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THE CULTURAL DIMENSION OF WASTE:
A CRITIQUE OF THE ETHOS OF TECHNOLOGY

The purpose of this article is not to undermine the honest efforts to improve natural conditions on this planet – efforts that we might place generically under the category of "environmental engineering." I do intend, however, to speak against the absolutization of technological thinking, the belief that the only way of improving our environmental condition is through technology. Such technological reductionism suggests that there is a technological fix to each and every technologically generated problem. The paradox is that even as we apply our technological knowledge to solving the next environmental problem, we inadvertently perpetuate the very technological absolutism that caused the problem in the first place. The problem of waste, for instance, has become almost exclusively a technological problem, and the phrase "waste management" exposes the widespread belief that there are economically and technologically "efficient" ways of dealing with waste. My starting point, as a cultural studies scholar, is somewhat different: I want to argue that we might benefit from a cultural analysis of our notions of cleanliness and dirt, purity and contamination.

The problem of waste may be seen in the context of what in the human sciences has come to be known as "the project of modernity", i.e. the creation of the modern (European) cultural paradigm. Arguably, part of this project is the drive toward purification, sanitization and hygienization, which is reflected in – among other things – the construction of the modern self or the way we place ourselves vis-B-vis the world. The Cartesian, "pure" self of the modern paradigm envisioned a world reduced to empty, homogenous, geometrical space filled with well-defined objects caught in gravitational fields. Looking beyond the "filth" of material existence, the modern subject projects a world of absolute, infinite

transparency: the immaterial, thinking "I" imagines itself in the like-
ness of a ray of light that "pierces" through the opaque world in its unin-
hibited straight-line trajectory. In what might be called "the ultimate
hygienics of existence" the subject seeks perfectly noiseless, frictionless
channels by ignoring the medium in which anything at all can occur. In
its abstraction from its actual positionality, the "I" (the self-transparent
figure, graphically and conceptually equivalent to "one") becomes invisi-
ble to itself, it usurps the voyeuristic position of a transparent "eye/I,"
separated from and invisible to the ground from which it takes its very
existence.

To narrow down our perspective, let us have a quick a look at the con-
text of the current ecological debate. The two main camps in this debate
are the nostalgic "unrealists" who crave for a non- (or pre-) technological
future and the "realists" who embrace technology's promises of liberation.
Eco-sentimentalists believe in the what-might-be, in the redemptive re-
versibility of current trends, while techno-realists profess – more or less
happily – that things have gone too far and faced as we are with techno-
logical realities, we should endeavour to make the best use of the present
circumstances for a more (ethically and economically) sustainable future.
I do not mean to maintain that the polarized model of eco-sentimentalism
and techno-progressivism as the end-points in a spectrum of intermediate
positions provides a comprehensive description of all ecological stances.
Anthony Weston, one of the leading American eco-philosophers, embraces
a version of eco-nostalgia that reiterates the dream of a pre-technological
world, whereas the ideas propagated by various trans- and post-human-
ists exemplify techno-enthusiastic millenarianism.

Weston expounds his philosophy most fully in *Back to Earth: Tomor-
row's Environmentalism*, a book whose very title epitomizes Weston's
approach. If the first part of the title suggests a regressive step back, the
subtitle tells us to look forward into the future. Words such as "return"
or "restore" recur throughout the book, and the plea Weston sets out to
make could well be summarized in his favourite phrase "coming back to
our senses" in its double meaning: "changing the way we perceive
things" and at the same time "redressing the balance of the mind"

> If bright lights outside were also disallowed [...] [t]he heaviness of the night could re-
> turn. [...] The stars could return, and the light creatures now exiled by the light.
> This is not a utopian proposal. Unplug a few outdoor lights, reroute some roads, and in
> some places of the country we have a first approximation, even when the electricity is
> on [Weston, 1994, 114–5].

Much as one might believe in the positive results of such actions, mo-
ving beyond the mediation of technology remains a regressivist dream: it

is easier to unplug a few outdoor lights than to unplug the self from the technologies it depends on.[1] The key question, rather, is *which* (or *whose*) technology we choose, what kinds of technology are allowed to mediate our perception and self-perception – and this is where Weston's campaign against technological determinism becomes fully relevant.

In an insightful essay on self-validating reduction (a sort of "self-fulfilling prophecy") in our thinking, Weston takes issue with those who charge ecologists with nostalgic sentimentalism by ironically agreeing with them:

> So let us embrace unrealism. [...] Even to ourselves, and especially to our students, we sound sentimental, romantic, softheaded, and utopian. My current suggestion is that we *should*. We speak for what the world might be, perhaps for what it once was — not necessarily for what it is right now. [Weston, 1996, 130]

Weston [1996, 130] argues convincingly that "our attention ought to be directed toward re-valuational *possibilities*, toward overlooked openings, toward the manifold hidden possibilities of things." Like many other sophisticated eco-thinkers of our times, he calls for a radical change in our perception, a re-visioning of the world around us. Yet through a stubborn rejection of technology and its threat of reductionism, are not some ecologists themselves overlooking certain openings and hidden possibilities of things? Arguably, any opening of new fields of vision happens necessarily at the cost of a narrowing or closure of other fields, so those who bemoan technology's domination (and its diminishing effects) may simply be too short-sighted to see its liberating potential. Digital technologies are believed to open new perceptual domains, just as the telescope and the microscope changed profoundly our optics in their time.

The new fields of vision and other possibilities offered by technology have been appropriated and apotheosized by a host of techno-proselytes, prophets of a "brave new age". An extreme example of the dream of technological salvation can be found in various versions of trans-humanism. We are now at a moment of transition, trans-humanists maintain, from a lower, merely human, evolutionary phase to a higher, "post-human" one. Thanks to modern science and technology, intelligent life is moving beyond its human limitations by means of all the technological self-enhancements available. Future post-humans will be persons of unlimited physical, intellectual, and psychological capacity, self-programming, self-constituting, and potentially immortal. One branch of trans-humanist philosophy, which calls itself extropianism, emphasizes growth and self-organization (i.e. the principle of extropy, opposed to that of

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[1] As I argue elsewhere, modern subjectivity is always co-produced by technology.

entropy). In typically techno-progressivist parlance, extropians declare that they seek to remove all political, cultural, biological, and psychological limits to self-actualization and self-realization [More, 1999].[2]

Here, following More [1999], as elsewhere, the story of transcendence is combined with the paradigm of progress and "new frontier" rhetoric. The first principle of extropianism reads "Perpetual Progress" based on rational optimism and a program of unrestrained self-improvement in all possible areas of life. Through science and technology, extropians seek "to transcend 'natural' limits imposed by our biological heritage, culture, and environment [Ibid.]." Indeed, "natural limits" do not exist, human nature is infinitely malleable and open to constant reshaping and self-transcending. Technology leads us to believe that no constraints should be taken for granted: "We challenge the inevitability of aging and death [Ibid.]," extropians proclaim proudly. In its denial of the body, or even the whole physical realm, technology promises an immaterial world of pure light and thought, a kingdom of the mind freed from the awkward opacity of corporeality. Technological fix is a panacea for all our problems: "Intelligent use of biotechnology and nanotechnology and the opening of new frontiers in space, can remove resource constraints and discharge environmental pressures [Ibid.]." Apparently, technology's *telos* is to turn the material world into an insignificant footnote, a side-effect or, indeed, waste. The problem of waste must be seen not just as a question of disposal, but more fundamentally as a question of how *not* to think of the whole physical universe (including human bodies) in terms of technology's waste.

Galway Kinnell's poem "The Fundamental Project of Technology" (1985) might serve as an apt, if ironic, comment on the sort of techno-idealism outlined above. Inspired by the Nagasaki tragedy, the poem declares:

> To de-animalize human mentality, to purge it of obsolete
> evolutionary characteristics, in particular of death,
> which foreknowledge terrorizes the contents of skulls with,
> is the fundamental project of technology; however,
> *pseudologica fantastica's* mechanisms require:
> to establish deathlessness it is necessary to eliminate
> those who die; a task attempted, when a white flash sparkled. [Kinnell, 1994, 2656]

The project of technology came to its logical conclusion – or its *telos* – with the construction of a weapon of total destruction. The luring promise of absolute transcendence lies in the possibility of an ultimate, indisputable erasure, perfect non-existence. Thus, unchecked technological fundamen-

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[2] My discussion of extropianism is based on Max More, "The Extropian Principles: A Transhumanist Declaration" [1999], available at http://www.extropy.org/extprn3.htm.

talism may turn out to be a suicidal enterprise. The drive to transcend is married, again, to the dream of ultimate, bodiless purity that only effective annihilation can guarantee. Total destruction becomes the best hygienic means to purge the mind of fear, and the body – of natural death.

The same impulse to repudiate the corporeal and the mortal can be discerned in John Perry Barlow's "Declaration of the Independence of Cyberspace"[3] (which, by the way, was criticized from extropian positions[4]). With the zeal of a Lenin, Barlow envisions a universal revolution that will overthrow the "Governments of the Industrial World, [...] weary giants of flesh and steel," except this time the driving force is not the proletariat, but internet technology. Characteristically, flesh and steel are brought together at the level of "hardware," so as to connote heaviness, clumsiness, and datedness; both need to be rejected for the sake of a high-tech "civilization of the Mind" where there is no matter and identities have no bodies. Yet, somehow, Barlow is able to maintain that cyberspace is "an act of nature" that "grows itself through our collective actions." It is probably one of the most extreme examples of the appropriation of the notion of nature; what Barlow means, supposedly, is that the dynamics of the growth of cyberspace is comparable, in its spontaneity and complexity, to the growth of organic bodies or ecosystems. At the background of Barlow's eulogy there lurks the idea that cyberspace is an extension of natural evolutionary progress.

The core of the cyberspace myth seems to lie in the belief that it is a realm of sheer profit. Barlow stresses that in cyberspace "whatever the human mind may create can be reproduced and distributed infinitely at no cost." It is nothing but a capitalists' dream of "minimum input, maximum output" come true. Overlooking the obvious fact that computer technologies are extremely costly, cyberspace zealots describe it in terms of a *perpetuum mobile*, an inexhaustible machine with zero degree entropy.[5] Commenting on this allegedly "infinite" productivity of cyberspace Robert Markley points out:

> Cyberspace [...] is an attempt to deny or repress the interpenetrating histories of labor, economic investment, technological development, and ecological wear and tear that results from a society still dependent on nonrenewable resources for its sources of energy and economic and political power. [Markley, 1996, 75]

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[3] Available at http://www.wired.com/wired/if/declaration.

[4] Cf. Reilly Jones, "A Critique of Barlow's 'A Declaration of the Independence of Cyberspace'" at http://www.extropy.org/eo/discrim/17jones.htm.

[5] This entails, of course, that cyberspace is a realm outside history, since it is only noise, loss, entropy that leaves a mark and thus makes all history possible.

While concealing its ultimate dependence on physical resources as well as its ecological and socio-political contexts, cyberspace produces a myth of "no pain, all gain," the final fulfillment of technology's promise of absolute efficiency and optimization.

It is against the usurped transparency of technology that an ecological thinker of today should argue. This ethos of transparency is clearly to be found in information technologies. Robert Markley states that

> the promises that technology offers – pleasure, plenty and self-actualization – ironically render it transparent: the purpose of technology, in this respect, is to re-create an enhanced version of natural existence. [...] Cyberspace promises to take us beyond the interventions of technology – ironically, only by repressing those interventions, by effacing the technologies on which it depends [Markley, 1996, 72–3].

Just as the longing for a "wilderness experience" masked the drive to escape beyond the painful sphere of history, so technology – and particularly Virtual Reality technology – promises new lands, seemingly free from the painful ecological realities of today. In Bill Bryant's straightforward formulation,

> The technologies of information age [...] seem to point away from the dirty, material world of minerals and machinery, fuel and smoke, flesh and bone, toward a pristine, dematerialized territory of codes and programs and virtuality set apart from the natural environment. The information age makes it easy to forget that the world still runs in fossil fuels, chemical pesticides and smokestack industries [Bryant, 2000].

The ecological paradigm, as I describe it below, helps counter the ethos of transparency with that of "opacity," where opacity stands, generally, for the principle of loss and entropy, wear and breakdown.

A careful re-examination of technology must recognize both its totalitarian impulse (the drive to appropriate human presence in the world at the subtlest, imperceptible, i.e. perceptual, level) and its potential for liberation. It is technology, after all, that emancipated us (partly, at least) from the constraints of purely "biological" existence. Once we disavow any allegiance to the Western techno-eschatologism, which promises a brave new world of technologically sustained spiritual "freedom," we may start negotiating the real gains and losses of introducing particular technologies. Donna Haraway's work is exemplary in this respect. Technologies – particularly computer technologies – always remain an open question (despite strong "regularizing" forces that prescribe particular uses of the devices), an area of contest. Significantly, the (military) power arrangements that made possible the invention of cyberspace, did not – indeed, could not – foresee its uses or social consequences. Although technology seems to have achieved the "escape velocity" which

promises to take us out of the Earth's gravitational field into the digital heaven of "no pain, all gain," mature ecology must resist the lure of this escapist dream and seek instead new metaphorical spaces for us to dwell in. My contention is that we need a new ecological ethics that would counter the ethos of technology.

As part of this "new ecology" I propose to introduce the notion of residue. The notion of "residue" might prove useful in revisioning the more traditional modes of perception and action. Although the modern self could never ultimately deny its functional dependence on the matter and energy exchanges between the body and its environment (e.g. in food processing), it could dream its spiritual, mental or intellectual detachment, predicated on the assumed "purity" of seeing. If the notion of residue poses no conceptual difficulty when it refers, say, to the body's retention of nutrients extracted from food, it may be less obvious when it comes to perception and the construction of subjectivity. In simple terms, there is always a trace of the context in the self, or more generally – a residue of ground in the figure; there is always an influx of ground into the figure and an efflux of figure into the ground. Existence is leaky by nature.

The above insights parallel Merleau-Ponty's reflections on the nature of the relationship between man and the world, developed into a theory of world-flesh and the *chiasm* (or "the intertwining"). Consciousness and nature, the body and the world "slip" or "flow" into each other in what might be called reciprocal interpenetration or mutual incorporation. As Douglas Low [2000, 41] puts it, consciousness "is intertwined with the body, which is intertwined with the world." Merleau-Ponty himself wrote:

> Where are we to put the limit between the body and the world, since the world is flesh? [...] The world seen is not "in" my body, and my body is not "in" the visible world ultimately: as flesh applied to a flesh, the world neither surrounds it nor is surrounded by it. [...] There is reciprocal insertion and intertwining of one in the other [Merleau-Ponty, 1968, 138].

Thus Merleau-Ponty creates "an ontology of regions that slip into one another and overlap" [Low, 2000, 49], in contrast with the classical Western ontology based on an alchemy of mutual exclusions, whose ultimate aim is a perfect "purification" of distinct and separate entities, such as "pure" wilderness perceived by a "pure" self, free of any technological contamination. As far as the "construction" of the self is concerned, Donna Haraway counters the old dream of purity (and clarity) with her brave new "cyborg myth," which blends the human with the technological and "advocate[s] pollution [Haraway, 1991, 176]."

The notion of residue invalidates the dangerous longing for absolute purity and leads straight to a revaluation of contamination. The inspiration for such a shift in perspective may again be derived from Merleau-Ponty, on whose account "nature cannot be adequately conceived as a pure thing in itself over against a pure consciousness for itself [Low, 2000, 38]." Instead, the two constantly permeate or, in my terminology, *contaminate* one another. This notion is largely incompatible with the traditional American philosophy of wilderness, as envisioned by nineteenth-century transcendentalists. In his analysis of Emerson's *Nature*, for instance, Tadeusz Rachwał [1997, 76–7] delineates the formation of the self/centre from the position of which "the world is but a contamination of the absolute, 'the sordor and filths of nature' to be dried up by the sun [...]". The dirt of material nature is too much for the purified subject, who imagines a pure, absolute realm behind the "sordor and filth" of the visible. Arguably, the very same posture underlies the enterprise of modern technology, whose ultimate aim – as I have pointed out earlier – is to transform the world into waste, a disposable by-product, garbage. Works such as A. R. Ammons's justly renowned poem-book *Garbage* undertake the difficult task of reconceptualizing the notion of garbage – not as something that needs to be neatly disposed of, i.e. moved to a place where it cannot be seen, but as "the poem of our time [...] believable enough / to get our attention, getting in the way, piling / up, stinking [...]" [1993, 18].

My program of revaluating "opacity" begins with the body as the opaque aspect of our presence in the world, largely disregarded by the classical, spiritualized "self" in its transcendentalist chase after the *beyond*. As Merleau-Ponty reminds us, it is the *body*, not the disembodied and transparent soul that perceives the world. The age-old Christian longing for de-corporealization almost becomes feasible in the technological fantasies of today. Without denouncing technology as such, a "new ecology" should work against the technological dreams of de-corporealization: the body cannot dissolve into cyberspace without a trace, leaving the pure mind as an interminable site of personal identity. We must protect the hardware (the awkward, the opaque, the fallible) against the despotic claims of the software. Indeed, we need to question the distinction itself, otherwise we will remain in the old school of thinking "mind" as housed in the disposable container of the body. If the ecological politics of reinhabitation is to succeed, we must first of all reinhabit our own fallible bodies.

Over the course of the 1980s and 1990s ecology allied itself with the cult of the "fit body" and a devotion to wholesome food. However, the underlying principle of this "health-culture" has, arguably, been derived

from the ethos of a well-working machine or, more fundamentally, from the economy of efficiency which aims at minimizing loss and maximizing gain. The totalizing regime of health (wholeness, holiness) has been grounded in "nature," that is a discourse which appropriates the notion of "naturalness" as a legitimization of social norm. "It is not surprising, then," as Neil Evernden [1992, 22] notes, "that nature is used in advertising much as it is in the promotion of a new morality or world-view: as a visible manifestation of normalcy and health." Even if the body as such is opaque, it may be subjected to a regulating "health-regime" and forced to work as smoothly and noiselessly as possible. The body, however, has its own points of opacity: pain, disease, death. The modern self, residing in the quiet refuge of its own consciousness, assumes transparency that presumably allows it to penetrate the world to its utmost limits (and beyond), except that death proves an impenetrable membrane, after all. Much of the West's spiritual and technological quest has been propelled by the fantasy that even if the body is too "thick" for the membrane, some ethereal soul at least can pass through. The cyberspace myth, which simply perpetuates the same old fantasy, offers a false solution: the mind may be believed to be entering a new dimension, but the body is still too dense to pass through the digital filters.

A well-working machine cannot claim "a story": a mundane repeatability of an unchanging pattern can leave no mark, no trace, no record. A story begins when the machine breaks down, at the point of the machine's (or the self's, or the body's, or nature's) opacity. Thus the ethics that would effectively undermine the ethos of technology must originate from a proper recognition of loss, wear-and-tear, finitude. In order to counter the Cartesian ontology of "clear and distinct" objects, we should emphasize the opaque and the blurred, the indistinct and the intertwined. We need to relinquish the dream of the self's and the world's absolute legibility, anchored in the belief in our presumably unlimited capacities as "interpreters." Such a new, ecological "ethics of opacity" would advocate specificity, locality, diversity. It would concentrate on that which cannot be subsumed, reduced, ignored, erased. It would pay attention to the medium, because nothing can exist outside of it. It would emphasize ground rather than figure, finitude rather than permanence, contamination rather than purity, opacity rather than transparency, porosity rather than impermeability, loss rather than gain. Re-thinking waste (particularly in relation to technology) must be an essential part of this ambitious (and possibly utopian) long-term program.

Ineffective waste management is one of the many effects of the domination of what I call "the ethos of technology," an ethos whose ultimate aim seems to be absolute cleansing. But my plea is not for making waste

management simply more efficient according to long-established rules, but rather it is a plea for changing the very terms of the debate. It is not enough, for instance, to say that garbage should be valued as a product, since such a statement is still deeply embedded in the techno-capitalist philosophy of frugality, proper use, efficiency etc. – the kind of mentality I have been trying to problematize. The ethics of opacity (possibly based on a Merleau-Pontian ontology of the *chiasm*), just as I have outlined it above, may serve as a starting point for an attempt to change the terms of the debate and develop a new relationship with the world – a relationship which will make the world not simply "cleaner" (i.e. more efficiently controlled, manipulated and cleansed by various technologies), but more livable in all respects.

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