agenda. One of the theoretical challenges of our time is how to think in terms of processes, not of entities or single substances, at both the social and the symbolic levels. Inter-disciplinary or even trans-disciplinary is an issue, but the very boundaries between the various disciplines also get questioned and need to be reexamined both conceptually and methodologically. New forms of cross-disciplinary cooperation seem absolutely necessary, as well as a form of "self-reflexive transdisciplinarity" (Becker and Johan 1999, 13).

What we need to come to terms with is the complex, 'hybrid' structure of contemporary scientific issues and social problems. Phenomena such as the virtual technological culture, or the environmental crisis linked to the technological development and to the monstrous social imaginary that sustains it (Braidotti 2002) cannot be dealt with in the conventional language and methodology of social philosophy and of the social sciences. They are transversal phenomena that intersect of different domains; thinking in terms of processes and inter-relations; and trying to represent the ever-speeding rate of transformations are

the main challenges thrown open by the issue of sustainability. Central among the lines that structure this 'hybrid' is the relationship between the natural and the social, the embodied and embedded material foundations of 'life' and the social and symbolic constructions that sustain them (or not). A new unity is imposed to our ways of thinking, by the problems created by our very historicity. How to rethink the singular complexity of this unity is the challenge.

Feminist theory proposes a trans-disciplinary approach, which entails a web of inter-related events in societal relations to nature, which does not focus on either pure social facts or on natural objects. It should rather focus on socially constructed forms of mediation between society and nature. The social and the natural are related, but heterogeneous notions within a structure of mediation which is historically shaped. As such, they are internally differentiated and process-oriented. The assumption is that nature cannot be addressed apart from social practices of appropriation, perception and symbolization, but that nature is also more than that and different from any other social construction.

This approach highlights the limits of social constructionism, by stressing first of all the global nature of the problems confronted by technologically mediated societies: the planetary nature of the environmental crisis; the world dominance by a single high-tech culture; the seemingly unstoppable triumph of advanced capitalism spell the total takeover by the human-technological apparatus of the world resources.

Confronted with problems of this quantitative and qualitative scale, such as contemporary bio-sciences or the environmental crisis, social constructionism shows indeed its limitations. This is one of the most important effects of the convergence between bio-technologies and the new communication and information technologies, which I mentioned earlier. Environmental problems or genetic engineering issues, in fact, are not analogous to other social problems, except gender issues, in that they entail natural effects and bio-logical consequences. To approach them merely in terms of their social construction, or their symbolic representation, is inadequate. The fact that these debates are socially constructed does not make them any less real: like all social events, these are embedded and embodied physically.

What we have to emphasize is the deep, vital inter-connection between the different elements, which makes any clear-cut distinction between the social and the natural or biological impossible to uphold. Feminist analyses of reproduction, i.e. the continuing exploitation of women for the benefits of the perpetuation of the species through reproduction constitute a significant precedent in highlighting both the strengths and the limitations of social constructivist methods. The embodied structure of women's oppression throws open the divide between nature and culture, biology and society, pointing to the complicity and the continuities between them. In order to meet this challenge, feminist theory has developed conceptual schemes and methodological tools that were simply not available elsewhere.

The critique of social constructionism consequently calls for a different political agenda, as well as for a renewal of the methodological and conceptual frameworks. Examples of this current trend are manifold today.

Contemporary feminist science studies are an eminent example of this new approach. Elizabeth Wilson (1998) for instance, attacks the historically sedimented ties that bind feminism to social constructionism. Wilson critiques them in terms of the "naturalized antessentialism" of feminist ways of thinking in general and of the critiques of science in particular. The assumption that biology is intrinsically regressive and politically reactionary is one of the least useful aspects of the Marxist legacy on the feminist mind-set. According to Wilson, this blind faith in social constructionism needs to be reviewed in the light of contemporary developments in genetics, molecular biology, neurology and artificial intelligence. The new bio-technological frontiers contribute to bring to the fore the material foundations of the embodied self, including its biological and genetic material. In turn, this forces a revision of the standard methods of social constructivist analysis. Wilson points out that this shift of perspective offers an added advantage: it may repair the paradoxical relationship that feminism has developed towards 'the body'. Wilson suggests that 'the body' – a dominant feminist *topos* by any standards – has become within feminism "curiously a-biological – its social, cultural, experiential or psychological construction having been posited against or beyond any putative biological claims" (Wilson 1998, 15). This marks a return to a bodily materialist approach that rests on the methods of the natural sciences, but cross-refers to the theoretical insights of deconstruction and postmodern theories of the subject. Wilson banks on this seemingly paradoxical mixture in order to reset the feminist agenda on issues of embodiment in such a way as to do justice to contemporary bio-sciences.

Franklin, Lury and Stacey (2000), while arguing that globalization is not a pre-given data, but an on-going process which is still being played out in a highly contested political struggle, focus on the epistemological implications of the process for a critique of Western science and technologies. For instance, while agreeing that the era of the global economy can best be described as the cannibalization of nature by a global market, they also argue that this process is being matched by an increased sense of re-territorialization and consequently a re-invention of nature. They speak consequently of a 'transmagnification' of nature (2000, 19), which is being refigured and revitalized by being completely saturated with technological culture. 'Nature' functions therefore as an indexing system that produces demarcations and classifications, while also resisting them. If there is one distinctive characteristic of 'nature', then it is that it is more than the sum of its marketable appropriations. It is a dual system: an indexation machine, but also an agent that remains beyond the reach of domestication and commodification.

Contemporary post-industrial societies have brought this logic to a paradox. Franklin argues that we live in the midst of a genetic social imaginary

which euphorically associates the genetic code or the DNA to marketable brand names. The genes therefore become data-banks of potentially profitable information and are commercialized as such. The very wide-spread practice of patenting and of enforcing intellectual property rights as a standard way of doing scientific research demonstrate the point. What this means concretely is that scientific research, which is still reputed and funded accordingly as 'fundamental' results simply in an endless succession of applied technological innovations. The on-going case of genetically modified organisms in food production – and the massive opposition they aroused in Europe – is a glaring example of the practice of genetic selection of manufactured goods.

In a very powerful twist to her argument, however, Franklin shows that the genetic social imaginary cuts two ways and if 'nature' has been transformed by technology, then the contamination also works in reverse. Thus, contemporary engineering and manufacturing are presented in a genetic format, which stresses the industrial transmission of inherited traits through careful selection and manufacturing of strengths and weaknesses. This commercialized version of social Darwinism adds a touch of irony to the widespread idea of the 'next generation' of electronic gadgets, computers, cars or whatever. The basic equation at work in the social genetic imaginary is that the DNA results in marketable brand-names, so that your genes are, literally, your capital.

These examples demonstrate quite clearly that 'virtual reality' is not an abstraction, but a technologically mediated social reality that engenders material relations and engages embedded and embodied subjects. The materiality of virtual technologies and new media is a crucial point, which entails both methodological and theoretical consequences. The need for a revision of the boundaries between the material and the semiotic, the social and the cultural is one of them. A drastic revision of the canonical status of social constructionism is another of them.

3. Towards another ethical subject

From the perspective of philosophical normadic thought, other aspects appear and acquire a central significance. First and foremost among them, the status of difference and the dialectics of Sameness and Otherness in relation to the question of the subject. I mentioned earlier on the extent on which post-modernity is marked by the return of difference, or of the 'constitutive others' of the subject of modernity. The sexualized, racialized and naturalized 'others' emerge on the scene of knowledge, as they do on the world scene – as subjects capable of turning their 'difference' into a substantive source of alternative knowledge. In the context of processes of globalization and of the redistribution of the boundaries of scientific knowledge under the impact of converging new bio and infor-

mation technologies, I think the 'constitutive others' of post-modernity undergo a fundamental mutation.

Feminist analysts and critics of contemporary technologies have stressed the extent to which the bodies of those empirical subjects who were previously marked as the others of modernity (woman/native/earth or natural others) have become the disposable bodies of post-modernity.

What exactly is a disposable body? It is a forcibly disrupted bio-cultural entity. A set of organs disengaged from organic unity, consistency or integrity: a collection of organs that are up to grabs. See the case of women's bodies farmed for their ova, the nurturing capacities of their uteruses, their generative powers, as Vandana Shiva points out. See how the bodies of animals, just like black or native bodies are "farmed" for their productive, reproductive and generative powers; for sexual services in the global sex trade; for spare parts in the organ transplant industries.

Think of the martyred body of onco-mouse, the farming ground for the new genetic revolution and manufacturer of spare parts for other species; think of trans-species organ transplant here (Haraway 1997).

Looked at from the angle of the traditional 'others' of the Humanist subject, the on-going new scientific revolution is neither very new, nor particularly scientific. We have science turning into sheer technological applications; of these very few are new and all are inevitably hype, while supporting the perpetuation of traditional modes and patterns of exclusion. Under the cover of virtuality, we are witnessing the materialization of structural inequalities: the ruthless exploitation of bodily materialism and bodily matters. Post-industrialism in the age of globalization has shown rawer and more brutal power relations that we had seen since the first industrial revolution. With bio-technologies, we have organs without bodies, not bodies without organs, as Deleuze and Guattari teach us. What we are getting is a mockery, a perversion and a reactionary rendition of the subversive and creative potential of those very technologies which we have invented.

How to confront this without falling into technophobia or paranoia is the question that inevitably raises. What norms and values can be opposed to the return of classical modes of inclusion and exclusion under the cover of the 'new' technologies? This ethical issue acquires special urgency amidst the hype and the violence of these 'high-tech' times. When it comes to the technological changes, our culture seems to alternate in a manic-depressive manner between gloom on the one hand and euphoria on the other, with nothing much in between. Politically, they translate respectively into nostalgia on the one hand, and mindless homologation into mainstream norms and modes, on the other. In other words, either the re-invention of nature or the whole-hearted acceptance of the commercialization of living matter, seem to be the only options available in our era.

I quite frankly long for quite a different moral barometer: one which might combine accountability with a sense of limits based on principles other than

those upheld by dominant morality. My central term of reference is the ethics of sustainability, that is to say an eco-philosophical sense of limits, resting on the assumption that techno-culture is indeed our habitat, but that precisely because of it, it is a dynamic and living entity which we need to take collective responsibility for (Braidotti 2002). Sustainable ethics combine morality with accountability, transformation with endurance and thus work towards duration.

In relation to this shift of ethical horizons, I think it urgent to reconnect this discussion to on-going philosophical attempts to re-cast subjectivity in a non-unitary and non-hierarchical mode. The emphasis rests on the cartographic reading of the present as a post-humanist system in which the human has been subsumed into global networks of control and commodification, which have taken 'life' and living matter as their main target. The political economy of euphoria and gloom of advanced capitalism inscribes us in a state of constant crisis. The crisis of human rights, of human life, of human survival is on the agenda. The generic figure of the human is in trouble. Tracking the mutations and the constant flows or fluctuations is the task of critical theory, but one which meets with a double challenge. The first comes from the corporatist resistance against this fragmented vision of the subject on the part of many philosophers in the areas of both epistemology and moral philosophy. So much time wasted in polemics has delayed a more reasoned confrontation of genuine theoretical differences.

The second challenge is of a different nature as it concerns the methodological difficulty of accounting for a web of fast-changing, inter-related and yet potentially contradictory power effects related to *bios/zoe*, or 'Life'. More specifically, serious methodological issues emerge in trying to deal with the illogical, non-linear and often quite simply irrational structures of advanced, post-industrial systems and their networks of power. How to account for the schizoid nature of contemporary power relations is a challenge that seriously tests the resources and the methodological stamina of social critics, like the poststructuralists, who are committed to provide cartographies of contemporary culture. Meeting such a challenge requires some creative efforts that go beyond the traditional call of methodological duties: it also involves the creative quest for more adequate representations for the kind of subjects we are becoming. And they pave the way for another kind of ethical thought.

In disagreement with other feminist theorists working on science and technology, I maintain the subject in the non-unitary, processual but accountable form, and I defend a more philosophical approach called nomadism. I want to keep an equal distance from both the humanistic assumptions of the unitary subject and the extreme forms of post-humanism which dismiss the need for a subject altogether. This is where my dialogue with Donna Haraway reaches some point of genuine disagreement. It is not the case that the Subject's transcendent nature needs to result in either disembodied abstractions or in univer-

salistic pretensions. The virtual needs to be dealt with as a materialist concept: a great deal of Continental philosophy in the second half of the twentieth century has attempted to re-think the embodied, materialist foundations of the subject in a non-essentialist, yet accountable manner. My nomadic subject is part of this so-called poststructuralist tradition.

As a consequence, I would enlist, rather than dismiss, the contribution that philosophical materialism and especially nomadism can make to this debate. I do not think that only social studies of science, or feminist cultural studies, can offer useful tools of analysis for the complex phenomena and cluster of problems surrounding the techno-bodies of advanced capitalism. Philosophical investigations of alternative ways of accounting for the embedded and embodied nature of the subject are very relevant and generous allies in the on-going efforts to develop an approach to subjectivity worthy of the complexities of our age. One needs at least some subject position: this needs not be either unitary nor exclusively anthropocentric, but it must be the site for political and move especially for ethical accountability.

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