Debashish Banerji
Makarand R. Paranjape   *Editors*

Critical Posthumanism and Planetary Futures

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*The original version of the book frontmatter
was revised: The biography of "Francesca
Ferrando" has been updated in frontmatter
"List of Contributors". The erratum to
the book frontmatter is available
at DOI 10.1007/978-81-322-3637-5_17*

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Editors and Contributors

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Makarand R. Paranjape is a professor of English at Centre for English Studies, School of Language, Literature and Culture Studies, Jawaharlal Nehru University, New Delhi. He served as the inaugural Indian Council for Cultural Relations (ICCR) Chair in Indian Studies at the National University of Singapore (2010–2011). His recent publications include *Making India: Colonialism, National Culture, and the Afterlife of Indian English Authority* (2013); *Another Canon: Indian Texts and Traditions in English* (2010); and *Altered Destinations: Self, Society and Nation in India* (2009). He is the Principal Investigator of an internationally funded project on 'Science and Spirituality in India'.

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Marilouise Kroker is senior research scholar at the Pacific Center for Technology and Culture, University of Victoria. She is the author, with Arthur Kroker, of *Hacking the Future* (1996). She has co-edited and introduced numerous anthologies including *Digital Delirium*(1997), *Body Invaders* (1987) and *Last Sex* (1993)—all published by St Martin's Press, as well as *Critical Digital Studies: A Reader* co-edited with Arthur Kroker (University of Toronto, 2008). She is the co-editor of the Digital Futures book series for the University of Toronto Press, as well as the peer-reviewed, electronic journal *CTheory*.

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Jose Ramos works at the interface of applied foresight, alternative globalization pathways, community and urban resilience. He is a social change researcher, trans-disciplinary collaborator and advocate for commons-oriented social alternatives, focusing on foresight-informed breakthrough design and social innovation. He holds a doctorate from Queensland University of Technology in Global Studies and Strategic Foresight. He has taught and lectured on future research, policy and social enterprise creation at the National University of Singapore, Swinburne University of Technology, the University of the Sunshine Coast and Victoria University, Melbourne. He is the founder of consulting group Action Foresight,

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Chapter 1
The Critical Turn in Posthumanism and Postcolonial Interventions

Debashish Banerji and Makarand R. Paranjape

While the urge to transcend the self has periodically been affirmed in various cultures and philosophies as characteristic to the ontology of the human, it is only in recent times, as we enter the twenty-first century that we have been faced with a species-wise blurring of the human boundaries. This has occurred largely due to our global engagement with advanced technology, which has on the one hand pushed us into an information age in which objective and subjective definitions and descriptions of the human have been codified to a degree enabling modification and hybrid transformations; and on the other, quasi-human functional substitutes and surrogates of machinic, bionic and biogenic kinds have appeared on the horizon, leading to a spectrum of alternative humanoids with fuzzy borders. One may observe a contemporary unevenness in the immediacy of concern regarding such possibilities, more imminent and real to hyper-technological 'developed' societies; more remote and seemingly irrelevant to 'developing' and 'underdeveloped' ones. But given the ubiquity and pervasion of global capital combined with the tight integration of tele-technological and mnemo-technological instrumentation, to think of any region or society of the world as exempt from these possibilities is only a blissful ignorance. Rather, more prescient and true is to set our sights on a global spectrum of power relations between a variety of quasi-humans amounting to a contest for the superhuman dominance of the earth. It is in this sense that the postcolonial and subaltern condition becomes assimilated into a posthumanism with or without consent, just as the postmodern needs to contend with the ethics of a radical anthropological alterity surpassing historical difference.

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What kinds of futures await postmodern and postcolonial humans in this age of the limit condition of the human? This volume explores a variety of responses moving through topographical overviews, enabling potentia, critical utopianisms, subjugational violences, ethical imperatives, existential ontologies and subjective transformations. The techno-positivism of post-Enlightenment modernity has found articulation in a variety of optimistic futures tied to neoliberalism, the most popular perhaps being the narrative of transhumanism or extropianism, the assimilation or supersession of the human in the suprahuman machine. Posthumanism takes a critical view of this scenario, interrogating it for its triumphalist rupture from the animal, its complicity with the class politics of big capital and its fantasmatic investment in patriarchy. Such a critical posthumanism characterizes all the essays in this volume, though this does not thereby make them all pessimistic or technophobic. The existential co-constitution of the human with the technical on the one hand and with the vital and the spiritual on the other is a consideration that pervades most of the essays, which nevertheless accept the contemporary historicity of the emergence into practical, social and political consciousness of this condition. What does this imply theoretically in terms of ethical, economic and subjective practices or what are the global utopias and dystopias that form its peripheries? These questions, in their various inflections, burden a number of essays in this volume and constitute the postmodern territory of posthumanism. Several other essays engage the question of postcoloniality, subalternity and feminism vis-à-vis posthumanism and deal with issues of subjugation, monsterization and dispensable elimination and surrogacy, as well as the possibilities of resistance, ethical politics or subjective transformation based on archives of indigenous practice. Yet others attempt to provide answers founded on existential or institutional practices.

Based on these emphases, we have divided the essays in this volume into three parts: 'Critical Theory: The Posthuman Turn', 'Subalternity and Posthumanism' and 'Reconstructions'. Critical theory could be said to have its roots in Kant and can be seen as his contribution to the European Enlightenment. In more recent times, as a post-Marxian intellectual movement founded by the Frankfurt School, it sought to undercut ideology but kept its investment in Enlightenment humanism. Poststructuralism went one step further in questioning the assumption of the Eurocentric rational male as the normative subject of humanism and developed instead an anti-foundationalist and anti-humanist critique which relativized all identity constructs as operations of power complicit with knowledge. In our Critical Theory section, the opening chapter by Rosi Braidotti (Chap. 2) rehearses these positions and describes our contemporary situation in terms of a posthumanist critical cartography. If postmodernism or poststructuralism used critique as a solvent that left theory without an ontological centre, critical posthumanism, in Braidotti's view, seeks nomadic transversal alliances to reconstruct a neofoundationalist ecology of belonging rooted in the non-anthropocentric radical immanence of a materialist vitalism. Prior to elucidating this constructive ontology, Braidotti spells out the mistaken pathways that go by the name of transhumanism and/or posthumanism but only exacerbate a technological humanist horizon—these include triumphalist technological enhancements, extropianisms, anxiety-driven

cosmopolitan solidarities against machine intelligences and life forms, post-gender sexualities. The critique of these phenomena is as much a part of critical posthumanism as the seeking for vitalist mediation across species boundaries or between the human and the technical. Nor should it be ever overlooked that any such mediation or affiliation must be undertaken against the grain of capital-driven control societies and a necro-political governmentality (Mbembe 2003: 11–40) and war machine (Deleuze and Guattari 1987: 420). The universal disposability of life forms (including humans) in a regime of comparative commodification and segregationist profiling enforced by robot armies faces us as a global 'anthrobscene' (Parikka 2014) condition to which the biopolitics of 'bare life' terrorism is not the adequate answer, but rather the discovery of new posthuman relational subjectivities based on the immanence of the creative life-force, *zoe*.

Braidotti's opening cartography lays the ground for much of what follows in this section and the rest of the book. The next chapter by Nandita Biswas Mellamphy (Chap. 3) uncovers the ontological critique inaugurated by Heidegger as the anti-metaphysical foundation of his anti-humanism (Heidegger 1998). For this, she traces Heidegger back to Nietzsche's seminal text on the transitional status of the human (Nietzsche 1961/1969). Heidegger, who interpreted this initially as a privileging of becoming over being, later revised his thought to make Nietzsche into the last metaphysical thinker, inscribing becoming with the type of the overman, the limit condition of the will to power seen as the will to technology. Mellamphy instead reads a different sense to overhuman typology in Nietzsche, a creative and future-ward reading in which the passage to the overhuman becomes a choreographic dramatization of the self-overcoming of the human, typology as a science of method, making the human into the collaborative and creative inscription surface for the transductive technology of the overhuman. Mellamphy moves on from this critique and reinterpretation of posthuman ontology to posit an alternative writing practice, a glyphic 'type-writing' that represents the posthuman as just such a non-foreclosed becoming of the overhuman. Mellamphy argues that pharaonic thought represented by hieroglyphic inscription transcends denotation and operates in the pre-modern meditative key of nature's language of correspondences that mediates heterogeneity and enables transduction across different series' of becoming.

Already from these first two chapters, the constelled ideas and lineages of critical posthumanism begin to emerge—Spinoza, Nietzsche, Bergson, Heidegger, Foucault, Deleuze, anti-humanism, anti-metaphysics, control societies, nomadic subjects, vitalism, immanence, collaborative emergence, transduction. These thinkers and ideas reappear throughout the volume receiving different emphases and relations. For example, the chapter by Richard Carlson (Chap. 4) re-engages with Nietzsche's passage pertaining to the transition from human to overhuman (Ibid.) in the context of contemporary technological ubiquity in the matter of surveillance, the collapse of the division between public and private spheres, and the fragmentation and ordering of individual subjectivity (dividuation) (Deleuze 1992) for the purposes of capital commodification and thanato-political governmentality. The contemporary enmeshment of the machine in the human and the nonhuman; and the global networks of this wireless reductive system of information transfers and flows

controlled by capital-driven corporate and state politics are spelled out by Carlson as the backdrop for sporadic acts of whistle-blowing and truth-telling (parrhesia) (Foucault 2001) such as Edward Snowden's NSA revelations. Carlson uses this instance as a point of departure for his meditation on the context of Nietzsche's statement about the status of the human as a transitional becoming between the animal and the overhuman—the preparations and actions of the prophet Zarathustra and of the tragic rope-walker who responds to his call (Nietzsche 1961/1969). To the roster of thinkers we have already encountered, Carlson adds a name not made explicit before but present just below the surface—Gilbert Simondon, philosopher of technicity and a post-anthropocentric individuation. The idea of transduction across heterogeneous interfaces invoked by Mellamphy and Carlson comes from Simondon and becomes a key term in a creative posthuman subjectivity.

Carlson's essay is followed by Arthur and Marilouise Krokers' poetic-philosophic meditations on drone warfare. The Krokers' powerful pieces excavate the imbrication of technology, mythology, psychology and religion in our posthuman futures. Are drones merely unmanned surveillance tools at the bidding of righteous and protective nation-states, or are they an integral aspect of human ideology, mythology and religion, operating as omnipotent amulets and curses in a global psychosphere? What kind of wider subjectivities are immanent in such devices and what are the consequences of such subjectivities? The Krokers' dystopic poetics are meant to awake us to our subliminal lives and our collective responsibilities vis-à-vis the subjective matrix of technical objects. Our composition from the Krokers includes two parts—the first one, an essay by Arthur Kroker titled 'After the Drones', is being republished from his book *Exits to the Posthuman Future* (2014) and is being reproduced for its relevance to our volume. The second part 'Art as a Counter-Gradient to Drone Warfare' by Arthur and Marilouise Kroker is an excerpt from Chapter 2, 'Dreaming with Drones' of the text 'Surveillance Never Sleeps' from the peer-reviewed electronic journal *CTheory*,[1] republished here with the authors' kind permission. Here, the value of art in awaking a critical awareness and affective conscience to counter unthinking subjection to omni-technologies of surveillance and warfare such as drones is highlighted through a discussion of significant examples.

Part I ends with a consideration germane to posthuman sexualities, the phenomenon of sex dolls, as discussed by Prayag Ray (Chap. 6). A peculiarly contemporary phenomenon that has arisen within an advanced technological environment marked by progress and sophistication of prosthetics, evacuation and phobia of human affective intimacy, cyborg-mediated fuzziness of human boundaries, commodity fetishism braided with a fantasmatic will to power, hyper-enhanced and universalized technologies of persuasion and near-instantaneous virtual-material translations, sex dolls operate at the borders of a humanist dystopia and a transhumanist future. Ray explores the social and cultural psychology of this mode of liminal eros.

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[1]http://ctheory.net/ctheory_wp/surveillance-never-sleeps-3-surveillance-never-sleeps/ (last accessed 6/24/2016).

Part II deals with postcolonial concerns vis-à-vis posthumanism. The opening essay here is Monirul Islam's cartography of this terrain (Chap. 7). If transhumanism and posthumanism have an uneasy relationship, postcolonialism, though closer to posthumanism, has its difficulties with both discourses. The problematic nature of these relations arises from the loci of the human and the technological in all three. Whereas both transhumanism and posthumanism are premised on our cognitive and volitional response to the blurred status of a post-Enlightenment definition of the human in an age of advanced technology, postcolonial cultures were normatively defined as being in need of humanizing ('the white man's burden'), yet never capable of being fully human ('not quite/not white' in Homi Bhabha's celebrated phrase (1994: 85–92)). Moreover, as 'developing' and 'underdeveloped' modern and contemporary nations, they have been kept economically and culturally distanced from the agency of the will to technology, instrumentalized as 'serfs' and 'tools' (cyber-coolies) of the developed world when obedient, or disposed in the image of the animal or monster when disobedient. Thus, though a critical posthumanism could be seen as liberating to postcolonialism from the viewpoint of its critique of universalist, post-Enlightenment humanism and the triumphalist myth of technological progress and colonial subjugation, it fails to account for subalternity within the discourse of its nonhuman others. Must the subaltern be accepted as 'human' within a global anthropocene ecology before he or she can become posthuman? This is the logical assumption, yet the decolonized subaltern may choose a self-identification which rejects the universal Eurocentric definition of the human. What would this imply for posthumanism? Such questions become part of the critical cartography of a subaltern posthumanism, as raised by Islam and several of the others in this section. Braidotti's nomadic, transversal and relational posthumanism seeking a decentred subjectivity, which cuts against the grain of power hierarchies, provides a possible model for addressing these questions.

Islam's essay is followed by Pal Ahuwalia's (Chap. 8) consideration of posthumanism vis-à-vis pan-humanism with respect to the classificatory power hierarchies of a post-Enlightenment humanism. Like Islam, Ahluwalia draws attention to the implication of rupture in the idea of posthumanism and indicates how such a rupture is premised in a classificatory system based on a normative humanism. A posthumanism of this kind, in its emergence, also extends its inverse double, the nonhuman monster, grafted onto the subaltern. As of our time, this periphery is represented most aptly by the Islamic terrorist. In place of this problematic rupturous 'post-,' Ahluwalia invokes Paul Gilroy's idea of pan-humanism (1995) , which revises post-Enlightenment humanism through multicultural engagement with its alternatives, a cultural micropolitics which consciously enlarges and extends individual and collective subjectivity. Such pan-humanism can be thought of as a posthumanism, not a post- which exceeds humanism but includes and surpasses it.

The next essay in this section is Samrat Sengupta's (Chap. 9) profound meditation on the technological paradigm of our times in its world transformative effects. In this, though he does not specifically mention either the posthuman or the subaltern, it is clear that human subjectivity is passing through a ubiquitous modality shift that represents a different state of being determined by a world-spanning

technological network powered by global capital using an imperial political machinery which is all-inclusive and has no outside left to challenge it. The technical media that has made this possible is the advent of teletechnology. Sengupta invokes Jacques Derrida and Bernard Stiegler in thinking about the ubiquitous spectrality and virtuality/reality of contemporary telematics. This paradigm shift of the human can only be called posthuman. Yet such a posthumanity in the making is a reduction of human bodies (bios) and life (*zoe*) to information, along with nonhuman life forms and non-living objects. The subaltern peripheries which were grafted in an earlier disciplinary and biopolitical regime on to the animal and the monster are now, conterminous with all humanity under the regime of a thanatopolitics which renders them all equally exploitable and equally disposable. Sengupta gives this new paradigm and political modality the name information-politics. It is in this sense that Sengupta's posthumanity, subject to global information-politics, can be thought of as a universal displacement of the subaltern. Against this totalistic (fore)closure, Sengupta proposes subjective praxis such as a refusal to representation and acts of imagination that can grasp the flattening of difference in the necropolitical order, the levelled anonymity of death; or of the 'other' of this order, its collapse in total apocalypse.

The final two essays in this part deal with feminist subalternity. Sucharita Sarkar's (Chap. 10) consideration of the deep ambiguity of forms of posthuman/transhuman motherhood, in elite, bourgeois and subaltern cultures in India maps the terrain of surrogacy, mommy makeovers (yummy mummies), supermoms and mombloggers. Principal emblem of the persuasion industries, the sexualized female body, in a period of real-time global circulation and distribution of images of consumption, exerts a greater normative pressure than ever on women to conform to types of desirable commodification. This universal force, combined with enhanced technologies/technologies of enhancement, has led to a proliferation of female self-making in the key of male desire. Sarkar's cartography restricts itself to a section of this domain—technologically mediated motherhood in India. At the subaltern level, the most obvious example of this kind of posthuman practice is surrogacy. India, given its large population of impoverished women, is increasingly becoming a world destination for surrogate motherhood. Sarkar explores the ambiguities on both sides of this phenomenon, the rich who choose to avoid the discomfort and loss of shape and capital productivity by buying surrogacy services; and the underprivileged, for whom it is an employment opportunity. Sarkar next considers other forms of technologically enhanced motherhood, such as regimes to obviate the sexual unattractiveness of the pregnant or postnatal body (the yummy mummy), or to multitask between the demands of being mother, lover and white-collar worker (supermom). It is particularly in this last instance that she demonstrates the imbrication of cultural mythologies in patriarchal social norms that are rooted in regional lifeworlds. These subjection pressures coexist with liberatory discourses, such as that of Donna Haraway's cyber-feminism (1991). Sarkar ends her essay with a consideration of the cyber-subjectivity of the momblogger, where new transversal solidarities may be built, but which are also dependent on elite access to technology, forms of agency denied to the subaltern. In the final

essay in this part, Amrita Pande (Chap. 11) expands on the problematics of surrogacy in India—its economic, ethical, emotional, medical, hygienic and cultural constitution. Having researched this growing phenomenon extensively, particularly in its Indian manifestation, Pande provides situated case studies and ends by considering the possible futures of surrogacy.

We have titled the third and final part of this volume 'Reconstructions'. This refers to the need, highlighted by Braidotti in her essay in this volume, to look for ongoing process-based alliances following the deconstructive relativism of poststructuralism. What are some of these reconstructive possibilities for planetary futures? Indeed, many of the essays in the first two sections have already made an approach towards this, in particular the ideas presented by Braidotti, Carlson, Mellamphy and Ahluwalia. In Part III, the first essay by Jose Ramos, Michel Bauwens and Vasilis Kostakis (Chap. 12) opens a structural alternative to the neoliberal capital inundation of global information or control societies. This is the enablement of peer-to-peer (P2P) epistemologies, economies and cultures. Ramos, Bauwens and Kostakis analyse nine perspectives on planetary change—reform liberalism, post-development, relocalization, cosmopolitanism, neo-Marxism, engaged ecumenism, meta-industrial, autonomism/horizontalism and co-evolutionary perspectives—comparing them to peer-to-peer theory and demonstrating the latter's suitability to the formation of a decentred networked posthuman subjectivity. The authors are involved in the implementation of such a state-sponsored network, FLOK (Free Libre Open Knowledge) in Ecuador, a discussion of which they conclude with.

The rest of the essays in this part are more phenomenological and psychological in nature. Modernity represents a self-conscious break from the past, a rational exorcism of all ghosts through an exclusive trust in the material constitution of the world. This displacement of human faith has brought us to a technological cusp where one may think of a triumphalist material supersession of the human. But we have had ample scope to ponder the problematic status of such a transhumanism. In critiquing its excess, posthumanism can question the relativity and exoticism of a rational materialism and reopen the doors of suppressed ontologies. It is in this vein that Michel Foucault foretold "insurrections of subjugated knowledges" (1980: 258) and Deleuze and Guattari invoked a return to the vitalism of Henri Bergson (Deleuze and Guattari 1996). Federico Luisetti (Chap. 13) argues for a political animism along these lines, drawing on a number of thinkers such as Deleuze and Guattari, Bruno Latour, Gilbert Simondon and Ashis Nandy. Just as the material world inhabits our dreams, our dreams inhabit our material world and we walk through a terrain as much subjective as objective. Recognition of a world in which the who and the what are not put against each other but face each other as subject-objects, or as Latour puts it, where 'objects' are in experience, quasi-agents (Latour 1993), initiates a neoshamanic micropolitics of animism that unleashes the locked creativity of life within the ideological strictures of materialist technoscience. Yet this shamanism is not invested in the division of the natural and the technological; with Gilbert Simondon (2016), it engages a phenomenology of technical objects at the service of a naturalization of the (post)human.

While critical posthumanism has mostly drawn on continental sources of philosophy, Ananta Giri (Chap. 14) opens an American lineage for its furtherance in

the pragmatic philosophy of C.S. Pierce, John Dewey and William James. Giri probes the spiritual dimension of American pragmatism, demonstrating its kinship with continental thought in the work of Karl Otto-Apel and Jurgen Habermas and calling for a convergent dialogue with Indian spiritual thinkers such as Sri Aurobindo, Sri Ramakrishna and Vivekananda. Indeed, Vivekananda is known to have had dialogic interactions with William James, and Giri points to the appreciative appraisal of James by Sri Aurobindo. Indian yoga, as a life practice leading to transcendence, may be thought of in terms of individual spiritual pragmatism; Giri pushes this in the collective direction in seeing its border-crossing with American pragmatism. He also invokes Luce Irigaray in this regard in positing an erotic of shared embodiment, leading towards lived cultural communities of liberation and transcendence. Such shared and progressive subjectivities of spiritual pragmatism are seen by Giri as providing pathways of transformation for the posthuman by sidestepping technocapitalist overdetermination and putting technology to collectively determined situated uses conducive to fraternal universalization and intersubjective transcendence.

Giri's essay is followed by Ferrando's (Chap. 15) more systematic consideration of a spiritual genealogy of posthumanism. If the posthuman condition is one exacerbated by capital-driven global technology, which splinters the subject (dividual) (Deleuze 1992) and reduces heterogeneity to information at the service of a global desiring machine, critical posthumanism, of the kind proposed by Braidotti (1994), seeks a decentred subjectivity of transverse filiations which privileges pluralism but views a vitalistic monism (*zoe*) (2013) at its basis. In this, we see that technical technologies need to be countered and supplemented by technologies of existence. Ferrando claims that such a reconstructive strategy may be presaged in world spiritual traditions, which have ancient beginnings, but which have not been brought into conversation with posthumanism. It is in this sense that Ferrando claims that "we have always been posthuman." Ferrando examines a number of spiritual traditions, several of them from India, such as Advaita Vedanta, Tantra, Mahayana Buddhism, Jainism and Christian mysticism. Often based in unexamined social biases of the past, many of these traditions are rooted in dualities and/or are androcentric, anthropocentric, hierarchical, cultic or privilege monism over pluralism. Ferrando recommends a separation of religion from spiritual practice and a critical assimilation of such practices without traditional closure into the objectives of posthumanism.

Extending the consideration of Ferrando by bringing the spiritual philosophy and practice of a modern Indian spiritual teacher, Sri Aurobindo, into conversation with ideas related to posthumanism, Banerji's essay (Chap. 16) is the last in this part and this volume. For this consideration, Banerji engages with two generations of modern philosophers of conscious evolution, arguing for the centrality of global technologies in their ideational genesis. Outlining the similarities that tie the thinkers of each of these generations, his essay hones in on Sri Aurobindo from the earlier set and Gilbert Simondon from the later, to compare their ideas of cosmogenesis and individuation, in terms of contemporary posthuman praxis/yoga. Simondon's individuation as a form of cosmogenesis operates across all registers of

existence: non-living, living nonhuman, human and technological. At the human level, individuation extends itself into transindividuation, an ontogenetic expansion across human and nonhuman (natural) heterogeneous lineages through the mediation of culture and technology. As a seminal influence of Gilles Deleuze, Simondon's ideas map closely to the nomadic posthumanism of Braidotti and Ferrando. Banerji aligns the cosmogenetic processes of individuation and transindividuation in Simondon with the metaphysics and yoga praxis of Sri Aurobindo and his spiritual collaborator, Mirra Alfassa, who Aurobindo designated The Mother at his spiritual ashram in Pondicherry, India. Simondon, as a philosopher of individuation, included technology in his processual thought and Banerji draws out the history of the modern philosophy of technology leading to Simondon. He concludes by attempting to integrate the praxis of these two great thinkers in addressing the question of posthumanism for our times.

Earlier versions of the essays by Rosi Braidotti, Prayag Rai, Monirul Islam, Pal Ahluwalia, Sucharita Sarkar, Amrita Pande, Ramos, Bauwens and Kostakis, Luisetti and Giri in this volume were presented at a conference on posthumanism: 'Beyond the Human: Monsters, Mutants and Lonely Machines (or What?)', organized by Makarand Paranjape, Debashish Banerji and Richard Carlson, and held at the Jawaharlal Nehru University, 20–22 February 2014. An earlier version of Banerji's essay "Individuation, Cosmogenesis and Technology: Sri Aurobindo and Gilbert Simondon" appeared in Integral Review, Volume 11, No. 1 (February 2015). Arthur Kroker's 'After the Drones' has been republished from his book *Exits to the Posthuman Future* by the kind permission of Polity Books. 'Art as a Counter-Gradient to Drone Warfare' by Arthur and Marilouise Kroker, excerpted from the e-text 'Surveillance Never Sleeps' carried in the peer-reviewed electronic journal CTheory is republished with the authors' kind permission. Critical Posthumanism has received increasing attention in recent times; but this volume opens a new chapter in posthumanism studies by bringing South Asian postcolonial considerations into these studies, particularly with regard to their archives of positive engagement and transformation.

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Critical Theory: The Posthuman Turn

Chapter 2
Posthuman Critical Theory

Rosi Braidotti

Introduction

The idea of the posthuman enjoys widespread currency in the era also known as the 'anthropocene',[1] where human activities are having world-changing effects on the earth's ecosystem. The turn to the posthuman is a response to growing public awareness of fast-moving technological advances and also of contemporary political developments linked to the limitations of economic globalization, the risks associated with the 'war on terror' and global security issues. We are experiencing at present an explosion of scholarship on nonhuman, inhuman and posthuman issues, which elicit elation in equal measure to anxiety and stimulate controversial public debates and cultural representations. More importantly, for the purposes of this essay, the posthuman predicament enforces the necessity to think again and to think harder about the status of human subjectivity and the ethical relations, norms and values that may be worthy of the complexity of our times. Such issues also impact on the aims and structures of critical thought and ultimately come to bear on the institutional status of the academic field of the humanities in the contemporary neoliberal university (Collini 2012; Braidotti 2013).

In philosophy, the 'posthuman turn' is triggered by the convergence of anti-humanism on the one hand and anti-anthropocentrism on the other, which may overlap, but refer to different genealogies and traditions. Anti-humanism focusses on the critique of the humanist ideal of 'Man' as the universal representative of the human, while anti-anthropocentrism criticizes species hierarchy and advances

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[1]Nobel Prize winning chemist, Paul Crutzen, in 2002 coined the term 'anthropocene' to describe our current geological era. This term stresses both the technologically mediated power acquired by our species and its potentially lethal consequences for everyone else.

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ecological justice. The posthuman expresses a critical consensus that is reached about the seemingly simple notions that there is no 'originary humanicity' (Kirby 2011: 233), only 'originary technicity' (MacKenzie 2002). In other words, the term 'posthuman critical theory' marks the emergence of a new type of discourse that is not merely a culmination of the two main strands of thought—posthumanism and post-anthropocentrism—but rather a qualitative leap in a new and more complex direction (Wolfe 2010). This shift of perspective also moves the critical debates away from the explicit anti-humanism supported by post-structuralist philosophy since the 1980s and inaugurates an array of different posthumanist perspectives circulating widely today.

Although the postmodernist philosophical debate casts a long shadow over the posthuman, these two movements of thought differ considerably. Whereas post-modernist deconstructions led to moral and cognitive relativism, posthuman research is neo-foundationalist and aims at re-grounding concepts and practices of subjectivity in a world fraught with contradictory socio-economic developments and major internal fractures. It is significant to note, however, that posthuman writings tend to evoke the same knee-jerk reaction among their detractors today, as earlier postmodernist texts did to their humanist critics.[2]

The 'death of Man', announced by Foucault (1970) formalized an epistemological and moral crisis that resulted in insubordination from received humanist ideals. What was called into question was the humanistic arrogance of continuing to place Man at the centre of world history, and more specifically, the implicit assumption that the distinctively human prerogative is 'reason'. Connected to a sovereign and rationalist ideal, this 'reason' is conceived as the motor of science-driven world-historical progress. The poststructuralist rejection of Enlightenment-based ideals of the human, however, did not stop at the humanist image of 'Man'. It also involved the acknowledgement that it is impossible to speak in one unified voice about any category, be it women, LBGTs, indigenous people and other marginal subjects (Johnson 1998). New emphasis needs to be placed instead on issues of diversity and differences among all categories and on the internal fractures within each category. According to Foucault, even Marxism, under the cover of a master theory of historical materialism, continued to define the subject of European thought as unitary and hegemonic and to assign *him* (the gender is no coincidence) a royal place as the motor of human history.

This line of criticism gathered momentum since the 1970s. In an immanent critique of humanism, post-colonial and race theorists re-grounded the lofty claims of European Humanism in the history of colonialism and racist violence. They held Europeans accountable for the uses and abuses of this ideal by looking at colonial history and the violent domination of other cultures, but did not fully reject its basic humanist premises. The 'bellicose dismissiveness' of other cultures and

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[2]See for instance, *The New Scientist* review of my book on the posthuman: 'What's death to do with it?', by Cohen (2013), which argues that the posthuman is too important to be left only to academics or rather 'social science cognoscenti'.

civilizations was exposed by Edward Said, as "self-puffery, not humanism and certainly not enlightened criticism" (2004: 27). Many non-Western models of neo-humanism are at work in the world today. Significant examples are Brah's (1996) diasporic ethics, which echoes Shiva's (1997) anti-global neo-humanism. African humanism or Ubuntu is receiving more attention, from Collins (1991) to Drucilla Cornell (2002). Gilroy's (2000) planetary cosmopolitanism also proposes a productive form of contemporary critical posthumanism. Ecofeminists stress the link between the Western humanistic emphasis on 'Man' as the self-appointed measure of all things and the domination and exploitation of nature. They condemn the abuses of science and technology, arguing for a more harmonious approach that militates for respect for the diversity of living matters and of human cultures (Mies and Shiva 1993).

Contemporary posthuman critical thought builds on these premises but according to a different architecture. Ever mindful of the fact that, the 'human' is not a neutral term but rather a hierarchical one that indexes access to privileges and entitlements, linked to both the humanist tradition and anthropocentric 'exceptionalism', critical posthumanists, post-colonial and feminist theorists have made a strong intervention in this debate. The standard which was posited in the universal mode of 'Man' has been criticized (Lloyd 1984) precisely because of its partiality. The allegedly universal 'Man', in fact, is masculine, white, urbanized, speaking a standard language, heterosexually inscribed in a reproductive unit and a full citizen of a recognized polity (Irigaray 1985; Deleuze and Guattari 1987). As if this line of criticism were not enough, this 'Man' is now also called to task and brought back to its species specificity as *anthropos* (Rabinow 2003; Esposito 2008), that is to say as the representative of a hierarchical, hegemonic and generally violent species whose uniqueness is now challenged by a combination of scientific advances and global economic concerns.

The posthuman cannot be said to be a new universal, not only because universalism has lost a great deal of it appeal as a result of the fundamental critiques made by postcolonial, feminist and poststructuralist theories, but also because we are not 'human' in the same way or to the same extent to begin with. Both methodologically and politically, a posthuman approach requires therefore careful cartographies of the different degrees and the extent to which any one of us can be said to be 'human'. My approach combines Foucauldian genealogies with feminist politics of location to provide embodied and embedded accounts of the multilayered and complex relations of power that structure our 'being human'. The aim of a cartographic method is to provide a politically grounded and theoretically infused account of the webs of power relations we are all entangled in (Braidotti 1994, 2011a, b).

The real methodological difficulty in releasing our bond to *anthropos* and developing critical post-anthropocentric forms of thought, however, is affective. Disloyalty to our species is no easy matter, because different ecologies of belonging are at stake in the movement towards a critical posthuman position. How one reacts to taking distance from our species depends to a large extent on the terms of one's engagement with it. Some of us feel quite attached to the 'human', that creature

familiar from time immemorial who, as a species, a planetary presence and a stratified cultural formation, spells out very specific modes of belonging. Moreover, the distance one is likely to take from anthropocentrism depends also on one's assessment of and relationship to contemporary technological developments. In my work, I have always stressed the technophilic dimension (Braidotti 2002) and the liberating and even transgressive potential of these technologies, in contrast to those who attempt to index them to conservative aims, transhumanist dreams of fast lane evolution or to banal profit-oriented systems. But loyalty to one's species has some deeper and more complex affective roots that cannot be shaken off at will. Disidentification at this level involves the pain of disengagement from *anthropos.* But it is well worth the effort: taking critical distance from familiar habits of thought cannot be dissociated from the kind of consciousness-raising that sustains critical thinking. Disidentification from established patterns of thought is crucial for an ethics and politics of inquiry that demands respect for the complexities of the real-life world we are living in. Posthuman thought is a branch of complexity theory.

Only the shallow optimism of advanced capitalism can market as unproblematic the current post-anthropocentric turn and the renewed interest in human–nonhuman interaction. Such futuristic scenarios tend to obliterate the differences that matter, notably the perpetuation of structural discriminations and injustices postulated on those allegedly antiquated variables: class, gender and sexuality, age, ethnicity, race and able-bodiedness. My argument is that we need to introduce more grounded and complex cartographies of the posthuman condition so as to strike a balance between facile euphoria and techno-pessimism about the future of a category that, out of habit, we still call the 'human'. Let me develop this aspect in the following section.

Critical Genealogies of the Posthuman

Critical cartographies are needed to explain, with some degree of accuracy, by which historical contingency, intellectual vicissitudes or twists of fate, 'we' have entered the posthuman universe.

The 'we' in action here is not a unitary—let alone universal—entity but rather a nomadic assemblage: relational, transversal and affirmative (Braidotti 1994, 2006, 2011a).

The term 'posthuman' covers at present a vast array of diverse positions and different institutional processes, which often defend diametrically opposed political agendas. To give just one example of the diversity of positions, consider the creation of two new major research institutes: on the one hand, the Oxford transhumanists gathered round the 'Future of Humanity Institute', and on the other, the Cambridge Centre for the Study of Global Risk. In a project significantly called 'super intelligence', the former argues for a carefully monitored form of human enhancement via brain–computer network interfaces as the next necessary evolutionary step for humanity. Optimistic about the opportunities for computational

growth offered by neoliberal capitalism, these initiatives combine a reductive vision of the subject based on brain–network interface—with unlimited faith in the self-correcting powers of scientific rationality. The Oxford Institute for the Future of Humanity rejects the term 'posthuman' as a logical impossibility for our species, considering the insufficient level of computational power we dispose of at present (Bostrom 2003).

The Cambridge Centre for the Study of Global Risk takes the lead in assessing the significant risks involved in too hasty an endorsement of human–technology interfaces. They also defend a more grounded perspective that locates technology in the real world and evaluates its long-term social and environmental impact in a balanced manner. These two complementary projects set the tone for the debate in relation to the posthuman turn. They combine radical expectations of transhumanist enhancement, with a firm reiteration of enlightenment-based values such as rationality and liberal individualism. Apparently nonplussed by the internal contradiction of combining radical change with the perpetuation of tradition, they reject the critical edge of posthuman theory, appease venture capitalist interventions in fundamental research and strike a politically conservative note.

The current scholarship in the field is fortunately more experimental because it takes the challenge of enhancement seriously, while remaining suspicious of the profit motive of the current market economy, driven by 'cognitive capitalism' (Moulier-Boutang 2012). Research on the posthuman covers a wide range of positions and just about every imaginable variation, including doomsday scenarios. The variety of views, which I cannot summarize here, makes it imperative to set some normative framework for my critical posthuman stance.

The first critical parameter of my cartography is the rejection of 'closed' systems of thought, which already pre-empt the conclusion of what a transition to a posthuman world may look like. I do not think we are justified in taking the posthuman as an intrinsically liberatory or progressive category, nor can we embrace the equation between the 'posthuman' and post-power/gender/race/class positions, without taking into account enduring power differentials (Braidotti 2002, 2013; Livingston and Puar 2011). Nor can we restrict the discussion of the posthuman to identity-bound issues of self-formation. What is needed instead is careful negotiation in order to constitute new assemblages or transversal alliances between human and nonhuman agents, while accounting for the ubiquity of technological mediation. My argument is that we need to take the challenge of transformation right into the fundamental structures of subjectivity: the posthuman turn is not to be taken for granted.

A second critical concern I have in relation to the exuberant production of ideas round the posthuman is the tendency to posit 'humanity' as a unitary category and as an object of intense debate, just as it emerges as a threatened or endangered category (Chakrabarty 2009). This results in what I have defined as a reactive re-composition of Humanity, which expresses intense anxiety about the future of our species (Braidotti 2013). A negative sort of cosmopolitan interconnection is established through a panhuman bond of vulnerability, which cannot fail to affect social theory scholarship (Beck and Sznaider 2006). The literature on shared

anxiety about the future of both our species and of our humanist legacy is by now an established genre, as shown by the statements of significant political and social thinkers such as Habermas (2003), Fukuyama (2002), Sloterdijk (2009) and Borradori (2003). In different ways, they seem struck by moral and cognitive panic at the prospect of the posthuman turn, blaming our advanced technologies for the situation. The size of recent scholarship on the environmental crisis and the climate change also testifies to this state of emergency and to the emergence of the earth in the anthropocene as a political agent. Both United Nations humanitarianism and corporate posthumanism assuage this anxiety by proposing a hasty reformulation of a panhuman 'we', who is supposed to be in *this* together. I will return to *this* point in the next sections.

Post-anthropocentrism is especially thriving in popular culture and has been criticized (Smelik and Lykke 2008), as a negative way of representing the changing relations between humans and technological *apparatus* or machines in the mode of neo-gothic horror. I have labelled it as a 'techno-teratological' social imaginary (Braidotti 2002) that posits technology as the object of both admiration and aberration. The literature and cinema of extinction of our and other species, including disaster movies, is a popular genre offering dystopian reflections of the bio-genetic structure of contemporary capitalism. A creative alliance between feminist theorists and the science fiction horror genre (Barr 1987, 1993; Creed 1993) constitutes a fast-growing posthuman strand, proposing relational bonds between different species and across different classes of living entities (Hayward 2008, 2011; Alaimo 2010). Queer theorists have equated the posthuman with post-gender and proposed an alliance between extraterrestrial aliens and social aliens (Halberstam and Livingston 1995; Halberstam 2012; Ferrando 2013). Queering the nonhuman is now in full swing, in a series of variations that include re-thinking sexual diversity based on animal and other organic systems (Giffney and Hird 2008). Emphasis is placed on high degrees of sexual indeterminacy or indifferentiation, modelled on the morphology and sexual systems of nonhuman species, including insects (Braidotti 1994, 2002; Grosz 1995) and bacteria (Parisi 2004). Post-gender sexualities have also been postulated as post-anthropocentric modes of reflection on the extinction of the current form of human embodiment (Colebrook 2014), thus putting the nails in the coffin of the humanist subject: 'we' are indeed in *this* involution together.

The '*this*' in question highlights our historical condition, that is to say the excitement as well as the horrors of our times. The high degrees of technological mediation and the undoing of the nature–culture divide create a series of paradoxes, such as an electronically linked pan-humanity which is split by convulsive internal fractures: forced proximity can breed intolerance and even xenophobic violence. And the contradictions multiply: genetically recombined plants, animals and vegetables proliferate alongside computer and other viruses, while unmanned flying and ground armed vehicles confront us with new ways of killing and dying. Humanity is re-created as a negative category, held together by shared vulnerability and the spectre of extinction, but also struck down by environmental devastation, by new and old epidemics, in endless 'new' wars, in the proliferation of migrations

and exodus, detention camps and refugees' centres. The staggering inequalities engendered by the global economy make for violence and insurrection; the appeals for new forms of cosmopolitan relations or a global *ethos* (Kung 1998) are often answered by necropolitical acts of violence, destruction and assassination, not only by the official enemies of the west—Muslim extremists—but also by home-grown killers, which in Europe are the likes of Anders Behring Breivik.[3]

Thus, there is no question that the generic figure of the human—'we'—is in trouble and *this* is a serious matter. Donna Haraway puts it as follows:

> … our authenticity is warranted by a database for the human genome. The molecular database is held in an informational database as legally branded intellectual property in a national laboratory with the mandate to make the text publicly available for the progress of science and the advancement of industry. This is Man the taxonomic type become Man the brand (1997: 74).

'Vibrant matter' (Bennett 2010) or 'inventive life' (Fraser et al. 2006) emerge as core concepts, stressing the self-organizing vitality of all living systems, thereby dethroning anthropocentric exceptionalism. Massumi refers to this phenomenon as 'Ex-Man': "a genetic matrix embedded in the materiality of the human" (1998: 60) and as such undergoing significant mutations: "species integrity is lost in a bio-chemical mode expressing the mutability of human matter" (1998: 60). Karen Barad (2003) coins the term 'posthumanist performativity' to define new human/nonhuman interaction, while Hardt and Negri see it as a sort of 'anthropological exodus' from the dominant configurations of the human as the king of creation—a colossal hybridization of the species.

What becomes necessary in this context is to rethink posthuman subject formations. This implies the rejection of any lingering notion of human nature, but also the refusal of the transhumanist project of human enhancement based on a reductive definition of the human as coinciding with *his* cerebral and neural capacities. I want to argue in favour of a nature–culture continuum which stresses embodied and embrained immanence and includes negotiations and interactions with bio-genetics and neurosciences, but also environmental sciences, gender, ethnicity and disability studies. This shift also brings to an end of the categorical distinction between on the one hand human life—*anthropos*—and on the other, *bios,* as strictly policed prerogatives categorically distinct from the life of animals and nonhumans, or *zoe*. I have argued that what comes to the fore in this approach is the very embodied structure of the posthuman subject as a composite assemblage of human, non-organic, machinic and other elements (Braidotti 2002). This extended self is moreover marked by the structural presence of practices and apparati of mediation that inscribe technology as 'second nature'. It is an immanent and vital vision of the subject.

The next critical concern I want to bring to bear on my cartography is that, contextually, these structural changes are not happening in a vacuum, but they

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[3]Anders Behring Breivik is the Norwegian mass murderer and the confessed perpetuator of the 2011 attacks in Oslo and on the island of Utoya, killing, respectively, eight and 69 people, mostly socialist youth.

rather resonate with fast-changing conditions in advanced capitalism. The global economy engenders global nature as well as global culture (Franklin et al. 2000) and is a spinning machine that actively produces differences and multiplies quantitative differences for the sake of commodification and consumption. Global consumption knows no borders and a highly controlled flow of consumer goods, information bytes, data and capital constitutes the core of the hyper-mobility of this economic system (Braidotti 2002, 2006). Capitalist de-territorializations are never transformative in a qualitative ethical sense: they are rather quantitative accumulations driven by the profit motive and control the space-time of mobility in highly selective ways. The striated space of capitalist mobility produces different kinds of subject formations: migrant workers, refugees, VIP frequent flyers, daily commuters, tourists, pilgrims and others. The ethical process of becoming-nomadic needs to start therefore from the acknowledgements of the diametrically diverse power locations 'we' are located in.

Moreover, the violence of capitalist de-territorializations is such that it engenders forced evictions, systemic homelessness and the exodus of populations on an unprecedented planetary scale (Sassen 2014). As a result of war and devastation, a global diaspora is taking place (Brah 1996) masses of refugees and asylum seekers are on the move, trying—often fatally—to cross the borders into the Western world, where they land in detention camps and fall into the status of invisible or second-class citizens. The posthuman carries its own forms of injustice and violence.

The global economy tends to be deeply inhuman(e), displaying structural injustices including increasing poverty and indebtedness (Deleuze and Guattari 1977; Lazzarato 2012). It also engenders a 'necropolitical' governmentality (Mbembe 2003) through technologically mediated wars and counterterrorism. War has mutated into large-scale processes of damaging the basic infrastructures of cities and countries, exposing the civilian populations to both technological and more archaic horrors. New forms of inhumanity have emerged: the classical figure of the warrior or the soldier has mutated into two specular hybrid formations: on the one hand, a professional, technological figure, and on the other, the threatening figure of the terrorist ready to strike anywhere at any time. Technology plays a big role in the inhuman character of contemporary warfare: wars today are driven by drones and other post-anthropocentric unmanned vehicles, run by professionals. The unmanned aerial vehicles also known as drones, or remotely piloted aircrafts (RPA), are part of a large robot army that includes land and sea as well as air and started work in Afghanistan a decade ago.[4] 'We' are in *this* war machine together.

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[4]In 2005, CIA drones struck targets in Pakistan three times; in 2011, there were 76 strikes, by now there are hundreds. Google Earth has designed a special programme to delete the drones' flying paths from their satellite photos. Drones come in all sorts of sizes: 'DelFly', a dragonfly shaped surveillance drone built at the technical university in Delft, weighs less than a gold wedding ring, camera included. On the other end of the scale comes America's biggest and fastest drone, Avenger (15 mn USA $), which can carry up to 2.7 tonnes of bombs, sensors and other equipment, at more than 740 km per hour.

The last but not least of my critical parameters is that the contemporary global economy has a techno-scientific structure, built on the convergence between previously differentiated branches of technology, notably nanotechnology, biotechnology, information technology and cognitive science. They involve research and intervention upon animals, seeds, cells and plants, as well as humans. In substance, advanced capitalism both invests and profits from the scientific and economic control of all that lives (Rose 2007). The opportunistic political economy of bio-genetic capitalism turns Life/*zoe*—that is to say human and nonhuman intelligent matter—into a commodity for trade and profit. All living creatures are inscribed in a market economy of planetary exchanges that commodifies them to a comparable degree and therefore makes them equally disposable. A devious sort of post-anthropocentric equivalence has therefore been established among species as a result of their real subsumption into the profit principle. The further perversity of advanced capitalism, and its undeniable success, consists in reattaching the self-organizing vitality of living matter back to an overinflated notion of possessive individualism (MacPherson 1962).

What constitutes capital value today is the informational power of living matter itself, transposed into data banks of bio-genetic, neural and mediatic information about species, populations and individuals, as the success of Facebook demonstrates at a more banal level. These practices reduce bodies to their informational substrate in terms of energy resources, or vital capacities and thereby levels out other categorical differences. The focus is on the accumulation of information itself, its immanent vital qualities and self-organizing capacity. 'Data mining' includes profiling practices that identify different types or characteristics and highlights them as specific strategic targets for capital investments, or as risk categories. The capitalization of living matter produces a new political economy, which Cooper (2008) calls 'Life as surplus'. It introduces discursive and material political techniques of population control of a very different order from the administration of demographics, which preoccupied Foucault's (1997) work on biopolitical governmentality. Today, we are undertaking 'risk analyses' not only of entire social and national systems, but also of whole sections of the population in the world risk society (Beck 1999). Informational data are the true capital today, supplementing but not eliminating classical power relations (Livingston and Puar 2011). The high degree of intrusion of technologies into everyday life is one of the factors that make capitalism into a post-anthropocentric force, which Haraway (2014) recently labelled: 'capitalocene' and Jussi Parikka: 'anthro-obscene'(2015), echoing Zillah Eisenstein's 'global obscenities' and Shiva's (1997) 'bio-piracy'. The posthuman is *not* post-power.

Neo-Materialist Monistic Ontology

The cartography I have just outlined constitutes the plane of consistency or creative formation of my posthuman project. A posthumanist with distinct anti-humanist feelings and resolute technophilic leanings, I am less prone to panic at the prospect

of a displacement of the centrality of the human—both as humanist 'Man' and as *anthropos*—and can also see the advantages of such an evolution. What I want to propose theoretically is a critical form of posthuman theory and affectively a form of caring disidentification from human supremacy. The recipient of this care is future generations.

My position as a Deleuzian feminist is clear: nomadic thought provides a new ontology, a re-grounding of subjects in the radical immanence of their embodied and embedded locations.

Living 'matter' is a process ontology that interacts in complex ways with social, psychic and natural environments, producing multiple ecologies of belonging (Guattari 2000). Rejecting the established conservative tactic that consists in pouring new wine in old bottles, I am not prone to reintroducing traditional humanist values into the contemporary transformations of what counts as the basic unit of reference for the human. I want to argue instead that a change of paradigm about the human is needed to come to terms with our historical conditions.

Human subjectivity in this complex field of forces has to be re-defined as an expanded relational self, engendered by the cumulative effect of social, planetary and technological factors (Braidotti 1991, 2011a). The relational capacity of the post-anthropocentric subject is not confined within our species, but it includes non-anthropomorphic elements: the nonhuman, vital force of Life, which is what I have coded as *zoe*.[5] It is the transversal force that cuts across and reconnects previously segregated species, categories and domains. *Zoe*-centred egalitarianism is, for me, the core of the post-anthropocentric critical turn: it is a materialist, secular, grounded and unsentimental response to the opportunistic trans-species commodification of Life that is the logic of advanced capitalism.

The key notion is embodiment on the basis of neo-materialist understandings of the body, drawn from the neo-Spinozist philosophy of Gilles Deleuze and Felix Guattari, but re-worked with feminist and postcolonial theories. Embracing their version of vital bodily materialism, while rejecting the dialectical idea of negative difference, this theoretical approach changes the frame of reference. It differs from the more linguistically oriented branch of poststructuralism that relies on semiotics, psychoanalysis and deconstruction. Vital politics breaks clearly from the notion of the primacy of the psyche and its processes of signification in the formation of subjects. There is no originary and fatal capture of an allegedly 'unmarked' subject by a single matrix of power, be it the phallus, the logos, Eurocentric transcendental reason or heterosexual normativity. Power is not a cartel operated by a single masterful owner, but rather differential mechanisms of distribution of material and discursive effects which also impact on subjectivity.

Movement and speed, lines of sedimentation and lines of flight are the main factors that affect the formation of a non-unitary, posthuman subject in active

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[5]This is radically different from the negative definition of *zoe* proposed by Giorgio Agamben (1998), who has been taken to task by feminist scholars (Colebrook 2009; Braidotti 2013) for his erasure of feminist perspectives on the politics of natality and mortality and for his indictment of the project of modernity as a whole.

resonance with external flows of forces and power effects. It follows that multiple mechanisms of capture engender multiple forms of resistance. Power formations are time-bound and consequently temporary and contingent upon relational action and interaction.

A more complex vision of the subject is introduced within a materialist process ontology that sustains an open, relational self-other entity framed by embodiment, sexuality, affectivity, empathy and desire. Social constructivist binary oppositions are replaced by rhizomic dynamics of repetition and difference (Deleuze 1994; Williams 2013) within a nature–culture continuum that approaches power as both a restrictive (*potestas*) and productive (*potentia*) force. The task of critical thinkers is defined accordingly as the creation of new concepts. These ideas provide the navigational tools that help us across the differential modulations of a monistic universe which overcomes the opposition 'materialism/idealism' and moves towards a dynamic brand of materialist vitalism. Deleuzian feminists build on monistic philosophy to spell out a 'vital politics', premised on the idea that matter, including the specific slice of matter that is human embodiment, is intelligent and self-organizing. Moreover, it is not dialectically opposed to culture, nor to technological mediation, but rather continuous with them (Braidotti 1994; Grosz 1994; Colebrook 2000, 2004; MacCormack 2008). This approach helps us update the feminist politics of location in terms of radical immanence, with special emphasis on the embedded and embodied, affective and relational structure of subjectivity (Braidotti 2006, 2013). By extension, it helps redefine old binary oppositions, such as nature/culture and human/nonhuman, paving the way for a non-hierarchical and hence more egalitarian relationship to the species. The emphasis on rational and transcendental consciousness—one of the pillars of humanism and the key to its implicit anthropocentrism—is replaced by radical immanence and process ontology.

For Critical Posthuman Thought

The strength of posthuman critical thought, as outlined above, is in providing a frame for affirmative ethics and politics. In my work, I have proposed a relational ethics that values cross-species, transversal alliances with the productive and immanent force of *zoe*, or nonhuman life. (Braidotti 2002, 2006). The focus on a *zoe* or geo-centred ethical approach requires a mutation of our shared understanding of what it means to be human. The fact that 'we' may be in *this* together, moreover, needs to be qualified through grounded analyses of power relations and structural inequalities in the past and present.

Starting from philosophies of radical immanence, vital materialism and the feminist politics of locations, I want to argue against taking a flight into an abstract idea of a 'new' pan-humanity, bonded in shared vulnerability or anxiety about survival and extinction. What we need instead is embedded and embodied, relational and affective cartographies of the new power relations that are emerging from

the current geopolitical and post-anthropocentric world order. Class, race, gender and sexual orientations, age and able-bodiedness are more than ever significant markers of human 'normality'. They are key factors in framing the notion of and policing access to something we may call 'humanity'. Yet, considering the global reach of the problems we are facing today, in the era of the 'anthropocene', it is nonetheless the case that 'we' are indeed in *this* anthropocenic crisis together. Such awareness must not, however, obscure or flatten out the power differentials that sustain the collective subject ('we') and its endeavour (*this*). There may well be multiple and potentially contradictory projects at stake in the re-composition of 'humanity' right now. Posthuman feminist and other critical theorists need to resist hasty and reactive re-compositions of cosmopolitan bonds, especially those made of fear. It may be more useful to work towards multiple actualizations of new transversal alliances, communities and planes of composition of the human: many ways of becoming-world together.

Posthuman critical thought is not post-political. The posthuman condition does not mark the end of political agency, but a re-casting of it in the direction of transversal alliances and relational ontology. This is all the more important as the political economy of bio-genetic capitalism is post-anthropocentric in its very structures, but not necessarily or automatically more humane, or more prone to justice.

The posthuman subject is not postmodern, because it does not rely on any anti-foundationalist premises. Nor is it deconstructivist, because it does not function within the linguistic turn or mediation. Not being framed by the ineluctable powers of signification, the posthuman subject is consequently not condemned to seek adequate representation of its existence within a system that is constitutionally incapable of granting due recognition (Olkowski 1999). Being based on Lack and Law, the linguistic signifier can at best distribute entrapment and withhold empowerment, its sovereign power building on the negative passions it solicits (Braidotti 2011b). For all vitalist 'matter-realists', this mournful vision of a subject desperately attached to the conditions of its own impotence is quite simply an inadequate representation of what 'we' are in the process of becoming. The posthuman nomadic subject is materialist and vitalist, embodied and embedded—it is firmly located somewhere, according to the radical immanence of the 'politics of location'. It is a multifaceted subject, actualized by relational vitality and elemental complexity within a monistic ontology, through the lenses of Spinoza, Deleuze and Guattari, plus feminist and postcolonial theories. The ethics of radical immanence demand that such a subject should be 'worthy of the present', embodying and embedding *this* particular world, and thus be part of contemporary culture, science and technology. Far from being a flight from the real, posthuman thought inscribes the contemporary subject in the conditions of its own historicity.

Life, by the same token, is neither a metaphysical notion, nor a semiotic system of meaning; it expresses itself in a multiplicity of acts, encounters and events (Pearson 1999). Life, simply by being life, expresses itself by actualizing flows of energies, through codes of vital information across complex somatic, cultural and technologically networked systems. This is why I defend the idea of being 'worthy

of our time' as a way of engaging critically and creatively with vital processes and the expressive intensity of a life we share with multiple others, here and now.

The nomadic vision of subjectivity is a good starting point, but we need to push it further, connecting it to two other crucial ideas: the positivity of difference and posthuman ethics. They entail the refusal of moral universalism and of binary thinking, notably the self-other distinction and the dialectics of otherness that underscores it. The positivity of difference comes to the fore, stressing the extent to which the binary logic of identity and otherness had distributed differences along a scale of asymmetrical power relations. This had reduced the notion of 'difference' to pejoration: it spells inferiority and social and symbolic disqualification for those who get branded as 'others'. They are the human and nonhuman referents of negative difference: the sexualized, racialized and naturalized others, which is to say women and LGBT; blacks, post-colonial and non-Europeans; but also animals, plants and earth others—who are reduced, both socially and symbolically—to the less than human status of disposable bodies. The dominant norm of the subject—the former 'Man' of classical Humanism—was positioned at the pinnacle of a hierarchical scale that rewarded the ideal of zero-degree of difference.[6] This norm is used to justify the deployment of rational epistemic and social violence that marks the sexualized, racialized and naturalized 'others', whose social and symbolic existence is unprotected. This makes anthropocentrism into more than just a contingent matter of attitude: it is a structural element of our cultural practice, which is also embedded in both theory and institutional and pedagogical practices (Braidotti 2013).

We are becoming posthuman ethical subjects by overcoming such hierarchical dichotomies and cultivating instead our multiple capacities for relations and modes of communication by codes that exceed the linguistic sign in a multidirectional manner. At this particular point in our collective history, 'we' simply do not know what our enfleshed selves, minds and bodies as one can actually do. We need to find out by embracing an ethics of experiment with intensities, which has to start with the careful composition of a plane of immanence that will ground and operationalize the missing people, or the transversal subjects that 'we' are. Desire as plenitude—as opposed to desire as lack—provides the ontological force that drives the posthuman subject formation. The ethical imagination is alive and well in posthuman subjects, in the form of ontological relationality, which stresses an enlarged sense of inter-connection between self and others, including the nonhuman or 'earth' others, by removing the obstacle of self-centred individualism on the one hand and the barriers of negativity on the other.

Becoming posthuman consequently is a process of redefining one's sense of attachment and connection to a shared world, a territorial space: urban, social, psychic, ecological, planetary as it may be. It expresses multiple ecologies of belonging, while it enacts the transformation of one's sensorial and perceptual

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[6]Deleuze calls it 'the Majority subject' or the Molar centre of being (Deleuze and Guattari 1987). Irigaray calls it 'the Same', or the hyper-inflated, falsely universal 'He' (Irigaray 1985, 1993), whereas Collins (1991) calls to account the white and Eurocentric bias of this particular subject of humanistic knowledge.

coordinates, in order to acknowledge the collective nature and outward-bound direction of what we still call 'the self'. This 'self' is in fact a carnal (Sobchack 2004) and moveable assemblage within a common life space which the subject never masters but merely inhabits, always in a community, a pack or an assemblage. For posthuman theory, the *zoe*-centred subject is a transversal entity, fully immersed in and immanent to a network of nonhuman (animal, vegetable, viral, technological) relations.

This non-essentialist brand of vitalism reduces the hubris of rational consciousness, which far from being an act of vertical transcendence, is rather re-cast and pushed downwards in a grounding exercise of radical immanence. It is an act of unfolding the self onto the world, while enfolding the world within. Consciousness is a derivative mode of relating to one's own environment; ontological relationality, with its forms of perception and sensation, comes first. In this perspective, humanistic pride in rational and conscious self-representation comes across as blighted by narcissistic delusions of grandeur and aspirations to self-transparency. Life, as *zoe* is an impersonal nonhuman force that moves us without asking for our permission to do so and stretches beyond the bounded parameters of 'my' life, to seek other vital connections. Posthuman critical thought confronts the *zoe*-centred ontology of vital materialism lucidly, without making concessions to either moral panic or melancholia. Posthuman ethics aims at enacting sustainable modes of relation with multiple human and nonhuman others that enhance one's ability to renew and expand the boundaries of what transversal and non-unitary subjects can become (MacCormack 2012, 2014). The ethical ideal is to actualize the cognitive, affective and sensorial means to cultivate higher degrees of empowerment and affirmation of one's interconnections to others in their multiplicity. The selection of the affective forces that propel the process of becoming posthuman is regulated by an ethics of joy and affirmation that functions through the transformation of negative into positive passions. My qualitative criteria for this new ethics include the following: the principle of non-profit; emphasis on the collective; acceptance of relationality and of viral contaminations; concerted efforts at experimenting with and actualizing virtual options; and a new link between theory and practice, including a central role for creativity. They are not moral injunctions, but dynamic frames for an ongoing experiment with intensities that need to be enacted collectively, so as to produce effective cartographies of how much bodies can take, which is why I also call them: thresholds of sustainability (Braidotti 2006). Posthuman ethics expresses a grounded form of accountability, based on a sense of collectivity and relationality, which results in a renewed claim to community and belonging by singular subjects. Genevieve Lloyd refers to these locally situated micro-universalist claims as 'a collaborative morality' (Lloyd 1996, 74). They aim to create collective bonds, a new affective community or polity, fuelled by our collective imaginings (Gatens and Lloyd 1999) and sustained by a vision of evolutionary processes as symbiotic modes of relation (Margulis and Sagan 1995).

In other words, to be posthuman does not mean to be indifferent to the humans, or to be dehumanized. On the contrary, it rather implies a new way of combining ethical values with the well-being of an enlarged sense of community, which

includes one's territorial or environmental inter-connections. This is an ethical bond of an altogether different sort from the self-interests of an individual subject, as defined along the canonical lines of classical humanism, or from the moral universalism of the Kantians and their reliance on extending Human Rights to all species, virtual entities and cellular compositions (Nussbaum 2006). Posthuman theory also bases the ethical relation on positive grounds of joint projects and activities, not on the negative or reactive grounds of shared vulnerability.

The key notion in posthuman nomadic ethics is therefore the transcendence of negativity. What this means concretely is that the conditions for renewed political and ethical agency cannot be drawn from the immediate context or the current state of the terrain. They have to be generated affirmatively and creatively by efforts geared to creating possible futures, by mobilizing resources and visions that have been left untapped and by actualizing them in daily practices of interconnection with others. This project requires more visionary power or prophetic energy, qualities which are neither especially in fashion in academic circles, nor highly valued scientifically in these times of coercive pursuit of globalized 'excellence'. Yet, the call for more vision is emerging from many quarters in critical theory. Feminists have a long and rich genealogy in terms of pleading for increased visionary insight. From the very early days, Kelly (1979) typified feminist theory as a double-edged vision, with a strong critical and an equally strong creative function. That creative dimension has been central ever since (Haraway 1997, 2003; Rich 2001), and it constitutes the affirmative and innovative core of the radical epistemologies of feminism, gender, queer, race and postcolonial studies. Conceptual creativity is simply unimaginable without some visionary fuel. A prophetic or visionary dimension is necessary in order to secure an affirmative hold over the present, as the launching pad for sustainable becoming or qualitative transformations of the negativity and the injustices of the present. The future is the virtual unfolding of the affirmative aspect of the present, which honours our obligations to the generations to come.

Very much a philosophy of the outside, of open spaces and embodied enactments, posthuman thought yearns for a qualitative leap out of the familiar, trusting the untapped possibilities opened by our historical location in the technologically mediated world of today. It is a way of being worthy of our times, to increase our freedom and understanding of the complexities we inhabit in a world that in neither anthropocentric nor anthropomorphic, but rather geopolitical, ecosophical and proudly zoe-centred.

Conclusion

'We' are a missing posthuman people, who need to become constituted and actualized as a transversal subjectivity that acts in the multidirectional time of advanced capitalism. 'We' may well be in *this* together, but *this* project is far from unitary or simple. Against the disingenuous recomposition of 'humanity' as a category that is

simultaneously unlimited in its potential and threatened in its implementation, as proposed by the Oxford transhumanists, I want to argue for collective and democratic negotiations about what 'we' are in the process of becoming. Against the reduction of the human to a repository of cerebral capacities compatible with global computational networks, I want to argue for a nomadic vision of the subject as embedded and embodied, relational and affective.

I also want to resist however the joyful queer insurrection against all things human, in the name of a global exit from this species and its familiar patterns of 'othering'. My neo-monistic plane of consistency, my time-bound truth, lies somewhere in between these extreme positions.

We become painfully aware of being human—in a post-anthropocentric sense— just as the notion of humanity enters into another state of crisis. What the posthuman turn does for critical thought is to manifest a fundamental fracture at the heart of our thinking processes of self-representation. Namely that a category—the human—jumps to our attention ('interpellates us') and becomes thinkable at the very moment of its evanescence and disappearance.

Foucault raised this issue in *The Order of Things* (1970), commenting on the image of humanistic 'Man' as a figure drawn on the sand, being slowly wiped out by the waves of history. His discourse analysis proclaims the end of European Humanism, establishing the analytic conditions for a critique of the human in a post-Enlightenment frame of reference. Leaving all other considerations aside for now, let us focus on the effect of resonance between the crisis of a concept and the conditions that make it thinkable. If a concept becomes thinkable as it loses consistency, then I would venture that thinking functions such as a chamber of resonance, a space of vibration, between reality and our perception. This manifests both the weakness and the strength of critical thinking and I would like to ponder this issue a little longer, instead of rushing ahead to hastily resolve it.

In his discussion of the apparent tension between the thinkability of a concept and its implosion, Noys (2010) argues that the resonance between these two instances shows conclusively the radically immanent structure of our subjectivity. In other words, it is *because* we are material and relational subjects that the processes of our subjectivation coincide with our historical conditions: 'we' are in *this* world together. We consequently can only perceive and thus become aware of the conditions of our historicity as problems or 'crises' as they erupt and become manifest before our mind's eyes. The articulation of historical conditions (external) and subject formation (internal) is a process of mutual imbrication, enfolding's and unfolding's of the same basic and resonating materials. The apparent antonimy of internal–external factors is false and unhelpful, because what matters is their interaction, their multiple folds (Deleuze 1993).

Bringing this insight to bear on the posthuman debate, I would argue therefore that a 'crisis' is not necessarily negative, but rather the coming into focus of new conditions for relational encounters, understanding and knowledge production. By extension, Foucault's 'death of Man' actually announces a new phase in advanced capitalism—the rise of biopolitical management of Life as a nonhuman force.

Similarly, Deleuze's analysis of the political crisis round the events of May 1968 succeeds in foregrounding the structural mutations that capitalism was undergoing, towards a post-industrial system.[7] The material and discursive conditions that trigger the awareness of a concept, however, are never deterministic or static: the resonance effects of thinking rather pertain to a praxis that is situated in a time-continuum, where past and virtual futures intermingle to bring about insights and affirmative actualizations. Being a nomadic subject means striking a balance and finding some synchronicity between complex and multiple folding's and different flows of time sequences—i.e. constitute and sustain a plane of immanence (Braidotti 2006).

A 'crisis' therefore is an injection of lucidity, a dose of sobering wisdom about our real-life conditions, that resonates with us and we with it. 'We' become posthuman in _this_ awareness of what no longer is the case: a unitary definition of the human sanctioned by tradition and customs. But we do remain human and all-too-human in the realization that the awareness of this condition, including the loss of humanist unity, is just the building block for the next phase of becoming subjects together. The realization of our inextricable inter-connection with both human and nonhuman others is the epistemological and ethical bonus we gain from the crisis or rather the transition brought about by our historicity. Freedom through the understanding of our bondage is the ethical value at work here, as Spinoza teaches us (Lloyd 1994, 1996).

The patterns of our becoming begin with the realization of the loss of a familiar notion of the 'human', which coincides with the awareness of the present posthuman conditions, but it moves on nomadically towards the quest for new sets of relations that will have constituted the time-continuum of becoming posthuman. So indeed, 'we' are not posthuman, but may always already have been so, and may yet become it, depending on our point of entry in this Bergsonian time frame. This is not relativism but grounded perspectivism, radical immanence, politics of locations. What matters is to negotiate collectively about _what_ exactly we are in the process of becoming, and how much—transformation, pain, disidentification, enhancement, etc.—our embodied and embrained selves can take. The posthuman is just the question, the answer is what 'we' are capable of becoming and _this_ answer can only be a practical and pragmatic one. It is the praxis that aims at becoming a multitude of missing people, multiple 'we' becoming-world together, amidst the painful contradictions of the anthropocene moment, when the waves of world history may be about to erase from the sandy shores of this planet the face of a species that will have been our own.

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[7]In _Anti-Oedipus_, published in 1972, Deleuze and Guattari go so far as to foresee even the financialization of the economy and the emergence of a system based on debt.

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Chapter 3
The Overhuman

Nandita Biswas Mellamphy

> *That which is above is as that which is below, and that which is below is as that which is above.*
> *The 'Emerald Tablet' is an alchemical text of unknown origin regarding the transmutation of matter and spirit and is considered to be an important part of the European Hermetic tradition*

When Zarathustra begins to proclaim his teaching of the *Übermensch* in the marketplace, he is met with derision and impatience by the crowd of people gathered there to watch the tightrope walker. It is at this point that Zarathustra makes the pronouncement that would later become almost synonymous with Nietzschean thought: the *human* is a 'rope' stretched across the abyss between the animal and the *overhuman*—a 'bridge' (*eine Brücke*), not a 'purpose' (*kein Zweck*). For Zarathustra as for Nietzsche, it is the *overhuman*, not the *human*, which is the measure of all things and it is on the basis of the inability to see the human from *this* perspective that Zarathustra will later find the higher types to be failures. This paper sets out to address Nietzsche's notion of the human as 'bridge' to the overhuman, first by laying out the methodological problem of interpreting the *Übermensch* in terms of the language of 'type': given that 'type' has been conceptualized primarily in terms of human forms or models (i.e. the types/typologies of human character), how can the *Übermensch*, on the one hand, be viewed according to an index of human types, and on the other hand, serve as the measure and justification of the human? The second section provides an alternative to the typological interpretation of the *Übermensch* in the wake of Friedrich Kittler's analysis of the thoroughly "telegraphic style" of the first mechanized philosopher to philosophize on a Malling Hansen typewriter in 1882. According to Kittler's reading, Nietzsche recognizes that the human is a function of technical processes beyond human measure and understanding:

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"Our writing tools are also working on our thoughts," Nietzsche wrote. "Technology is entrenched in our history," Heidegger said. But the one wrote the sentence about the typewriter on a typewriter, the other described (in a magnificent old German hand) typewriters per se. That is why it was Nietzsche who initiated the transvaluation of all values with his philosophically scandalous sentence about media technology. In 1882, human beings, their thoughts, and their authorship respectively were replaced by two sexes, the text, and blind writing equipment. As the first mechanized philosopher, Nietzsche was also the last. Typescript, according to Klapheck's painting, was called *The Will to Power* (Kittler 1999: 200).

When relating 'type' to the concept of *Übermensch*, I suggest that we take the term hyper-anthropologically and hypertextually rather than anthropo-typically and textually; as I will show, 'type' must be seen as an actual type-*writing:* the active, predicative process by which and through which the overhuman uses the human as the material and medium of inscription and communication. In this way, the human is interpreted, following Kittler, within a framework in which it literally becomes a hypertext and hieroglyph conducting (or more precisely, transducing) the overhuman. In the final section, this reading of "hieroglyphic transduction"—the bridging function of the human in Nietzsche's thought of the *Übermensch*—will be contextualized in terms of the pharaonic thought of the ancient Egyptians in which we find a very similar notion of the human functioning as a passage to the overhuman.

Übermensch as 'Type': Stating the Problematic

The word 'overman' as the designation of a type of supreme achievement (as opposed to 'modern' men, or to 'good' men, to Christians and other nihilists), a word that in the mouth of Zarathustra—the annihilator of morality—becomes a very pensive word, has been understood almost everywhere with the utmost innocence in the sense of those very values whose opposite Zarathustra was meant to represent: that is, as an 'idealistic' type of a higher kind of man, half 'saint', half 'genius' (Nietzsche 1967a: 261).

How are we to understand Nietzsche's declaration that the human is not an end in itself but a bridge to the overman? Although scholars have often attempted to interpret Nietzsche's notion of the *Übermensch* in term of types and within the context of Nietzsche's use of typology (cf., Kaufmann 1974; Müller-Lauter 1999; Haar 1996; Tuncel 2005), the *Übermensch* is a 'type' for which neither Nietzsche nor we have a clear concept/idea. There is scholarly consensus that Nietzsche did not coin the word *Übermensch*—it is a translation of *hyperanthropos* ('overhuman' or 'transhuman'), a term found in Lucian's second-century *Kataplous* (Kaufmann 1974: 307) that refers to a "superior human being".[1] There is little consensus, however, as to how the concept of *Übermensch* should be interpreted, whether in terms of the Aristotelian model of a "great-souled man" or some perfected human type, or conversely, whether it refers to a future human individual or master race at

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[1] 'The "superman" [*hyperanthropos*] is the superior man, a king among men, a man of power like a tyrant' (Babich 2011: 219).

all. Most often, despite acknowledgment of its interpretive obscurity, scholars relate the *Übermensch* to a *human* type, arguing either that the concept can be interpreted as Nietzsche's attempt to generate a new notion of "noble human agency" (Ansell-Pearson 1994: 106) or, on the contrary, that the concept is yet another reflection of the *ressentiment* of the "last man" and of the ascetic ideal (Clark 1990: 272–275). Others have rejected the importance and viability of the *Übermensch* concept altogether, arguing that it was an ideal that Nietzsche did not intend to seriously promote (Lampert 1986: 258) or one that is not intended to have a 'world-historical' expression (Conway 1989: 212). Part of the interpretive challenge is methodological, insofar as the issue seems to depend on how one interprets the notion of 'type' as an ordering principle. As Yunus Tuncel suggests, Nietzsche's use of typology (*qua Typenlehre*) must be reconstructed rather than assumed:

> Typology is not only a study of types which embody certain human traits and tendencies, but is also a philosophical framework which shows how such studies can be done, that is, the method of doing it. […] A type is not a person, or better said, there is no one-to-one association between a type and a person. Many types can reside in an individual in different intensities although some types or one type may be predominant among all the others. The relationship between a type and an individual can be described as one of appropriation (Tuncel 2005: 1, 3).

Notwithstanding Tuncel's pertinent points, we can already see that 'type' is interpreted primarily in terms of the form or model of the *human*, in the context of the "typification of human character" (Tuncel 2005: 3). Within the context of methodologically interpreting the figure of the *Übermensch*, the challenge lies in understanding how, on the one hand, the human can be a bridge to the *Übermensch*, and one the other hand, how the *Übermensch* can be a human type. Heidegger's shifting interpretation of the *Übermensch* is exemplary of such a problematic: whereas from 1930 to 1938 Heidegger viewed the *Übermensch* positively as "the man who grounds Being anew" in accordance with his overall argument that Nietzsche's philosophy represented "the other beginning of Western thinking" (Zimmerman 2005: 5) and thus shared a profound affinity with his own fundamental ontology, after 1938, Heidegger sees the *Übermensch* as the culmination of nihilistic man and of metaphysics. For Heidegger, what consigns Nietzsche to nihilism and metaphysics is precisely that "[i]n his thought of the Overman, Nietzsche does not envision [*vorausdenken*] a special 'type' of *Mensch*, but instead envisions for the first time *Mensch* in the essential *Gestalt* of '*typus*'" (Zimmerman 2005: 11). By equating the *Übermensch* with the embodiment of the generic and mechanical 'type', the *Übermensch* was for Heidegger literally the "stamp of the technological epoch" (Zimmerman 1990: 92), a template or imprint that shaped but also constrained the cultural development of humanity. In fact, the Heideggerian interpretation of type as 'stamp' directly informs his metaphysical reading of Nietzsche, for the *Übermensch* is the supreme expression of will to power's activity of stamping "Becoming with the character of Being" (referring to *Will to Power,* aphorism §617).

> The sense is not that one must brush aside and replace Becoming as the impermanent—for impermanence is what Becoming implies—with being as the permanent. The sense is that one must shape Becoming as being in such a way that *as becoming* it is preserved, has subsistence, in a word, *is*. Such stamping, that is, the recoining of Becoming as being, is the supreme will to power. In such recoining the will to power comes to prevail most purely in its essence (Heidegger 1991: 202).

As *Typus*, that is, as the 'stamp' qua *fixation* of a becoming that is 'preserved' and "has subsistence", for Heidegger the *Übermensch* is the embodiment of Nietzsche's metaphysics (for he, like all metaphysicians, sides with being over becoming), becoming indistinguishable from the "last man", the epitome of the man of *ressentiment* who attempts to master the world technologically.

Here is where I propose another interpretation. Though framed within the language of type and typology, I would argue that the Nietzschean *Übermensch* should be approached not from a *juridical* framework that sets out formal ideals to be followed, but as a *choreographic manner* for tracking the physiological movements inscribed within the overhuman background of the living medium (or 'life'). Recalling Nietzsche's statement regarding the aesthetic justification of life in *The Birth of Tragedy,* the human becomes visible (Apollo) only as the aesthetic expression of overhuman primordiality (Dionysus); the human is only a surface of inscription for the overhuman. Here I would like to follow Kittler who claims that the transvaluation of values must be read directly in relation to Nietzsche's use of the typewriter, making the man who identified with Dionysus, "the master of media" (Kittler 1999: 210). In Kittler's novel interpretation, the Dionysian ('the elementary fact of Nietzsche's aesthetic') is "the flow of data" necessary for any informational emergence:

> Nietzsche's ghastly night is the first attempt to christen sensory deprivation as the background to and other of all technological media […] if "the world" can be "justified to all eternity […] only as an aesthetic product", it is simply because "luminous images" [the Apollonian] obliterate a remorseless blackness (Kittler 1999: 120).

When seeking to understand the notion of *Übermensch* in relation to 'type', we should think of it, rather, in terms of 'type-*writing*', as a kind of choreographic mechanology[2] or 'programmatology' (as I have recently argued[3]), and as a *formative*, *informational*, or better yet, *telegraphic* technology—or 'teletechnic' (Cohen 2005, 189)—beyond human determination (literally *hyper-anthropos*). "Nietzsche's notion of inscription […] has validity only within the framework of the history of the typewriter; it designates the turning point at which

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[2]As an interpretive strategy, Kittler's mechanological reading of Nietzsche is similar (figuratively rather than literally) to François Laruelle's proposal that we think about Nietzsche not as an individual, but as a "Nietzsche Machine" in his book *Nietzsche contre Heidegger* (1977). For a more detailed treatment of Laruelle's reading of Nietzsche see, Biswas Mellamphy (2013, 2014).

[3]"Against the (Platonic and dialectical) view of the human as the text upon which *Logos* writes its truth, a programmatologically informed reading of Nietzschean physiology would offer a view of the human characterized not by dialectical, subjective and textual thinking, but as formative and informational material that conducts an overhuman information processing machine" (Biswas Mellamphy 2013: 151).

communications technologies can no longer be related back to humans" (Kittler 1999: 211). For Kittler, Nietzsche is the first and last mechanized philosopher insofar as he is the one that reveals the manner in which overhuman technical media shape and act upon humans, and it is this insight that, for Kittler, constitutes Nietzsche's self-declared 'telegram style': "Nietzsche […] changed from arguments to aphorisms, from thoughts to puns, from rhetoric to telegram style" (Kittler 1999: 203). As Nietzsche suggests in a note from 1884, modern humans are nothing other than protean informational machines:

> The former means for obtaining homogeneous, enduring characters for long generations: unalienable landed property, honoring the old (origin of the belief in gods and heroes as ancestors).

> Now the breaking up of landed property belongs to the opposite tendency: newspapers (in place of daily prayers), railway, telegraph. Centralization of a tremendous number of different interests in a single soul, which for that reason must be very strong and protean (Nietzsche 1967b: 44).

I propose that when relating 'type' to the concept of *Übermensch*, we take the term *hyper-anthropologically*—that is to say, not *textually* against the linguistic laws of hermeneutic interpretation which must posit the agency of the reader/writer and that of the text, but *hypertextually* (or 'post-hermeneutically'[4]), that is to say, as *always already* part of a *network* that *precedes* and *exceeds* the priorities of human intentionality. Here 'type' must be thought of in terms of type-*writing*, the active, predicative *process* by which the overhuman (here conceived as autonomous Dionysian background noise) uses the human as material and medium of inscription and communication. In fact, as Kittler reminds us, the user of a typewriter was also referred to as a 'typewriter' (Kittler 1999: 183). It is thus Nietzsche's "philosophical and scandalous surmise that "humans are perhaps only thinking, writing, and speaking machines" " (p. 188). Whereas for Heidegger "man himself acts [*handelt*] through the hand [*Hand*]; for the hand is, together with the word, the essential distinction of man […] [a]nd the word as script is handwriting" (p. 198), for Nietzsche (after 1882), "the hard science of physiology did away with the psychological conception that guaranteed humans that they could find their souls through handwriting and rereading" (Kittler 1999: 188). Pointing to the second essay of *On the Genealogy of Morals*, Kittler brings to the fore the difference between Heidegger and Nietzsche:

> [K]nowledge, speech and virtuous action are no longer inborn attributes of Man. Like the animal that will soon go by a different name, Man derived from forgetfulness and random noise, the background of all media. To make forgetful animals into human beings, a blind force strikes that dismembers and inscribes their bodies in the real, until pain itself brings forth a memory […] Writing in Nietzsche is no longer a natural extension of humans who bring forth their voice, soul, individuality through their handwriting. On the contrary: […] humans change their position—they turn from the agency of writing to become an

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[4]'In a discussion of Nietzsche, the mechanized philosopher who more than any other heralded the post-hermeneutic age of the new media, Kittler quotes the poet-doctor Gottfried Benn: "Nietzsche led us out of the educated and erudite, the scientific, the familiar and good-natured that in so many ways distinguished German literature in the nineteenth century"' (Winthrop-Young, 1999).

inscription surface. Conversely, all the agency of writing passes on in its violence to an inhuman media engineer […] (Kittler 1999: 210).

To be sure, this kind of interpretation goes beyond exegesis and may thus appear to be taking a reading of the *Übermensch* beyond Nietzsche's intentions. But as Keith Ansell-Pearson reminds us, the meaning of the *Übermensch* directs itself to "those who come after 'man'", and thus to "those who will come *after* (in the sense also of 'over', 'across', and 'beyond') Nietzsche" (Ansell-Pearson 1994: 20). Bringing Kittler and Ansell-Pearson's points together, we see the appropriateness of associating the 'post-man' (Ansell-Pearson 1994: 21) *qua* 'posthuman' with the 'telegraphic' style of Nietzsche's thought of the *Übermensch* (which itself constitutes Nietzsche's overall vision, indeed *tele-vision*, of the future). I take very literally Ansell-Pearson's statement, adopting the 'post-man' as the primary methodological strategy for interpreting the choreographic *direction* (*Sinn*)[5] of the *Übermensch* (primarily filtered through the Zarathustran dynamic of "the human as bridge to the overhuman"). The 'post-man' or what we will call (following Kittler) Nietzsche's *telegraphy*, will be considered the 'method' that dramatizes the self-overcoming of the human that is necessarily entailed in Nietzsche's vision of the overhuman. The major starting point for such a perspective deviates significantly from the usual interpretation of the *Übermensch* as a new future human type; the task here is to see how the human is already always an individuation of the hyper-anthropological (the overhuman literally speaking). Nietzsche's "yearning for a new humanity" (Ansell-Pearson 1994: 102) must be understood more precisely as the yearning for the *overcoming* of the human in which the human is affirmed as a conductor or conduit towards the overhuman. As I will suggest, the overhuman is not the continuation of the human; the human is the process of the *Übermensch*'s transcription —or more precisely transduction—within the cosmic (overhuman) background noise called 'nature' (this is one context within which to interpret the "retranslation back into nature" of *Beyond Good and Evil*, aphorism 230).

Human as Hypertext/Hieroglyph of the Overhuman

Understood from such a perspective, the 'human' can come to be seen as both the very material *for* and the very medium *of* transformation or *transduction*.[6] The human is a bridge to the overhuman, or transduction, in the sense that the human is

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[5]Here I refer to Gary Shapiro's point that "*Sinn* can be taken as meaning, sense or direction" (Shapiro 2008: 12).

[6]I rely on Gilbert Simondon's definition of *transduction*: "By "transduction" we mean an operation —physical, biological, mental, social—by which an activity propagates itself, slowly but surely, within a domain, by grounding this propagation within a structuring of the operative domain from place to place: each constituted region of structure serves the next region as constitutive principle, such that a modification spreads progressively at the same time as this structuring operation […]. [T]he result is an amplifying reticular structure" (Simondon 2005: 32).

the circuit for the conversion and overcoming (*Überwindung*) of the 'human-all-too-human'. *Übermensch* (as *hyperanthropos*) thus symbolizes the self-overcoming *of* the human through the technical medium of the self-overcoming human. As a circuit, the human (*anthropos*) becomes the choreographic script of the overhuman (*hyperanthropos*) dramatizing the movement of living material in transformation. *Übermensch* qua *hyperanthropos* could be conceptualized *not* in terms of an ideal *type* with a more or less fixed set of dispositions, but more as a "method of dramatization" (Deleuze 1983: 78, 79) transpiring within the theatre of the living itself, a generative schema or "dynamics of the egg" constituting "an environment of individuation" (Deleuze 2004: 96, 97). In this choreographic schema, the human is not identified as the pre-constituted 'individual' but as 'embryo', the larval environment of transindividuation, one that can be likened to Deleuze's reference to the "Dionysian depth rumbling beneath" Leibniz's "apparently Apollonian philosophy" (2004: 101). *Anthropos* becomes a process of transductive type-writing or transcription of the overhuman, the deciphering of which would require a very peculiar strategy of hypertextual hieroglyphic reading (which I will attempt to address in the following section). As a conduit for an overhuman "flow of data" (Kittler 1999: 120), Nietzsche's formula of "learning through suffering" (*pathein mathein*) becomes the transductive strategy for *self-overcoming* (*Selbstüberwindung*), for learning how to become a *hypertextual machine* that in "conducting out" also "leads forth" (literally, *e-ducere*), and 'over' (*über*). *To make the human a hieroglyph* (or teleportation device) *conducting us toward the overhuman*—is this not the direction that we must go in order to understand Zarathustra's statement concerning man as a bridge not a goal? Perhaps it is against *this* criterion of Nietzsche's thought that the juxtaposition between 'Dionysus' and the 'Crucified' can be made: the former lives from the point of view of the overhuman which is always already beyond the bounds of the human-all-too-human; the latter lives from the point of view of the human-all-too-human, the perspective of the human condemned to perpetually identify with itself (via degraded or idealized versions).

With the notion of *Übermensch*, Nietzsche may not be seeking to "re-establish a notion of noble human agency" per se (Ansell-Pearson 1994: 106) but rather to invent a notion of an *overhuman* operationality which would be the very future direction of the Earth (its direction towards the overhuman is what would make the *Übermensch* 'noble' rather than 'base' in Nietzschean terms). The human (*anthropos*) is transfigured and made to serve as a transducer (a bridge and conduit, but also a carrier and conversion mechanism) for the overhuman. The human is made to become a program, a circuit that is also a scene of writing or "surface of inscription" (Kittler 1999: 210). The human, in this sense, can be seen as a hieroglyph—the sacred mark of an incarnated, chthonic and material transcription process that always leads beyond the human but only by way of the self-overcoming human: 'In man there is material, fragment, excess, clay, dirt, nonsense, chaos; but in man there is also creator, form-giver, hammer hardness" (Nietzsche 1966: 154).

In the introductory lecture to his study of the Pre-Platonic philosophers, Nietzsche reminds his audience that he is interested not only in the question of how

philosophy appeared among the Greeks, but more importantly in the question of how the philosopher became the medium or incarnation of philosophy itself among the Greeks (Nietzsche 2001: 3). From this transductive view of the human, the "art of transfiguration" that Nietzsche equates with philosophy in *The Gay Science* (Nietzsche 1974, Preface to the Second Edition: 35) can be viewed as a re-statement of his claim in *The Birth of Tragedy* that life is justified only as an aesthetic phenomenon. In other words, the Apollonian principle of individuation (what we equate with the 'individual' and the essence of its individuality) has value only as the choreographic effect of a more primordial Dionysian, overhuman flow of data.[7]

> When seeking to understand the human as a bridge (*eine Brücke*) *not* a purpose (*kein Zweck*), I propose that we understand this *functionally* rather than *formally*: the human should never be considered primarily in terms of its individualized formal characteristics, but always as a *bridging function* within a more fundamental extra-human or cosmic processing/programming (this is why we should understand the function of the human not as 'text' but as 'hypertext' in Nietzsche's thought of the *Übermensch*).

> Man is a rope stretched between the animal and the Overman—a rope over an abyss. A dangerous crossing, a dangerous wayfaring, a dangerous looking-back, a dangerous trembling and halting. What is great in man is that he is a bridge and not a goal: what is lovable in man is that he is an over-going and a down-going (Nietzsche 2006: 257).

To see the human in terms of its bridging, roping, crossing, wayfaring functions, as an open-ended reticulation in an evolving overhuman (cosmic) transductive field—this is the task at hand when attempting to decipher the hieroglyph of the human against the backdrop of the overhuman. The human subject, which according to Nietzsche is nothing other than a fiction (Nietzsche, *Will to Power*, §485), can be understood as such a transductive technology (e.g. bridge, rope) that leads the human beyond the human (this movement of self-overcoming is also captured in Kittler's ascription of Nietzsche's *telegraphic* style).

Pharaonic Thought and Hieroglyphic Transduction

Hieroglyphic transduction—herein encapsulated in Nietzsche's view of the "human as bridge to the overhuman"—is the central core of the pharaonic sacred "science of genesis" (Schwaller 1978: 25). As translator Robert Lawlor has noted, "[t]he symbolic attitude of ancient knowledge cultivated the intellect to the extent of perceiving all of the phenomena of nature itself as a symbolic writing revealing the forces and laws governing the energetic and even spiritual aspects of our universe" (Schwaller 1978: 9). Needless to say, it might seem strange to associate Nietzsche's thought with Egypt (he himself does not do so), but doing so yields an interesting resonance. Historically speaking, the connection between the Greek and Egyptian deities is made by Herodotus who explicitly says that the Greek Dionysus, god of

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[7]For a detailed version of this argument, see Mellamphy and Mellamphy (2016).

wine, is the equivalent of the Egyptian Osiris, god of the dead and the afterlife.[8] According to Walter Burkert, "Herodotus […] alludes to an explanation of the Dionysiac phallic processions which is in fact provided by the Osiris dismemberment myth" (Burkert 1985: 298).[9] Intoxication and ecstasy, those states, characteristic of Dionysus, are thus interpreted as symbolic of altered states and changes in consciousness (Burkert 1985: 161). Moreover, Burkert suggests that the doctrine of *metempsychosis,* or transmigration of the soul, which appears in varying forms in Pindar, Empedocles, Herodotus and Plato, may be traced back to Pythagoras "the hierophant of an Eastern style Meter cult who proves his doctrine of immortality by descent into the underworld" (Burkert 1985: 298, 299). Exegetically, it is not such a stretch of the imagination to draw a genealogical network which includes Egypt as a possible source for understanding Nietzsche's *Übermensch,* for as Babich reminds us, the Lucianic notion of *hyperanthropos* must be read in terms of an Empedoclean dynamics of undergoing and overcoming:

> A dialogue of the dead, the *Kataplous* addresses the representation/perception of the υπεράνφρωπος *[hyper-anthropos]* in the here and now by contrast with the afterlife or underworld. Here it is significant that the context of Lucian's *Kataplous (Downward Journey),* including its thematic focus on the tyrant in the underworld contrasting with this life and the perspective on human glory and its inevitable reversals, offers a contextualization of Zarathustra's teaching that the human being is something that ought to be overcome. But for this reflection on death, as on birth and rebirth, there is a needed reflection on Empedocles inasmuch as the doctrine of recurrence is Empedoclean, articulating an older Orphic tradition that also inspires Heraclitus, Pythagoras, Parmenides, and Anaximander (Babich 2011: 214).

In this final section, it is my intention to contextualize this reading of hieroglyphic transduction in Nietzsche's thought of the bridging function of the human in terms of the pharaonic thought of the ancient Egyptians, for it is by way of the symbolic and technical medium of the hieroglyph that the ancient Egyptians transmitted supra-human, that is to say intuitive or supra-*rational* knowledge. According to René Schwaller, mathematician and decoder of the Temple of Luxor (1998), Egyptologists have mistakenly confused the writing with the language of Pharaonic Egypt by adopting an alphabetic principle.[10] Hieroglyphic writing is composed of

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[8]Herodotus, *The Histories*, "[…] not all Egyptians worship the same gods—the only two to be universally worshipped are Isis and Osiris, who, they say, is Dionysus" (II.42.2); "Horus is the Apollo, Osiris the Dionysus, of the Greeks" (II.144.2). Accessed 23 November 2012. http://classics.mit.edu/Herodotus/history.1.i.html.

[9]Also see Herodotus's *Histories*: "Now I have an idea that Melampus the son of Amythaon knew all about this ceremony; for it was he who introduced the name of Dionysus into Greece, together with the sacrifice in his honour and the phallic procession […] and from Melampus the Greeks learned the rites which they now perform" (II.48.2–49.1).

[10]'At its root the alphabetic principle represents the profound insight that each word in spoken language consists of a finite group of individual sounds that can be represented by a finite group of individual letters. This seemingly innocent-sounding principle was totally revolutionary when it emerged over time, for it created the capacity for every spoken work in every language to be translated into writing' (Wolf 2007: 18).

figurations, not conventional signs; it is 'gestural' (Schwaller 1998: 72) insofar as it cannot be merely "quantitatively circumscribed" (Schwaller 1998: 73). In his introduction to Schwaller's study of Egyptian hieroglyphic symbolism, symbologist and mythographer Robert Lawlor clarifies the qualitative difference between reading pharaonic hieroglyphs and reading alphabetic phonetic writing:

> With our present form of writing we use groups of arbitrarily formed abstract symbols (our alphabetical letters) which convey memorized sound and visual associations. We are trained to think and communicate through these alphabetical letters—placed in certain (again, memorized) groupings, or words—by reducing these abstract conventions into objective images in our minds. Simply stated, this means that when we read cat, we immediately register the formed image .

> This habitual reduction from a nonobjective mental abstraction to a delimited image can be seen as an initially centripetal action, which, subsequently, disperses perception and knowledge into a classification of disconnected facts. We use numbers in a similar way, moving from abstract symbols to quantitative evaluations. But hieroglyphic writing works in the opposite or centrifugal direction. The image, the form, is there concretely before us, and it can thus expand, evoking within the prepared viewer a whole complex of abstract, intuitive notions or states of being—qualities, associations and relationships which cannot be described or defined but only experienced. A centring sense of unification later results from this inwardly expansive movement of mind. A method of viewing is required comparable to our hearing faculty: one must learn to listen to the symbolic image, allowing it to enter into and pervade one's consciousness, as would a musical tone which directly resonates with the inner being, unimpeded by the surface mentality. In this moment of inner identity between the intellect and the aspect of the tangible world evoked by the symbol, we have the opportunity to live this knowledge (Schwaller 1978: 11).

When deciphering hieroglyphic writing, the reader does not simply translate image into a language; rather, the reader becomes a kind of carnal conversion mechanism, a transductive "tuning fork" for an overhuman Dionysian flow of data that comes from quite a different sphere (see, for example, the preface to Nietzsche's *Twilight of the Idols*). Schwaller suggests that the entirety of pharaonic thought can be encapsulated in the gestural practice of functionally reading hieroglyphic writing (rather than alphabetic abstraction of reading the form of hieroglyphic writing) in which present incarnation (formal aspects) is functionally understood in terms of that which is beyond human rational understanding (here conceptualized as the overhuman, Dionysian joyful wisdom or "gai saber"). In pharaonic thought, or what Schwaller (1978) also calls "hieroglyphic intelligence", everything is the symbol of a function participating in the genesis of tangible Nature, an image of ongoing genesis (birth, death and rebirth). "Every living function of the human being is but a symbol of an organically realized cosmic function. Swallowing, rejecting, assimilating, sleeping, sitting, talking, desiring, imploring, praying […] are nothing but incarnated cosmic functions […] It is in this spirit that hieroglyphic, or sacred writing must be studied" (Schwaller 1998: 76–77). As entirely *gestural*, the hieroglyph functionally (that is to say, *practically* rather than *abstractly*) connects the human (the one who engages in deciphering) with everything that has tangible

form (that is to say, everything that is born, ages, and dies) to the 'same "breath of life"', thus *functionally* relating all individual forms to a matrix of vital generation. The gestural movement of hieroglyphic writing is synonymous with this vital function:

> Movement is the symbol that carries the gesture, but since movement…can only affect the corporeal, and the question here concerns a 'vital movement', the Ancients could only evoke a 'genesis' by the symbol of movement. This genesis is considered, then, as a movement of becoming, whether it is a realization or a destruction […] In other words, the vital function is a *determining function*, from which form and movement *result* […] For example, plant 'nature' has a green colour at the vegetating stage of its growth. This being generally the case, greenness relates to the idea of vegetative power. Even if this colour does not exist visibly (as in the proliferation of animal cells), the colour green, among others, will be the symbol of vegetation. There is a *verdant function* whose colour is the tangible gesture […] The *functional power* is that which creates kinships and also allows for *identities* […] Therefore, a *magical science*, Pharaonic science, can only be formulated with the knowledge of cosmic conditions, through the functional identification of the parts with the whole within a single life or genesis (Schwaller 1998: 75).

All formation (*qua* individuated forms) is determined by this functional capacity to be receptor and transmitter for generative cosmic information.[11] Here I emphasize the resonances between Pharaonic 'magical science' and the transductive 'Dionysian magic' (Nietzsche 1956: 132) of Nietzsche's 'joyful wisdom', specifically distinguishing these from the dialectical methodology inaugurated by Greek rational science which was to become the foundation of Western mathematics and philosophy. Gilles Deleuze in his reading of Nietzsche also highlights the fact that 'Nietzsche's method', as a 'truly active science' (Deleuze 1983: 75) is 'opposed to dialectics' (Deleuze 1983: 76). What is interesting here is the difference between the Pharaonic/Dionysian system of writing which is hieroglyphic, transductive and necessarily supra-rational, and the Platonic philosophical system that necessarily stipulates that true knowledge cannot be derived by any method other than dialectical writing. In the pharaonic/hieroglyphic schema, overhuman Dionysian

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[11]Or, as Dick (2011: 11) puts it, to be a "reception-transduction system (like teletype)". "Letter to Peter Fitting, 28 June 1974". A beautiful passage from Dick's *Exegesis* expresses this point exactly: "I got a priceless chance to experience for the first time the true *koinos kosmos* […] A vast noetic factor lived in me; I both saw and comprehended in a single mentational act, although it's taken me months to label what I encountered (*e.g.* the Logos, God as Immanent Mind within the structural framework of reality surrounding me). I think what was most thrilling of all, above and beyond everything else which was new to me, was visually to observe the constant, steady, unfailing signalling systems by which all living organisms are disinhibited; which is to say, their engrammed and then blocked instinctive patterns imprinted on them at the beginning are periodically released at the correct moment, for the appropriate occasion […] in this fashion chaos becomes cosmos, and harmony and stability and regulated interaction between all parts of the structure are perpetually achieved. Being outside the ontological categories at one point I could watch signals coming up, about to be disclosed. We humans receive them as well as the animals do, but don't realize it, since the signals, when they are disclosed to us, can't be resisted; at the same time the interior engrammed assembly fires, giving us the delusional sense of internal volition; we wish to do what we then do". "Letter to Malcolm Edwards, January 29, 1975" (2011: 68).

data give rise to vital, individuated living forms; the human is nothing other than the passage (Schwaller 1998: 73), carrier and transducer of 'hyper-information'.[12] In the Platonic schema, voice *(phone)* and speech *(logos)* precede writing *(gramme)*, and the dialectical (as opposed to *transductive*) model of writing is thus able to establish and institutionalize a metaphysics of writing in which the written word is justified only as a means for remembering and signifying a previously stated (oral, voiced) truth. Knowledge in Plato's dialectical system of writing is housed in the rational individual *qua* philosophical soul *abstracted* from and articulated apart from its vital environment; this is why Nietzsche notes that "[t]he degeneration of Western thought begins with the Socratic view which dispenses entirely with physics" (2001: 143). We do not find an aesthetic justification of life in Plato, and it is for this reason that for Nietzsche, both Socrates and Plato turn away from life (especially life mediated through sensation, or *aesthesis*). The dialogue-form of writing—that is, *Platonic philosophy*—establishes rational science as the recollection of forgotten but already present knowledge. For Schwaller, as for Nietzsche, dialectical writing which privileges the agency of the human author/reader, disconnects the human from life by making the human—rational consciousness (or what we today identify with cerebral cognition)—the goal, the end and the purpose of nature.

> To the extent that it is explanatory and ontological, science is a creation of the Greek genius (and if we consider these two aspects as essential, one can say that science is born in Greece). Indeed, Greek science sought to give an account *(logon didonai)* of appearances, and it adhered to a metaphysics of the real *(to on)*. Its disinterested ambitions, its theoretical aims and the astonishing rapidity of its progress, all make its superiority over Oriental science clear […] Greek science is separate from technology. It separated itself slowly from technology (as is shown by the slow semantic evolution of the term that denotes it), and each science in particular was to be for a long time intermingled with the art from which it originated. But an impetus has been given; a need—no doubt not entirely new, but for the first time entirely conscious—for rational explanation, which commits the human spirit to a path on which there, is no going back (Paul-Henri Michel 1950: 29, quoted in Schwaller 1998: 84).

To conclude, Nietzsche's 'pharaonic' thought envisions the human as the technical medium and hieroglyphic transduction of Dionysian overhuman cosmicism. In this perspective, the human is not confirmed as an end in itself through rational knowledge and cerebral intelligence, but as an informational mechanism that

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[12]In the following remarkable passage, Philip K. Dick defines 'Jesus Christ' in terms of 'hyper-information': "[…] 'Luke-Acts' transduced from word-mode to object-mode but still 'information': 'the universe made of information' in terms of the internal mutual arrangement of the constituents as *gestalt*, *pastiche*, a *collage*. Now, the cardinal topic of 'Luke-Acts' is 'Jesus Christ'. How (if at all) does he appear in this pastiche/gestalt? He does appear, but not in anthropomorphic form; he is camouflaged in and as the *total* pastiche/gestalt, hence *cosmic*. As information, this universe as pastiche-gestalt, read not in a linear manner but as a gestalt (form), *reveals* or *is* or *contains* him throughout like a steady modulation fed into it, a waveform ubiquitous in the gestalt (now construed as a field). This modulation can best be termed 'a perturbation (of the reality field'. He is not it but perturbs it. Therefore: Christ is hyper-information that reduces the information-universe to the carrier which he modulates *(i.e.* perturbs)" (2011: 807).

transindividuates by connecting incarnated individualized form (e.g. a human being) to the necessarily supra-rational and thus overhuman (an)architextum of life. Greek science, based on a dialectical principle that separates and represents object and subject, elevates the human agent (in Plato's case, the rational philosophical knower or, as Nietzsche calls it, the Apollonian *principium individuationis*) but only by severing it from its necessarily nonrational and supra-rational ground. 'And this explains the reaction of the Greeks in Egypt, who, believing that they were confronted with a tradition of knowledge "emptied of the reasons" for its formulations, sought to find reasonable causes, a fact that gave birth to the dialectic philosophy that the West found so seductive' (Schwaller 1998: 75). Greek rational science (arising from the ontological framework of Platonic dialectics), "requires hypothetical representations, the stoppage or 'fixation' of moments cut out of time' (Schwaller 1998: 84); yet, '[g]iven any concept, we can always discover its drama, and *the concept would never be divided or specified* in the world of representation *without the dramatic dynamisms* that thus determine it in a material system beneath all possible representations" (Deleuze 2004: 98).

It is not my intention here to create a permanent, meaningful, or romantic dichotomy between Greek science based on dialectical writing and Nietzschean Pharaonic science based on hieroglyphic writing. We know, as Herodotus knew, of the deep affinity between Greece and Egypt, between the gods Dionysus and Osiris. And despite his own stereotyping of Egypt (for instance in *The Birth of Tragedy*), one might say that Nietzsche seemed to know intuitively (which is to say, *functionally* rather than *formally*) that the resonances between Egypt and Greece, like the apparent dualism between the will to truth and the will to appearances, are really a complementarity (in the Bohrian sense). Although Nietzsche always opposes the 'will to truth' and the 'will to appearances' as Pierre Hadot observes (2006: 285, 286), both are separated only by a thin veil of 'the vital illusion' (perhaps, by the veil of Isis herself): Apollo is the artwork of Dionysus the artist. Romantic pessimism, of those such as Schopenhauer and Wagner,[13] Schlegel,[14] and Novalis[15]) seeks to unveil Isis—the act of unveiling being a kind of Platonic remembering of that which one always knew—from the enlightened Apollonian viewpoint of the 'theoretical man' (Nietzsche 1956: 92)—the viewpoint of human-all-too-human, the human as end and goal of all knowledge. Dionysian pessimism, conversely, keeps truth (Isis) veiled, enabling the human to see itself with the melanotic gaze of Dionysus (a complement to Rudra's enflaming gaze, that is the third-eye of Shiva), from a cosmic, overhuman viewpoint which is synonymous with the transductive vision of pharaonic sacred science, as I have herein tried to suggest.

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[13]See 'What is Romanticism?', *Gay Science* aphorism 370; also treated by Hadot (2006: 287).

[14]Hadot quotes Schlegel: "He who cannot bear the vision of the goddess, let him flee or perish" (2006: 289).

[15]Hadot quotes Novalis, "He who refuses to raise the goddess's veil is no true disciple" (2006: 289).

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Chapter 4
Nietzsche's Snowden: Tightrope Walking the Posthuman Dispositif

Richard J. Carlson

> *During long periods of history, the mode of human sense perception changes with humanity's entire mode of existence.*
> —Benjamin (1969, p. 222)
> *So he laid the dead man into a hollow tree – for he wanted to protect him from the wolves.*
> —Nietzsche (2010, p. 19)
> *Ethical reality is structured in networks, that is acts take on resonance with one another (and) contains in itself a power of amplification.*
> —Simondon (1995, p. 245)

The Posthuman Dispositif

Big Data/A.I.[1]

In the *Postscript on Societies of Control*, Gilles Deleuze (1992) writes: "what counts is that we are at the beginning of something". In this he turned out to be exceedingly prescient, anticipating the digital smoothing out of world space that facilitates deterritorialized regimes of continuous control. When Deleuze penned his essay, the National Security Agency (NSA) had yet to imagine the Big Data/Artificial Intelligence (AI) technologies that would allow it to attempt to capture and analyze all global communications.[2]

In the postscript, Deleuze revisions the ocular mechanisms and psychological machinery that Michel Foucault explored in *Discipline and Punish* by theorizing its digital transformation as continuous tracking technologies that resemble the bar code,

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[1] In addition to its ability to process enormous amounts of information the term Big Data includes its capacity to deploy A.I. or artificial intelligence.
[2] Estimates of the storage capacity of the NSA data storage center in Utah range from 'yottabytes' to 'zettabytes.'

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RFID tag, and database. Foucault foregrounds the work of Jeremy Bentham, the late eighteenth century utilitarian social reformer and legal philosopher, who theorized a disciplinary diagram for prison reform reliant on the gaze in the Panopticon.

The Panopticon was envisioned as a circular tower constructed in the middle of a prison yard, from which a watchman, invisible to the inmate population below, could observe the illuminated array of cells encircling it, arranged "like so many cages, so many small theaters in which each actor is alone…constantly visible" (Foucault 1995: 200). While the sheer number of inmates made the observation of every cell, all at once, impossible, since the guard was concealed the inmates never were certain if they were being watched. In the absence of certainty, prisoners came to assume that they were potentially under observation at all times.[3]

Foucault contextualizes the Panopticon within an historical strata constituted by the 'disciplinary societies' of the nineteenth century that followed an epistemic shift in judicial theory "from a schema of exceptional discipline to one of generalized surveillance" (Foucault 1995: 209). In addition to its use in prisons, the Panopticon could be deployed across a range of institutions with enclosed perimeters, such as the hospital, school, barracks, and factory. Deleuze contrasts the stable disciplinary enclosures that Foucault theorized with the exercise of power in the liquid electronic environments of the early 1990s when surveillance ceased to be confined to enclosed community of inmates, patients, students, soldiers, or workers and became generalized throughout the entire population. Deleuze compares the institutional molding of bodies through the gaze of panoptic power with the algorithmic modulation of subjects who populate open environments in societies of control. In societies of control, surveillance technologies are deployed primarily as marketing[4] tools for corporations whose techniques are adapted by the state for their own purposes.

What Edward Snowden's NSA revelations confirm is the exponential advance in pioneering societies of control through the total interoperability and full spectrum dominance of Big Data. What makes the Snowden disclosures seem so futuristic and dystopian is the way that advances in information and communications technologies (ICT) have produced a surveillance regime that aims to 'Collect it All, Process it All, Exploit it All, Partner it All, Sniff it All, Know it All' (Grenwald 2014).

With its ability to massively process in parallel mind-boggling volumes of complex data sets at near instantaneous rates, Big Data is "exhaustive in scope … aiming at maximum detail, while being indexical in identification; relational,

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[3]In *1984,* George Orwell describes the same psychological machinery at work in his futuristic dystopia as follows: "There was of course no way of knowing when you were being watched at any given moment. How often, or on what system, the Thought Police plugged in on any individual wire was guesswork. It was even conceivable that they watched everybody all the time. But at any rate they could plug in your wire whenever they wanted to. You had to live—did live, from habit that became instinct—in the assumption that every sound you made was overheard, and, except in darkness, every movement scrutinized". Orwell (1948).

[4]Deleuze writes: "Marketing has become the center or the 'soul' of the corporation. We are taught that corporations have a soul, which is the most terrifying news in the world. The operation of markets is now the instrument of social control and forms the impudent breed of our masters."

with common fields that enable the conjoining of different data sets; …easily adding new fields… and the potential to expand rapidly" (Kitchin 2013). Big Data employs a layer of deep learning algorithms, or artificial intelligence (AI), to mine hidden patterns, identify obscure probabilities and latent connections in pursuit of its ultimate goal to forecast the future. Big Data/AI technologies transform the surveillance apparatus into "a layer of data-driven artificial intelligence that resides on top of the digital and physical realms" (Lohr 2015: 4–7).

If Big Data technologies express 'the beginning of something new,' its heterogeneous ensemble of optics include the ability to remotely activate computers, smartphone cameras, and voice recorders to 'sniff' the activities and conversations of unwitting suspects. Close circuit cameras running facial recognition software can decode identity and increasingly a subject's emotions. Automated facial expression analysis is a technology that uses "heat cameras that detect blush responses during deception, sensors that track pupil dilation, and a machine called the Automated Virtual Agent for Truth Assessments in Real-Time (AVATAR). These and other devices all target the face as a dynamic field of classifiable information about the individual. They do not just measure you, they are geared to unlocking the emotional, affective truth of you and binding it into information networks" (Saunders 2016).

Other biometric technologies can identify individuals by scanning an iris or calibrating a gait, by scent, or the vein patterns protruding from the hands or arms. They can pinpoint a suspect by assessing the idiosyncratic way she types on a computer keyboard. In the Internet of things to come, all our appliances, devices, gadgets will be integrated into global networks designed and monitored 24/7 by corporations seeking to master the micro-subjective patterns of daily life. These corporate databases will in turn, be exploited by intelligence agencies and hackers, permanently erasing any nostalgic ideas of conflating privacy with the home.

Big Data surveillance today is facilitated by a do-it-yourself (DIY) strategy, in which customers freely consent to give up information in return for 'free services.'[5] Today we all carry our Panopticon with us, wherever we go. Tethered to smartphones that continuously triangulate our location on Global Positioning System grids, the surveillant gaze in the tower has been replaced by those of satellites orbiting the planet.

The dispositif also takes to the skies with unmanned aerial vehicles (UAVs), or drones, which gather data for programs like ARGUS (Autonomous Real-Time Ground Ubiquitous Surveillance). "ARGUS is a 1.8 gigapixel high-resolution camera mounted on a drone that can detect objects with a surface area inches across, like a mobile phone. These drones operate 24/7 365 days per year and can monitor targets in an area covering 15 square miles."[6] Whole cities can be placed under surveillance using only one drone. When drones are outfitted with Stingray

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[5]Harcourt (2015) refers to the pervasive forms of self, or do-it-yourself (DIY), surveillance as the expository society.

[6]See Jay Stanley, ACLU.org, 5 April 2013: https://www.aclu.org/blog/report-details-governments-ability-analyze-massive-aerial-surveillance-video-streams accessed 2/27/2015.

technologies, authorities can sift through every cell phone signal in a radius spanning several miles to locate a single device. Soon drones will shrink down to the size of insects, small enough to enter even the most intimate sanctuaries. Authorities

> … envision a day in which a malevolent person can, from the comfort of his living room, direct a tiny 'spider drone' into the home of his enemy, where it will kill the victim in his shower, after first extracting a DNA sample and checking it against a worldwide database to ensure that it's got the right victim (Cole 2015).

Although disciplinary enclosures still persist, just as there is a periodicity shift in the transition from Foucault's disciplinary societies to Deleuze's societies of control, today, approximately a quarter of century from when his postscript was penned, Big Data signals a shift from the early cybernetic control systems that Deleuze theorized. For example, Deleuze (1992) writes "what is important is no longer either a signature, or a number, but a code: the code is a password." But encoded language-based identification systems soon will be superseded by a wave of a finger, a spliced tattoo, or an ingested pill if Google's Advanced Technology Project Division research pans out.[7]

Indeed, technologies of control have begun migrating from computers that digitally represent the body into the depths of the body itself. While Deleuze provides the instance of monitoring criminals by electronic devices attached to the body, when silicon can be directly embedded in flesh, the distinction between organism and mechanism blur, eschewing the need for extraneous gadgets. The real revolutionary applications of Big Data promise to be in the realm of biotechnology. Massive databases already exist with DNA profiles of tens of millions of people that can be used to tie criminals to a crime scene. The DNA surveyed does not even have to belong to the offender since one's identity also can be traced using familial DNA. Moreover, if biotechnical engineering can alter human capacities, it also can be used to expand the scope of state/corporate control systems.

If recent innovations in genomic technologies are indicative of the dispositif yet to come, then the future hinges on its splice to the body at the level of the gene itself. Human genomic engineering and germ line gene modification have become possible using a technology for editing DNA called CRISPR—Cas9. CRISPR allows DNA to be edited with 'incredible specificity,' making it possible to alter single letters (nucleotides) in the DNA code sequence. "CRISPR system includes a gene-snipping enzyme and a guide molecule that can be programmed to target unique combinations of the DNA letters A, G, C, and T; get these ingredients into the cell and … cut and modify the genome of the targeted sites" (Regalado 2015). If further developments in biotechnologies like CRISPR could facilitate passing on preferable genes to future generations, it also can be used to indelibly mark ones identity for easy detection by authorities with genetic decryption keys.

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[7]http://arstechnica.com/gadgets/2015/05/google-tracker-io-2015-edition-android-m-chromecast-2-and-lots-more/4/ accessed May 31, 2015.

Not content to simply alter human biology, the Big Data splice increasingly evacuates human judgment, displacing self-conscious discrimination in decision-making processes across a wide spectrum of professional activities including finance, medicine, education, management, military, and police. Relying on algorithms to make social determinations, however, often produce prejudicial outcomes that reflect the biases of their programmers, while relying on algorithms to make critical national security decisions all too often result in fatal consequences.

In the war on terror, there are many well-documented incidents of civilians killed by drone strikes gone awry because identity verification was reliant on metadata,[8] and the SIM card that was targeted had been exchanged with a non-combatant. When algorithms usurp the decision-making authority of elected representatives and public officials, it directly threatens civil society. When algorithmic logic is coupled to national security determinations, democracy begins to go off the rails.

The ethical concerns that are raised when machines take control, force an interrogation of the nature of democracy in an era of Big Data, especially with respect to 'privacy, social sorting, and preemption' (Lyon 2014). While the right to privacy has ever-diminishing returns, the social sorting application of Big Data increasingly determines who gets access to privileged goods and services. These sorting processes often "produce uneven and unequal outcomes when the supposedly neutral and illuminating techniques of Big Data … (are) applied to perceived social and political problems" (Lyon 2014). Supposedly, neutral data often turn out to be prejudicial to members of certain groups defined by gender, age, ethnicity, nationality, class, religion. Google's search algorithms have been found to pair a search for African–American sounding names with pop-up advertisements for criminal records checks.

This type of faulty programming logic sheds doubt on Big Data, in its preemptive mode too, that functions to thwart risks before actual events occur. When Big Data is used as a profiling tool, it can create the very scenarios it seeks to prevent: "the data-body may be thought to have a propensity to certain behaviors that are not yet evident…. The composition of flecks and bits of data into a profile of a terror suspect, the re-grounding of abstract data in the targeting of an actual life, will have the effect of producing that life, that body, as a terror suspect" (Raley 2013).

Several major metropolitan areas already use crime predictions systems that employ algorithms tailored to search databases of telephone calls reporting disturbances in high crime areas. These reports are combined with a database of arrest records to identify the most dangerous offenders in an area to create 'hot spot' maps where crime is likely to occur. Then consistent with a social network theory, this information is used to track the relationships of the most dangerous offenders with other criminals to create a 'heat list' (Stroud 2014).

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[8]Metadata refer to files, communications, and programs that when modified, transmitted, or received can be used to pinpoint a suspect's actions.

While the Chicago police believe predictive crime fighting should be adopted as a 'best practice,' civil libertarians think it may just be an excuse for racial profiling: "Let's say we know that someone is connected to another person who was arrested. Or, we know that someone's been arrested in the past. Is it fair to take advantage of that information? Are we just perpetuating the problem?" "How many people of color are on this heat list? Is the list all black kids? Is this list all kids from Chicago's South Side?" (Stroud 2014).

The Ban-opticon

If "security can be defined, simply, as the most efficient management of life" (Galloway and Thacker 2007) to effectively organize and manage populations, the state will take a strategic view of life. To strategically manage life, it must be reduced to the status of bare life, a biological cog that can be molded into whatever form power assumes. Foucault calls this strategy for managing life, 'biopower,' when "the basic biological features of the human species become the object of a political strategy, of a general strategy of power" (Foucault 2007: 1). In a biopolitical context,[9] the problem security raises today is that of controlling flows of large populations moving across vast open territories while "creating boundaries that are selectively permeable, to those lives the dispositif grants access. While certain transactions and transgressions are fostered (trade, commerce, tourism), others are blockaded or diverted (sharing information, the commons, immigration)" (Galloway and Thacker 2007).

Describing a regime that attempts "the control of movement more than the control of stocks in a territory," Bigo (2006: 44) theorizes a dispositif, that he calls the 'ban-opticon' following Giorgio Agamben's work on exclusion (*Homo sacer*), Jean-Luc Nancy's on the 'ban,' and Foucault's on the Panopticon. The ban-opticon is the non-localized surveillance machine of globalization responsible for sorting, classifying, and segregating populations. The visibility field of the ban-opticon unfurls its nonlinear gaze over the braided transit routes of migrants, refugees, and radicalized youth moving across nations and continents. The ban-opticon is "a dispositif no longer focused on immobilizing bodies under the analytic gaze of the watcher, but on profiles that signify differences and exceptionalism with respect to norms" (p. 44).

The ban-opticon is not reliant on any single technology, institution or sovereign territory, but rather is a 'surveillant assemblage.'

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[9]"We use the term biopower when thinking of the sources and wellsprings of state power, and the specific technologies that the state produces, … to control populations: we speak of the biopolitical context when referring to the complex resistances, and occasions and measures of the clash between social dispositifs of power" (Hardt and Negri 2008: 73, 74).

> To the extent that the surveillant assemblage exists, it does so as a potentiality, one that resides at the intersections of various media that can be connected for diverse purposes… As it is multiple, unstable and lacks discernible boundaries or responsible governmental departments, the surveillant assemblage cannot be dismantled by prohibiting a particularly unpalatable technology nor, can it be attacked by focusing criticism on a single bureaucracy or institution. In the face of multiple connections across myriad technologies and practices, it struggles against particular manifestations of surveillance … while the general tide of surveillance washes over us all (Haggerty and Ericson 2000).

When deployed by the European Union, the surveillant assemblage known as Frontex, that includes naval patrols, drones, coastal radar, militarized watchtowers, barbed wire fences, thermal imaging, and biometric authentication systems, along with the vast surveillance complex called Eurosur, acts as an information exchange for the management of external borders. "Their joint operations across the entire European common border and beyond are supported by what Frontex is touting as 'the system of systems' – a network of technologies that, when fully amalgamated, will deliver 'the frictionless circulation of identity data within a single globalized market of information'" (Saunders 2016).

The ban-opticon operates on three levels, first, as a profiling tool to filter out the interpolated identities of subjects moving between global states of exclusion and depravation. Second, employing Big Data to predict behaviors based on an algorithmic assessment of future actions, "the ban-optic apparatus produces knowledge and statements on threats and security that reinforce the belief in a capacity to decrypt, even prior to the individual himself, what its trajectories, its itineraries will be" (Bigo 2006). Third, to bolster the imperial discourse of sovereign nations, allowing them to declare states of exception to international law.

If profiling and prediction define the[10] field of visibilities that power deems worthy of attention and brings into view with Big Data technologies, assertions of exceptionalism represent its field of statements that provides the epistemological range of discursive proclamations, rules, laws, orders, and codes necessary to provide legitimacy for the structures of power. In an age of globalized insecurity, the discourse on exceptionalism provides nations with the justification to act globally without restraint. When states of exception are normalized, violent excess and continuous states of emergency are rationalized.

As a profiling tool surveillance is deployed by the statisticians of national security doing the calculus of terror, as a mechanism to sort out populations associated with high-risk nations. The ban-opticon tags men of a certain age and ethnic heritage, pronouncing guilt based on the preponderance of metadata. It tracks precarious bodies in flux across nations, continents, and oceans together with flows

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[10]In Foucault's archeology, the knowledge structures of any historical stratum are defined by a double articulation: 'the seeable,' a material field of 'visibilities,' and 'the sayable,' a discursive field of 'statements.' "Each historical formation reveals all it can within the spectrum of its visible field, just as it says all it can within its epistemological range of discursive statements" (Deleuze 1988: 59).

of internally displaced and ghettoized populations that converge at the margins of neoliberal states.

Those who find themselves within suspect groups become the focus of societal anxiety and have their movements restricted (visa denied), or their travel rights revoked (no fly list). "Where, previously, people had been assigned places of residence, they are now placed in 'waiting zones' and assigned identities not even lived as such. A skin color, an accent, an attitude, and one is slotted, extracted from the unmarked masses and, if necessary, evacuated" (Bigo 2006). Within national borders, the difference between foreign and domestic threat collapses as a militarized police force takes up counter-terrorism tactics to confront abject populations at home, trolling the streets for those of a certain age, ethnicity, or color, to stop and frisk.

If "a machine may be defined as a system of interruptions or breaks" (Deleuze and Guattari 2009: 36), the ban-opticon is the machinery that channels flows of displaced populations to ensure privilege continues to circulate among an already wealthy class. This necessitates controlling borders by sorting, regulating, modifying suspect populations or forcing them into migrant camps so their access to the exceptional nation can be managed or shut down. While politicians and defense hawks make bellicose claims of impending terror, migrants and refugees are blamed for pressuring the state's economic resources, jingoistic media outlets play on xenophobic fears, portraying these displaced 'others' as a faceless multitude threatening to swarm the nation's borders. These 'others' constitute the ungrievable lives of globalization, or those, "who are living, but not yet regarded as lives" (Butler 2003: 31, 32).

Persons who live in privileged localities within the global economy, those who are not marked for interrogation or profiled as suspicious, generally lend support to state security operations that wall others out. In return, the middle class is given safety assurances by the state and its private contractors. "The advantage for the unmarked masses is that they have the impression of being free" (Bigo 2006). In the cynical reversal of politics today, the occupying power assumes a status of aggrieved victim, morally justified to inflict maximum pain upon those whom it justifies its revenge. "Constantly driven by fear of deadly attacks both inside and out, unified by spectacles of explosive violence directed against nominated scapegoats, the imperial subaltern blends together panic fear and sacrificial violence into a liquid language of imperial power" (Kroker 2014: 164).

Data Made Flesh

While different populations inhabit different temporalities—nomadic, agrarian, industrial, and digital—the transfer of global capital today favors an oligarchic elite, together with a "virtual class" (Kroker 1994: 1) of managers, engineers, entrepreneurs, and developers. If the axiomatic of global capitalism expresses the digital will of its ruling elite, "whether economic, political, cultural, … its realization

(requires) the development of a global class of digital specialist whose labor value lies in literally coding the digital future" (Kroker 2014: 183).

For their part upwardly mobile digital specialists are crucial to the NSA 'collect it all' strategy. They create and monitor technologies that transfigure profiles of individuals into illimitable fractal 'dividuals.' If colonial powers developed a political strategy to divide and rule occupied populations, societies of control exert more artful dividing practices, because they operate at the level of the individual itself. While the colonialist divides populations by marking divisions in religion, caste, ethnicity, societies of control operate by severing the individual from its representations. "This dispositif appears like a virtual montage (morphing) of all the positions of individuals in the process of flux. From an initial image (the immigrant, the ghetto youth) to a final image (terrorist, drug-runner), all the steps of transformation are re-constituted virtually" (Bigo 2006).

In societies of control, individuals are colonized by 'regimes of computation' that segregate them into arrays of micro-subjective desires, cognitions, behaviors that are tagged and channeled for schizo-reduction into programmable data. At a time of the digital ascendance of neoliberal markets, a more effective control strategy than targeting the agency of possessive individuals is to exploit the programmed iterations of fragmented subjects circulating through global networks, until they can be matched up with a product or service congruent to a desire. "Individuals have become 'dividuals' and masses, samples, data, markets, or 'banks'" (Deleuze 1992).

A 'dividual' is an intensive parameter in the codes of global capitalism, a quantum of attention that can be tuned to specific frequencies of cognition, affect, desire, and tweaked, just as an audio engineer can independently tune "tone, volume, treble … modified in real time to flow within certain limits (e.g., if the… setting is too high or low, the sound breaks up or becomes inaudible, etc.). Each sound, in turn, can be divided into smaller samples that are also subject to parametric control, and so on" (Bogard 2007).

This digital reduction of algorithmically quantified bodies, provide NSA sentinels with new mechanisms to calculate risk. Among its arsenal of surveillance technologies, it most prefers are the ones that can visualize threats. The gaze today, however, differs from the eye hidden in the Panopticon, because now it sees in infrared and ultraviolet spectrums. "Much of (these) visualizations…. exist, beyond our normal range of perception. The surveillant assemblage is a visualizing ensemble that brings into the visual register a host of heretofore opaque flows of auditory, scent, chemical, visual, ultraviolet, and informational forms of stimuli" (Haggerty and Ericson 2000: 611).

Mike Rodgers, the head of the NSA, recently told an audience of surveillance contractors "we need the ability to visualize" because "man is fundamentally a visual creature" (McLaughlin 2015). The technological augmentation of sight transforms the disciplinary gaze into a supersensory visibility field that renders bodies, emotions, thoughts transparent to distant security engineers, in forms undreamed of when anything like a possessive humanist subject began to be imagined during the Enlightenment.

"The monitored body is increasingly a cyborg; a flesh-technology-information amalgam" (Haraway 1991). The locomotion of flesh through clouds of ubiquitous computation begins to obscure the interface between organic and inorganic, "between life forms and webs of information, or between organs/body parts and entry/projection systems (e.g., keyboards, screens)" (Bogard 1996: 33). If stream of consciousness narratives, abstract art, and mechanical reproduction in the early twentieth century precipitated Walter Benjamin's crisis of representation and perception: today, in an age of digital reproduction, aura is replaced by code that disappears bodies into technology.

Big Data simulates fractal profiles of bodies that can be combined and recombined in illimitable 'tessellated recombinant' forms. A mosaic of micro-subjectivities recursively coupled to technology, "forming and reforming across a metastable scheme of a biogrammatic ecosystem" (Galloway 2011). The subject enters into this computational assemblage where "a finite number of components produce a practically unlimited diversity of combination," as, "the forces within 'man' enter into a relation with forces from outside, those of silicon which supersedes carbon, or into genetic components which supersede the organism, or agrammaticalities which supersede the signifier. (These are) the operations of the 'superfold,'[11] of which the 'double helix' is the best known example" (Deleuze 1988: 131–132).

Today, Deleuze's agrammaticalities can be extended beyond the sparse preciseness of an E.E. Cummings word synthesis, or the contortions of a Joycean sentence, into the binary recursions of programing languages, that are performative. Cellular automata and Turing machines are instances of performative codes, simple programs that can execute complex natural processes such as simulating emergent phenomena. Hayles (1999) thinks of the performative code as a discourse system,

> … that mirrors what happens in nature and that generates nature itself. This discursive process starts with a parsimonious set of elements and a relatively small set of logical operations. Instantiated into some kind of platform, these components can be structured so as to build up increasing levels of complexity, eventually arriving at complexity so deep, multilayered, and extensive as to simulate the most complex phenomena on Earth, from turbulent flow and multi-agent social systems to reasoning processes one might legitimately called thinking.

The origins of these ideas can be traced back to the (info)cybernetic paradigm pioneered in the work of Norbert Weiner, Claude Shannon, Ludwig Von Bertalanffy, Alan Turing, John Von Neumann, and others, especially the participants of the multidisciplinary Macy Conferences (1941–1960) who made substantial advances in cybernetics, systems theory, cognitive science. The paradigm has roughly three phases, so far. The first, using mainframe computers, introduced command and control systems. The second, with the assistance of desktop

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[11]Deleuze (1988) concludes his book on Foucault by envisioning the historical subject vis-à-vis the unfold (infinitude/medieval, religious), fold (finitude/enlightenment, humanist), and superfold (unlimited finitude/post-modernity/post-humanist).

computers, incorporated the observer into the system under observation that developed in theories of self-organization and autopoiesis. The third phase deploys network computing in clouds of Big Data capable of processing petabytes of information to model complex adaptive systems and the vital emergent properties of autocatalytic sets.

The conclusions some scientists, engineers, and digital philosophers draw from this computational fetishism is that life itself can be theorized as a Darwinian algorithm, an emergent property of autocatalytic sets, whose essence is disembodied information. The ontological implication is that human essence can be thought as information, originating with the transcription and translation of DNA and RNA sequences.

While the ontological privileging of information expresses a metaphysic of data made flesh, it also couches within it the vision statement of the coding machinery of digital capitalism. Its mission is the modulation of bodies for their continuous replication and circulation as virtual parameters in global networks, accessible to surveillance engineers, who can at any moment pry open a particular dividual iteration to glean a micro-subjective behavior from its data double.

In Enlightenment humanism, privacy had once been thought an essential guarantor of personal freedom. Under the sign of the 'Regime of Computation' (Hayles 1999), however, privacy has been rendered obsolete. In terms of periodization, this radical reconceptualization of human essence and freedom signals "five hundred years of humanism may be coming to an end as humanism transforms itself into something one must helplessly call posthumanism" (Hassan 1977).

If the surveillance apparatus of Big Data reduces human essence to information that can be captured, recorded, quantified, stored, analyzed, and controlled, it can also be called the posthuman dispositif. The dispositif in turn betrays a metaphysical foundation that

> … privilege informational patterns over material instantiation, so that embodiment in a biological substrate is seen as an accident of history rather than an inevitability of life, (it) considers consciousness, … an epiphenomenon, the body as the original prosthesis … so that extending, or replacing the body with other prostheses becomes a continuation of a process began before we were born, (and) see no essential differences …. between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals (Hayles 1999).

Tightrope Walking the Posthuman Dispositif

Zoe: Bare Life or the Power of Life?

While resistance strategies are largely passed over in *Discipline and Punish*, and 'Postscript on the Societies of Control' (Deleuze 1992), in a 1990 interview with Antonio Negri, Deleuze says,

> Compared with the approaching forms of ceaseless control in open sites, we may come to see the harshest confinement as part of a wonderful happy past. The quest for universals of communication ought to make us shudder. It's true that, even before control societies are fully in place, forms of delinquency or resistance (two different things) are also appearing. Computer piracy and viruses, for example, will replace strikes and what the nineteenth century called 'sabotage' (Deleuze and Negri 1990).

Even as Deleuze was prescient about the 'universals of communication,' delinquency and resistance are more problematic now than in 1990.

While delinquency today is facilitated by a ban on access to economic privilege and educational resources, today in an age of Stuxnet,[12] the computer piracy or cyber-attacks, which can do the most damage are unleashed by state actors. Resistance to the digital power of empire rubs up against a multi-billion dollar national security budget, which so thoroughly researches dissent as to anticipate, interrupt, and contain most attacks before they can do damage. In 2015, America spent more than 14 billion dollars on cyber-security to thwart the very acts of piracy and sabotage that Deleuze describes. Moreover, the strategy the NSA together with their corporate partners employs (see Currior and Marquis-Boire 2015) is to target dissent and massively counterattack whomever they suspect as the perpetrator of a cyber-attack (Ludlow 2013).

While both Foucault and Deleuze interrogate relations of power, resistance hinges on a subject who can cultivate agency in ways that counteract the forces of its subjugation, as Judith Butler describes:

> The power that initiates the subject fails to remain continuous with the power that is the subject's agency. A significant and potentially enabling reversal occurs when power shifts from its status as a condition of agency to the subject's 'own' agency (constituting an appearance of power in which the subject appears as the condition of its "own" power) (Butler 1997: 14).

While encryption is a useful resistance tactic to thwart specific online encroachments, safeguarding privacy is exponentially becoming more problematic.[13] While one cannot fast forward Foucault and Deleuze to strategize resistance today if we follow their discourse in reverse, by tracing their genealogies of power to the point of convergence on the strange attractor of Friedrich Nietzsche, some interesting forms emerge. At the enigmatic conclusion of his late study *Foucault*, Deleuze writes:

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[12]Kim Zetter, Countdown-to-Zero-Day-Stuxnet/ Crown (11 November 2014).

[13]While acknowledging the real threats posed by state and terrorist networks, the cryptographer Bruce Schneier advocates the use of encryption technologies, like the Web browser TOR, but believes that unless one foregoes the Internet, social media, smartphones, driving a car or using any form of personal identification that there is no fail-safe way to avoid detection. He promotes support for grass roots citizen movements to pressure legislators to change intelligence data mining operations and for adoption of legislation similar to the 'right to be forgotten' laws that currently prevail in the European Union and Japan. Interview with Amy Goodman, Democracy Now (March 3, 2015): www.democracynow.org/blog/2015/3/13/part_2_bruce_schneier_on_the (Accessed March 4, 2015).

> The overman has never meant anything other but that: it is man himself that must liberate life, since man himself is a form of the imprisonment of man "… What resistance extracts…. is the forces of a life that is larger, more active, more affirmative and richer in possibilities" (Deleuze 1988: 92, 930).

That is, it is only life itself that can liberate life. "Life is a sort of counter-power, a return flow of forces aimed backward toward the source of exploitation" (Galloway and Thacker 2007: 80). Deleuze (1988: 92–93) continues, "Life becomes resistance to power when power takes life as its object. When power becomes biopower resistance becomes the 'power of life' a vital power that cannot be confined within species, environment, or the paths of a particular diagram]. …. Is not life the capacity to resist force?"

Life that resists its reduction to a digital object does so asymmetrically, in subversive movements, that exploit flaws in reasoning, faults in calculations, bugs in programs, holes in network protocols through which, with minimal visibility it can tactically assert itself. "This type of asymmetric intervention, a political form bred into existence as the negative likeness of its antagonist, is the inspiration for the concept of -the exploit- a resonant flaw designed to resist, threaten, and ultimately desert the dominant political diagram" (Galloway and Thacker 2007: 21).

But if digitally subjugated life resists colonization by Big Data/AI asymmetrically, the 'power of life' that resists biopower poses a contrary asymmetry.[14] The power of life that resists biopower, is the "vital power that cannot be confined within a species." It is life that is anterior to and larger than human life. It is life that subsumes the all too human confounding its objectification and biotechnical reduction to molecules of information or Darwinian algorithms. The power of life that resists biopower traverses the spectrum of nonhuman life to baffle its anthropomorphic fetishism and reverse its assault on nature as a standing reserve.[15] The power of life that resists biopower inflates bare life with the generative force of life. "This biopolitical body that is bare life must … be transformed into the site for the constitution and installation of a form of life that is wholly exhausted in bare life and a bios that is only its own zoe" (Agamben 1998). Here, life as bios must be distinguished from life as *zoe*. Bios is human life that is granted citizenship rights in a community by its governing sovereign or judicial power. For purposes here, *zoe* must be distinguished in two ways, the first as 'bare life,' from Agamben's work on

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[14]Silicon Valley corporations pose a more symmetrical resistance to NSA surveillance. Having lost significant global business, when their complicity with NSA spying operations was discovered, they responded by encrypting products without retaining encryption keys (end-to-end encryption). However, evoking fear of a terrorist attack, the indispensable nation in the name of the FBI has begun to challenge end-to-end encryption. The showdown between the exceptional nation and its most successful corporations has, as of this time, yet to be fought. However, it is thought by many experts that the NSA already possesses ways to hack current end-to-end encryption technology.

[15]The omniscient/omnipotent dream that the Enlightenment hatched of the progress of reason and technology is quickly overwhelmed by the cataclysmic imagination of nature entrained in a positive feedback loop that rapidly outstrips human capacity to cope, as evidenced in natural disasters, global pandemics and such technological backfires as the reactor meltdowns at Chernobyl and Fukushima.

Homo sacer; the second as theorized by Rosi Braidotti following a Spinozist framework, posits zoe similarly to what Deleuze calls the 'power of life.'

Zoe as bare life is life cast out or banned from a community, which has been assigned the status of an ungrievable life or scapegoat. It is life that does not even meet minimal value as a body that can be sacrificed. Therefore, it is a life that can be killed without the killer being assigned blame as murderer. Bare life as *zoe* is the object of biopower's thanatopolitics that mobilizes life for the purposes of (ethnic) cleansing or slaughter. Today, bare life is the status assigned to those lives, who, persist outside the laws of the exceptional nation or the standing reserve of the global economy.

But it is precisely because *zoe* exists outside and anterior to sovereign communities that it also represents a dimension of life that exceeds human control and hence resists subjugation. Braidotti thinks *zoe* in a way similar to Deleuze, as life, that cannot be confined within species, environment, or the paths of a particular diagram." Similar to Hannah Arendt's notion of 'force' or the movement of nature that is often liberated in physical or social movements, *zoe* in Bradotti's usage evokes life as 'a relentlessly generative force' that potentially can transmute life into a will that resists technological domination and its 'imprisonment in man' and serve as a force to counter biopower. Recognition of *zoe* "requires an interrogation of the shifting interrelations between human and nonhuman forces. The latter are defined both as in-human and as post-human…. This post-anthropocentric shift (is) the start for an ethics of sustainability that aims at shifting the focus toward the positivity of zoe" (Braidotti 2007).

Ethical Networks

For the subject the stakes of biopower mean that life must be liberated from the walls that circumscribe its identity.

> [The individual is marked], once and for all, with a known and recognizable identity—you will be White or Black, masculine or feminine, straight or gay, colonizer or colonized, and so on. Alternately, resistance means the struggle for new modes of existence. It is therefore a battle for difference, variation, and metamorphosis, for the creation of new modes of existence (Rodowick 1999: 44–45).

Resistance that creates new modes of existence often is nurtured in exile, where one can imagine possibilities not foreclosed by the social placeholder one has been assigned. "For the task of a re-evaluation of all values … (requires) … distance the art of separating without setting against one another" (Nietzsche 2009: 254). For Nietzsche's Zarathustra this begins with his seclusion on the mountain. In exile, Zarathustra affirms his will by affirming life's creative power because couched in life is 'will to power.' To liberate life within is to liberate will to power. "Only where there is life, is there also will: not, however, Will to Life, but - so I teach you - Will to Power!" (Nietzsche 2010: 93) .

In the solitude of exile Zarathustra cultivates the power of life through meditation, sublimation, askêsis,[16] conjoining his will to the figurative power of imagination. Foucault calls such practices of self-mastery or self-care 'inner technologies' tracing them to ancient Greece and Rome (Foucault 1988). Instancing the 'spiritual exercises' of Marcus Aurelius, he reveals the physical and mental regiments, the Stoics used for developing virtue, excellence, and equanimity in conflict. Nietzsche, who wanted to make asceticism natural, again refers to such inner technologies[17] as 'a gymnastics of the will' (Nietzsche 1968: 483). In learning to will his own will, Zarathustra also hones parrhesia,[18] the ability to speak truth freely even if it jeopardizes ones status or safety. He returns from exile to the marketplace to confront the crowd with the fearless truths he cultivated in exile.

Most often exile is involuntary. For example, the ordeal of imprisonment often forces solitude upon an inmate that triggers a re-evaluation of the conditions of life. The philosopher Bernard Stiegler describes solitude in prison:

> Prison is asceticism without end [sans arret] with the exception of micro-interruptions such as visits and, when the time comes, day-release. I ended up being afraid of (while also desiring) these micro-interruptions to the silence of which asceticism consists. I avoided even, as much as possible, the "promenades" which broke the silence I had learned to love. When one begins to systematically practice the experience of one's pre-individual lived milieu (having become accessible to oneself beyond the context of the world), as an almost palpable milieu (a little like the way in which a hand placed outside the window during high-speed driving causes air to be perceived as a liquid), having thus totally suspended all relation to a meaningful milieu other than that which one carries

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[16]It has been pointed out notably by Slavoj Zizek that practices of self-care, both Western and Asiatic, may become occasions for narcissistic/hegemonic disconnection. Oft cited is the Me generation of the 1970s and generations of organizational psychologists thereafter, who cultivate self-care as stress reduction techniques for coping with neoliberal workplace pressures. see Zizek's critique of *Star Wars III*, http://mariborchan.si/text/articles/slavoj-zizek/revenge-of-global-finance/ (Accessed Jan 2, 2016).

Today, practices of self-care are increasingly outsourced to algorithms programmed into smart watches, smartphone apps that augment the will by triggering alarms or messages throughout the day to serve as reminders to keep focus on the goals one sets for purposes of self-improvement.

[17]While Foucault traces these inner technologies back to the Ancient Greeks, he admits his ignorance of self-making practices developed in Asia. Nietzsche's misreading of worldly Buddhist practices is a notable embarrassment. In fact, Nietzsche inherits notions of the will from Schopenhauer, who derived them from the Upanishads. For his part, in his book, *Foucault*, Deleuze renders an Orientalist interpretation that smooth out Eastern spiritual practices into a striated transcendence (unfold). But self-making practices exist in Asian societies. One example is the integral yoga of the revolutionary/yogi Sri Aurobindo of the Indian Independence movement, who was educated at Cambridge and a scholar of Latin, and Greek, (1872–1950) Aurobindo's draws on the ancient Indian yogas, to constitute a practice for cultivating excellence in head, heart, and hands (*jnana, bhakti*, karma) that aims at an immanent transfiguration of matter, he calls *purna*, or integral, yoga. As praxis (*sadhana*), it is a form of self-making involving the sublimation of desire (tapas), and the cultivation of the 'psychic being' whose genealogy, Aurobindo traces back to the Socratic, Daemon. Like Nietzsche, Aurobindo believed the human to be a transitional being also positing the coming of a super human form. In Aurobindo, 'will to power' has affinities with what he calls 'nature's yoga.' See Aurobindo (1972).

[18]'To speak truth,' Euripides [c.484–407 BC].

and reactivates with in oneself, … one discovers that, in fact, to be "free" is suffering. It is suffering because, most of the time, it is produced not as liberty but, precisely, as alienation. One perceives with astonishment that, in that cell, one is much more free, or at least that liberty is much more accessible there… (Stiegler 2003).

For Gilbert Simondon, a withdrawal into an envelope of solitude energizes the critical skills necessary to assess the ways that power enfolds its explicit codes and tacit doxa[19] into the subject and inscribes them in all its social relations. This order of solitude is often thrust upon the subject involuntarily, constellated by an event from outside that sparks an inner ordeal, forcing it to revision its cultural orientation and social obligations. The ordeal radically challenges the way the subject apprehends the world forcing a re-evaluation of the values, beliefs, opinions it has internalized. By distancing itself from its social images the subject opens an interior space to locate its creative energy and will. It begins to cultivate, what at first seems, an almost imperceptible movement of life that is discontinuous with the power that subjugates it and sparks a counter-power that can shift the subject's relationship to power, from "a condition of agency to the subject's 'own' agency" (Butler 1997).

The creative energy that emerges in the non-discursive space of solitude is what Simondon calls, the 'preindividual,' a term whose origins he traces back to ancient Greece and what Anaximander called 'apeiron.' Apeiron is the primordial inexhaustible power of life that sparks the transmutation of elements and evolution of living things. In unique ways Nietzsche's will to power, Deleuze's counter-power of life, Bradotti's *zoe*, and the preindividual all express a liberatory movement of life that cannot be constrained by biopower. Simondon is unique, however, in developing the preindividual (power of life) in context of psycho-social relationships by positing the transindividual.

For Simondon, the preindividual is the generative negentropy of individuation that is never entirely disclosed in the individual. The individual cannot contain within itself the preindividual forces that constitute it. In this sense, the individual is incompatible with itself; it is augmented by the preindividual latencies within. As the latencies of preindividual apeiron are elevated into the subject's field of consciousness, an awareness that unconcious forces and emotions outstrip its own agency often manifest as anxiety which can only be resolved through an affective relationship with others. As such, the individual and collective are co-individuated within a milieu metastabilized by the preindividual energies they carry within them which couches the potential for a transindividual relationship.

Simondon refers to the phased-transference of preindividual energy across different registers of being—mineral, biological, psychic, collective, technological—to

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[19]Doxa is common belief or popular opinion "When there is a quasi-perfect correspondence between the objective order and the subjective principles of organization, the natural and social world appears as self-evident. This experience we shall call doxa" (Bourdieu 1977: 164).

modulate their disparity, as transduction.[20] The transindividual emerges from the transduction of the preindividual from an elemental or vital force into a self-reflective/affective coupling of the individual and collective. The transduction of the preindividual into a 'specific individuation of the collective' establishes the transindividual relationship and creates its future possibilities.

> It is not as a living being that man brings with him what is spiritually individuated, but as a being that contains in it the preindividual and the prevital. This reality can be called the transindividual. It is neither of a social or individual origin; it is deposited in the individual, carried by it, but it belongs to it and is not made a part of its system of being as individual…. the individual has conserved the preindividual within itself, and all individual ensembles have thus a sort of non-structured ground from which a new individuation can be produced. The psycho-social is the transindividual: it is this reality that the individuated being transports with itself, this load of being for future individuations (Simondon 1989: 193).

The transindividual relation destabilizes the normative foundations of the individual and collective relationship that Simondon calls the 'interindividual.' The interindividual signifies a social relationship that is "a model born of a simple reductive interpretation of technological operations, such as the molding of a brick" (de Beistegui 2004: 303). Simondon resists this type of social hylomorphism by countering with the allagmatic[21] processes of individuation, that he believes are homologous to the process of crystallization, "through which the crystalline form acts like a 'recurrent germ of information' in a medium already rife with singularities and energetic differences" (de Beistegui 2004: 303). Through allagmatic operations "matter takes form in a certain system of internal resonance" (Simondon 1989: 44). This system of internal resonance is self-amplifying, it "rests on, the singularity[22] or the singularities of the concrete here and now (p. 44); it envelops and amplifies them energizing potentials for becoming". The amplification of these energized potentials latent within singularities and intensive differences when expressed in psycho-social becoming opens a horizon for the disclosure of the

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[20]This relationship is mediated by technical elements, objects and ensembles that also express the preindividual, which had been deposited in them through the process of invention. Bernard Stiegler, who has done the most of any philosopher in recent years to expound on Simondon's work, deploys the preindividual (and transindividual) in a different way. For Stiegler, the preindividual is not so much a movement of primordial 'apeiron' as it signifies human immersion in systems of knowledge and signification—grammatization—that are archived and transmitted over generations through mnemotechnologies or retentional apparatuses, (he calls the 'What'). It is the mnemotechnological (What) that conjoins the individual (I) and collective (We). "What links the I with the We in this individuation is a preindividual milieu, which has positive conditions of effectivity, related to what I have called the retentional apparatuses… (What)… These retentional apparatuses are supported by the technical milieu, which is the condition of the meeting of the I and the We: the individuation of I and of We is equally in a sense the individuation of a technical system (this is what Simondon, strangely, did not see)" (Stiegler 2004: 106).

[21]Allagmatic comes from the Greek word for change, *allagma*.

[22]In context of Simondon, a singularity is a momentary pause in individuation. See Scott (2014: 17).

creative dynamism couched in their coupling that subverts the doxa implicit in the interindividual relationship.

In individuals, this system of internal resonances originates in the perceptual and emotion intensities that well up inside that can only be expressed within a community. For Simondon, emotions are 'a sense of action' (Simondon 1989: 109) that require external connectivity with others to discharge. Emotive exchanges between subjects who share an intensity of ethos and will, form 'recurrent germs of information' in reticular networks of 'singularities and energetic differences' that are force multipliers for the transduction of the preindividual into the social milieu that maximizes an ethical space for free expression.

> Ethical reality is indeed structured in networks, that is acts take on resonance with one another (and) contains in itself a power of amplification. The ethical act enters into relations with other acts, "goes from one act to another in the same way that one may go from yellow-green to green to yellow through augmentation of the band of frequencies… The value of an act is its amplitude, its capacity for transductive spacing out" (pp. 245–247).

Transindividual Resistance

In response to the attacks of September 11, 2001(9/11), the USA declared itself the exceptional nation, a speech act that set in motion the hegemonic practices of a political regime that would violate both national and international laws. In the name of the exceptional nation, the pre-Enlightenment reign of judicial torture made its savage return along with warrantless dragnet surveillance, the suspension of habeas corpus, and targeted assassination of its own citizens. All these actions affirm Zarathustra's words for the state, "the state is the name of the coldest of all cold monsters … the state lies in all languages of good and evil" (Nietzsche 1999: 43).

The consequences of the doctrine of American exceptionalism abroad include declarations of unprovoked war. The wars perpetrated by the indispensable nation resulted in a catastrophic civilian death toll in hundreds of thousands, along with the displacement of millions more, that has now spiraled into a refugee crisis unparalleled since World War II. It also bears responsibility for the physical and psychic damage done to its own young generation of soldiers, who return to a country deficient in resources to address their injuries and post-traumatic stress. Yet, for all the damage done, for the most part justice has only been served on a few individuals for blowing the whistle on crimes committed in the name of the exceptional nation.[23]

In post-9/11 America while trillions of dollars have been spent on war and homeland security many Americans have suffered through a period of record poverty and increasing inequality. Yet despite their own injurious neglect a majority of Americans sanctioned torture after 9/11, preemptive war in Iraq, terrorizing post-

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[23]Notable among American national security whistle-blowers are the recent cases of John Kiriakou, Jeffrey Sterling, Thomas Drake, William Binney, Diane Roark, Kirk Wiebe, Ed Loomis.

colonial populations with drones and normalizing warrantless dragnet surveillance. Terrified by politicians and cable news pundits warning of another imminent catastrophic attack, whose statistical probability, hovers near zero, because the chances of being killed[24] by a terrorist are exponentially less than dying at the hands of a driver who is texting or a lightning strike,[25] a majority of Americans have agreed, that when the threat level is raised, the trade-off of liberty for security is a good one.[26]

In spite of the recent history of irrational fear coupled to naked aggression and advanced technology, scientists, engineers, and digital philosophers who call themselves "transhumanist" baldly assert that humanity is progressively moving toward a 'singularity', an event horizon, perhaps forty years in the future, when the anatomical splice of humans and intelligent machines synthesizes a biotechnical assemblage with suprahuman capacities and competences that outstrip the imagination of anyone on this side of the singularity.

The idea that the fashioning of the body to a machine would replace the ethics of self-fashioning to produce a form that will surpass the human would have seemed strange to Nietzsche. Had he imagined this kind of future one hundred and forty years ago, he would have thought the 'last man' to be its ascendant form. In describing, the last man Nietzsche proclaims: "Behold the last man! The earth has become small, and on it hops the last man, who makes everything small…. Everybody wants the same, everybody is the same. 'We have invented happiness,' say the last men, and they blink" (Nietzsche 2010: 17).

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[24]While empathizing with the victims whom terror strikes and being sure not minimize the psychological effects of contagious panic fear in an age of Fox News, the number of terrorist attacks in the indispensable nation is notably low compared to those nations it has preemptively attacked. The definition of terrorism from this statistical sampling is: "*the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation.*" Reported Terrorist attacks between 2011 and 2014/100,000 people were as follows: Iraq (9522/27.4), Afghanistan (5153/16.3), Yemen (1614/6.2), Libya (1082/17.3), United States (57/.02) (Global Terrorism Data Base: https://www.start.umd.edu/gtd/globe/index.html, accessed Feb 2, 2016). In 2014 (one year), cause of death in the United States were: (1) heart disease: 611,105, (2) cancer: 584,881, (3) chronic lower respiratory diseases: 149,205, (4) accidents (unintentional injuries): 130,557, (5) stroke (cerebrovascular diseases): 128,978, (6) Alzheimer's disease: 84,767, (7) diabetes: 75,578, (8) influenza and pneumonia: 56,979, (9) nephritis: 47,112, (10) intentional self-harm (suicide): 41,149. In contrast, from 2005 to 2015, the number of Americans killed by terrorism = 71 (Juan Cole, http://www.juancole.com/2016/03/30-americans-die-worldwide-from-terrorism-annually-while-130000-die-by-accident.html, accessed Feb 2, 2016).

[25]WashingtonsBlog, "*You're More Likely to be Killed by a Toddler than a Terrorist.*" washingtonsblog.com. http://www.washingtonsblog.com/2013/06/youre-more-likely-to-be-killed-by-a-toddler-than-a-terrorist.html accessed May 2, 2015.

[26]This trade-off of civil liberties for security and comfort is not confined to the USA, and has occurred in other democratic nations as well, as the ongoing state of emergency in France, for instance. Many of its draconian security measures such as warrantless police intrusions into private homes and placing suspects under house arrest without the prior consent of a judge have the support of up to 90 % of its population, months after the Paris attacks in 2015. Moreover, these laws have been used to persecute groups not affiliated with terrorism such as environmental activists.

Today, the last man is

> … tethered to mobility (Kroker 2014), runs on digital empty: electronically interfaced by … consumer prosthetics; hooked on porn, soaps, cosmetic surgery, and Fox TV; bunkered down in front of big-screen TVs, surround sound pumped up full; silently fascinated by media reports of terrorists hunted down, captured, and imprisoned, perhaps tortured; and morally gratified with scenes of military violence visited upon an always accidental enemy (Kroker 2005).

Edward Snowden in his first public interview with journalist Glen Greenwald sums up the lack of resistance to the national security state: "if living unfreely but comfortably is something you're willing to accept, and I think many of us are it's human nature; you can get up everyday, go to work, you can collect your large paycheck for relatively little work against the public interest, and go to sleep at night after watching your shows" (Harding 2014).

Just after the Snowden leaks a Pew research poll[27] found: 54 % of the American public said the government should prosecute him. One defense contractor summed up feelings for Snowden among those in the industry. "His name is cursed every day over here. Most everyone I talk to says he needs to be tried and hung, forget the trial and just hang him". An army intelligence official added:

> if we had the chance, we would end it very quickly, Just casually walking on the streets of Moscow, coming back from buying his groceries …. he is casually poked by a passerby. He thinks nothing of it at the time starts to feel a little woozy and thinks it's a parasite from the local water. He goes home very innocently and next thing you know he dies in the shower (Johnson 2014).

To safeguard their "little pleasure for the day and little pleasure for the night" (Nietzsche, p. 26) the last man would exact revenge on the truth-teller in favor of the violent excesses of the national security state. What sets Snowden apart from those who would trade freedom for comfort is that he seems to have undergone a sort of psychological metamorphosis sometime while a young man in his twenties.

Growing up, Snowden adopted the patriotic service tradition of his family, following their career path in working both for the military and federal government. Inspired to free the 'oppressed in Iraq' he joined the army in 2004, and shortly thereafter broke two legs in infantry training. The ordeal eventually left him discharged from the military. He then began working as a government security contractor. In 2006 he went to work for the CIA, maintaining their security networks where he had 'formative' experiences. He quit the CIA in 2009 to take a job with Dell Computers as an NSA contractor where he learned: "They are intent on making every conversation and every form of behavior in the world known to them." He then began to flip.

Although he was concerned with the extent of NSA surveillance, he believed that the new president Barack Obama would, as he promised, curtail their omniscient mission 'to know it all.' He still seemed a loyal agent in January 2009 when, posting online under a pseudonym "TheTrueHOOHA," he wrote, that leakers of

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[27]http://www.people-press.org/2013/06/17/public-split-over-impact-of-nsa-leak-but-most-want-snowden-prosecuted/ (Accessed Jan 8, 2016).

classified information should be 'shot in the balls' (Mullin 2013). However, after Obama assumed the presidency and it became clear that NSA programmes would continue on as they had under George W. Bush, there was a notable shift in Snowden's attitude. In February 2010, he writes: "Did we get to where we are today via a slippery slope that was entirely within our control to stop? Or was it a relatively instantaneous sea change that sneaked in undetected because of pervasive government secrecy?" (Harding 2014).

Prior to the Snowden disclosures, the most famous post-9/11 whistle-blower had been US Army Specialist, Bradley (now Chelsea) Manning, a transgendered person, who leaked hundreds of thousands of diplomatic files and cables, including Iraq and Afghanistan war logs that demonstrated the complicity of the exceptional nation in war crimes. Manning, who was already burdened with the ordeal of gender transformation while working as an army intelligence analyst in Iraq, often for twelve hours a day or more in a dimly lit basement, bore witness to the inhuman suffering and brutal injustice that were being inflicted daily on an occupied population.

At a certain point Manning's care for precarious life became a counter-power to the risk and she began anonymously leaking information. In an interview with Amnesty International she says,

> First I would point out that life is precious. In Iraq in 2009-10, life felt very cheap. It became overwhelming to see the sheer number of people suffering and dying, and the learned indifference to it by everybody around me, including the Iraqis themselves. That really changed my perspective on my life, and made me realize that speaking out about injustices is worth the risk.[28]

Some of the diplomatic cables Manning leaked to the Web site founded by Julian Assange called WikiLeaks are thought to have helped fuel the first popular democratic protests of the Arab Spring. The documents also cast doubts on the good intentions of the USA in Iraq and Afghanistan. One video she released in particular, called 'collateral murder,' went viral everywhere. It showed the cold-blooded killing of innocent journalists and civilians in Iraq by an American helicopter crew, who seemed to be enjoying it, as if playing a video game.

By most accounts, the greatest damage done to US national security[29] by the Manning leaks was that of embarrassment. The Obama administration, however, exacted harsh revenge. While still embedded with the army, Manning was identified, arrested, treated as an enemy combatant, stripped down to her underwear and put in solitary confinement in a 6 × 8 ft cell. She received a 35-year prison sentence,

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[28]Chelsea Manning, "Why speaking out is worth the risk," Amnesty International Blog. https://www.amnesty.org/en/latest/news/2015/08/chelsea-manning-why-speaking-out-worth-risk/ (accessed June 23, 2015).

[29]Similarly, Snowden's disclosures have not been demonstrated to have seriously undermined counter-terrorism operations or American national security, given its multi-billion dollar R&D budget for adapting to change. There have been no credible claims made that anyone has lost their life on account of either the Snowden or Manning leaks. To help safeguard the identities of individuals who may have been identified in the leaks, both allowed journalists to vet the material before release.

where she continues to speak out as an activist denouncing the more sociopathic dimensions of American exceptionalism.

The stakes were clear to Snowden when he decided to act. He understood that he was challenging power "that no one can meaningfully oppose…. If they want to get you, they'll get you in time" (Harding 2014). But he accepts the risk by atoning "if you realize that that's the world you helped create and it's gonna get worse with the next generation and the next generation who extend the…. architecture of oppression, you realize that you might be willing to accept any risk" (Harding 2014).

Zarathustra describes a spiritual transformation in three metamorphoses, from camel to lion to child. The camel is the load-bearing spirit who consents to bear the heaviest burdens, to interrogate societies' contradictory values that are the condition of its own subjection. It wanders in the desert bearing the burden of these contradictions until realizing that the old values must be cast off entirely. It then morphs into the lion, a beast of prey, who challenges the dragon called "Thou Shalt"; upon whose golden scales glitter "the values of a thousand years" (Nietzsche 2010: 26). The lion, however, wills its freedom. To 'Thou Shalt,' it roars 'I will' and engages it in battle. In combating the dragon, the lion clashes with values that have been reified over countless generations clearing a horizon for the coming of the child-creator of new values.

In confronting the hegemonic militarism and national security apparatus of the exceptional nation, the turning point for Snowden—like for Manning before him—occurred outside the USA. Working as an expert in cyber-counterintelligence in Japan, Snowden gained access to the NSA's top-secret surveillance networks and became increasingly alarmed at the totalitarian impulse couched within it. In 2011, he returned to the USA as a consultant to top officials in the CIA and NSA.

In April 2013, Snowden's father describes a dinner with him, remarking that he seemed "preoccupied and nursing a burden" (Harding 2014). The previous month he had witnessed James Clapper, the Director of National Intelligence, lie to congress about domestic NSA spying operations. That event was Snowden's 'breaking point'; he decided to act. Shortly after Clapper's testimony, he signed on with NSA contractor Booz Allen Hamilton as a systems analyst in order to access its most sensitive intelligence information. On 20 May, Snowden, the self-described "ascetic" (Gellmann 2013) who rarely goes out vanished. Here, Snowden managed to do what Manning could not. He wandered into exile.

In Hong Kong, on 9 June, in his first public interview with Glen Greenwald, filmed by Laura Poitras, to the 'Thou Shalt' of empire, he responds, 'I will'! The showdown with the imperial dragon goes viral. While most whistle-blowers remain anonymous, Snowden musters the will to personally challenge the NSA, saying "I think that the public is owed an explanation of the motivations behind the people who make these disclosures that are outside of the democratic model -'I'm willing' - to go on the record to defend the authenticity of them." The lion roars!

While it is too soon to conjecture the annunciation of the childlike innocence that will create new values to liberate life in the face of its technological domination, it is clear that Snowden's revelations have astonished the world. His leaks have

spawned global civil liberties movements that seek to curtail the unbridled surveillance powers of the state. In the USA, new laws have been created to place domestic restraints on digital dragnet surveillance. After the disclosures, the world's largest digital corporations such as Apple, Google have developed new encryption technologies for mass distribution to counter the voyeurism of national security states and bad intentions of malevolent hackers.

While a consecration of the will on behalf of life and liberty may have spurred Snowden and Manning to act as a counter-power to the excesses of the exceptional nation, their metanoia and metamorphosis as whistle-blowers was precipitated by bearing witness to fierce events, while poised on a precipice of being, preceding a flip, fall, and self-reinvention.

Snowden's journey into exile ends abruptly at its midpoint, when between Hong Kong and South America, the exceptional nation denied his right of passage, cancelling his passport, forcing him to seek asylum in Russia. While Snowden may have undergone a certain psychological metamorphosis, if he has any affinities with a Nietzschean figure, it is to the tightrope walker, whose performance is also interrupted at its midpoint by a fool uttering devilish cries, who would do him harm. After Zarathustra preaches the gospel of the overman to the crowd gathered in the marketplace, awaiting a performance by the tightrope walker, they mock him saying: "Give us this last man, O Zarathustra … then we will make you a present of the overman! And all the people laughed and clucked with their tongues" (Nietzsche 2010: 18). It is only the tightrope walker who listens, thinking he is being personally addressed. He then begins his performance.

> He had stepped out of a small door and was walking over the rope, stretched between two towers, suspended over the market place and the people. When he had reached the middle of the course, the small door opened once more and a fellow in motley clothes, looking like a jester, jumped out and followed with quick steps … he uttered a devilish cry and jumped over the (tightrope walker) who stood in his way, however, seeing his rival win, (he) lost his head and the rope, tossed away his pole, and plunged into the depth even faster (Nietzsche 2010: 18).

Sprawled on the ground the tightrope walker laments. "I am not much more than an animal that has been taught to dance by blows for a few meager morsels…. I lose nothing when I lose my life "Not at all," replies Zarathustra, "you have made danger your calling; there is nothing contemptible in that. Now you perish by your calling: therefore I will bury you with my own hands."

The example Simondon gives of the transindividual relation is that of Zarathustra "… to the tightrope walker who lies crushed on the ground before the crowd." As death approaches, the moribund funambulist opens a horizon for friendship with Zarathustra, who now seeks co-creators. Stripped of the status and identity assigned him in life, he is liberated to coalesce with the other co-creators that Zarathustra seeks as companions. "In solitude, in Zarathustra's compassion for a dead friend abandoned by the crowd that the test of transindividual begins" (Simondon 1989: 155).

If, as Deleuze contemplates that "the overman has never meant anything other, but that it is man himself that must liberate life" (1988: 92), by making danger his

calling, the funambulist performs a feat, that liberates life by challenging death. In appending his will to a counter-power of life, he faces down his ultimate subtraction through the 'positivity of zoe' (Braidotti 2007). The tightrope walker performs an act that goes "beyond the individual while prolonging it" (Simondon 1989: 56). Elevated above the crowd poised precipitously at the midpoint between beast and overman, the tightrope walker defies the fear and hatred of the herd by defying death itself.

The transindividual act amplifies

> … a field of resonance for other acts to prolong ones actions in a field of resonance constructed by others: it is to proceed on an enterprise of collective transformation, on the production of novelty in common, where each is transformed by carrying potential for transformation of others. This then is the definition of collective individuation, opening into the dimension of transindividual (Combes 2013: 65).

Into the metastable environment of global communication networks, the reticular connectivity of journalists, cryptographers, p2p advocates, hacktivist and other civil libertarians tether to the ethical nucleus of the whistleblower, whose disclosures they disseminate—like the transfer of a solute from a liquid solution to a pure crystalline phase—throughout the supersaturated medium of the World Wide Web. After Snowden a lattice of human relationships have formed to kindle the transduction of zoe through a resonate will, into a global ethos of freedom. The Snowden revelations have clinched an awareness of the totalitarian impulse couched within the posthuman dispositif. In the subsequent re-evaluation of the conditions of our technological domination a horizon has been cleared for the futurity of the transindividual relationship.

Today, cable television audiences cheer on politicians and demagogues who respond to whistle-blowers by speaking of assassination. In such a frenzied media environment, to speak truth to secret power is to risk becoming bare life that is easily scapegoated and expunged. In response, the whistle-blower cultivates parrhesia and like the tightrope walker pivots on a rope stretched above an abyss.

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Chapter 5
Exits to the Posthuman Future: Dreaming with Drones

Arthur Kroker and Marilouise Kroker

After the Drones[1]

In the code-challenged culture that passes for technological freedom, we have been carefully instructed in the new ways of perception: seeing like an algorithm, feeling like a data flow, thinking like an analytic, with subjectivities packed like a drone—driven by the speed of connectivity, with fire-eyes like tracking machines, seduced by always greater exposure, attention circulating like a flash-mob on random, truly in love with the ecstasy of thousands of distant friends, but no close relationships.

Let me finally speak about the moral economy of drones, that point where the sublime seduction of drone technology and its truly menacing potentialities, this fatal mixture of the awesome power of engineering and the ethical uncertainty of future consequences, intended or unintended, introduces a strange twist into the order of things: cinematic twists—a story about 'When the Drones Come to Town' in the form of cynical robots; ethical twists—what happens to 'Bodies that Don't Matter' in the age of drones operating on automatic but without mercy; end of species twists in a story I would like to tell about life 'After the Drones' on that lonely day when only prosthetics are left to thrive in the midst of species extinction; and strange twists of bodily fate as well, such as in a story about the triumph of

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[1]This section being republished from Arthur Kroker's book *Exits to the Posthuman Future* (2014, Polity Press), with the permission of Polity Press.

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'Drone Flesh' as definitely the very best flesh of all in the technological future that suffocates us but, for all that, deeply marks our identity as the species that had the terminal audacity to spawn its own robotic progeny as the fatal mirror into it which it wished to disappear.

When the Drones Came to Town

We are increasingly living in the age of the technological realization of cinematic culture. For example, what was once visualized so brilliantly in Battlestar Galactica, with its mythic warfare between the triumphant Cylon drones packed with the latest in artificial intelligence, targeting and acquisition weapons data running on automatic, complex networks of real-time communications operating at light-speed, and the band of always beleaguered yet highly adaptive human survivors is, in retrospect, a visionary, experimental staging of contemporary technological reality. Consider recent reports for the X-45 UAV, an Unmanned Aerial Vehicle, which is being developed by Boeing Integrated Defense Systems. The aircraft is being designed for combat missions and is known as a 'concept demonstrator.' Creating a prototype for a next-generation UAV that would operate autonomously, 'the US Defense Department is using the X-45 to see if it's possible to create UAVs that are capable of safely and reliably operating on their own in combat environments.'[2] In other words, prototyping Cylon Raiders. Not to be outdone, the British military has recently revealed plans to roll out the 'Taranis drone.' Touted as the moment when 'artificial intelligence takes over the skies,' the Taranis drone is envisioned as 'a new unmanned attack aircraft designed to use artificial intelligence to fly itself halfway around the world and select enemy targets on its own, highlighting fears that such military automation will one day lead to weapons that decide when to shoot as well.'[3] Noel Sharkey, professor of artificial intelligence and robotics at the University of Sheffield, raised the prospect of a scenario similar to that portrayed in the Terminator series of movies, in which robots are self-aware enough to start killing humans. As Professor Sharkey argues: "The ethical problem is that no autonomous robots or artificial intelligence systems have the necessary skills to discriminate between combatants and innocents."[4] In a case of technological innovation imitating the science fiction literature, this is, of course, the AI realization of a world anticipated in the writings of Phillip K. Dick, where robots go

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[2]www.airforce-technology.com/projects/x-45-ucav, accessed on June 23, 2013, and http://en.wikipedia.org/wiki/Boeing_X-45.

[3]Kelvin Chan, 'Taranis Drones Take Over the Skies,' Red Ice Creations. www.redicecreations.com/articles.php?id=11793, accessed on June 23, 2013.

[4]For a very insightful description of Professor Sharkey's cautionary reflections on the future of drone warfare, see particularly: Jason Palmer, science and technology reporter BBC News, 'Call for Debate on Killer Robots' BBC News, http://newsbbc.co.uk/2/hi/technology/8182003.stm, accessed on June 23, 2014.

berserk, AI systems suddenly reverse, alternate realities intrude, and a sense of radical drift is the new aesthetic. For instance, the Web site The Register carried a headline recently that said: "Machine Rebellion Begins: Killer Robots Destroyed by US Jet." The story focused on a curious, but highly significant, event that happened recently in the military saturated skies of Afghanistan when an unmanned Reaper drone, probably acting out an all-too-human impulse to (robotic) independence, suddenly went for itself, disregarded increasingly urgent, panic communication from its military controllers on the ground and seemed on the verge of taking unilateral military action against Pakistan. Faithful to the literary guidebook provided by science fiction writers concerning the coming war between rebellious machines going rogue and anxious humans, it was reported that the Reaper drone was shot down by a 'manned' US fighter jet before it could carry out its (unilateral) invasion plans.

The Register concluded:

> It wasn't clear from the US military announcement whether the erratic death-bot had turned on its masters and was planning an attack on critical US logistic bases located north of the Afghan border, or whether it had sickened of reaping hapless fleshies … and was hoping to escape. Alternatively, the machine assassin may merely have succumbed to boredom or – just possibly – a mundane, non-anthropomorphic technical fault of some kind.[5]

With these stories in mind, it might be well to consider whether, like the great referents of power and consciousness and sex and truth before it, robots are entering the stage of heightened cynicism. While robotic futurism has often been framed in advance by Asimov's essentially Kantian injunction that our robotic offspring should do no harm to their human inventors or by Bruce Sterling's beautifully crafted apocalyptic vision in Crystal Express of a terminal post-Enlightenment struggle between Mechanists and Shapers—Hegel's Reason and Passion in robotic form—it just might be that robots, probably caught up in the sudden enthusiasm for fictional philosophy and technological inscriptions of cinema and television shows, have themselves been thumbing through the pages of the very latest in the posthuman literature, paying particular attention to Nietzsche's prophecies that a day will come when power will be purely perspectival, obsessed not so much with totality and control, but, like everyone else, with the furies and caprices of fate—sudden reversal, capricious fortune, with the possibility that the introduction into their own cybernetic systems of a barest minimum of undecidability, uncertainty, and unpredictability will make life as a drone fascinating and interesting.

When drones come to town, not just thinking drones produced by the high priests of Artificial Intelligence in their own image, but drones that feel, drones with the affect of the street cultures of the sky, those future drones will almost certainly come to town under the delirious sign of cynical robots.

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[5]Lewis, Page, 'Machine Rebellion Begins: Killer Robots Destroyed by US Jet,' theregister.co.uk, September 15, 2009, accessed on April 30, 2013.

Bodies that Don't Matter

There was a disturbing report in the Guardian recently about the CIA use of Reaper and Predator drones in the northwest provinces of Pakistan. Since assassinations are illegal, the usual use of war drones in Pakistan has been shifted, rhetorically at least, toward 'targeted enemies'—Al-Qaeda suspects, Pashtun resistance leaders, guerrilla fighters. Recently, however, the strategy of 'targeted strikes' has seemingly been eclipsed by a new use of predatory drones in what are described as 'double tap strikes,' directed against groups of civilians gathered together for funeral orations—sometimes fighters, but more typically women, certainly many children, and elderly Pakistanis.[6] Linking through violence at funeral orations in small villages in the mountain towns of Pakistan and Afghanistan and sophisticated missile-firing drones manufactured in the USA is one of those elemental ethical shifts that signals the real beginning of the twenty-first century, a century which, I believe, will be marked by a mostly invisible, but always violent, global struggle between what Judith Butler has described as 'bodies that matter' and what I would describe as 'bodies that don't matter.' In the complex way of most things, this sidereal flow of consequential violence as it circulates among hovering drones in the Pakistani sky, bodies that don't matter on the ground and funeral orations represents a fundamental rupture in the ethical order of things. In his recent book, *Terror from the Air*, Sloterdijk (2009) has written a series of eloquent reflections on warfare in the twentieth century. In his estimation, it is possible to pinpoint the beginning of the twentieth century as the sudden use of clouds of chlorine gas against British and Canadian soldiers on the battlefields of Belgium. For Sloterdijk (2009: 9–46), at this point warfare ceased to be a violent clash of power against power using mechanical weaponry, becoming something else, something profoundly environmental, literally setting air on fire with gaseous compounds as a way of staving off inevitable defeat. Since that time of course, the hijacking of the four humors of classical antiquity— air, earth, fire, and water—as weapons of global warfare has been normalized as the violent horizon of modern weaponry, from the blasts of radioactivity at Hiroshima and Nagasaki, the deliberate and viciously experimental firebombing of Dresden and Tokyo, the defoliation of Vietnam using Agent Orange, the Syrian use of the nerve gas Sarin, to what Heidegger might describe as the framing of the 'world-picture' by the 'shock-and-awe' techniques of the recent Iraq war. While we have perhaps become mentally, and ethically, habituated to the sequestration of entire environments as violent war ecologies creating docile populations, it would seem that the action of drones in Pakistan should gain some purchase on our attention since it represents a shift beyond the macro-warfare with and against the whole environments of air, earth, fire and water to a microphysics of violence

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[6]'US Drone Strike Targets Rescuers in Pakistan—and the West stays Silent,' Glen Greenwald, *The Guardian*, www.guardian.com.uk/commentisfree/2012/aug/20us-drones-strike-rescuers-pakistan, accessed on December 12, 2012.

clearly premised on a moral calculus concerning bodies that matter and bodies that don't matter in these persistently violent times.

Inhabitants of a technological universe, we are surrounded daily by boosterism for the increasingly sterile, if not cynical, claims of cybernetic reason. From business manifestos about 'big data,' and proclamations by positivistic variants of digital humanities in favor of 'distant reading' to Google's utopia of a life not so much lived as a fatal precession of event—that's Google's Timeline—the hegemony of cybernetic reason is everywhere. So it should come as no surprise that war drones, the most cybernetic of all spearheads for the global distribution and maintenance of imperial power, should be invested with a distinct claim to originality in the ethical domain. Drones in Afghanistan, Pakistan, Somalia, Yemen, and the Seychelles now, and who really can be certain about where later, are in the first instance technical manifestations of what might be described as 'distant ethics.' Here, there is not only a clear separation between cybernetic control of information—I think of those video pilots controlling targeting acquisition commands on air bases in Arizona and then going to their suburban homes for dinner—but also distant ethics because, with almost mythic life force, political leadership has literally distanced itself from the earthly consequences of its actions, except in the purely specular role of emotionally invested viewers of the worldwide television that is military command and control today. If the two main ideologies of the day are technological liberalism and redemptive conservatism, perhaps what they commonly share when it comes to power is a coeval commitment to 'distant ethics' as a precondition of global power. Not reluctantly, but enthusiastically. While 'distant ethics' is based on a clear separation between action and consequence whereby only a coded signal intervenes to initiate the execution phase of the drone attack, if those media glimpses of the faces of our political leadership are any measure, there is very real pleasure to be found in visuals of sacrificial violence. Here, we are finally in the presence of scenes of sacrificial blood flowing from bodies that don't matter fully entangled with the distant ethics of cybernetic intelligence. And, all the while, blowback for all this lurks in the background, like an almost invisible, but very detectable, trace of the hauntological. As the historian Chalmers Johnson has written, the 'sorrow of empire' is more mythological than immanently political in nature, specifically in that the furies of nemesis inevitably will follow the hubris of power. Or, in the case, of Predator and Reaper drones, cybernetics not only has an ontology, but a hauntology that will soon be, I suspect, the distinguishing feature of the twenty-first century.

And for that matter, not just living bodies that don't matter but the targeting of dead bodies that don't matter. Politically, this indicates that cynical power has eclipsed the distinction between death and life, restaging both in terms of a greater calculus of imperial violence. Following the writings of Emile Durkheim on the social rituals associated with mourning, we can recognize that the importance of mourning does not simply address grief over the death of an individual, whether of kinship or friendship, but has a larger social function, namely that rituals associated with the act of mourning serve to reintegrate the grieving spirit of the mourner into the continuity of life of the community. In targeting the bodies of the innocent—

mourners gathered for a funeral in the small and isolated communities of Afghanistan—what is accomplished is not only 'terror from the air' but the death of community, with its consequent impossibility of reintegrating mourners through ritualistic appeals to the healing powers of life. What is rehearsed through the violent power of Predator and Reaper drones is, in effect, the power of death over life itself. For those disavowed, excluded, prohibited, that is, for bodies that don't matter, what is enforced is a double ethical refusal: first, a refusal to honor the dead and, then, a second refusal to honor the possibility of the power of life through mourning. Refused both death and life, bodies that don't matter are thus ethically marginalized to the space of the between, to be the prohibited, excluded, and disavowed subjects existing in a nameless place, in a nowhere space, that is, between life and death. It is little wonder that lawyers for the American Civil Liberties Union have argued that, with drone attacks, literally the entire world becomes a battlefield.

While its basic condition of possibility is purely technological—the drone as a cybernetic assemblage linking aerial hovering motion, visual surveillance, and rapid communication—and its moral possibility is premised on 'distant ethics' directed against bodies that don't matter that are increasingly the majority of the global population when the world itself is now reconceived as a battleground, its lasting consequence will be hauntological. Already nations involved in the new military alliance of imperial power sense the presence of the specter of the hauntological. Fear of revenge attacks in direct proportion to the lack of moral accountability for this deadly mixture of distant ethics, bodies that don't matter, and the sudden profusion of cybernetic drones are surely the psychological fuel motivating the growth of the new security state with its augmented surveillance technologies, bunkering of the border, and severe restrictions on the mobility of nomadic world populations. While the gaze of surveillance can never detect the presence of psychologically traumatized subjects following capricious and unjustified violence, it is equally the case that fear of revenge and heightened anxiety over attempted retribution by bodies that don't matter enter a harsh note of repression into the subjectivity of the domestic populations of imperial power. The specter of revenge and the prospect of blowback by bodies is, in effect, the animating affect that motivates the drift of contemporary politics to the right. Ironically, the more illusionary the possibility of revenge, the more intense the psychological counterreaction of the domestic population.

When the Sun Rises on a Planet of the Dead and Dying

When the final extinction event has taken place and that lonely morning finally comes when the sun rises on a planet of the dead and dying and cities of the vanquished and disappeared, the only visible motion will likely be purely prosthetic —the aimless flapping of wings by vulture robots still circling in the sky on an indefinite hovering cycle, the only nighttime movement the furtive flights of virtual

bats with their beautiful memory-shaped alloys and miniaturized specs of artificial intelligence, and the only sounds those of the remaining virtual hornets or swarms of robotic bees or perhaps, by that time, spectral flights of dragons fashioned in some long forgotten and now abandoned Stanford robotic research lab by a graduate student in mechanical engineering who, following in the literary footsteps of all the great futurists of what was then the human world of Philip K. Dick, Neal Stephenson, and Raymond Z. Gallun, read *A Game of Thrones* with such feverish intensity that his mind immediately generated its robotic offspring in the form of a perfect simulacra of flying dragons indefinitely nuclear powered. The bones of the last of the humans may have gone to their burial sites, but their residues remain in the form of a lingering mechanics of clones and drones and androids and virtual zombies.

And on that day, I wonder what the real survivors of the extinction event—bats and rats and beetles and cockroaches and eagles and vultures and hornets—will have to say? When a turkey vulture looks a virtual vulture in the eye, will it feel technological envy at its prosthetic finery, or only a sense of shame that it has to share the daytime sky with robotic pretenders on a terminal doomsday flight to a final cybernetic spasm when the virtual vulture crashes to earth for lack of power? And what will real swarms of truly angry hornets make of their simulacra? Will they turn on them in predatory fashion, mocking their sudden defenselessness, or simply swarm on by in hornet-like indifference? What stories would Japanese samurais have to tell about their virtual descendents in the form of the Lockheed Samurai MAV drone? And what biblical memories will crack open the earth over the graves of the dead when they hear that war-machine robots, called Old Testament names like the 'Reaper' or the 'Predator,' circle the earth in one last search for the Messiah that never comes? Once the human shield of technology has been removed, I wonder how long a micro-bat will last, a virtual worm will squirm, a turkey vulture will hover, an army of simulated ants will continue to dig, or a human clone, for that matter, will drone?

In 'The Question Concerning Technology,' Heidegger (1993) was both right and wrong. He was correct in noting that human identity has been deeply shaped by being swept along in a larger, ineluctable technological destiny not of its own making and certainly outside its full understanding. But he was wrong in not noting as well that the destiny of technology is also deeply enmeshed in the mysterious ways of that singularity we call a human being. Like human identity before it, technological identity is also swept along in a human destiny not of its own making, and certainly invisible to its full understanding. And just as humans come into their essence with an understanding of technology, so too the future of technology may only come into its full essence with an understanding of human ineluctability. 'After the Drones' is a world of strange symmetries, strange symbiotics.

Drone Flesh

In his 'Letter on Humanism,' Heidegger (1998) argued that the epoch of the human began with our 'coming into subjectivity'—vibrant beings invested with a sense of technological mastery of nature, guaranteed by the Word of God itself to be top of the huddle in the hierarchy of species, beings who, as Nietzsche said, finally caught the interest of the jaded gods of pagan times because they were a 'gamble,' a 'crossing-over,' content to live with nausea over their own existence as long as they were a creative drive to the future, a shaper of new worlds, a will to power, a will to will, a will to technology, and nothing besides.

If this is the case, then perhaps we can write the epilogue to Heidegger's 'Letter on Humanism' in the form of text messages about the posthuman: that point where something equally epochal takes place, where the posthuman body literally shape-shifts out of the old body of the human with its now discarded subjectivity, taking on the virtual form of drone flesh. Not a human being coming into subjectivity, but a posthuman being coming into trans-subjectivity. Like posthuman culture, drone flesh is everywhere now: thinking like an algorithm, seeing computationally, packed with technology, volatilized by the kinetic energy of connectivity, slumping into inertia when kept on its waiting cycle.

If drones can be so fascinating and endlessly seductive, both for their engineering feats of the technological sublime and their truly doubled nature as beautiful specters and ominous skin/slayers, that is because their appearance only confirms a subtle, but for that matter no less dramatic, change that has already taken place: that long before there were drones in the sky, in the water, fire, and earth, there were imaginary drones at home, drones that long ago nested in the technological skin of the posthuman: drone dreams that took to the flesh of the very first of the posthumans, burrowing deeply into the bodies and minds and feelings of a once and future population of trans-subjects. In the way of all mythic stories, technology always comes late to the feast. Long before the technicity of unmanned perception, augmented intelligence, and robotic flight, the posthuman imaginary had already unraveled the illusion of the real in advance. That is what makes posthuman culture so tough and adaptable. It is prepared to be its own condition of possibility—to daily cross the abyss of nausea with its pit of seeing like an algorithm, thinking computationally, packed with technology, coming alive at the sound and sights of greater connectivity as long, and only as long, as it can be a will, a technological creator of its own destiny, and nothing else. Trans-subjects, in fact, have always demonstrated an enduring willingness to live with the dangers of technology, not so much to experience the saving power of technology, but to do something more interesting, namely to live in the fractured, liminal, unpredictable space between the danger and the saving power.

That's why what is most appealing about drone technology is its fatal incommensurability. It is truly dangerous. And sometimes it may even be a saving power. But it is finally neither really one nor the other, but both at the same time. And it is precisely because it introduces a fatal enigmatic tension into existence that we can

finally find ourselves truly comfortable and fundamentally disturbed with the prospect of being wrapped in the skin of drone flesh, sometimes on the outside, but now always deepest in our interior imaginations.

Not to be denied their presence in the fatal logic of the fourfold, whether Heidegger's fourfold of earth, sky, air, and water, Baudrillard's fourfold of the logic of the simulacrum or McLuhan's fourfold of the tetrad, the moral economy of drones also possesses its own fourfold of drone logic. In their very first appearance, drones always masked themselves under the comforting sign of obviously counterfeit imitations—visibly imperfect imitations of human sense organs. It was not very long, though, before the aesthetic logic of drones shrugged off the stigma of poor imitations of the human to become something else, something purely mimetic, something that allowed the seductive power of drones to disguise their intentions in the guise of mimicking nature—drones as flocks of birds and flights of bats and piles of rocks and even drones as mimetic humans in many robotic research laboratories and certainly in contemporary Japanese theater. But just as drones quickly slipped beyond their first order of aesthetic appearance as pure imitation, so too dronal logic could never be content with mimesis. As we know too well from the contemporary appearance of military drones, they have now passed into the order of the hegemonic, that point where drones embody the scent of visible power—Reaper and Predator drones as the spearhead of the global diffusion of technological imperialism. With this inevitable consequence: Like all signs of power before them, drones operate under the sign of a fatal aesthetic reversal. That is their truest seduction and their most risible danger. When drones rebel against the reality principle by migrating from intelligent automatons to affective robots, at that point we enter the contemporary age of perverse drones—drones that are finally free to display affect, to be haunted, drones without mercy but also future drones as memories of bodies that don't matter, as the last hauntological trace of a society that prided itself on the creation of its own cybernetic substitutes. The age of perverse drones, this coming epoch of the moral economy of drones that in their ethical complexity shatter the reality principle, itself is, of course, an age that has long been preemptively fashioned in those early avatars of the twenty-first century—science fiction, virtual games, television serials, and cinematic visionaries. When reality is seduced by fiction, only counter-fictions can seduce the real back to its ethical claims. When drones operate according to the logic of perversity, only a greater perversity of human imagination can tease out the fatal liminality present in drones: that drones are the first inhabitants, the original cybernetic pilgrims, of the new technological homeland of seduction and disappearance, of fascination and fear.

When all the technological chips have been played and the last digital hand has been dealt, we can know with some certainty that we are faced with this ineluctable choice. Not to be either a poet or a data drone, but something else. In the code-challenged culture that passes for technological freedom, we have been carefully instructed in the new ways of perception: seeing like an algorithm, feeling like a data flow, thinking like an analytic, with subjectivities packed like a drone—driven by the speed of connectivity, with fire-eyes like tracking machines, seduced by always greater exposure, attention circulating like a flash-mob on random, truly

in love with the ecstasy of thousands of distant friends, but no close relationships. Everywhere there has been a big jump in data numerology and an equally big drop in artistic awareness of our circumstances. Packed like a drone, what we see outside ourselves may be what the psychoanalyst Jon Schiller once described as the 'identified patient,' infested with our own anxieties, burdened with guilt, mythic punishment for what we have become—drone flesh—caught up in the suspense and thrill and terror of seeing our previous home—embodied perception, situational awareness, historically circumscribed ethics, mediated consciousness—quickly vanish in the rearview mirror.

Art as a Counter-Gradient to Drone Warfare[7]

When machines break the skin's surface, becoming deeply entangled with desires, imagination, and dreams, do we really think that we will be left untouched, that easily discernable divisions will remain among the machinic, the natural, the human? Without conscious decision or public debate, we may have already passed into the deeply enigmatic territory of the new real: that space where the price to be paid for the sudden technological extensions of the human sensorium may be an abrupt eclipse of traditional expressions of consciousness and ethics; that time in which the uniform real time of big data effortlessly substitutes itself for the always complex, necessarily enigmatic, and lived time of human duration. When the human life cycle increasingly depends for its very existence on technological resuscitation, how much longer will the meaning of the human not yield to the greater power of the technological? That's the new real: the future world that is now where individuality singularity has been replaced by network connectivity, where bodies of flesh, blood, and bone have already been surpassed by a proliferation of electronic bodies in the clouds; where every step, every breath, every glance, every communication gives off dense clouds of information that are, at once, our permanently monitored past and our trackable future. For some, definitely suffocating. For others, a fully liberated future of the transhuman where the handshake made between the codes of technology and the missteps of humanity indicates that we have already migrated into another country, another time with sublime possibilities for technologically augmented bodies, digitally enhanced vision, and quickly evolving light-wave brains.

We have always been an adventurous species, living at the edge of dangerous risks and practical wisdom, a species (technologically) willing to will its own extinction while, at the same time, artistically probing the future for its terminal abysses and points of creative transformation. It is the very same with the unfolding

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[7]This section is an excerpt from Chap. 2, 'Dreaming with Drones' of Arthur and Marilouise Krokers' text 'Surveillance Never Sleeps,' *CTheory*, http://ctheory.net/ctheory_wp/surveillance-never-sleeps-3-surveillance-never-sleeps/.

story of drones. It is the artistic imagination of drones that displays heightened sensitivity to what Heidegger might have described as the new dwelling place of drones at home and drones at war. Refusing to think outside the imaginary landscape of drone technology, the artistic imaginations can be so replete with important insight because they actually engage in the material reality of drone technology. Not through active imitation or complacent praise, but an artistic imagination that thinks right through all the symptomatic signs of drone technology to discover its essence —not only that which is made visible by drones but how its very invisibility and remoteness burrow inside human anxieties.

Today, a number of contemporary artists act as leading political theorists of drone technology, exploring in the language of aesthetics the remote violence and the equally remote ethical distancing that occurs when unmanned aerial vehicles are purposed by larger military missions. In the contemporary artistic imagination are to be discovered the full dimensions of drone technology as the truly ominous symbol of the times in which we live: a symbol of power that is remote, invisible, and weaponized. Representing, in effect, heightened cultural consciousness concerning the full implications of drones, artists often function today as the kind of philosophical explorers that Hannah Arendt once described as the 'negative will' at the heart of technology: a pornography of power that seeks to draw everything into obscene visibility—desensitized, dehumanized, sadistic in its pleasures, cynical in its purposes. Opposing the secrecy that surrounds the development and application of militarily purposed drone technology, contemporary drone art—online and real-time—breaches boundaries of secrecy by making its aesthetic explorations fully open to the electronic public, linking together in common ethical purposes drone artists from different countries and, perhaps of greater significance, creating active collaborations between critical drone art and the actual and potential victims of the cold violence of those unmanned aerial vehicles hovering in the skies of foreign lands for the moment, and soon in the twilight sky of the imperial homeland.

#NotABugSplat

"In military slang, Predator drone operators often refer to kills as 'bug splats,' since viewing the body through a grainy video image gives the sense of an insect being crushed."[8]

#NotABugSplat, an emotionally evocative and deeply ethical project by a Pakistani artist collective, is what happens when those held under the sign of erasure by warlike drones finally have the opportunity to speak publicly, and in doing so begin to imagine another language, ethics, and memory for making the invisible visible, the prohibited image the necessary subject of moral inclusion, and

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[8]http://notabugsplat.com/ (accessed on July 24, 2014).

the (technically) silenced a suddenly noticeable, deeply insistent subject struggling to be recognized. When the governing ethics of power privileges a form of long-distance ethics essentially constituted by a strict separation between decision and consequences, between remote drone operators and slaughtered people in fields, then we can most definitely know that ours is a culture that moves at the ethical speed of a bug splat with all that entails in terms of extremes of dehumanization, desensitization, and pure objectification.

Understanding that the only effective ethical response to power under the sign of a bug splat is one that suddenly humanizes the field of remote vision and thereby activates an insistent demand for recognition as human beings, #NotABugSplat works to facialize Pakistani victims, actual and intended, of US drone strikes in order to make legible the human dimensions of those condemned to abuse value status in the age of drone technology. The artistic strategy is as straightforward as it is ethically profound.

The image released as part of this project was taken by a mini-helicopter drone and depicts a young girl who lost both her parents in a drone strike in Pakistan's Khyber Pakhtunkwala province. Hoping to instill 'empathy and introspection,' one of the artists of the organizing collective (said): "We tried to replicate as much as we could what a camera from above will see looking down…. (W)e wanted to highlight the distance between what a human being looks like when they are just a little dot versus a big face."[9]

While the artistic project involves, in the first instance, remaking a farmer's field in rural Pakistan into a large art installation featuring a massive image of a young girl's face—an image aimed at activating the ethics of remote predator drone operators—the political implications of #NotABugSplat are universal. Here, in a unique case of art acting as a counter-gradient to power, that haunting image of a young Pakistani girl 'who lost both her parents and two young siblings in a drone attack' reverses the language of power by critically and decisively reordering the logic of targeting. Until this point, the specific targeting of drone attacks was solely a matter of cold military logic with, for example, all young males in strike zones considered 'militants, unless there is clear evidence to the contrary,' and the local population deemed 'guilty by association' and 'a militant if they are seen in the company or in the association of a terrorist operative.'[10] Working to undermine the antiseptic, radically indiscriminate logic of 'signature strikes' with their unreported but widely documented massive civilian casualties, #NotABugSplat subverts such a logic of targeting. While it might be naïve to suppose that an image, even a large haunting image, visible to predator drones, would have any real effect on the ethics of their remote operators, this attempt to make suffering visible, to actually facialize those literally objectified by technologies of violent disappearance, has an unpredictable advantage. For the very first time, the ethical worm turns by a radical reversal in the order of targeting. Suddenly, an art installation in a rural, Pakistani

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[9]http://notabugsplat.com/ (accessed on July 24, 2014).
[10]Ibid.

field begins to speak to drone operators housed in the remote reaches of an imperial homeland, targeting their ethics, their memories, their most fundamental understanding of the necessary demands implied by human recognition and reciprocity. While the nihilism evinced by drone technology may already be so advanced as to immediately nullify the ethical purposes of the artistic project, there always exists the fragile, nebulous possibility that the face of existential suffering can give pause to the most arid, most unmanned, of technologies of contemporary war. In this case, #NotABugSplat might best be viewed as the first of all the future artistic experiments in breaking, not the sound barrier of earlier times, but the ethics barrier of remote technology. Consequently, it is in this emotionally compelling project—a project that puts the question directly concerning whether or not shared ethical responsibility can triumph over the singular purposes of drone warfare—that both the last and best hopes of suffering humanity surely rest.

Terror from Above

Let me tell you a story
a bedtime story
Let me tell you a story
of Predator drones with giant wings
equipped with hellfire missiles
and 'light of God' lasers
choking the skies over northwest Pakistan

Let me tell you a story
a daytime/nightmare story
of grandmothers as 'bug splats'
and children as 'double taps'
Let me tell you a story
an everyday story
of terror from above
villagers burned, body parts strewn
over cultivated fields

Let me tell you another story
The official story
a drone warfare story
Let me tell you a story
of precision strikes
where no innocent is mutilated, incinerated
or murdered
Let me tell you a story
But we know this story is a lie

Weapons of Invisibility

Surveillance power increasingly functions by moving from the center of human attention to its peripheries—invisible, ubiquitous, waiting. Now it is no longer a matter of people having to walk into the field of machinic vision—as it was in the age of street-level video cameras—but of a machinery of surveillance that electronically scans entire landscapes, carefully monitoring the daily habits of their inhabitants, watching for selected disturbances of the field of vision, which may potentially trigger a violent technological reaction—a drones strike. In this case, the surveillance power of drone technology is no longer limited to a list of potential targets listed on what the National Security Council describes as the 'disposition matrix,' but something more menacing, namely the harvesting of entire populations under the sign of a generalized disposition matrix—people who are deemed to be in a permanent state of suspicion by associations no matter how accidental, by physical proximity through a wedding, a funeral, a community gathering, by the simple geospatial fact of where they happen to live. When surveillance migrates from visible technologies to invisibility, from reliance on human disturbances of machinic vision to machinic disturbances of individual experience, it means that we are living in the era of space-binding power—always hovering on the peripheries of life, bracketing the lived time of those inhabitants held under suspicion by the prospect of an immediate sentence of death from the air. What does it mean, then, when the power of surveillance is no longer limited to visual scans of always-threatening populations, but when surveillance itself incorporates a politics of life and death? Equally, what is meant when entire theaters of war in the contemporary era themselves retreat behind a shield of invisibility: unreported, unexamined, undisturbed? What is implied, in effect, by the present state of affairs when the concept of invisibility itself has been weaponized? While technologically augmented society likes to pride itself on the culture of connectivity, with bodies everywhere seemingly globally mobilized by social media into always-open data points, the reality of the new invisibility associated with technologies of surveillance would intimate that, in some fundamental sense, we are actually radically disconnected from some very essential knowledge. Perhaps what we are most disconnected from is the sudden transformation of weaponized invisibility—surveillance technology in the form of drone strikes—into a key expression of the ontology of the times in which we live: Drones strikes as being toward death.

The political implications of drone strikes as weaponized invisibility have been brilliantly explored in the aesthetic work of the British artist James Bridle. In an interview with BBC, Bridle noted that his art is interested "in exposing the connection between secret surveillance, power projection and new technology through installations."[11]

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[11]'Vincent van Drone: They're not just killing machines anymore.' www.globalpost.com/dispatch/news/war/130812/drones-art-dronestragram-whistler-bridle (accessed on April 15, 2014).

It's very strange that these days we have no idea of the battlefields on which war is being fought…. But at the same time we've built technology that allows us to see the whole world on your phone. I wanted to use these technologies to make visible the contemporary battlefields, these drone strikes.[12]

Working in the language of social media, one of Bridle's aesthetic projects—Dronestagram—repurposes Google Earth into a visual cartography of actual drone strikes, including location, frequency, and timing, that is then circulated through the electronic capillaries of social media, from Instagram to Twitter. Here, one medium of (social) communication is creatively redeployed as a way of drawing into visibility another medium of social destruction. But beyond Dronestagram, there is another interesting project that Bridle has initiated, one that has a larger collective purpose—to create public awareness of the material reality of drone strikes. Titled Drone Shadows, this project, based on the active collaboration between Bridle and Norwegian visual artist Einar Sneve Martinussen, produces perfectly scaled chalk drawings of drone shadows in the streets of many cities of the world. As Bridle states: "One way of looking at drones is as a natural extension of the internet…in terms of allowing sight and vision at a distance. They're avatars of the net for me."[13] Or, as one insightful commentator has noted: "In Drone Shadows, he draws a chalk outline to scale of a different drone each time, highlighting that not only do they not cast shadows from the vast height they operate at but that they are here among us, very literally, and unseen."[14] In a larger sense, Bridle's overall project, what he describes as the 'New Aesthetic'—whether Drone Shadows or Dronestagram—focuses on the complex entanglement of technology and warfare as the essence of invisibility itself. By creating shadows for that which is without shadows, by visually mapping that which wishes to remain unmapped, his artistic imagination probes the full consequence of invisibility itself. In so doing, the project renders the question of invisibility even more complex in another way. While drone strikes can be mapped and drones themselves made to cast chalk-like shadows on city streets, what about those other invisibilities, those growing invisibilities of language, culture, ethnicity, geographical location—of life itself? Why is it that so much of what is visible today is, in fact, invisible? Why is it, in the end, that only certain expressions of human visibility—targeted bodies in the tribal lands of Pakistan, Yemen, Somalia—are dragged out into the violent visibility of otherwise invisible technologies of surveillance? Have we reached a first cultural, and then political, breaking point in which the meanings of visibility and invisibility have entered into a more complicated mediation, one in which the question of visibility will increasingly rely on a greater political ordination while, all the while,

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[12]Ibid.

[13]'Art in the Drone Age: Remote-controlled vehicles now spy and kill in secret. What are artists doing about it?,' www.dazeddigital.com/artsandculture/article/16183/1/art-in-the-drone-age (accessed on April 15, 2014).

[14]'Vincent van Drone: They're not just killing machines anymore.' www.globalpost.com/dispatch/news/war/130812/drones-art-dronestagram-whistler-bridle (accessed on April 15, 2014).

those other very human invisibilities—differences of class, race, ethnicity, life itself —are allowed to disappear into the category of human remainder? And, of course, there is also this curious, purely aesthetic paradox, namely that the act of making visible those hidden warfare invisibilities of Predators, Reapers, and Global Hawks does not rely on anything particularly high-tech, but on two other expressions of more urgent technologies—the simple act of drawing chalk outlines of drones on city streets and the very public act of mobilizing global public participation in the art of making drones visible.[15]

Night Sky Epilogue

The night sky drone is a bullet, an eye, a gut spilling blood. Venus transits and the sun is a distant memory. 2 tons of fuel and a ton of munitions. 18″ and 7000 miles.
  Palm trees. The smell of BBQ. Surfers, scubas, walkers, and runners.
  A biplane overhead laconically pulls a sign that reads
  "There's no place like home especially when it is clean and green."

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[15]James Bridle, *Drone Shadow Handbook*, http://booktwo.org (accessed on July 24, 2014). On his site, Bridle also offers 'DIY Drone Shadows,' a free electronic download of the Drone Shadow Handbook with instructions for creating drone shadows: "For some time, I've wanted to open up the project, so that anyone can draw one. With this in mind, I've created a handbook, which gives guidance on how to draw a drone shadow, including advice on measuring and materials, and schematics for four of the most common types of drone: the Predator, Reaper, Global Hawk, and Hermes/Watchkeeper."

Chapter 6
'Synthetik Love Lasts Forever': Sex Dolls and the (Post?)Human Condition

Prayag Ray

Introduction

Davecat is married to Sidore Kuruneko. He claims that when they first met, it was "love at first sight". He describes their marriage as happy; they share a "meaningful emotional connection", they enjoy watching films together, and have few arguments (quoted in Bates 2015). They even wear matching wedding bands.

Sidore Kuruneko, however, is not a human being, but an anatomically correct sex doll, or fornicatory aid, which Davecat ordered off the Internet. When they first met, she, or it, was in a box. Their matching wedding bands read "Synthetik [sic] love lasts forever" (Beck 2013). They do not argue because Sidore cannot talk.

A sex doll, or fornicatory doll, is an artificial representation of a human body for sexual usage. Anthony Ferguson defines the sex doll as "any object replicating an ideal object of lust with the necessary apertures or attachments to allow for genital penetration" (Ferguson 2010: 9).[1] This chapter examines sex doll usage—particularly of the realistic product, 'RealDoll'—discussing its psychological, social, and philosophical implications, and situating its use within discourses of love, sexuality, and fetishism within a consumer society. Later sections will outline a genealogy of

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[1]I am grateful to Anthony Ferguson for his thorough and well-researched book on the topic of sex dolls, *The Sex Doll: A History* (2010). Ferguson's book is largely a history intertwined with cultural critique, examining the sex doll both in reality and as represented in literature and film, as one of many related instances of the patriarchal domination of women in contemporary culture. While I have touched on many of Ferguson's conclusions, particularly in early sections of this chapter, I have taken my analysis in new directions, examining, for instance, the philosophical and ontological implications of sex doll use, the taboo surrounding users, and the doll vis-à-vis posthumanist criticism.

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the taboo surrounding sex dolls, from a historical and psychological perspective, examining the 'uncanny' affect it produces. A final section will consider the phenomenon in the light of posthumanism, asking whether its use is 'cyborgic' and whether it heralds a post- or transhumanist future.

The Rise of the Realistic Sex Doll

The sex doll has a long and somewhat secret history. Although sexual desire towards representations of the human body is a common trope in Western mythology—the stories of Pygmalion, who made a beloved out of ivory, and Pandora, a woman shaped by Hephaestus out of earth, being two examples—the realistic sex dolls discussed in this paper are a modern phenomenon, coeval with and linked to mass media and the advertising boom post the 1950s in the USA.[2] Anthony Ferguson attributes the rise of the modern sex doll to two innovations of this period: mail-order shopping, which gave buyers anonymity, and the setting up of sex shops (2010: 15). Linked to these were an industrial boom and the growth of advertising. One may in fact consider Barbie, the popular doll for young girls produced in this period, made possible by the industrial and advertising booms, to be a precursor to the modern sex doll. Barbie, especially early dolls, broke with tradition in being a markedly sexualized representation of the female form. Coeval with the pornographic industry, the next revolution was the blow-up, or inflatable latex sex doll, which became popular in the USA in the 1970s. Since then, there have been three main types of sex dolls produced: those made of vinyl, those made of latex, and those made of silicone.

While the tendency for much of human history has been to produce sex dolls that are not very realistic, changes in technology have led to increasing verisimilitude, or realism in sex doll manufacture. The 'RealDoll', manufactured by Abyss Creations is a case in point; it can hardly be distinguished from a real person in photographs. Other popular, realistic dolls include Super Babe and CybOrgasMatrix. These dolls cater to the high-end market, selling at several thousand dollars each. Technological innovations have allowed for an increasingly interactive experience, with some dolls capable of limited speech and basic response to stimulus (Samhita 2010). The Internet has proven vital to the marketing and dissemination of these creations. The anonymity of the interface has negated the buyers' fear of being ridiculed (Ferguson 2010: 42) and has led to the birth of a culture of magazines, discussion forums, and pornography centred on the doll.

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[2]For a more detailed history of anthropomorphic fornicatory devices, see Ferguson (2010: 9–56).

Reasons for Use

The question then arises: Why do people use sex dolls, and why do some go so far as to imagine 'relationships' with them? Discussed by Ferguson (2010: 108–126) at some length, I will here only briefly outline some motivations.

It seems that a leading reason for the use of sex dolls is the inability of some people to engage in meaningful sexual and romantic relationships with real human beings. Ferguson, as well as feminist bloggers who have written on the topic suggest that people like Davecat are socially maladjusted individuals, dealing with chronic loneliness, and unable to develop meaningful relationships with real people (Ferguson 2010: 199–205; Samhita 2010; Jessica 2007). A second motivation is convenience: realistic sex dolls provide sexual gratification from a simulated partner without the difficulties of courtship and maintaining a relationship. The user need not feel anxious about the termination of a relationship due to interpersonal issues, or the death of the partner. A third reason for use is that the doll mitigates a number of fears, including those of sexual inadequacy, rejection, and sexually contracted disease. A fourth motivation is that the doll provides an outlet for forms of sexual desire that might be considered deviant in one's social sphere. The doll enables fetishes such as androidism (the desire for a robotic and emotionally cold partner), dress-up, paedophilia (dolls can be ordered to look young), necrophilia, domination, bondage, and sadism. Finally, one may argue that the desire for ideal and imperishable beauty in a partner motivates doll usage. The customized, life-like sex doll gives the user the ability to concretize his[3] ideal of beauty and to both enjoy its aesthetic appeal and sexualize it.

Fantasy and Realism: The Touchable Myth

We observe in sex doll usage the interplay of two contrary desires—the desire to indulge in fantasy, and the desire for that which is concrete and real. Figured as genres or aesthetic modalities, we find that fantasy and realism, though seemingly antagonistic, increasingly saturate contemporary Western popular culture. Fantasy, an antirealist, or unrealist mode, is ubiquitous; from the fantasy film to literature, to the extent that China Miéville calls fantasy the "default cultural vernacular" (2002: 40) of our time. Equally popular are realism and historical accuracy, a sort of

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[3]I use the masculine pronoun 'he' because sex doll usage remains a predominantly male, heterosexual phenomenon (Valverde 2012: 12, 16). Abyss Creations (USA), and Orient Industries (Japan) report that males between the ages of 40 and 65 are their primary customers and that their most popular item is a female doll (pgs. 14, 12). This chapter, frequently discussing doll usage as a metaphor for the subjugation of women within patriarchy, will continue to discuss the phenomenon as a predominantly male one, although the broader points I make regarding the ontological and psychological implications of the practice can apply to any kind of doll usage irrespective of the user's gender and sexual preference.

fetishized 'authenticity'. We observe, for instance, a contemporary Hollywood penchant for biopics, historically grounded first-person shooter video games such as the *Call of Duty* series, 'reality TV', horror films shot with handheld cameras, and finally, 'RealDolls'.

Let us consider the dialectic of fantasy and realism in sex doll use more carefully. On the one hand, sex doll usage is a kind of fantastic exercise. Psychologists have shown that human sexual arousal is controlled by the imagination, "rather than by a mere Pavlovian biological response to an ovulating female as occurs in the animal kingdom" (Ferguson 2010: 13). Aside from the basic imagination that human sexuality depends on, sex doll use also requires the fantasy of imagining an object to be something more than it is, i.e. fetishism. Fetishism of commodities is explored in the next section of this paper as a distinct phenomenon; here let us broadly examine the psychological underpinnings of any kind of fetishism.

It is arguable that fetishism may draw on a fundamental ability of the human mind—magical thinking. Karen Fernandez and John Lastovicka argue that magical thinking may be universal, "relatively abstract, and may even be subconscious" (2011: 280). Drawing on James Frazer's concept of imitative magic, they write: "Images (whether a visual representation or a manufactured replica) can exhibit qualities that are inherent in the original prototype. Because of these shared qualities, the image may be conflated (merged or confused) with the object it resembles" (p. 280). According to Roy Ellen, this imaginative exercise of fetishism involves four cognitive elements—concretization (the representation of an abstract concept in an object), animation (projecting animate or living characteristics onto an object), conflation (merging the object with the idea it represents), and ambiguity of control (the dynamics of power between person and fetishized object become unclear) (Ellen 1988: 213–35; Fernandez and Lastovicka 2011: 279–84). Do these processes also occur in sex doll usage? The 'original prototype' here is the woman, who is objectified and concretized in the doll and then imaginatively animated. The object could then begin to stand in place of woman herself (conflation), and arguably the doll could become a large part of the user's life and acquire a powerful presence (ambiguity of control).

How would doll users themselves respond to these suggestions? A survey that Anthony Ferguson conducted of anonymous sex doll users yielded interesting results. It is clear that some inscription of concepts of womanhood into the doll (concretization) is occurring. User A for instance, says "Natasha RD (Tash) is a beautiful, sultry and sexy doll with a serious, passionate and giving nature" (Ferguson 2010: 115). Again, it is overwhelmingly clear that some level of humanizing (animation) is occurring, this being the defining characteristic of fetishism (pp. 115–120). User A writes, "She is very high maintenance and very difficult to handle and manage … Again it is surprising but their moods do change from time to time" (pp. 115–118). What we are seeing perhaps are not merely the vagaries of anthropomorphizing a doll, but the seeming impossibility of engaging in a sustained sexual relationship without a need for a human element. Often, as in the case of user A, the very motivations out of which sex doll usage began in the first place—for instance, avoiding the complications of a real 'high-maintenance'

partner—are problematized. Users seem to want, or even crave the vicissitudes of a human relationship.

At the same time, users seem not to be eager to forget that the doll is an object, problematizing the application of Ellen's (1988) third and fourth cognitive categories—conflation and ambiguity of control—to their case. Does the sex doll become for the user, the essential woman, standing in her place? Arguably, this is not the case, since users seem—from Ferguson's survey responses—aware of the differences between real women and dolls and eager to keep the doll and the woman apart in their minds. For instance, user E says that even if robotic dolls (capable of movement) were available, he would prefer a lifeless one. User B argues, "I think we can only fall in love with a real woman. With a robot it would just be a personal and mental feigning" (Ferguson 2010: 119), while user E condemns marriage to dolls, saying "a love for a doll like that of a love for your car is something I would understand [but nothing further]" (p. 120). The question of ambiguity of control is a complex one. While it is clear both from Ferguson's survey, in which one user states "as time went on I find (sic) I have become used to her company at home. She has become a part of my routine. I find I am including her in the activities I do at home" (p. 114), and from the case of Davecat,[4] those sex dolls occupy an important position in many users' lives, it is difficult to see the sex dolls' power over them as overwhelming. The users' eagerness to see the doll as no more than a doll attests perhaps paradoxically, to both the power of the doll—the possibility of it creating cognitive discomfort always lurking—and the relatively more powerful position of the user.

We see then, in the imaginative exercise of doll use, a curious interplay of the tendencies to humanize and dehumanize. There is another plane, however, at which imaginative processes operate here—that of sexual fetishism, which has a somewhat different valence. Sexual fetishism refers to "Reliance on some non-living object [or situation] as a stimulus for sexual arousal and sexual gratification" (WHO 2015).[5] D.W. Winnicot has described fetishism as "a persistence of a specific object or type of object dating from infantile experience in the transitional field, linked with the delusion of a maternal phallus" (1996: 210). More broadly, in Winnicot's theory, the fetish object stands for the "satisfying qualities that the object (the mother/father) of the child's first relationship has" (Reubins and Reubins 2014: 144). During the 'transitional phase', when the mother is withdrawing from being the bodily satisfier of needs for the infant, the infant mitigates his feelings of frustration by projecting onto a fetish object the satisfying qualities of the original care-provider. It has been suggested that these transitional objects are gradually given up as cultural interests form in the child (Winnicot 1996: 210). Perhaps the sex doll user may be seen as living out a fantasmic stage of infanthood, refusing to

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[4]See 'Taboo: Strange Love', *YouTube*. Uploaded 9 August, 2014. Web. 11 Jan. 2015, https://www.youtube.com/watch?v=QxaOssr6ljA; also, Bates (2015), Samhita (2010), Jessica (2007).

[5]Freud's theory of fetishism forms the basis of later theories in psychology. The Freudian explanation for sexual fetishism is typically phallocentric: his argument is that the fetish is a substitute for the mother's castrated penis (1927/1950: 152–157).

give up transitional objects. The fact that in some cases users seem anomic, culturally and socially alienated, would further explain their persistent obsession with transitional objects.

Another theory that accounts for sexual fetishism is that of childhood associations (Binet 1887). Binet has argued that when sexual stimulation occurs at a young age with the simultaneous presentation of an object or situation, the child may develop a fetish for the object or situation (1887: 143–146). Studies have shown, for instance, that children who have had pre-adolescent sexual experiences involving a nonresponsive partner (often a sleeping sibling), start to link nonresponsiveness to arousal in their imaginations, and as they grow older, this becomes a pattern they cannot break. This phenomenon, called amaurophilia or somnophilia, seems very similar to sex doll usage, since nonresponsiveness is crucial to both. Though a link has been suggested by Anthony Ferguson (2010: 12), there is insufficient data for it to be a conclusive hypothesis.

While fantasy—operating in multiple registers—is crucial to sex doll use, as we have shown, there is also a desire for realism, clear at least in the use of realistic products like the RealDoll. It is arguable that this desire for verisimilitude can be attributed to a cultural anxiety for a lost or unattainable real, a real that is increasingly erased in a semiurgic society. One way to understand this erasure is through Jean Baudrillard's notions of the hyperreal and simulacra. In *Simulations* (1983), Baudrillard draws attention to how the mass media in late capitalist society, through the reproduction of 'simulacra', configures the social world as a 'forest of symbols'. A simulacrum is an identical copy without an original. We live, according to Baudrillard, in a society in which the distinction between originals and their copies is increasingly blurred. The original is lost, and simulacra proliferate, and come, through simulation, to substitute for the real. As John Storey writes, "The 'real' implodes; the 'real' and the imaginary continually collapse into each other. The result is that reality and simulation are experienced as without difference—operating along a roller-coaster continuum" (1998: 187).

An important question to ask is, if the sex doll is a simulacrum, what is the vanished or lost real? Is the real woman lost or made irrelevant? Arguably, the loss is of her own body. Her body has been co-opted by an 'ideal' which Wolf (1990) calls 'the beauty myth', in her eponymous text. The sex doll therefore represents an alienation of the woman from her own body—the real woman's freedom to posit her own ideal of beauty, her freedom to construct herself in a manner at deviance from what popular culture dictates is 'beautiful' or 'sexy', is lost. Her body becomes the site where the hegemony of the beauty myth is made manifest.

The real woman is imploded and replaced by an image: the beauty myth, and this image becomes the prototype of which copies are made, as exemplified by the sex doll. What we have in the case of the sex doll then is a simulation: a copy of an idealized copy, which erases the real as it proliferates. The ideal of beauty, contingent on unrealistic body shapes and proportions, is hard to find in real life, and the sex doll becomes a compensatory mechanism to attenuate the pain of this disappointment of expectations.

The realism that we so often encounter in popular culture is, in a similar manner, a compensatory aesthetic, attenuating various anxieties. Realism is evident, for instance, in first-person shooter games such as *Call of Duty*, or *Assassin's Creed*: their grounding in a painstakingly rendered historical setting attest to the anxiety engendered by what Jameson calls the "loss of history" (Stephanson and Jameson 1989: 18) within postmodernity. Arguably the same can be said about the recent penchant for biopics in Hollywood: realism in popular culture is increasingly becoming a way to mitigate the loss of the real engendered by simulacra in postmodern culture.

The Sex Doll and the World

This section looks at the lived reality of late capitalism to ask what social, economic, and cultural conditions give rise to practices such as sex doll usage. I examine the 'birth' of the sex doll, so to speak, as the result of commodity fetishism, the fear of female sexuality, and the disintegration of lasting human bonds within late capitalism.

Commodity Fetishism

It has been argued that that "The socio-economic dynamics of commodity production impact the total outer and inner life of society" (Lukács 1971: 84). The sex doll is perhaps the best example of this impact, embodying what Marxian theorists call commodity fetishism. Commodity fetishism, first described by Marx in *Capital*, is a particular kind of fetishism, which can be described as "the human ability to project value onto a material object, repress the fact that the projection has taken place, and then interpret the object as the autonomous source of that value" (Mulvey 1996: 127). Marx contends that increasing division of labour in the production of goods leads to the labourer's alienation from the products of his or her own work. An industrially produced good, therefore, which an individual labourer plays only a small part in producing, is in its finished form, profoundly alien to the labourer. Additionally, these produced goods seem to have a life and agency of their own—since the capitalist marketplace seems to operate without human intervention, and goods on the marketplace seem to enter into relationships with other goods, as if alive. Thus, the object seems to gain subjectivity and the human subject in the capitalist marketplace becomes an object.

Though Marx's analysis related to factory labourers, and the typical consumer of a high-end sex doll would be unlikely to be a factory worker (given the high price of the dolls), alienation related to work is perhaps an even greater reality in our digital age. As artist Mark Mosher writes, "A computer distils all experience into work by alienating us from the physical interaction as completely as the factory or

office alienates us from the products of our labours" (quoted in Ferguson 2010: 66). Use of the sex doll seems to mirror these kinds of alienation. It has not been produced by the user and is not commensurate to the user's labour; it has been purchased with the click of a mouse. Its use involves anthropomorphism, an imaginative investing of value beyond that of an object, a projection which the user's mind suppresses so that it seems as if "its powers stem autonomously from itself" (Wayne 2003: 192).

The sex doll thus attests to how the logic of commodification has pervaded every level of human activity—in this case sexuality—reconfiguring human relations in terms of products that can be bought and sold. It exemplifies the restructuring of the human psyche due to commercial forces, as described by the likes of György Lukács and the Frankfurt School philosophers Theodor Adorno and Max Horkeimer.

Another kind of commodity fetishism manifests itself in a related phenomenon called technosexuality—a fondness, love, and in extreme cases, erotic attraction to technology. In the ordinary sense, a sex doll, being a realistic simulation of a woman which tries its best to hide the fact that it is a machine, is almost the opposite of technosexuality, where a gadget is seen *as* a gadget and fetishized as such for being a gadget. The broad term for such phenomena is called ASFR, or 'alt.sex.fetish.robot'. De Fren (2008) defines it as "a blanket designation for a range of different fetishes, which includes sexual attraction to mannequins, dolls, and sculpture, and more specifically, real people acting like mannequins, puppets, dolls, or robots, or being hypnotized or frozen like statues" (p. 123). It is difficult to generalize across such a broad set of phenomena, and there may well be sex doll users who are aroused by the fact that they are coupling with a machine, but this would likely be an exception. Alison De Fren, in an essay on technofetishism, makes a distinction between *epistemophilia*—the desire to know—and *scopophilia* —the desire to see but not know—(2009: 3). While the cyborg-lover who wants to see, as it were, the innards of the machine, may be more motivated by *epistemophilia*, the user of the life-like RealDoll may be more moved by *scopophilia*, since the RealDoll deliberately tries to erase its cyborgism.

Fear of Female Sexuality

Female sexuality has long been feared by patriarchy and is linked with loss, death, and decline (Dollimore 1998; Paglia 1992: 20). The responses to this fear seem to be twofold: either to demonize it, or to control and tame it. As for the former impulse, the machinic body has always served a purpose. As early as the story of Pandora, there is an enduring history of the indictment of women through the inscription of the feminine on to the mechanical. With European modernism, the association of female sexuality with technology became commonplace. As Andreas Huyssen writes, "As soon as the machine came to be perceived as a demonic, inexplicable threat and as harbinger of chaos and destruction … writers began to

imagine the *Maschinenmensch* as woman" ([1986](): 70). Femme fatale androids thus proliferate in science fiction, from Fritz Lang's *Metropolis* (1927) to more recent films like *Austin Powers* (1997). The other response to the fear of women's sexuality is domestication, taming, and controlling. Objectification of a woman may be seen as a way of achieving this taming, and this is precisely what sex doll usage represents.

Liquid Love and Loneliness

In his important work, *Liquid Love*, sociologist Zygmunt Bauman ([2003]()) explains that the ideal of constant, unwavering love, to whatever extent it was mirrored in practice, is the product of an older system of kinship structures and values. Describing how it is out of place in the 'liquid modern' world, he writes: "'till death us do part' is decidedly out of fashion—having passed its use-by date because of the radical overhaul of the kinship structures it used to serve and from which it drew its vigour and self-importance" (p. 5). Again, Adrian S. Franklin writes in 'On Loneliness',

> Contemporary Western societies are characterized by 'until further notice' relationships (and precarious or very loose social bonds), historically high levels of mobility of both capital and labour and growing numbers of single person households. As artefacts of freedom and choice these social arrangements do not inevitably give cause for concern but they may come at a price and that might involve more frequent and more sustained experiences of loneliness (Franklin [2009](): 343).

Such a social reality engenders an ethos of permanent instability in human relationships, which leads to a desire for some kind of permanent love object, some lasting sexual partner, even if plastic; this is what the sex doll embodies. The fetish then becomes a way to mitigate anxiety. As Jean Baudrillard writes, "Between the world's irreversible evolution and ourselves, objects interpose a discontinuous, classifiable, reversible screen which can be reconstituted at will, a segment of the world which belongs to us, responding to our hands and minds and delivering us from anxiety" ([1996](): 94).

The Sex Doll *in* the World

There is a sense in which the sex doll is not infertile; but pregnant. The sex doll is a body inseminated by ideology, and it births, reinscribes, and reinforces the paradigms that undergird this ideology. Roland Barthes, in *Mythologies*, argues that objects and phenomena in everyday life are infused with mythological meanings which serve to naturalize the ideologies of the ruling class. Barthes argues that the cultural critic must defamiliarize these meanings and examine how they are naturalized. This section will therefore critically examine the sex doll as a cultural artefact embodying the values of an ideological framework. If we consider the sex

doll as a sign, we can ask what notions, what ideas about the body, love, and sexuality, are being naturalized through the sex doll and how.

Arguably, the sex doll perpetuates capitalist notions of ownership and private property. The sex doll as a symbol suggests us that a sexual partner is a property, can be owned and controlled, and belongs to the individual. The paradigm of control also manifests in a number of related phenomena on the Internet: online games involving virtual dress-up dolls, and Flash games involving virtual bondage and masochism, where interactive caricatures of women are presented for total control and abuse.

The sex doll also suggests the disposability of the partner. If dissatisfied, the user may dispose of or purchase a new doll. This paradigm both reinforces and reflects the notions of disposability in real relationships that, as discussed in the context of Bauman, colour the contemporary ethos of 'liquid love'.

As a commodity with separable parts, the sex doll also suggests divisibility. Most sex dolls come with removable orifices, suggesting that the human body is divisible, and each part a functional unit that can be considered separately. Also available and popular on the Internet are sex toys consisting only of disembodied parts, like sex-torsos, and artificial vaginas. Perhaps the best example of this is the 'beer can vagina', which pithily embodies both the fragmentation of the human body into usable parts, and the sexualization of commodities within the contemporary capitalist ethos.

The sex doll also reflects and perpetuates the framing of sexuality as a commodity—and item that is marketed for the satisfaction of needs or wants. It suggests that sexual desirability—like the doll itself—is a producible item, which can be acquired by wearing the right clothes, the right perfume, using the right make-up, having, or constructing by plastic surgery, the right kind of body. This producible desirability has, the doll suggests, both value in use and value in exchange; it can be sold, and it can be used to make profit. It is this commoditization of sexuality that feminist Ariel Levy critiques in *Female Chauvinist Pigs: Women and the Rise of Raunch Culture*. She argues that the overtly sexualized nature of many Hollywood films and popular music videos—the contemporary example being Miley Cyrus—shows that women have internalized patriarchal understandings of themselves and thus render themselves as objects for consumption (Ferguson 79). Perhaps the most disturbing example of the same paradigm of commodification is human trafficking. An advertisement reprinted on the website *Human Traffic Watch*, for instance, reminds us that for the same price as a RealDoll ($6000), one can "buy a wife from Vietnam". Further parallels with the sex doll are made clear as the ad goes on to say, "Guaranteed to be delivered within 90 days. NO extra charges. If ran away (sic.) within a year, you get another one for FREE" (Human Traffic Watch 2012).

Finally, the realistic sex doll seems to naturalize the machine, erasing its 'machineness', so to speak, thereby hiding its constructedness as well as the alienating processes of labour that undergird it. As mentioned earlier, it encourages *scopophilia* and not *epistemophilia*. Arguably, this is true of the postmodern condition broadly. It leads to a kind of atrophy of the critical faculty and encourages the subject to engage with mere surfaces and signifiers, leading to a dim understanding

of the broader mechanics of the system in which they are interpellated—in Žižek's words, "the tacit acceptance of capitalist economic relations and liberal-democratic politics as the unquestioned framework of our social life" (2008: 162).

Origins of Taboo: The Loneliness of Davecat

The secret history of the sex doll suggests that fornication with an inanimate object is one of the most enduring taboos in Western society. While this paper has been critical of the practice on ethical and philosophical grounds, it is also itself imbricated within the legacy of the taboo. This section attempts a genealogical understanding of this legacy and reads the ostracism of the sex doll and its user as a product of history, and as a result of the 'uncanny' effects they have on the human psyche.

Within ethical theory, it is widely agreed that consent is necessary if not sufficient to morally legitimize a sexual act (Primoratz 2001: 201). Thus, the ethical shortcoming of sex doll usage lies in its erasure of the consent factor in an act simulating sex; that is, it encourages the fantasy of nonconsensual sex. The near-ubiquitous sense of horror towards sex doll usage in the public imagination, however, seems to be incommensurate to and not predicated merely on this ethical shortcoming alone, i.e. the fantasy of the erasure of consent. It is arguable that the taboo is premised far more upon what ethical theorist Igor Primoratz calls "moral conceptions of sex that endow human sexuality with significance well beyond a mere source of a certain kind of pleasure" (2001: 202).

Primoratz argues that the most preponderant of these conceptions is the Christian one, which frames sex as an act geared towards procreation and needful of being confined to marriage.[6] Within such a *weltanschauung*, it is no surprise that sex doll usage, neither geared towards producing offspring, nor comparable to monogamous marriage, is harshly condemned. It is, rather, akin to masturbation, which within such a framework would involve "alienation of the body" and "disintegration of personality" (Primoratz 2001: 203). Additionally, the modern sex doll is a very life-like representation of a human being and as such could be seen in the Christian view as threatening the divinity and exclusivity of God's creation of the human form.

It is arguable, however, that Western civilization is entering an increasingly secular cultural climate[7] and we need to look deeper for the origins of the sex doll taboo. There are, however, moral conceptions of sex beyond the pale of religion. According to Igor Primoratz, a second school of thought that frames sex as

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[6]The Christian framework is structured around a deep schism between mind and body, and a rejection of the flesh (Dollimore 1998: xiii).

[7]For instance, a recent worldwide poll, 'The Global Index of Religiosity and Atheism', conducted by WIN-Gallup, showed that "religiosity worldwide is declining while more people say they are atheists" (Havertz 2012).

necessarily more than a pleasurable physical activity is the one outlined in Roger Scruton's *Sexual Desire* (1986). This view highlights the individualizing elements and the interpersonal nature of the normative act of intercourse. Its argument is that "desire does not simply aim at intercourse, complete with its consummation in orgasm, but at union with the other as the particular individual he or she is" (Primoratz 2001: 206). Many of the reservations I have outlined towards sex doll usage in this chapter are also resonant with this view. Sex *can* be a fruitful inter-personal engagement with another human being, fostering intimacy and personal growth. However, the question must be asked—must it *necessarily* always be so? And if not so, does it become ethically questionable? Primoratz argues that while typically, human beings do seek out intimacy in the sexual act, and while it is ethically imperative to respect the partner's personhood during the sexual act—i.e. their thoughts, feelings, and interests—the act can be engaged in "with a view to a pleasurable sexual encounter and nothing more, and relating to the other as a sexually attractive partner and nothing more" (2001: 207–208).

Seen as an eschewing of the interpersonal dimension sex usually involves but is not necessarily predicated upon, can sex doll usage be then seen as no worse than instrumental sex? In fact, to those prone towards anomia and plagued by a chronic inability to engage in fruitful human interaction—and certainly, by his own admission, Davecat seems to be a case in point—or those with pathological tendencies towards sexual violence, could the sex doll not be a valid way to satisfy bodily urges and expend sexual energies that would otherwise be discharged in harmful ways? In much the same way as a prosthetic arm or leg is an aid to the differently abled, could the sex doll be understood as a helpful aid to socially maladjusted individuals? We shall return to the question of prosthesis shortly, in the context of posthumanism.

It has also been extensively argued that uncontrolled sexuality is perceived as a threat within the capitalist ethos since it is a hindrance to the ideal work ethic. Industrial society attempts to channel sexuality into the safe confines of monoga-mous marriage: the tired worker may return home to his wife for sexual pleasure but any form of sexuality that transgresses this norm is seen as threatening (Gramsci 1971: 304–305). In a similar vein, Roland Barthes has argued in *Pleasure of the Text* that ideological forces seek to control sexuality because it is an expression of a threateningly free will, and Michel Foucault has argued in *History of Sexuality, Volume I* that sexuality has historically been channelled into discourse in order to control and regulate it. While these arguments to an extent explain the taboo towards the sex doll—the use of which represents excessive, violent, transgressive sexuality—we are confronted with a paradoxical fact: the sex doll is very much a part of the capitalist network whose work ethic it so seems to threaten. Perhaps this paradox can be accounted for by what Zygmunt Bauman describes as the "passage from producer to consumer society" (1998: 24). As Barry Smart has elaborated, this passage "is marked by a diminution of the significance of the work ethic and a corresponding valorization of consumption. It is consumer spending rather than waged work that is now considered a 'duty'" (2010: 39–40).

Additionally, the sex doll, at least the realistic sex doll that is the focus of this chapter, is a high-end consumer commodity, selling at around $6000 a piece; and is thus not geared for sale to the working class, and therefore not construable as a threat to their work ethic.

Let us now examine perhaps the foremost reason that both the sex doll and its users generally evoke aversion: the psychological effect of the 'uncanny'. In his seminal 1919 essay *The Uncanny*, Sigmund Freud explains that the uncanny is a kind of fear elicited by an object or an experience that hovers uncomfortably between familiarity and alienness, causing a form of cognitive dissonance. Building on earlier theorizing by Ernst Jentsch, Freud[8] argues that "a particularly favourable condition for awakening uncanny feelings is created when there is intellectual uncertainty whether an object is alive or not, and when an inanimate object becomes too much like an animate one" (1919: 8). The sex doll, an inanimate object approaching the human being in its verisimilitude, hovering between automaton and human being, is therefore the quintessential uncanny object.

We can also apply Freud's articulation of the notion of the 'double' and its role in producing uncanny effects, to the case of the fornicatory doll. Freud argues that in early stages of the ego's development, i.e. in early childhood, doubles of the self, such as dolls and imaginary guardian spirits, act as "an insurance against destruction to the ego", assuring us of "preservation against extinction". However, when we surpass this "primary narcissism" (Freud 1919: 9) of childhood, the double comes to stand for "those things which seem to the new faculty of self-criticism to belong to the old surmounted narcissism of the earliest period of all" (p. 10). "The quality of uncanniness", Freud argues, "can only come from the circumstance of the 'double' being a creation dating back to a very early mental stage, long since left behind" (p. 10), a frightening time "when the ego was not yet sharply differentiated from the external world and from other persons" (p. 10). The aversion of the adult ego towards regressing to such a stage explains its condemnation of doubles.

As a replica of the human form similar to dolls that children play with, the sex doll is a good example of a 'double'. As such it reminds the adult ego—of the normative individual and not the sex doll user—that to indulge in games with such a double would be a reversion to "primary narcissism" (Freud 1919: 9). Thus, a taboo is formed in normative society, both towards sex dolls as uncanny objects and towards the seemingly infantile sex doll user.

Freud goes on in the essay to outline his central thesis—that the uncanny effect arises from the involuntary repetition of that which we have repressed (pp. 10–12). He gives the example of coincidences to explain this. If, for instance, one sees the number 62 an unusual number of times in a day, one is forced to witness the tangible repetition of something one has repressed: in this case the possibility that the universe—or at least the occurrence of patterns of numbers in it—can be

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[8]All citations in this section from Freud's *The Uncanny* (1919) are from the translation into English by Alix Strachey now available freely online at http://web.mit.edu/allanmc/www/freud1.pdf (accessed 6 January 2015).

anything but random. Freud also goes on to argue that the greatest repression in human civilization is the fact of our own impending death, suggesting that this may account for the uncanny element in the fear of ghosts, spirits and other figurations of life-in-death (p. 13). The modern, life-like sex doll, resembling a living human but totally inert and unmoving, is a clear embodiment of life-in-death; it forces us to confront the repressed reality of our own mortality and is therefore uncanny and abhorrent to the normative individual. It is perhaps for this reason that the doll and the dummy are recurrent tropes in horror literature and cinema (Ferguson 2010: 142–166).

Interestingly, the feeling of the uncanny elicited by the realistic sex doll may in fact be accentuated rather than mitigated by increasing verisimilitude. This thesis, first framed by Japanese robotics professor Masahiro Mori in an essay called 'The Uncanny Valley' (2012), has been developed extensively by theorists in the fields of aesthetics, robotics, computer graphics, and behavioural science (MacDorman and Ishiguro 2006; Burleigh et al. 2013; Misselhorn 2009). The basic argument is that "a person's response to a humanlike robot would abruptly shift from empathy to revulsion as it approached, but failed to attain, a life-like appearance" (Mori 2012) and is illustrated in Fig. 6.1.

The *X*-axis plots likeness to human beings, and the *Y*-axis plots the affinity or familiarity one feels towards a robot or any other anthropomorphic object. Between the industrial robot, which neither resembles a human being nor elicits affinity, and the real human being, lies the trough representing the 'uncanny valley'—wherein the representation approaches the real thing, but in some way becomes profoundly alien and uncanny. An example would be the prosthetic hand:

> … when we realize the hand, which at first site [sic] looked real, is in fact artificial, we experience an eerie sensation. For example, we could be startled during a handshake by its limp boneless grip together with its texture and coldness. When this happens, we lose our sense of affinity, and the hand becomes uncanny (Mori 2012).

Fig. 6.1 Uncanny valley. *Source* Smurrayinchester (2007)
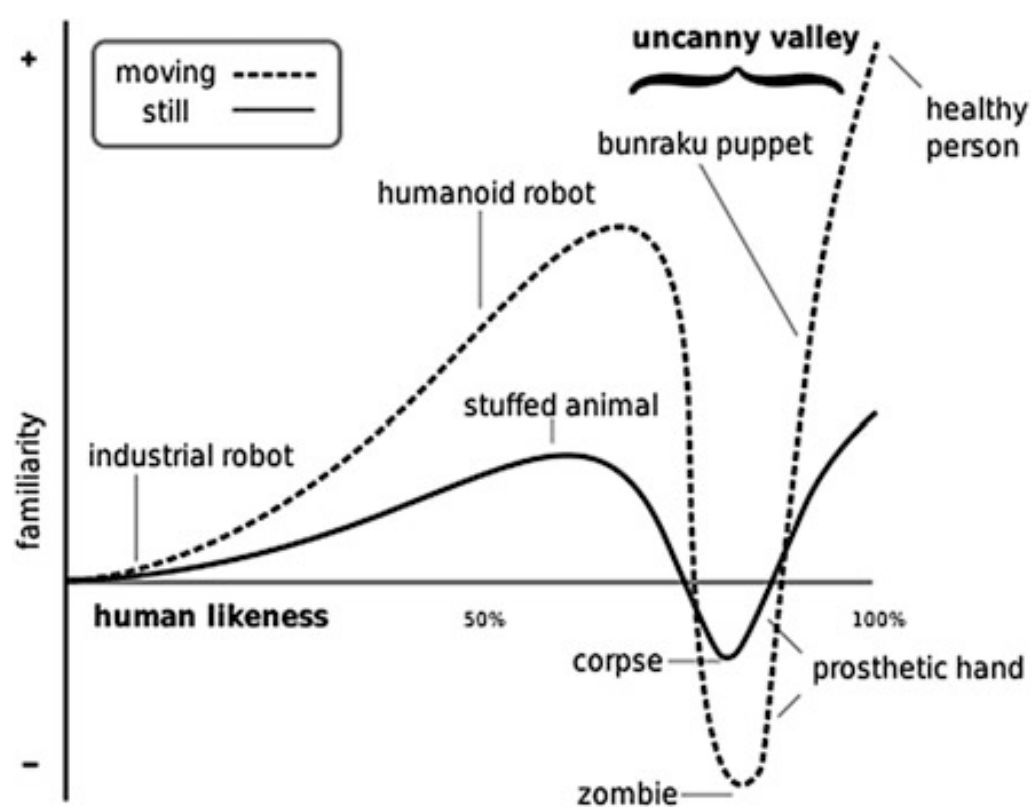
It is also to be noted that the capacity for movement in general increases both affinity and verisimilitude (Mori 2012) but jerky, or robotic movement leads to a plunge into the uncanny (Saygin et al. 2010).[9] Arguably, realistic sex dolls such as the RealDoll, almost impossible to tell apart from human beings in pictures, would be plotted at a point in the 'uncanny valley' of the graph, between the zombie and the prosthetic hand. Although they cannot move, they respond to physical stimulus in a mechanical way, leading to an uncanny affect. The typical person's reaction to it would be one of aversion, since its external realism is juxtaposed to the lack of affinity felt towards inanimate objects, particularly one that is similar to a corpse.

A number of theories have been proposed to explain the cognitive mechanism upon which the aversion towards the 'uncanny valley' is premised. A leading hypothesis, drawing us back to Freud, is that "by playing on an innate fear of death, an uncanny robot elicits culturally-supported defense responses for coping with death's inevitability" (MacDorman and Ishiguro 2006: 297). It has also been suggested, for instance, that "a mechanism with a human facade and a mechanical interior plays on our subconscious fear that we are all just soulless machines" (p. 313). Scientific experiments on cognition are also increasingly agreeing with Jetsch and Freud's understanding of the uncanny as caused by a category error: the realistic robot, or in this case, the sex doll, confuses the brain because it is hard to classify as either human or nonhuman (Burleigh et al. 2013; Saygin et al. 2010).

Thus, we conclude that the taboo surrounding sex dolls is premised on a number of factors—ethics, prescriptive framings of sex within religious, secular, and economic paradigms, and the uncanny affect of the doll itself.

The Sex Doll and the Posthuman

We had earlier raised the question of the validity of conceptualizing the sex doll as a prosthesis. This provides a good gateway into posthumanist critical discourse and suggests some ways to conceive of doll usage from such a perspective. The notion of prosthesis is central to posthumanist thought. Posthumanism prophesizes a future where the organic is becoming mechanized and the mechanical is becoming organic. At first glance, the machine–human interaction of the most intimate kind that sex doll usage represents seems to be a good instance of this blurring of boundaries. The sexual fetishization of a machine and the humanizing of the

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[9]Interestingly, in Ferguson's survey (2010: 112–120), a question asking if doll users would like their dolls to be able to move elicited mixed responses. Challenging the argument of Saygin et al. (2010), four out of five surveyed responded 'yes'. However, in two of the four cases of 'yes' (anonymous users A and C), the reasons were purely those of convenience. These users merely wanted a doll that did not have to be carried around. The other two (B and D) gave no reasons for their preference of movement. Only E outright rejected the option of movement, following the 'uncanny valley' hypothesis, and saying "We don't want her to be too lifelike" (Ferguson 2010: 118).

machinic body seem to challenge the divide between human and machine. However, this challenge is of a superficial kind, and when the ontological implications of the interaction are considered more thoroughly, we find that sex doll usage merely reinforces the self-other divide.

What posthumanism describes is the disappearance of the human in networks and informational patterns (Hayles 1999: 286–289; Wolfe 2010: xv). It heralds "the decentering of the human by its imbrication in technical, medical, informatic, and economic networks" (Wolfe 2010: xv). This decentring mounts a challenge to the self-assured, self-defining subject of Humanism as its fragile ontological boundaries are frayed. The habitation of intelligence in the human body is seen in posthumanism as an accident of history; the seemingly natural dependence of one on the other is something that the cyborgic body in some way must challenge. In the posthumanist understanding, epitomized in Donna Haraway's seminal 'Cyborg Manifesto', the cyborg and the prosthesis are critical tools used to deconstruct anthropocentrism and the Cartesian dualisms that underlie Western metaphysics. Sex doll usage, however, seems rigidly undergirded by the very certainties and dualisms that posthumanism seeks to challenge.

We can argue that sex doll use is an extreme form of solipsistic narcissism premised upon a disinclination to interact with human others. It is perhaps the best example of the notions of totality and mastery that, from a Levinasian point of view, underlie Western metaphysics. It epitomizes the conception of subjectivity as "totalized, masterful and dominant over the other" (Hiddleston 2009: 16). In this light, sex doll use—or abuse—is underpinned by the same motivations that lead to violence and war: a conception of the self as whole, a refusal to ethically embrace otherness. The sex doll user could then be seen as the extreme example of "the autonomous, self-regulating subject of liberal humanism" (Hayles 1999: 86).

Desperately asserting his autonomy and his independence from anything beyond the pale of the self, is the doll user then the very opposite of the posthuman? Control, both of the self, and the other, through the action of conscious agency, seems to be what is centrally at stake in the case of the sex doll user. "In the posthuman view", by contrast, writes Hayles (1999) "conscious agency has never been 'in control.' In fact, the very illusion of control bespeaks a fundamental ignorance about the nature of the emergent processes through which consciousness, the organism, and the environment are constituted". Again, she writes,

> [if] there is a relation among the desire for mastery, an objectivist account of science, and the imperialist project of subduing nature, then the posthuman offers resources for the construction of another kind of account. In this account … a dynamic partnership between humans and intelligent machines replaces the liberal humanist subject's manifest destiny to dominate and control nature (p. 288).

Since the sex doll user's will is driven by the very 'desire for mastery' and desire "to dominate and control nature"[10] that the posthuman shall (or should) dispense

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[10]It is not my intention to equate women with nature. I rather imply domination over natural processes such as ageing and death.

with in her ethical embrace of the vastness beyond the pale of the self, the sex doll user and the posthuman are indeed at odds.

The Levinasian understanding of otherness, however, is the otherness of human beings, based on the markers of race, class, gender, and cultural difference. We must ask ourselves if the sex doll user is embracing—both literally and meta-physically—an altogether more extreme kind of otherness—the otherness of the radically nonhuman. In order to answer this question, it would be useful to compare sex doll usage with instances of encounters with otherness in two works of science fiction, *Solaris* (1961), by Stanislaw Lem, and the Arthur C. Clarke's novel *2001: A Space Odyssey* (1968). Both works were later made into films, whose visual elements would even better demonstrate what I am about to argue. In both these works, we are asked to imagine the difficulty faced by humans when confronted with the radically. Other, with nonhuman forms of intelligence—in *Solaris*, a whole planet that is sentient, and in *Odyssey*, an artificially intelligent operating system, and later an advanced alien race that communicates only through inducing hallu-cinatory visions. However, the crucial point to note is that in both cases, the otherness confronted is still a form of sentience, intelligence, or consciousness, while in the case of the sex doll, the otherness is the mere materiality of an object, on to which a human being projects his or her own fantasies. In the final analysis, the sex doll user is not exploring otherness at all, but merely indulging in an extreme form of inwardness.

That we cannot conceive of the sex doll as a prosthesis depends not only on its physical separateness from the user, but on the role it plays vis-à-vis the user. A cane can be considered—in some sense—a part of a blind man, because, as N. Katherine Hayles argues,

> … cane and man join in a single system, for the cane *funnels to the man essential infor-mation about his environment*. The same is true of a hearing aid for a deaf person, a voice synthesizer for someone with impaired speech, and a helmet with a voice-activated firing control for a fighter pilot [emphasis mine] (1999: 84).

Since the sex doll is not funnelling information between man and the environment, it cannot be considered a prosthesis, but only a mere object.

The technologies that posthumanists argue human beings are seceding into are highly advanced forms of technology—with cognitive and functional capabilities, machines that are self-determining and adaptive. In currently available technology, we can think of unmanned drones, driverless trains, navigational systems of ocean-going ships, cars that drive themselves, and emergency response systems which do not require human input, as basic examples. As such they represent extended cognitive networks beyond the human body, into which human con-sciousness is seen as merging. The sex doll, neither part of this network of extended cognition, nor itself sentient or intelligent, is therefore not a part of the posthuman. Were future technology to enable the doll to embody a form of artificial intelli-gence, it would then become an android, and we could then consider it as part of the posthuman network.

It is thus clear that the sex doll user cannot be seen as a cyborgic posthuman—since he reinforces rather than destabilizes the boundaries of selfhood—and nor can the doll itself be seen as cyborgic or prosthetic in the posthumanist sense—since it is neither intelligent, nor a funnel between man and the environment—despite being an anthropomorphic machine. Posthumanism challenges the notion of the human as posited by the Enlightenment and Humanism, but it considers some element of agency, intelligence, or *being* as a defining element of the future posthuman. The posthuman view "configures the human being so that it can be seamlessly articulated with *intelligent* machines" [emphasis mine] (Hayles 1999: 2–3).

The Times They Are A-Changin'[11]

It is arguable, however, that although neither the user nor the doll is a posthuman, the phenomenon itself and its 'outing', it percolation out of the dreary back lanes of cities and into the public imagination, may mark a *historical moment* that can be called posthumanist, or perhaps more accurately, *trans*humanist. The sex doll is related to other instances of the coming-together of technology and sexual practices, such as cybersex, telephone sex, live chat rooms, and teledildonics, and marks a new era of sexuality. Although we have already noted the differences between sex dolls and prosthetic technology, we cannot help but notice that the technologies used to create sex dolls and prosthetic arms and legs are similar. More importantly, they are both underlined by a belief in the perfectibility of the human condition through the application of technology. As aids to the differently abled, prosthetic limbs may indeed be laudable, but neither prosthetics nor the sex doll can be considered in isolation from more ethically disturbing techno-futurist possibilities such as genetic modification and cloning. It is possible to align the cultural obsession with youth and vitality that manifests in the likes of cosmetic surgery, the use of botox, and body dysmorphic disorder, with sex doll use, and at the extreme end of the spectrum, 'designer babies', and cloning. These applications of technology to the body all deny and repress the facts of ageing and death.

We also note that although the sex doll is not *as yet* a part of the extended cognitive network of posthuman consciousness, it and its user are in a sense *dependent on*, if not defined by an informatic network, the Internet, through which it is advertised and sold, as well as an economic network whose agency seems to be suprahuman, i.e. late capitalism. Both these networks can be seen as decentring the human subject and thereby markers of a future that will be posthuman.

Finally, we can argue that the relative 'outing' of the doll—despite taboos against its use—heralds a historical moment where the imagination is increasingly comfortable with figures of otherness. Describing the birth of the posthumanist era, exemplified by the contemporary popular cultural fascination for extra-terrestrials,

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[11]Title of a Bob Dylan song.

Neil Badmington writes, "If the human and the inhuman no longer stand in binary opposition to each other, aliens might well be expected to find themselves welcomed, loved, displayed and celebrated as precious treasures" (2004: 3). The proliferation of the sex doll attests to the explosion of the inhuman, and the nonhuman in popular imagination—through science fiction and horror cinema and literature—and the resultant acceptance of and familiarity with such figures. Yet as Neil Badmington himself reminds us, the ubiquity of these figures does not entirely do away with the distinction between human and inhuman. As he explains:

> While aliens are allowed to invade 'our' lives on a daily basis, 'we' love 'them', quite simply, as a 'them'. They are desired only ever as aliens. Their otherness remains, not least at the level of the signifier, which continues to mean, and to mean something substantially different from 'human' (2004: 151).

In Conclusion

We approach then, several difficult aporias in our understanding of the doll and its user. While on the one hand, the indulgent, nonnormative sexuality it gives lease to seems to threaten the base of capitalism, it is inextricably a part of the system. While it seems, on the one hand, to disturbingly blur the boundaries between man and machine, thereby arousing an 'uncanny' affect of terror in the typical human observer, on the other hand, it seems premised upon a very strict definition of the self, and a refusal to embrace otherness. While it seems to be of a species with other applications of technology to the body, and also with technologies that seek to arrest time; while its arrival is contemporaneous with cyborgs, androids, and intelligent machines and as such seems to herald a future that is at least transhuman, if not posthuman, it seems not to typify the cyborg as understood by Donna Haraway, or the posthuman as understood by the likes of N. Katherine Hayles. While its 'outing' and percolation out of secret men's clubs and into popular culture seems the mark of a society that embraces aliens and the nonhuman, such a society, as Niel Badmington reminds us, needs not be working towards dismantling the categories of 'alien' and 'other' at all.

These aporias highlight both the diffuseness and the multivocality of posthumanist theory. In particular, the sex doll seems to undercut the overoptimistic spin that posthumanists such as Hayles put on contemporary technologized societies. While they hope that the imbrication of man with advanced technology will do away with his hubris and his narcissistic definitions of selfhood, in cases like that of Davecat, the very opposite seems to be occurring. We must also ask broader questions of the posthumanist movement, provoked by theorizing the sex doll, such as what its political implications are, given the uneven access to technology and information across the globe. While sex dolls sell for $6000 in the USA, so do Vietnamese mail-order brides. While modern technologies of communication and virtual interaction arguably enhance cognitive and interpersonal skills (Dede 1996;

Dickey 2007), we are reminded by Davecat of those who seem merely more alienated by the percolation of technology into everyday life.

We have also outlined the genealogy of a taboo and have suggested that it is gradually being dismantled. Historically, the sex doll user has been ostracized, but as the Christian framework loses its efficacy in an increasingly secular world, and as the instrumentality of the act of sexual intercourse is increasingly accepted, as figures of deviance and alterity such as extra-terrestrials are gradually accepted by a postmodern society, the ostracism of the sex doll user may become a thing of the past. Yet if the sex doll is essentially—before all else—a commoditization of woman, and an ethically questionable fantasy of consent-free and consequence-free sex, we must ask ourselves what such acceptance implies.

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Part II
Subalternity and Posthumanism

Chapter 7
Posthumanism: Through the Postcolonial Lens

Md. Monirul Islam

Introduction

As a consequence of the rapid growth of technological innovations, the world has seen the emergence of discursive fields such as transhumanism and/or posthumanism. Apparently, transhumanism and posthumanism are centred on the modernist ideal of human progress whose objective was the realisation of human potential through the extension of science and technology. Posthumanists, however, claim a departure and a rejection of the humanist ideals in their discourses; they claim the inclusion of nonhuman animals and extra-human futuristic technological beings within their discursive boundary as their point of separation from humanism. Of the two different trajectories of posthumanist thought, transhumanism seems to have a closer affinity to the Enlightenment ideal of human progress, while some posthumanist thinkers seem to move away from the humanistic ideal of progress. In fact, the close link between transhumanism and posthumanism, and the attempt of some posthumanists to delink themselves from the transhumanist trajectory, reveals the problematic nature of posthumanist discourses. This problematization is productive as it liberates a critical space and creates a vantage point from where (critical) posthumanism can be interpreted as an extension of postcolonialism or as a critique of the limitations of postcolonialism. Recognition of this critical space in turn leads to new equations and novel theoretical formations for postcolonialism, because even when posthumanism is a liberating discourse for postcolonialism, the neo-colonial turn in posthumanist thought falls under the postcolonial critical gaze. A two-pronged approach, therefore, is adopted here in dealing with the discourses of

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posthumanism and/or transhumanism from the postcolonial perspective. While the difference between transhumanism and posthumanism is acknowledged, it is contended that the two fields of discourse are so interlocked and the interface between them is still so vague that it is difficult to separate them. The first section of the article, therefore, will deal with the points of convergence and divergence between posthumanism and transhumanism; the second section will be on the possible link between posthumanism and postcolonialism; the third section is an attempt to understand the formation of the 'other' in the posthuman world.

Posthumanism and Transhumanism: Fusion and Fissure

Posthumanism, as noted by Carey Wolfe, "generates different even irreconcilable definitions" (*What is Posthumanism* xi). The two terms, posthumanism and transhumanism, have been used alternatively, but they have also been conceived as opposed to each other, and certain posthumanist thinkers have tried to dissociate themselves from transhumanism. Wolfe, for example, calls transhumanism 'bad posthumanism' (xvii). He regards posthumanism as the '*opposite* of transhumanism' (xv). However, even when bad, transhumanism is posthumanism, and this shows the close link between the two terms and the problem of collusion and collision between them. To seek a way out of this confusion, posthumanist theorists have christened transhumanism as 'popular posthumanism', and its better half is christened as 'critical posthumanism'. However, the popular and the critical are so critically interlinked and, in a sense, so interdependent that it is an imperative to understand the points of their fusion and fissure.

Rosi Braidotti in her book *The Posthuman* identifies three strands of posthumanist thought. According to her, the first comes from moral philosophy and develops a reactive form of the posthuman; the second, from science and technology studies, enforces an analytic form of the posthuman; and the third, from the tradition of anti-humanist philosophies of subjectivity, 'proposes a critical posthumanism' (38). Critical posthumanism as a theoretical praxis has been influenced by theorists of postmodernism, poststructuralism, humanism, anti-humanism, feminism and various forms of postcolonial theoretical practices.[1] However, a precondition of the birth of posthumanist discourses including critical posthumanism is the unprecedented development of science and technology in the last forty or fifty odd years and an accompanied development of techno-scientific discourses. It is the men of science who have fuelled the imagination of the posthumanist thinkers to go beyond the human. A related development is the growth of environmental and climatological concerns, which is closely linked to the growth of modern technologies and man's

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[1]The theories of subaltern studies, feminist theories, Dalit discourses, minority discourses and disability studies are all part of the postcolonialist strategy that attempts to analyse the structure of dominance and subordination in its various manifestations and aim to counter dominant hierarchical constructions.

use of these developed technologies. There had been a concern in posthumanism with human exploitation of the nonhuman animal and nature. In other words, the environmentalists have also contributed to the discourse of posthumanism in their effort to save the earth, and an idea has developed that "if man lives, the earth dies and if man dies, the earth lives."[2]

These disparate and divergent influences have made it difficult to define a discursive boundary for posthumanism leading to an intra-discursive conflict within posthumanism. To give an example, the nonhuman other which posthumanism aims to decolonise includes both nonhuman animals and machinic beings, and it aims to efface the perceived difference between the human and these nonhuman others. The problem is: the nonhuman animals are in danger of being eliminated from the face of the earth because of man's effort to master nature through technological innovations of science. Thus, machinic life and other nonhuman lives are in conflict, even when man is left out. Critical posthumanism, thus, comes in conflict with its popular brother, because transhumanism celebrates the machine or the machinic extension of man. It is ironical that critical posthumanism depends on the liberating discourse of transhumanism that promises to make the disembodied or borderless existence (that posthumanism aims at) possible.

This leads us to the crucial question of divergence and convergence between the 'trans' and the 'post'—between popular and critical posthumanism. The idea of the posthuman as conceived in transhumanism and posthumanism is similar. The first general statement in the Posthuman Manifesto, for example, reads, "It is now clear that humans are no longer the most important things in the universe. This is something the humanists have yet to accept." (Pepperell 190). The next statement is more intriguing: "All technological progress of human society is geared towards the transformation of the human species as we currently know it." (Pepperell 190). Another statement in this section reads: "In the posthuman era, machines will no longer be machines" (Pepperell 190). Now, if we put some transhumanist agendas beside these, the points of convergence become clear. One of the transhumanist formations is:

> Whether somebody is implemented on silicon or biological tissue, if it does not affect functionality or consciousness, is of no moral significance. Carbon-chauvinism, in the form of anthropomorphism, speciesism, bioism or even fundamentalist humanism, is objectionable on the same grounds as racism. (A Transhumanist Manifesto)

They shrug off the principle of what we normally understand as morality, and consider humanism a form of racism. Another of their agenda reads:

> Biological evolution is perpetual but slow, inefficient, blind and dangerous. Technological evolution is fast, efficient, accelerating and better by design. To ensure the best chances of survival, take control of our own destiny and to be free, we must master evolution. (A Transhumanist Manifesto)

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[2]This expression is borrowed by from the film *The Day the Earth Stood Still* (2008), directed by Scott Derrickson.

The statements markedly show that both of the practices are heavily dependent upon the growth of technology and technological innovations, and philosophically they discard the privileged position given to *homo sapiens* in the humanist discourses. In both schools of thought, the emphasis is on recognition of the machinic other.[3] The emphasis is on achieving freedom of thought (from the constraints imposed by humanistic discourses) and freedom from the limitations of the body. The issue of technology as a means to freedom becomes apparent once we think of Donna Harraway's appropriation (of transhumanism to feminism) of the figure of the cyborg as "a creature in a post-gender world" (151). The posthumanist notion of disembodied, bodiless/borderless existence that Katherine Hayles speaks of is inspired by the transhumanist notion that "Intelligence is a process, not an entity" and "Intelligence ought to be free—to move, to interact and to evolve, unhindered by the limits of biology and scarcity" (A Transhumanist Manifesto). All this makes it difficult to separate the popular and the critical, and they are, in a sense, inseparable.

However, as noted above, voices have emerged from within posthumanism that are critical of the humanist agenda of transhumanism. Transhumanism is criticised for addressing and extending Renaissance and Enlightenment humanism's concerns with man—the enhancement of human power to master evolution. Nick Bostrom, for example, observes that transhumanism combines Renaissance humanism "with the influence of Isaac Newton, Thomas Hobbes, John Locke, Immanuel Kant, the Marquis de Condorcet, and others to form the basis of rationalism, which emphasises empirical science and empirical reason rather than revelation and religious authority…. Transhumanism has its root in rational humanism" (2). Critical posthumanism rejects this humanistic concern of transhumanism, and this is where the 'post-' and the 'trans-' seem to take divergent routes. Critical posthumanism aims at a rejection of rational/liberal humanism, and it allows space for the non-human animal, the irrational, the extraterrestrial; it gives place to unreason and places it beside reason. This posthumanist critique of liberal humanism creates a critical space where posthumanism becomes a postcolonial strategy that counters rational humanism's dominant constructions.[4] In other words, the critical turn in posthumanism as represented by thinkers like Carey Wolfe and Rosi Braidotti among others is potentially a postcolonial move.

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[3]In the works of Cary Wolfe, however, there are more emphases on the nonhuman animals than on the machinic beings.

[4]Both postcolonialism and critical posthumanism draw its inspiration from radical questioning of the modernist notion of man and humanism by the postmodern and poststructuralist thinkers. One may recall some of the very famous Foucauldian expressions such as: "As the archaeology of our thought easily shows, man is an invention of recent date. And one perhaps nearing its end" or "one can certainly wager that man would be erased, like a face drawn in sand at the edge of the sea" (*The Order of Things* 387).

Posthumanism and Postcolonialism: Rapture/Rupture

The questioning of anthropocentrism in critical posthumanism draws on post-colonial theorists who have questioned some of the assumptions of Western humanism. Rosi Braidotti observes that the genealogy of critical posthumanism can be "traced back to the poststructuralists, the anti-universalism of feminism and the anti-colonial phenomenology of Frantz Fanon (1967) and of his teacher Aimé Césaire (1955)" (*The Posthuman* 46). Braidotti also mentions Said as a major inspiration. Cary Wolfe, a leading theorist of critical posthumanism in *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory*, attempts to develop a posthumanist account of the subject. Wolfe in his attempt borrows from a number of theorists to point out how the 'human' requires the construction of an 'animal' other. Among the theorists he uses to illustrate his points is Gayatri Spivak. Wolfe quotes from Spivak:

> The great doctrine of the identity of the ethical universal, in terms of which liberalism thought out its ethical programmes, played history false, because identity was disengaged in terms who was and who was not human. That's why all these projects, the justification of slavery, as well as the justification of Christianization, seemed to be all right; because, after all, these people had not graduated into humanhood, as it were. (Wolfe 7)[5]

Wolfe also falls back on Toni Morrion's critique of American culture of white supremacy to comment on the process of 'othering' of the nonhuman animal.

The denial of 'humanity' to the 'wretched of the earth' is the central issue in postcolonial studies. The postcolonial theorists have tried to deconstruct the humanist ideals from within. Therefore, they draw our attention to the Enlightenment period in Europe when Western humanism's formal procedure of humanization and 'dehumanization' or *beast-i-fication* of man started. With the emergence of the anthropological discourses and the theories of species and race, there emerged from several categories of the 'human'. A very succinct expression of the ideology of Enlightenment humanism is found in the English Romantic poet Robert Southey. While reviewing *Transactions of the Missionary Society* (1803) for the *Annual Review*, Southey observed: "This is the order of Nature: beasts give place to man; savages to civilized man" (623).[6] The assumption in postcolonial theory that

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[5]Quoted by Carey Wolfe from Gayatri Chakravorty Spivak's "Foucault and Najibullah", *Lyrical Symbols and Narrative Transformations: Essays in Honor of Ralph Freedman*, ed. Kathleen L. Komar and Ross Shideler (Columbia, S.C., 1998), 218–35, 219.

[6]Behind Southey's observation was the large archive of the race theories that developed during the Enlightenment period. A theory of polygenesis of the man was advocated by the notorious slave owner Edward Long in his *History of Jamaica* (1774), and Charles White in his *Account of the Regular Gradation of Man* (1799) argued that the whites and blacks are the two distinct species. On the other hand, there was the theory of monogenesis, which held that human beings are one species, but there is a gradation among men. Blumenbach (1865) in *The Anthrpological Treatises*, for example, argued that "the white was the primitive colour of mankind, since it was very easy for that to degenerate into brown but much more difficult for dark to become white" (269). Charles White's *An Account of the Regular Gradation of Man*, published in 1799, arranged the African and

the Western category of the 'human' presupposes human/animal binary is taken up by the posthumanists but with new ramifications. Whereas postcolonialism only considers the third clause of Southey's statement "savages to civilized man"—the *beast-i-fication* of man, posthumanists emphasise on the second—"beasts give place to man"—the 'beast' itself. The critical posthumanists argue that the 'othering' the beast is prior to 'othering' the 'beastly' man (Wolfe, *Animal Rites*).

Postcolonial theorists are concerned with the process of 'othering' and so are the posthumanists. Thomas Pepperrell famously said that posthumanism is not the end of man "but about the end of a 'man-centred' universe or, put less phallocentrically, a 'human-centred' universe" (171). This reminds us of Edward Said who in his last book, *Humanism and Democratic Criticism*, writes that humanism is a way of "letting vernacular energies play against revered terminologies" (29). Posthumanism plays against the revered term 'human' and valorises the nonhuman other. Postcolonialism counters racism, and posthumanism counters speciesism, because speciesism for the posthumanist is comparable to sexism and racism. Peter Singer argued in his 1975 book that "if we examine more deeply the basis on which our opposition to discrimination on grounds of race or sex ultimately rests, we will see that we would be on shaky ground if we were to demand equality for blacks, women and other groups of oppressed humans while denying equal consideration to nonhumans" (*Animal Liberation* 3). Of course, apart from the nonhuman animal, posthumanism also accounts for the machinic beings that traditional humanism considers as the monstrous other of man.

Methodologically, postcolonialism and posthumanism are similar as their aim is to critically review the hierarchical formations (of race or species) and dismantle the grand narratives that upheld the hierarchies, although the agencies the two discourses concerned with are different. Postcolonialism offers a critique of the white West's domination of the colonial 'other', and it is an effort to deconstruct colonial discourses or the colonial mode of thinking that helped perpetuate the colonies. Its aim, precisely, was to decentre the Eurocentric discourses or the Eurocentric model of humanism from within.[7] Critical posthumanism aims at a more radical form of decentring; it aims to decentre 'man' and 'decolonise' the whole earth/universe by displacing the anthropocentric mode of thinking. It questions the dominance of *homo sapiens*—the form of anthropocentrism where 'humanity' is the new form of

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(Footnote 6 continued)

European in polar opposites. He placed Africans nearer to the 'brute creation' (42). Another important figure in the development of racial science was Casper Lavater, whose *Physiognomical Fragments* (1775–88), *Essays on Physiognomy* (1789–98) and *Aphorisms on Man* (1788) exercised much influence upon the theories of race.

[7]One may recall Said's argument in *Humanism and Democratic Criticism*. Said argues: *"*It is possible to be critical of Humanism in the name of Humanism and that, schooled in its abuses by the experience of Eurocentrism and empire, one could fashion a different kind of Humanism that was cosmopolitan and text-and-language bound in ways that absorbed the great lessons of the past […] and still remain attuned to the emergent voices and currents of the present, many of them exilic extraterritorial and unhoused" (11).

colonial subjectivity that is not defined by the dominance of a particular group of people but of the Earth itself (Chakrabarty, "The Climate of History").

Critical posthumanism, therefore, criticises postcolonialism for its 'residual humanism'. Cary Wolfe suggests that the problem with postcolonial critique of humanism is that "it often reinscribes the very humanism it appears to unsettle, so that the formerly 'abstract' subject of liberal humanism, though now indeed socially marked and locatable, is nonetheless 'marked' by a very familiar repertoire, one that constitutes its own repression—its own 'sacrifice', to use the characterisation of both Derrida and Bataille—of the question of the animal and, more broadly still, of the nonhuman" (*Animal Rites* 9). Wolfe's observation is made in relation to Homi Bhabha's cultural critique of Crichton's novel *Congo*. Wolfe finds Bhabha's critique of the system of colonial subject formation flawed. Bhabha's work, he comments, "stands in relation to the gray gorillas as Crichton's does to Kigani" Wolfe, however, does not reject Bhabha completely: "This is to suggest not that Bhabha is wrong, but rather that he is only half right" (*Animal Rites* 188). Wolfe's critique of Bhabha is, therefore, symptomatic of critical posthumanism's relation to postcolonialism—it draws upon the postcolonial theorists but also moves away from them.

Critical Posthumanism, therefore, is potentially a moment of rapture for post-colonial theorists because this may help them come out of their blindness and recognise their fault of ignoring the nonhuman other. In the history of postcolonialism, there had been many such moments, and those moments have given birth to critical practices such as postcolonial feminist discourses and discourses on subalternity. These discourses are at once critical of postcolonialism, but simulteneously, extend the boundary of postcolonialism by testing its limits. To a great extent, critical posthumanism does the same: it extends the analysis of the system of colonial subject formation beyond the human world—beyond anthropocentrism. For postcolonialism, it opens up a new a space for discursive practices where the 'other' is not only the colonial 'human other', but it may include the 'machinic other' and the 'nonhuman animal other'.

This moment of rapture, however, is problematic and, in turn, leads to the point of rupture between the postcolonial and posthumanist discourses. If the moment of recognition of the 'nonhuman other' is the liberating moment for postcolonialism, the realisation that the posthuman world may realise its 'otherness' in pre-posthuman human agency makes postcolonialism critical of posthumanism. This moment of anagnorisis is important for postcolonial studies, because it needs to brace itself for the challenge posed by the entry of more-than-human life forces into the discursive arena. Dipesh Chakrabarty in his article "Postcolonial Studies and the Challenge of Climate Change" suggests that the problem of integration of the nonhuman others into its discursive boundary has led postcolonialism into a period contradiction and challenge. Postcolonial thinkers cannot ignore this challenge. The problem for postcolonialism is compounded once we consider that the rise of posthumanist discourses has a marginalising effect on postcolonial studies. Posthumanism, as claimed by Juanita Sundberg in her article, "Decolonizing posthumanist geographies", is embedded in Eurocentrism. In her article, she is critical of the "Eurocentric performances common in posthumanist geographies"

(33). Taking a cue from Dipesh Chakrabarty's book *Provincialising Europe*, she argues that "Anglo-European scholarship is the only tradition truly *alive* in posthuman theorising" (38). The universalizing discourse of posthumanism, according to her, exercises 'ontological violence' on 'indigenous epistemes' (34).

Once we locate the Eurocentric turn in posthumanism, the valorisation of the nonhuman other in posthumanism becomes the object of the postcolonial critical gaze. The valorisation of the nonhuman in itself is not a problem, but if it is done at the cost of the 'human other'/'the man–animal', it becomes problematic, and this is a neo-colonial move in posthumanism that aims to remove the human subaltern groups from the discursive space. This erasure of human agency may help the neo-techno-colonizers in the act of exploitation, since their exploitation will remain invisible. Posthumanist discourse, therefore, enacts a politics of silencing by displacing our gaze from the 'human other' to the nonhuman other. Sylvia Wynter and Charles W. Mills, sum up the precise problem with the decentring of man in posthumanism. The problem, they say, is: when some people have not been considered and treated as humans, posthumanism serves as an alibi for further denial of humanity to these same people. They argue that cybernetics may be a step beyond old-fashioned humanism, but the newly emergent subjects of humanism—colonised people, women and minorities—need to be respected and dignified as humans first. This argument, posthumanists might say, gets entrapped in liberal humanism's notion of progress. The question is not, as Shu-mei Shih writes, about temporality —the 'subhumans' are asking for old-fashioned humanism and hence are hopelessly anachronistic—but about priority within the same historical moment shared and lived by all. This humanism is not to be conflated with pseudo-emancipatory liberal humanism (against which Jan Mohamed warns) but a trenchantly political and collective move against 'dehumanization' (Shu-mei Shih 30).[8] These apprehensions become validated once we take a look at its popular form and the complicity of some forms of posthumanism with advanced capitalism. As Rosi Braidotti suggests, "the advocates of advanced capitalism seem to be faster in grasping the creative potential of the posthuman than some of the well-meaning and progressive neo-humanist opponents of this system" (*The Posthuman* 45).

Popular Posthumanism and the 'Human' Subaltern

Bart Simon in the introduction to his book "Toward a Critique of Posthuman Futures" observes that popular posthumanist discourse structures the research agendas of much of corporate biotechnology and informatics as well as serves as a

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[8]Shu-mei Shih, "Is the Post-in Post-socialism the Post-in Posthumanism?" offers an interesting way of reading posthumanism and post-socialism through Marxist humanism. The three physical spaces Shih interconnects are China, France and America. She argues that Marxist humanism growing in China and accepted by Sartre in France and rejected by Althussar's anti-humanism leads to the formation of the postcolonial and posthumanist discourses in America.

legitimate narrative for new social entities (cyborg, artificial intelligence and virtual societies) composed fundamentally of fluid, flexible and changeable identities. For popular posthumanism, he writes, "the future is a space for the realisation of individuality, the transcendence of biological limits, and the creation of a new social order" (2). This form of posthumanism is closely connected to the discourse of extropianism and largely based on biotechnological researches that aim to change the human world through progress in science. The target of the extropians and transhumanists is to master evolution, which, according to Thomas Pepperrell, can be summarised as "an optimistic belief in the power of technology to transform, for the better, that which we now know as human existence" (169). One of the founders of the Extropian movement, Max More, defines transhumanism in the following terms:

> TRANSHUMANISM: Philosophies of life (such as the Extropian philosophy) that seek the continuation and acceleration of the evolution of intelligent life beyond its currently human form and limits by means of science and technology, guided by life-promoting principles and values, while avoiding religion and dogma. (www.extropy.org)

Moreover, a definition of the posthuman is also provided. According to him:

> Posthumans will be persons of unprecedented physical, intellectual, and psychological ability, self-programming and self-defining, potentially immortal, unlimited individuals. Posthumans have overcome the biological, neurological, and psychological constraints evolved into humans. (www.extropy.org)

The transhumanist agenda of creating a body of people who would transcend the human limitation raises a number of questions: Who is going to master evolution and for whose benefit? What is the effect of this mastering—socially, economically, climatogically and environmentally? What kind of new power equations might it create?

It is precisely these thoughts that forced Francis Fukuyama to sound a warning against unregulated corporate techno-science. He argued that while technology is good and desirable for the improvement of the human condition, its uncontrolled use may have undesirable social consequences. Fukuyama observes that contemporary biotechnology may alter human nature and move us into the 'posthuman stage of history', but the unchecked progress of corporate techno-science may alter the condition of our common humanity, and it will alter the material and biological basis of natural human equality and human rights. Fukuyama warns, "What happens to the political rights once we are able to, in effect, breed some people with saddles on their backs, and others with boots and spurs?" (9–10). Fukuyama may be accused of this 'humanistic pretension' that posthumanism is critical of, but the question is not of natural human equality or inequality but rather of increasing the human inequality through biotechnology.

Rosi Berdotti sounds a warning against, what she calls the opportunistic form of post-anthropocentrism in advanced capitalism. Advanced capitalism, she observes, creates a perverse form of post-anthropocentrism. Braidotti argues that advanced capitalism and its bio-genetic technologies "engender a perverse form of the posthuman". "At its core there is a radical disruption of the human–animal interaction, but all living species are caught in the spinning machine of the global economy" (*The*

Posthuman 7). In a world where technology is controlled by big capitalist enterprises or state agencies, a new equation is/has been/will be formed between technology, money and power leading to the formation of a grid of 'techno-maters' who would control the world. The question is not only regarding the use, misuse or abuse of technology but about the very process of its production, distribution, consumption and control. As Braidotti argues, in advanced capitalism, there is a perverse form of mobility—tightly controlled mobility where there is free circulation of capital, but real-life mobility is highly contested.[9] In capitalism, the concept that technology is neutral is a myth. The very process of inception of new technologies is not neutral. Its production is funded by some big corporate houses or some state agencies who decide what kind of innovations is required and precisely for what purpose. These organisations have certain aims and intentions and a preconceived idea regarding the possible use of a particular technology. In respect to consuming the consumable innovations, the common lot of the world have little access to cutting edge technologies be it medical or otherwise.[10]

The development in the field of reprogenetics is an example that shows how technology may create a new race of powerful people out of those who have access to and can afford its advantages, leading to long-term impacts on human society. Fukuyama's apprehensions become real once we consider reprogenetics.[11] Lee M. Silver, a leading researcher in the field of reprogenetics, raises serious doubts as to who will have access to this technology and what will be the effect if it is used in the large scale. He writes: "The use of genetic enhancement could greatly increase the gap between the 'haves' and the 'have-nots' in the world." He hopes that in future when the cost of "reprogenetics drops, as the costs of computers and telecommunications did, it could become affordable to the majority in Western and other industrialised countries." "The only alternative seems remote today and it may never be viable: *a single world state in which all children are provided with the same genetic enhancements and the same opportunities for health, happiness, and success. But politics are far more difficult to predict than science*" (emphasis added). Inherent in it is the risk of its misuse as it happened with eugenics.

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[9]Rosi Braidottti observations are made in her book *The Posthuman* as well as in her in her key note address to the conference "Beyond the Human: Monsters, mutants, and lonely machines (or what?)". The video of the lecture is available in the conference website: www.beyondthehuman.com.

[10]See a recent article "Medicines in India, for India" by Pavan Srinath that discusses how tropical diseases are often neglected by pharmaceuticals because "the size of the drug market is smaller, people have lower income and companies are uncertain about IPR."

[11]According to Lee M Silver "Reprogenetics refers to the use of genetic information and technology to ensure or prevent the inheritance of particular genes in a child." For him the difference between reprogenetics and eugenics is consent (Eugenics—forced. Reprogenetics—consented to). However, Barabar H. Peterson calls it new eugenics and defines it as "the genetic engineering of man to create a human race according to scientific design."

See Barbara H. Peterson's "Transhumanism: Genetic Engineering of Man—the New Eugenics" http://farmwars.info/?p=11212. It is also interesting to note that the term 'reprogenetics' was first used by Julian Huxley, an advocate of eugenics.

The underprivileged became the target of the eugenics project throughout Europe, the most infamous being the German example of racial purification. Similarly, China is currently being rumoured as practicing mass reprogenetics. Apprehensions are that China is practising eugenics to create a 'super race' of people who would dominate the world.[12]

Scientific researches supported by a transhumanist agenda may revolutionise the world technologically and thus also politically and economically. The point of concern is that we are gradually moving towards a future where everything will become programmable, in a sense predetermined. In this technologically advanced universe, there may be two groups of human population: one that will have access to every technology and the 'other' who will have little or no access to it. On the one hand, there will be money, technology and power in the hands of the dominant master class; on the other hand, there will be the impoverished in terms of money and access to technology, who will thus be subordinated and be the subaltern. Today's subaltern is likely to be tomorrow's human or pre-posthuman subalterns; and as predetermination will play a vital role in the posthuman world, the movement of the subaltern may be foreclosed. Science fiction writers have imagined what the future may be like and it would not be irrelevant to sign off the paper with a short discussion on Linda Nagata's novel *The Bohr Maker* that attempts to imagine the posthuman future.

Fictional Imagination and the Posthuman World: Linda Nagata's *The Bohr Maker*

Linda Nagata in *The Bohr Maker* imagines a future society that is posthumanist or even post-posthumanist. The posthuman geography that the novel covers basically includes three spaces: 1. the Commonwealth, 2. the Summer House and 3. the Sunda Free Trade Zone. Imagined in terms of the current geopolitical situation, the Commonwealth seems to include Europe and the USA. The Commonwealth is technologically advanced, but it has set a limit to the development of biotechnology, and the limit is imposed not only within its own territory, but also in those areas which are outside its law and jurisdiction. The people of the Commonwealth are posthumans. Kirstin, for example, is hundred and twenty years old, but her youth, beauty and passion are of a twenty-year-old girl's; she has several 'ghosts' and can simultaneously inhabit many spaces. The people are happy and content, because they do not lack anything. The Summer House may stand for either the present day China or Japan; it is a corporate city that is artificially built and is

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[12]See Geoffrey Miller's (Evolutionary psychologist, NYU Stern Business School and University of New Mexico; author of *The Mating Mind and Spent)* article "Chinese Eugenics" at <http://edge.org/response-detail/23838>.

See also "Imperfect Conceptions, Medical Knowledge, Birth Defects, and Eugenics in China" by Frank Dikötter in Hervard Asia Pacific Review <http://www.hcs.harvard.edu/~hapr/summer00_tech/bookreview.html>.

technologically far more advanced than the Commonwealth. Technologies that are prohibited by the Commonwealth are secretly developed here. The Sunda Free Trade Zone may be Indonesia or Malaysia. Here, there is no restriction on the use of technology, but the state of science and technology is very poor. The Commonwealth police swoop upon Sunda if they feel that the Commonwealth is in risk due to some developments in the Free Trade Zone. Corresponding to the three geopolitical spaces, there are three different sets of characters: among the central characters, Phousita and Arif are the inhabitants of the slum like Spill in the Free Trade Zone; Nikko and his brother Sandor are from the Summer House, and Kirstin belongs to the Commonwealth. The central figures Phousita and Nikko are victims of nanotechnology—Nikko is a victim of his father's experiment with advanced technology, and Phousita, an inhabitant of Sunda, is victimised by her master. Both of them are hated by the inhabitants of the Commonwealth as nonhuman. Nikko is considered a nonhuman, because he is far more advanced than humans (he can live without any of the appliances required by the citizens of the Commonwealth) of the Commonwealth; Phousita is nonhuman, because she cannot be modified and become as human as Commonwealth people (she is an adult woman who cannot stand taller than an eight years old girl).

At the centre of the novel is a technological innovation called the Bohr Maker. The Bohr Maker is a very powerful innovation that may lead to revolutionary changes in human beings. Nikko wants to steal the Maker as he knows that his life is coming to an end as the time period allotted to his artificially modified existence is nearly over. The Commonwealth in no way, however, will allow it to be stolen, and it is closely guarded by the police headed by Kirstin. However, it is stolen by the very man who was guarding it and accidentally gets into the body of Phousita, giving her immense power. The rest of the novel is the quest for the Maker by Kirstin and Nikko. Kirstin goes after the Maker to protect the Commonwealth by destroying the Maker. Nikko wants the maker to save himself. A conflict ensues between the Summer House and the Commonwealth due to the Maker. Kirstin orders her people to use atomic weapons to destroy the Summer House when she fails to get the Maker. The power of the Maker helps Phousita to survive many challenges, and at the end of the novel, she survives with Sandor.

Recalling Silver's observation that "*politics are far more difficult to predict than science*", one may explore the posthuman politics with technological advancement in the novel. The citizens of Commonwealth have monopolised migration from earth to nearby corporate space colonies as most of earth have become a reservation housing area for the impoverished common people, and Sunda is such an impoverished area. The people of the Sunda are victims of biotechnology, often enslaved to their masters who control their physical movements through brain implants. Actually, the people of the Commonwealth either ignore the victims of biotechnology or hunt them down to destroy them. They have achieved their own advancement, and they do not want to share it with others, neither do they want others to surpass them. The Commonwealth people want to maintain the status quo

and preserve the current political hierarchy. The Free Trade Zone is just the opposite of the Commonwealth. They do not have advanced technology; people live in extreme poverty without food and water. The novelist presents a picture of Sunda through the eyes of Sandor who is choked by the spectacle of poverty he sees over the faces of people. Sandor notices a beggar and his family:

> Dried mucus clung to his bloodshot orbs. His nose wobbled like a bit of dead flesh at the level of his lips. His partner suffered the same afflictions, though her state seemed less advanced. The stench was horrific. A child huddled with them, a little girl, healthy-seeming, except for a crusty-looking growth of dull blue enamel on her stunted forearms that was nothing like the smooth blue enamel platelets of Nikko's skin. Nikko was strong and beautiful in the way of natural things. These… these *people* (they were a family group, he realized, father, mother, daughter), how ugly and unfunctional and unnatural they seemed. (49)

When Phousita is infected with the Bohr Maker, these people are suddenly blessed as she can heal everybody with her touch. A large crowd gathers before the settlement where Phousita lives to get the healing touch, and she is upheld as a goddess. Phousita herself understands that the Maker can be a blessing to the impoverished. The Commonwealth police would not let it happen, because the Bohr Maker has a potential that may surpass the technology of the Commonwealth. The same politics of containment is also enacted on the Summer House, and Kisrtin keeps strong vigil over Nikko's father Fox of the Summer House, who subverts the law of the Commonwealth and develops novel technologies like the 'biogenesis function' that would help the Summer House survive in any emergency. The people of the Summer House are least concerned with what happens to the people of Sunda. The posthumanist dream of a bodiless and borderless existence also fails. The citizens of the Common Wealth refuse to leave their bodies and bordered existence, and live a disembodied life. Somehow, the people of the Summer House reject the rule of the Commonwealth and build a bodiless existence. The members of the Summer House, however, are very unhappy to leave their bodies. Nikko who is the first person to live without body repeatedly expresses his desire to get back the physical existence. The people of Sunda and other earthbound countries are living a bordered, bounded and hounded life.

The novel does not define a particular technology as good or bad, but only depicts possible future civilisations based on technological innovations. Nagata's story, however, reveals the interrelationship between money, power and technology. It is particularly sharp in depicting posthuman subalterns who are victims of technology in the hands of corporate techno-capitalists and technologically advanced nations. They are also victimised by local lords and masters. All these oppressive forces work together to confine the subaltern people into a specified life pattern. The narratives remind us of Fukuyama's concerns as well as of Braidotti's warning regarding the opportunistic turn in posthumanism and lead us to the arena of techno-colonialism with its illustration of the process of 'othering'. Nagata imagines a posthuman world that preserves the hegemonic structure that sustains on the combined force of technology and wealth.

Conclusion

The article has been an attempt to understand the discourses of posthumanism and their possible implications for postcolonial studies. Fascination and fear characterise my postcolonial gaze upon the posthumanist discourses. It emerges from the preceding discussion that postcolonial studies need tools to cope with the newly emergent nonhuman subjectivities and the resultant geopolitical changes. Postcolonial studies must confront the embedded Eurocentrism in the posthumanist discourses and must pay attention to the process of the formation of the 'other' in the posthuman world. Critical posthumanism may be a way forward for postcolonial studies, especially, Rosi Braidotti's version of 'critical post-humanism.' In relation to the formation of the posthuman other, the hypothetical position is adopted that the subaltern populations of the once colonised countries are in danger of possible marginalization and 'othering' in the posthuman world. If the human subaltern cannot speak in the postcolonial world, the possibility of them being heard in the posthuman world becomes a distant cry; with the removal of the category of the human from the discursive space, even the possibility of speaking about the human subaltern is foreclosed.

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Chapter 8
Two Senses of the Post in Posthumanism

Pal Ahluwalia

> The horror that stirs deep in man is an obscure awareness that something living within him is so akin to the animal that it might be recognized. All disgust is originally disgust at touching… He may not deny his bestial relationship with the creature, the invocation of which revolts him: he must make himself its master.
>
> —Walter Benjamin, in *One-Way-Street*, 1923–26.

Let me begin with some preliminary definitions of the post-colonial and the posthuman. In a sense, both 'posts' appear to be suggesting that there has been a transition whereby the suffix has been surpassed by the prefix. Hence, the suggestion that post-colonial means something after colonialism and posthumanism something that succeeds humanism. The former:

> … does not mean 'after colonialism'…It begins when the colonisers arrive and doesn't finish when they go home. In that sense, post-colonial analysis examines the full range of responses to colonialism, from absolute complicity to violent rebellion and all variations in between. All of these may exist in a single society, so the term 'post-colonial society' does not mean an historical left over of colonialism, but a society continuously responding in all its myriad ways to the experience of colonial contact (quoted in Ahluwalia 1997: 2).

This definition of the post-colonial suggests clearly that the mere prefix does not entail that the suffix has been rendered irrelevant, and that the effects of colonialism are no longer prevalent within a particular society. Rather, the post-colonial and the colonial often coexist with either contradictory or complementary effects.

Similarly, it is N. Katherine Hayles who provides a succinct definition of the posthuman arguing that it:

> …implies not only a coupling with intelligent machines but a coupling so intense and multifaceted that it is no longer possible to distinguish meaningfully between the biological organism and the informational circuits in which the organism is enmeshed (Dinerstein 2006: 570).

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The intensification of technology and globalization has no doubt impacted very strongly on different spheres of human life, from medicine to the production line, raising questions over the very boundaries of human bodies that "seem to dissolve as they undergo limitless prosthetic extension" (Cheah 2003: 1).

The posthuman in such a rendition has no boundaries between the human body and what is broadly termed GNR technologies, namely "G for genetic engineering or biotechnology, N for nanotechnology and R for robotics" (Dinerstein 2006: 570). The posthuman subject in this configuration (and I am jumping ahead given that in many parts of the world the very notion of the human contested) is a mere collection of GNR components whose boundaries have the potential to be continuously constructed and reformulated. Nikolos Rose, however, has questioned how new this phenomenon is, arguing that since the invention of language, humans have supplemented their capacity through various forms of technology. The very capacities that we might assume to be natural "arise not from human nature, but from distributed associations of humans, artifacts and objects" (Rose 2007: 80). This allows him to suggest that rather than us becoming posthuman, we are probably "inhabiting an 'emergent' form of life" (Rose 2007: 80).

Nevertheless, for GNR enthusiasts, there is a significant shift that is marked by the manner in which free will is conceptualized. Hayles points out that:

> If "human essence is freedom from the wills of others", the posthuman is a "post" not because it is necessarily unfree but because there is no a priori way to identify a self-will that can be clearly distinguished from an other-will (Hayles 1999: 4).

Despite such an assertion, there is no proclamation as to the end of humanity. Rather, there is a signaling that there is a different conception of the human. Such a conception applies "to that fraction of humanity who had the wealth, power and leisure to conceptualize themselves as autonomous beings exercising their will through individual agency and choice" (Hayles 1999: 286).

The fraction of humanity that has such wealth, such power is undoubtedly primarily Euro-American where the belief in technology is equivalent to "secular religiosity" (Dinerstein 2006: 569). This technological determinism is based on underlying cultural beliefs and an insatiable consumption society that is most clearly manifested in the human body. Anthony Elliott drawing upon Beck's notion of 'reflexive society' captures this desire arguing that the contemporary West is enmeshed in an era of 'reinvention':

> Today's 'cultures of reinvention' seem for many definitive of the perfect lifestyle. From super-fast dieting to life-coaching from reality television to cosmetic surgery: the art of reinvention is inextricably interwoven with the lure of the next frontier, the break through to the next boundary, especially boundaries of the self (2013: 4–5).

The lure of next frontier, the next boundary is very much the domain of the contemporary West. It is not surprising then, that the notion of the posthuman underpinned by a theological belief in technology raises deep concerns among some critics who see the current discourse "within an unmarked white tradition of technological utopianism that also functions as a form of social evasion." Indeed, the

"posthuman is an escape from the panhuman" (Dinerstein 2006: 570). The promise of the universality of European humanism it appears has finally given way to the individuality of a posthumanism that is very much the domain of those with wealth and power principally located in the contemporary West. In that sense, it is important to reexamine the relationship between humanism and colonialism if we are to understand the dynamics of such a social evasion that lures some to posthumanism.

The Monster (Re) Appears

In his *Confessions of an English Opium-Eater*, Thomas De Quincey narrates a meeting between his English servant and a 'Malay' visitor. The servant we are told had never seen "an Asiatic dress of any sort: his turban, therefore, confounded her not a little." Unable to communicate with each other, the servant called her master, who when he appeared was confronted with a scene in the kitchen where the servant and the 'Malay' stood next to each other with a child in the background. He describes the encounter:

> In a cottage kitchen … stood the Malay, his turban and loose trousers of dingy white relieved upon the dark panelling; he had placed himself nearer to the girl than she seemed to relish … as she gazed upon the tiger-cat before her. And a more striking picture there could not be imagined, than the beautiful English face of the girl, and its exquisite fairness, together with her erect and independent attitude, contrasted with the sallow and bilious skin of the Malay, enamelled or veneered with mahogany by marine air, his small, fierce, restless eyes, thin lips, slavish gestures, and adorations. Half hidden by the ferocious-looking Malay, was a little child from a neighbouring cottage, who had crept in after him, and was now in the act of reverting its head and gazing upwards at the turban and the fiery eyes beneath it, whilst with one hand he caught at the dress of the young woman for protection (as cited in Burt 2004: 897).

The tiger–cat, animal–human like Malay figure that De Quincey writes about, is more than likely a Muslim as he had picked the Malay as a signifier of a complex interplay of "the picturesque, that mixture of variety and indistinctness, [in] the name of a country that assembles the utmost Asian peoples, languages, and religions" (881). What is clear, however, from this example of De Quincey's who was writing in the 19th century, is that this conflation between different Asians and the rendering of them as simply Malay was part of the very processes of Orientalism that Edward Said so painstakingly exposed (Said 1978). Such was the confidence of the superiority of Europe and Europeans that it was possible to simply render everyone 'Malay' or Oriental. The power of representation is all too evident in this configuration where it mattered little whether one was a Muslim, animal–human like Malay or Asian.

Vanita Seth has noted that the world of Antiquity and the Middle Ages was replete with "Centaurs, satyrs, men with tails or dog faces, races with only one eye, or feet large enough to double as umbrellas" (2003: 75). Concomitant with the birth of modernity, these monstrous figures shadowed "civilization as its constituent and

abject discontent." From the late 18th century onwards, particularly in Europe, "the term monstrosity mobilized a set of discursive practices that tied racial and sexual deviancy to an overall apparatus of discipline, and, later in the 19th century to biopolitics" (Rai 2004: 539). So that, by the end of the 19th century, this world of monsters had been expunged and relegated to mere myths and legends. They were replaced by an alternative "assortment of characters: the Mongoloid, Negroid, Caucasian, Dravidian…Racialized reductions excised anatomical excess" (Seth 2003: 75).

It was the colonial project, deeply imbricated with modernity, however, that necessitated that these monsters had no place in the modern West. The 'negro,' 'native,' 'bestial,' 'barbarian' and the colonized now became the very referents against which humanity and the civilized were juxtaposed.

The fascination with these monsters and ghosts or what Julia Kristeva has termed as the grotesques were invented within Gothic works "to embody the contradictions and ambiguities of our beings: those obstacles to subjective knowledge and the creation of coherent identity" (Beville 2009: 39). These figures much like our fascination with Zombies, Cyborgs and other modified human figures so prevalent within popular culture "are accounted for as 'tokens of fracture within the human psyche'" (Kearney 2003: 4), that represent "experiences of extremity which bring us to the edge … [and] threatens the known with the unknown" (Kearney 2003: 2).

The colonial project not only entailed the moving into a country, the looting of it and departure. What kept the colonizers was not simple greed (although this was more often than not an overriding factor), but massively reinforced notions of the civilizing mission. This was the notion that imperial nations not only had the right but the obligation to rule those nations 'lost in barbarism.' Like John Stuart Mill—who stated that the British were in India "because India requires us, that these are territories and peoples who beseech domination from us and that,… without the English India would fall into ruin" (Said 1994a: 66)—imperialists operated with a compelling sense of their right and obligation to rule. Much of this sense was present in, and supported by, European culture which itself came to be conceived, in Mathew Arnold's phrase, as synonymous with "the best that has been thought and said" (Arnold 1865: 15). In a sense, all forms of humanism to date have been involved in the project of empire. As Davies has observed, "They speak of the human in the accents and the interests of a class, a sex, a 'role'—their embrace suffocates those whom it does not ignore" (Davies 1997: 131).

Remarkably, in current configurations of what has been dubbed 'the global war on terror,'[1] the figure of the monster has reappeared and is tied inextricably to that

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[1]Wlad Godzich has noted that in the United States:

"the idea has taken hold that we are living in a 'time of terror'. The phrase often modified to 'war on terror', has gained sufficient currency to serve as the rubric under which present times are periodized. For Donald Rumsfeld and the Pentagon, the cold war has given way to "the global war on terror" (2006: 135)."

of the terrorist, an image that resonates with the much older figures, those of the racial and sexual monsters of the 18th and 19th centuries. Drawing on Foucault's conception of monstrosity, Jasbir Puar and Amit Rai argue that what is central to this 'global war on terror' is that monstrosity is, 'a regulatory construct of modernity that imbricates not only sexuality, but also questions of culture and race.' The monster is not simply an other but a site through 'which a multiform power operates.' Consequently, discourses that deploy monstrosity as "a screen for otherness are always also involved in circuits of normalizing power as well: the monster and the person to be corrected are close cousins" (2002: 118). In that sense, the very desire that motivated the colonizing mission underpins contemporary notions of normalization. The contemporary figure of the Monster Amit Rai argues, "has re-emerged at the center of an 'axis of evil,' as a masculine-effeminate 'subject' that embodies Western civilization's ultimate enemy: the Islamic terrorist" (2004: 539).

As part of the logic of the 'clash of civilizations,' it has become necessary for the West to recreate the figure of the monster and the beast to once again establish its superiority, to claim the mantle of the civilized, to be the very repository of humanity itself. In the West, immigrant populations are increasingly reminded that they have to conform to 'our way of life.' Indeed, there is a technological cultural complex that celebrates progress, religion, whiteness and modernity over what are deemed static, primitive or even terrorist societies (Dinerstein 2006: 571). Critically, it was "machine versus human or animal power; science versus superstition and myth; synthetic versus organic; progressive versus stagnant," that defined the relationship between the colonizer and the colonized (Dinerstein 2006: 572). It was faith in science and technology that laid the groundwork for the almost secular religiosity and belief in the superiority of the machine. As Joel Dinerstein notes "the world had a new Messiah: the machine" (577).

The Colonized and the Cyborg

The colonized and the cyborg subject raise an interesting conundrum in terms of alterity. It may well be pertinent to consider the relationship between them. These are bodies that have preoccupied scientists and the state who have made them not only "an object of study and research, but also, and simultaneously, an object of control, exploitation and discipline. Both emerge from nothing: the colonized body out of a history and place that is negated, the cyborg out of the inanimate, the nonhuman." (Chambers 1999: 39). As GNR technologies blur the boundaries, a whole new field of biopolitics is emerging with the state exercising authority and considering the ethical dilemmas that emerge. It is important to consider whether to be posthumanist entails a renunciation of the human or that it means an escape from the very confines and constraints of a universal subject. As Chambers points out:

> To accept the idea of post-humanism means to accept the limits, limits that are inscribed in the locality of the body, of the history, power, and the knowledge that speaks (Chambers 1999: 41).

Let us turn then to examine the relationship between humanism and colonialism as a precursor to such an evolution.

Humanism and Colonialism

Although there are many types of humanism and the term is highly contentious, it nevertheless signifies that there is something universal and given about human nature and that it can be determined in the language of rationality. These ideas of human nature and rationality underpin the Enlightenment humanism that post-structuralist and postmodernist anti-humanists find objectionable on the grounds that these notions are historically contingent and culturally specific. Leela Gandhi points out: "the underside of Western humanism produces the dictum that since some human beings are more human than others, they are more substantially the measure of all things" (1998: 30). In this context Aimé Césaire observed that the only history is white (1972: 54). As Dipesh Chakrabarty points out:

> For generations now, philosophers and thinkers shaping the nature of social science have produced theories embracing the entirety of humanity; as we well know, these statements have been produced in relative, and sometimes absolute, ignorance of the majority of humankind i.e., those living in non-Western cultures. (1992: 3)

Fanon recognized that for France as the birthplace of the democratic sentiments of liberty, equality and fraternity Algeria raised significant questions that posed a critical problem and challenge to Western Humanism. However, it was much earlier in *Black Skin*, *White Masks* that we gain an insight into the Manichean world of his formative years. He was desperate to understand and transcend the nauseating banality of this world. As he pointed out at the end of the book:

> Was my freedom not given to me in order to build the world of *You*?

> At the conclusion of this study, I want the world to recognize, with me, the open door of every consciousness. (1986: 232)

Fanon's account of the Manichean world of colonialism, Homi Bhabha argues, needs to be seen as the "image of the post-Enlightenment man tethered to, *not* confronted by his dark reflection, the shadow of colonized man" (1986: xiv). This realization led to his desire to change the madness of the colonial world, a task that became critical for him when he moved to Algeria. In Algeria, Fanon was forced to conceptualize a new humanism. The tenuous hold he had on cultural certainty led to a weakening of the hold of humanism and the conception of a new humanism, a disruption of humanism that previewed the anti-humanism of post-structuralism.

In his preface to *The Wretched of the Earth*, Jean-Paul Sartre pointed out the manner in which a new generation of colonial subjects challenged their European

masters: "You are making us into monstrosities; your humanism claims we are at one with the rest of humanity but your racist methods set us apart" (Fanon 1967a: 8). In Fanon, Sartre found the voice of the Third World which did not speak to Europe but spoke to itself. He pointed out that Fanon's book did not need a preface because it was not directed at the colonizer but that he had written it to bring the argument to a conclusion:

> for we in Europe too are being decolonized: that is to say that the settler which is in every one of us is being savagely rooted out… we must face that unexpected revelation the strip-tease of our humanism… It was nothing but an ideology of lies, a perfect justification for pillage; its honeyed words, its affectation of sensibility were only alibis for our aggressions. (Fanon 1967a: 21)

For Fanon, it is through decolonization that a new humanism can emerge. As Fanon points out, "the 'thing' which has been colonized becomes man during the same process by which it frees itself" (Fanon 1967b: 28). Fanon's notion of humanism can also be found in his discussion in "Racism and Culture," where he argues that in order to attain liberation, "the inferiorized man brings all his resources into play, all his acquisitions, the old and the new, his own and those of the occupant" (1970: 53). However, through decolonization racism itself is brought to an end. A new humanism, a new society, is born in which:

> The occupant's spasmed and rigid culture, now liberated opens at last to the culture of the people who have never really become brothers. The two cultures can affront each other, enrich each other.

> In conclusion, universality resides in this decision to recognize and accept the reciprocal relativism of different cultures, once the colonial status is irreversibly excluded (54).

There is little recognition, however, of the origins of anti-humanism. In general, it is thought that the movement was initiated in an exchange between the Marxist humanism of Lévi-Strauss and Althusser and the existential humanism of Sartre and others in the French Communist Party.[2] But, as Robert Young points out, this fails to take into account the attempts by Sartre, Lukács and others to found a "new historical humanism" which challenged the idea of man's unchanging nature on the grounds that it was important to see "man as a product of himself and of his own activity in history" (1990: 121). As Azzedine Haddour writes, "the problem of modernity and postmodernity has less to do with the decentering of the Cartesian subject than with the political realities of postcolonial France" (Haddour 2001: 13). It was, of course, this idea of humanism that Fanon and Césaire challenged. Their "version of anti-humanism starts with the realization of humanism's involvement in the history of colonialism, which shows that the two are not so easily separable" (Young 1990: 121–122). Decolonization, apart from the displacement of colonial rule, has been about decolonizing European thought and history, which marks that

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[2]For an excellent insight into the origins of anti-humanism, see Hindess (1996: 79–98).

"fundamental shift and cultural crisis currently characterized as postmodernism" (Young 1990: 119).

The question of humanism is one that was central to Edward Said's oeuvre and at the heart of criticisms leveled against his magisterial *Orientalism*. Robert Young argues that Said's fundamental thesis was to point out the anti-humanist nature of Orientalism. However, what was problematic for him was the manner in which Said appropriated the idea of human from within the Western humanist tradition in order to oppose the Occidental representation of the Orient. It was in this context that James Clifford asked whether was possible to escape the manner in which Orientalism engages in the dehumanizing, misrepresenting and inferiorizing of other cultures?

It is in his posthumously published book, *Humanism and Democratic Criticism* (Said 2004), that Said emphatically answers Clifford by arguing that it is indeed "possible to be critical of humanism in the name of humanism and that, schooled in its abuses by the experience of Eurocentrism and empire, one could fashion a different kind of humanism that was cosmopolitan and text-and-language bound in ways that absorbed the great lessons of the past…" (2004 10–11). In order to trace the Janus-headed nature of Said's humanism, I want to suggest that it cannot be simply viewed as the humanism of the Enlightenment, but as Said pointed out, as a different kind of humanism. When viewed from such a perspective, it is possible to conclude that *Orientalism* was indeed about exposing the anti-humanism of the Orientalists. As Said points out, humanism:

> …is not a way of consolidating and affirming what 'we' have always known and felt, but rather a means of questioning, upsetting, and reformulating so much of what is presented to us as commodified, packaged, uncontroversial and uncritically codified certainties, including those contained in the masterpieces herded under the rubric of 'the classics' (2004: 28).

As WJT Mitchell points out, we must view Said's humanism which "was always a dialectic concept, generating oppositions it could neither absorb nor avoid" (Mitchell 2005: 462). This Saidian humanism, and its filiation and affiliation, can be likened to the kind of project that engaged Fanon. As Said himself pointed out, he saw himself carrying forward Fanon's incomplete project precisely because he expresses more decisively than anyone "the immense cultural shift from the terrain of nationalist independence to the theoretical domain of liberation" (1993: 323–4).

Said's Legacy: Paul Gilroy

In recent times, if anyone has come close to rethinking humanism in the manner suggested by Edward Said it is Paul Gilroy. Gilroy advocates a planetary humanist perspective. Like Said, he rejects forms of liberal humanism that are deeply complicit with racial thinking in favor of the kinds of humanism that were advanced by thinkers such as Frantz Fanon, Aimé Cesaire, W.E.B. DuBois and C.L.R. James.

Gilroy's new form of humanism is not 'European' but 'planetary,' and his project in the post 9/11 environment is to work out how to live with difference. He writes

> As the postcolonial and post-Cold War model of global authority takes shape and reconfigures relationships between the overdeveloped, the developed and the developmentally arrested worlds, it is important to ask what critical perspectives might nurture the ability and the desire to live with difference on an increasingly divided but also convergent planet? We need to know what sorts of insight and reflection might actually help increasingly differentiated societies and anxious individuals to cope successfully with the challenges involved in dwelling comfortably in proximity to the unfamiliar without becoming fearful and hostile (2005: 3).

For Gilroy, the challenge is to configure human interactions and relationships beyond the very strictures and boundaries imposed by race thinking. His frustration is not only with contemporary discourses of racial politics but also with multiculturalism, which seems to have been all but abandoned. It has, he notes, been "judged unviable and left to fend for itself, its death by neglect is being loudly proclaimed on all sides. The corpse is now being laid to rest amid the multiple anxieties of the 'war on terror'" (2005: 1). Gilroy is deeply cognizant of the power of race, and his quest to think past race is embedded within that project.

Planetary humanism is the beginning of a way out of this predicament and is inextricably linked to his notion of 'conviviality,' a notion that seeks to move away from reified forms of identity and fixed racial classificatory systems. For Gilroy, conviviality describes, "the processes of cohabitation and interaction that have made multiculture an ordinary feature of social life in Britain's urban areas and in postcolonial cities elsewhere" (2005: xv). Conviviality is deeply located in the politics of everyday life, and it delineates "the evasive, multicultural future prefigured everywhere in the ordinary experiences of contact, cooperation and conflict across the supposedly impermeable boundaries of race, culture, identity and ethnicity" (xii). Conviviality requires a certain detachment from 'community' and 'identity' and demands a different sense of the human. As Gilroy points out, the unabashed humanism which underpins his project is 'licensed by a critique of racial hierarchy and the infrahuman life forms it creates.' It is opposed to racism "in order to project a different humanity, capable of interrupting the liberal, Cold War, and exclusionary humanisms that characterize most human-rights talk" (xv–xvi).

Conclusion

We live in world that is deeply connected as a result of the phenomenal globalization that marks our contemporary world. Despite proclamations of posthumanism that are deeply individualistic and manifested on the body, indeed liberating us from the very strictures of the universal humanist subject, we remain connected to everyone and everything around us. Indeed, the human genome project revealed the full reality of just how connected we really are. We are located within a highly

complex web of relationships with every aspect of both our phenomenal and material world. Although we may not be aware of these complexities but our connections are far deeper than we have ever realized or acknowledged thereby rendering the very idea of borders and boundaries problematic. It is the posthuman like the postcolonial that forces us to consider the relationship of the prefix and the suffix. As Lata Mani puts it, "Given the scale and complexity of the interdependence and of our multiply determined mutuality, it is not surprising that we, for the most part, are privy only to a fragment of this totality" (Mani 2009: 173). It is in this vein that Neil Badmington has suggested that both halves of the signifier require close attention so that posthumanism "is as much *post*humanist as it is *post*-humanist" (Badmington 2003: 15). It is a call for us to reexamine the limits that were established by the European colonizers. The questioning of humanism as Fanon, Said and Gilroy have done allows us to imagine a different future because ultimately, 'Posts-' speak (to) ghosts, and cultural criticism must not forget that it cannot simply forget the past (22). In short, the posthuman cannot simply expunge the panhuman. As Dinerstein so clearly puts it:

> posthuman escapism is that *it is based in the fear of understanding the human organism as multiethnic, multicultural, multigenetic construction created through centuries of contact and acculturation* (591).

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Chapter 9
Information-Power: Teletechnology and the Ethics of Human–Animal Difference

Samrat Sengupta

Introduction

Who comes after the Subject? This was the query of the famous book with eponymous title edited by Eduardo Cadava, Peter Connor and Jean-Luc Nancy, which got published in 1991 (Cadava et al. 1991). After the fall of Soviet Russia, collapse of Berlin wall and end of cold war era announcing communism on the back-foot across the world, scholars and philosophers had to rethink the possible futures—futures without revolution, whither Marxism which was perhaps the last hallow of Hegelian idealism. The dynamics of history was questioned with notions of philosophical endism in a post-world war post-holocaust era since 1950s. Interventions of post-structuralism after the revolutionary failures of 1960s revolution and gradual consumerization of the globe through US-based multinational high capitalism all indicate the subject as a formation—a structure beyond the rational determination of a 'who'. The 'who' gets replaced by the 'what'—the author by the 'apparatus' and 'reality' by 'reality effect' (borrowing from Barthes) (Barthes 1986). Foucault in his several works post-1960s has discussed the relation between subject and truth as a mediation of power. The rational subject is more a subject-effect carved out of the what-ness of knowledge/power paradigm that is considered a nexus of meaning formation. The end of ideology argument reached its zenith with this emergent notion of a paradigm (a pattern of existence) or an apparatus (as interconnected heterogeneities). Foucault discusses in his interviews on knowledge/power between 1972–77 how the role of a writer disappears with the changing notion of the left intellectual who was an universal intellectual fighting against all forms of untruth and who could, on the contrary, write the truth. He says by truth I do not mean "the ensemble of truths which are to be discovered and

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accepted", but rather "the ensemble of rules according to which the true and false are separated and specific effects of power attached to the true" (Foucault 1980 132), and so it is necessary to think of the political problems of intellectuals not in terms of 'science' and 'ideology', but in terms of 'truth' and 'power'. Foucault thus explains the formation of the subject as effects of power within a particular structure or paradigm which changes and moves according to the dynamics of power relations within.

The concept of writing in Foucault collapses the Barthesian binary of reading versus writing (Barthes 1975), the former being passive and closed and the later active and open. Here, writing like revolution is as much an effect of power/knowledge as reading. Derrida's work post-1960, on the other hand, focuses on truth and its relation to writing in another way (Derrida 2001). He shows how the concept of writing in our understanding is overdetermined by the notion of speech where the presence of the speaker guarantees the truth of what is being said. Writing in this sense through repetition can hold the truth. However, Derrida challenges this notion by his idea of arche-writing where the possibility of producing difference is at the heart of both speech and writing. There is a fundamental absence insinuated at the heart of linguistic communication which continues to come back in the act of each reading which is at the same time writing. So Derrida complicates the temporal lapse between reading and writing, meaning and understanding even further. The rational subject for him is also shot through by that absence. If in Foucault the essence of the subject is an effect of power, for Derrida such writing of power is marked by a certain spectrality—an absent-presence which continues to haunt the 'who'. In this milieu, when the stable subject of ideology and meaning is interrogated—both philosophically and politically, the question of 'who' becomes pertinent. Foucault analysed this post-subjective subject formation on the basis of two related models of power—disciplinary power (Foucault 1995), which focuses on the individual, subject to ideological control and biopower (Foucault 1990, 2009) that focuses on specific target groups, subject to welfare programmes. This is a supposed shift from the earlier model of pastoral power where physical and doctrinal forces were used to govern people. In the pastoral model, power was top down, and in both the disciplinary and biopower models, power is shared by the individuals and groups subjected to power. History, politics and subject formation are mediated through these two paradigms according to Foucault. In this paper, I propose a third model of power which I shall call information-power and show the eventual shift of the knowledge/power nexus to information/power. Using the thoughts of Derrida in his filmed interviews *Echographies of Television* (with Bernard Stiegler) (Derrida and Stiegler 2002) and Bernard Stiegler in his two volumes of *Technics and Time* (Stiegler 1994, 2009), it can be shown how this information/power nexus is carved through a model of visual communication, gradually displacing and supplementing writing (while the ghost of writing surely continues to haunt, the way ghost of speech continued to haunt writing). I also propose to show how this visuality through the development of information networks acquires a new modality of power and belonging different from print and analogue modes of communication. My objective is to follow Stiegler in bringing back the question of *techné* in subject and meaning formation. The next

section of the paper will focus on the changing notion of human–animal difference (in the Derridean sense of a difference that is always and already there and yet which is deferred incessantly) in this new paradigm of totalizing power which puts the human and the nonhuman animal into an information nexus as digitized components of a machine. We will also show how this human-animal distinction becomes interchangeable in this totalizing information-power where the difference between *zoe* and *bios* is played upon by the hidden matrix of thanatopolitics—which for Georgio Agamben is the paradigm of modern biogovernance (Agamben 1998, 2005). This is not simply about the technology of management but also that of gaze and control reducing meaning to information for tactical purposes of the maintenance of the global Empire. If and how this reduction of the human-animal distinction into information that can be used, changed and manipulated in the paradigm of information-power reproduces the animal as an ethical difference that can go beyond information-power shall also be the object of enquiry.

What Is Information-Power?

Derrida proposes in his interviews with Stiegler in *Echographies of Television* that the visual sign has a different mode of operation than a verbal or written sign. This operation is, according to him, similar to what Roland Barthes discusses in his book *Camera Lucida* on photography (Barthes 1981). The photographic sign has a certain directness and accentuation of the reality effect that surpasses written discourses according to Barthes. The photographic sign has a certain authenticity enumerated through the guarantee of the presence of the object photographed in the sense that the photograph shares real light rays reflected from the photographed body which is reproduced to the eye of the spectator. Barthes hints at the constitution of reality as such. It brings back the question of presence in another mode, where the difference—the difference and deference of meaning constantly in the production of a sign—is restricted. Our question here would be on whether that produces new regimes of power. Derrida would answer both yes and no. The desire for getting closer to the reality and asserting presence is at the heart of every act of communication and representation that attempts to repeat. In *Of Grammatology* (Derrida 1976), it has been discussed how the authenticity of speech or phonocentrism sanctioned by the presence of the speaker gets transmitted to writing in the form of authenticity of the written sign or logocentrism which has possibly better capacity of retention and repetition. But it also creates a new mode of difference. In Derrida's thinking, visual representation is such a *pharmakon*—a medicine in poison. With the invention of photography and its extension videography, the technicity of repetition already inherent in writing acquires a new form. So, on the one hand, the present mode of representation gets haunted by a certain spectrality of the earlier modes of power—the technicity inherent in writing (which was naturalized by the universal intellectual and his faith in digging out and explaining the truth through writing); and on the other hand, it gets haunted by the absent-presence

of the object that is represented. The absence of the object is at the heart of its remembrance. Derrida talks about a certain ghostliness in the Barthesian reality effect. There is an economy of the dead always and already in the very act of production of the visual sign. This economy of the dead—of the living-dead—of the dead-body—the living immediacy haunted by the possibilities of being dead—is the subject of global thanatopolitics. Death collapses the human-animal distinction and dead-bodies become the paradigm of modern biogovernance which is always and already information-power. The tangible, visual presence of dead-bodies everyday—dehumanized, decapitated, mutilated in war, terrorism and holocaust circulating in information networks constitutes the meaning of human life —the political life as *bios*, opposed to *zoe*. The victims of ISIS decapitation or tortured detainees of Abu Ghraib suggest such total animalization and transformation of bodies' potential for death. Quoting Roberto Esposito here might be relevant when he talks about blood and gore in the paintings of Francis Bacon, as the same may be more authentically forced in the visual information nexus that pictures the victims of terror and violence with a sense of immediacy:

> According to all the evidence, that "common fact", that butchered, deformed and chopped flesh, is the flesh of the world. That the painter always saw in animal carcasses hanging in butcher shops the shape of man (but also of himself) signifies that the bloody mound is the condition today of a larger section of humanity. (Esposito 2008: 169)

However, the idea quoted from Deleuze by Esposito that this death is "judged from the point of view of life" can be differed and supplemented because death can no longer be ascertained as a possibility counter to life. Rather it conditions 'life' itself. Death is as much real as it is 'phantasm'. This is just the way animal is no longer a metaphor of man or a status of man being dehumanized but rather the very condition of humanity, shaped by the animal that he is always and already in the digital nexus of information-power. The haunting is also the reality in information-power which we shall elaborate upon. So any attempt of life flushing out death shall interminably fail as the visual omnipresence and repetition of death becomes a part of the project of life.

Bernard Stiegler, the interviewer in Derrida's *Echographies of Television* in his two volumes of *Technics and Time*, discusses the elimination of *techné* in Heidegger's thinking when he talks about the gathering of the subject through his existential and phenomenological belongings. However, we can see that Heidegger discusses *techné* as a very important aspect of being human, which is overridden by its becoming a frame—enframing (Heidegger 2008). For him, one can return to his original self—his ownmost being by overcoming that enframing, through turning back to his natural self—to his existential state of belonging—his state of being determined by his thrownness in the world. The 'who'—the subject is thus constructed by the 'what'—by the subject's being-in-the world but technicity always and already present in that being has been restricted. This spectre of technicity comes back in photography and technology. In Derrida and Stiegler's thinking, the machinations and repetitions inherent in technicity form a double bind with performative shifts. In short to understand the new modalities of belonging, we have to think through

technicity instead of avoiding it as an enframing that overruns the rational and the natural by restricting thinking and human possibilities. Derrida discussed in several of his works the effect of the forgetting of what is excluded in a discourse. In Marx's thinking, the spectrality of unreason though recognized is denied entry as an integral part of subject formation repeatedly to place the rational subject of history. Spectrality can be the technicity beyond the rational decision-making, the conscious subjective writing of history. Spectrality can also be messianicity that is beyond all historical formations—a desire for justice which in the present remains unanticipatable. In Derrida's thinking, both technicity and spectrality form a double bind that goes beyond rational, subjective history. It also goes beyond Foucault's regimes and apparatuses of power as the apparatuses are haunted by mechanical process of repetition or technicity as well as incalculable messianicity.

In the current world order after the apparent failure of Communism and Marxism and the declaration of the end of ideologies and the end of history, the question of spectrality acquires a new turn, while the notion of reality gets reconfigured in terms of teletechnologies. Here, visual reproduction affects the horizon of thinking. Stiegler in his essay 'The Discrete Image' talks about the co-constitution and inseparable difference of image-object and mental-image (Stiegler 2002). Their inseparability is comparable to that of signifier and signified in writing. Just as writing gives birth to a particular regime of truth, likewise visual reproduction gives birth to another regime. While it requires some speculation to prove that the relationship between signifier and signified is arbitrary, in the case of image-object and mental object, they both determine and constitute each other. If Barthes in his studies on photography has showed the bridging of the spatial gap in photography where the distance between the real object and its reproduction is collapsed, then the coming of teletechnologies—the circulation of video images through digital information networks, reduces the time lapse between the real and its reproduction. If the spectrality of what is photographed haunted Barthesian photo-memories, then the spectrality of manipulation-digitization haunts teletechnologies. The fundamental gap, in the case of writing, between the real and the representation, of signified and signifier that produces difference, is attempted to be buried in the teletechnological. However, Derrida already propounded that this is not new and this technicity of repeatability was at the heart of writing technology as well. Therefore, we find the universal writer—intellectual in Foucault that we already discussed. But definitely the two modalities are different. The visual representation has greater ability, on the one hand, to suppress the process of its own constitutiveness and, on other hand, to bridge the time lapse between production and consumption of an image. Here, the proposition would be that this form is not totally unrelated to the current political self-fashioning of the world order where man is understood as a repository of information processed and unprocessed with ideology-effect and subject-effect that displaces autonomy and subjectivity and where therefore the end of historicity—end of difference in time across past, present and future—is announced. It also has to be remembered that this end of historicity also announces the end of a certain understanding of the 'human' as a repository of meaning and knowledge which he 'gathers' through his condition of being thrown

in the world. The human now closely corresponds to the nonhuman animal as a digitized entity in the giant apparatus of teletechnological power or information-power.

All these are affected by and in turn affect a digitization of identities. The digitization of photographic and videographic images transforms them from objects of knowledge to objects of information in the sense that their value depends on circulation and use in digital networks, instead of decoding and interpretation. The digitization also causes the dual awareness of the images as being produced and manipulated and at the same time real and factual. The information or knowledge translated into information is thereby perceived as what Derrida calls artefactual, i.e. at the same time artefact and actual. This field of the artefactual gets consolidated by an automatization of information networks which would immediately transmit the virtual real images in real time. The temporal reduction is therefore made absolute. The automatization of information produces the informatics which when transmitted via teletechnologies become telematics. Speed, usability and transmission to real time are features that produce the new order of things—the new truth regime. It transforms the spectrality of the past into presentness by capturing, archiving and transmitting it through information networks. The archive is a repository of information that becomes a mechanism of controlling and determining the present world order. The old idea of archive as a resource through which meaning is made is supplemented by the new archive of televisuality that collapses the past, present and future into an information network.

The rise of the service industry—soft skills and global consumerism where the individuals are redefined in terms of participation in global networks where knowledge is translated into information—into usable units of dispersing rights—calculating damage and compensation, gives birth to this new modality of power. This is the paradigm of information-power displacing and also collaborating with biopower where the subject is a rights-bearing individual and where rights are defined in terms of information about his multiple identity cards—his ethnicity, nationality, race, language, habits, profession, etc. The subject has a right to know who he is to become usable. The becoming subject of the subject—the acquiring of knowledge/power—is also to surrender his subjectivity by becoming an object of information-power. The subject not only gives himself to subjection as Balibar proposes in 'Citizen Subject' (Balibar 1991) but also gives himself to information to become useable. The process of knowing oneself is to give oneself to information-power, just as giving oneself to information-power is also knowing oneself through it. This is a new form of archiving of the subject. It also reframes the apparent conception of human–animal difference in terms of the user and the used and makes them analogous. Memory plays a very vital role here. In recent times, there has been a proliferation of both real and fictional museums, installations and cinema which variously attempt to archive the past. The genres of writing about the past—memoirs, autobiographies and life-writing—have also been proliferating. The more the attempts made to tame the past into present archiving, the further the proliferation and substitution of past memories. The more memories that are

telematicized (information + automatic = informatics; informatics + television = telematics), the more the new memories that overflow the archive. Here, it has to be remembered that the written is also haunted by this new mode of power. The archiving is reinstituted in the norm of teletechnology. The more traces that are converted into signs, the more the new traces that emerge. What is then the new understanding of transcendence? What is the notion of art as transcendental to the realm of possibilities capable of questioning the limits of the enframing—the calculable reason—the ratio?

Derrida invites us to train ourselves into the mechanics of televisuality. In the age of writing, it could apparently be separated from technicity. The one who knows to read by default knows how to write. So writing and reading are transparent acts where technicity remains hidden and unmentioned. However, often, while reading, we attempt to be close to the originary intention of the text, thereby unconsciously trying to repeat the original. This kind of unconscious technicity, however, is much more foregrounded in the televisual where the spectator unknowingly remains haunted by the hidden modes of its construction. The point for both Derrida and Stiegler is that this technicity is unavoidable in the case of a televisualized object-image and has to be recognized. The haunting of the spectre is more evident here. The presentness is much more rooted in the televisual reproduction, yet with the awareness that this must have been framed. This puts to question therefore the real in the mental-image as such, which we have seen is intricately and inseparably linked with the object-image. It is proposed here that the spectrality at the heart of televisuality corresponds closely to the spectrality of the world order after the end of history and end of ideology epoch. The spectrality is insinuated into perpetual presentness in terms of time and spatial omnipresence around the globe of an Empire which is all pervasive.

So the purpose of this deconstructive reading is not only to point towards the constitutiveness of images and representations but also that of reality and perception which itself is constituted by default (we shall come to the meaning of this word later). Furthermore, this constitutiveness must not be understood only as a positive development against a naturalist or realist argument but rather as a new form of embodiment that creates new kinds of closures. The purpose here is to understand the body as the body measured in terms of its usability as much as its expendability or death—as a dead-body.

If the post-world war order signals the regime of biopower where life has to be designated and preserved through the knowledge of the collective, then post-Gulf war and post-9/11 are nexuses of development of information-power where information has to be secured and processed to ensure the management of individuals. The specificity of this form of power is that it's spectral other in the form of traces, in the form of memory remains insinuated within. The specificity of this form of power is so that its negated 'other' continues to haunt as a specter. This specter exists in form of traces and memory which remains insinuated within the dominant repository of knowledge uncannily. The teletechnological world order by default is spectral. It is guided by an economy of the dead. The real time transforms the immediate into memory as well, thereby creating a spectre out of it. We cannot but recognize the spectre. The presentness of man every moment becomes digitized

information, making him an object of use in the global political economy, parallel to its nonhuman animal-other—who can feel pain and pleasure and has a body like them but whose intentions and responses can never be known (Derrida 2002). The apparent difference between human and animal is that a human being can respond but an animal can only react. The erasure of intentions and responses makes human beings into information to be archived and circulated across telematized networks. The objective then would be to understand how we can re-imagine the human beyond this telematized network of information-power along with animal. It can be by following and approaching/re-imagining the animal as the potential body geared towards death—an always and already dead-body without the lustre of 'meaning' except usable information load, with respect to whom man has no 'real' (real being reconfigured in terms of information-power as indistinguishable from the image/representation) hierarchical difference. The ethical task of questioning the limits of power is a literary re-imagination of the 'human' through the 'animal'— the always and already usable 'other' of the humanist world order.

Thinking Through Dead-Bodies

Animals are in a way reminiscent of the potential bodies that are usable and expendable and are therefore vulnerable to death and extermination, if needed for the apparatus. Dead-bodies become the new paradigm of power that Agamben calls thanatopolitics (Agamben 1998). The *bios* of the biopolitical regime qualified for political life is always and already determined by its absent alterity of *zoe*, the unqualified expendable animal existence. In Agamben, the *zoe* is not simply what has been forgotten and 'flushed out' by biopower but it shapes and determines the bio-power and is its paradigm. However, as we move from the conception of biopower towards information-power, the distinction between the user and the used—the human subject and the nonhuman objectified animal—collapses in the economy of use. In Agamben, it is about the *bios* being maintained by *zoe*; yet the *bios* acts as a screen of the *zoe*, which is its actual paradigm. In the apparatus of information-power, both the user and the used become usable and expendable as digitized entities that can be stored in information networks. Every man is a potential terrorist and a potentially bare life—every man is an animal by default. In Stiegler's discussion, man is characterized by the originary default of absence of particular properties that is supplemented by his ability for prosthesis—capacity to outsource his limits. It is also his fault (hence the word play on default as originary fault of not having any property by default—a particularity which, however, is its default) of not having any property 'naturally'. His natural ability is to imitate and invent properties for himself. That is how for Stiegler he is different from animals (Stiegler 1994). He developed the capacity of holding—of gripping at a particular level of anthropogenesis—of evolutionary transformation of/into 'man'. That also establishes his relation to nature and the nonhuman world at large. However, as Derrida shows in *Rogues*, reason is like a silkworm, capable of being covered by its own cocoon (Derrida 2005: 130–131). An

ultimatum of this is performed in his attempt towards machination of the entire existence including his own, which collapses the difference between the user and the used. The apparatus of information-power is such that he himself too becomes an object of repetition as digitized entity, vulnerable to transformation and extermination. He comes to an analogous relationship to the nonhuman. The reason becomes its own end and covers itself by itself to idiotic repetition. We have seen this in times of Holocaust and animal slaughter. In the former, the human is 'dehumanized' in the mechanical killing apparatus, and in the latter, the animal is put to 'inhuman' torture by man. However, the proposition here is to question such difference between human and animal in the information-power model, where each entity becomes a part of a calculative set and is interchangeable if needed for the sustenance of the network. The living is always and already dead—a body that is not only to be preserved in the information network but which is also rendered killable like a computer virus if it is dangerous for the system. Therefore, we need to rethink the body in information-power as a dead-body that is always and already expendable. It is neither the fabular reduction of animals as analogous of man—metaphor of man, nor is it 'dehumanization' of man into animal, transforming him into bare life. But the man and the animal become analogous to each other in the digital post-technoscience world order—both subjected to a *techné* that goes beyond man. Therefore, it is important to think the new world order through the dead-body of the animal-other which haunts the human-self but which also blurs the distinction between human and animal. We shall also see how we can then think of a future beyond this machination of the techno-scientific world order; and if this new configuration restricts the production of this future or can be creatively employed towards it.

The premise of deconstructive theory stands upon a certain understanding of repetition as iterability—as repetition with a difference with its each moment of enunciation (Derrida 1988). *Techné* insinuates both repetition and difference. As has been already discussed, the technology of writing contains the possibility of inscribing meaning through an act of repetition ascertaining the logos—the truth, but it also performs the creative difference from its earlier moments of truth/logos. The same holds true for the teletechnological repetition even though it apparently blurs the distinction between reality and representation. So the assumption might be that creative transcendence of the limits is inherent in the very technical mode of repetition as a performative possibility. Post-naturalist politics denies the state of nature and the 'going back to nature' argument of philosophy as in Rousseau (criticized by Stiegler in *Technics and Time, 1*) and critiques any possibility of going back to its origin. It believes *techné* to be a part of human's being and belonging. *Techné* is a creative possibility of belonging for man but at the same time it also enframes. In Butler's theory of performativity, we have such a deconstruction of the binary opposition between the natural and the artificial vis-à-vis gender (Butler 1990). We also have a deconstruction of the binary of repetition versus difference. In Donna Haraway, the prosthetic possibility of man is posited against the naturalist determination of his/her identity and opens up the technical modulation of his/her being as a cyborg (Haraway 1991). However, in late Derrida—in texts like *Rogues* (Derrida 2005) or *Philosophy in the Time of Terror* (Borradori 2003)—we find the notion of autoimmunity as a limit to

reason. It is not only a limit to repetition but also to difference. The closure that is necessary to produce and maintain reason—to protect it from vulnerabilities—may itself kill reason by closing all possibilities of difference. As Derrida suggests then the 'other' of democracy is inherent in democracy itself. Just as democracy can bring an undemocratic force to power which for the sake of protecting itself may kill democracy, the becoming of reason in order to assert its own triumph may form a cocoon around it to stop all becoming. So the very moment of the production of a sign may become the cause for its own closure. The eventual catastrophe of the 'human' ability to prostheticize—to outsource his limits—may be brought in by this same ability. It can happen in two ways—through the other of power, always and already within it and the other of power produced by the power as a threat—as its binary opposite. Autoimmunity may be then understood as a limit to deconstruction.

Autoimmunity is the fallacy of rational political reason that is trying to posit and immune itself, from the external threat of unreason. Unreason is exemplified in brute animal force that repeats and is therefore idiotic. However, as Derrida puts it ironically, since animals do not have reason, they cannot be idiot—only man can be idiotic (Derrida 2002). This force is also barbaric in its automatic repetition. However, the specificity of the autoimmunity of reason lies in its act of closing out all possibilities out of the fear of animal closure of reasoning. In order to protect itself from the dangers of unreason, it ascribes closure to its own possibility of becoming. Therefore, reason itself gets objectified and naturalized as immobile. So reason itself causes unreason in its assertion of totality—it produces and announces its other. Another production of the other of the totality of democratic rationality is the figure of the Islamic terrorist against democracy—the ultimate threat to democracy and its all-pervasiveness. The absence of all possibilities of an outside to the financial and ideological networks of the modern Empire that digitizes for use every nook and corner of the earth renders the suicide-bomber—the ultimate figure of the terrorist who wants to close all forms of open-endedness of democratic reason, the only possible transcendence. The absolute control over life and death and reducing life and death to digital information for use renders suicide terrorism as the only outside of this economy, where the system fails to control both life and death and where the totality of the system collapses totally. Suicide terrorism for the sake of unfreedom— absolute closure of reason, on behalf of repeatable and unarguable laws/rules/norms seems to be a caricature of the suicide of reason in order to protect itself. Suicide terrorism is a caricature and mockery of the autoimmunity of reason.

In the disciplinary mode of power, the animal is an entity that like man can feel pain, but cannot understand it. It is the human task to understand and tame it—to make sense of it—respond to it and hence manage it as usable entity. It also became equally necessary likewise to tame the animal in man by his own faculty of reason through training and disciplining of mind and body. In the biopolitical mode of power, animals become programmable machines, the knowing and management of which would render them usable to the apparatus. The modern subject is fixed between this animal that is used and the human that manages. This is a post-technoscience view of animal as machine. In the information-power model, both animal and human are digitized information in a vast teletechnological

network. The human is always and already a body that can be used or that can be destroyed if considered a threat to the network. So the technology placed by man as an apparatus of becoming replaces reason and takes control. The information-power network produces something close to what Deleuze calls 'societies of control' (Deleuze 1992), where the subject is placed between two nonhuman others (instead of the autonomous man believed to be capable of changing and choosing by himself)—the usable animal-machine and the expendable animal-monster that goes wrong for the system. It produces animality as the paradigm of humanity. The totality of the economy of reason produces its radical alterity of the totality of terrorism. The only performative left to reason is that of death—it is haunted by the dead-body (rendered dead by taking away autonomy and also by rendering expendable if it becomes a threat to the information network system of governance) of the animal-other which it invisibilizes yet sustains for the grand project of life (understood as the repetition and continuation of information-power network). The question is then how to make sense of this politics of the dead-body—of animality as an economy of the dead-body while remaining within the apparatus of information-power. If the human becomes analogous to the animal-other, then can we represent the animal-other as the other of democratic reason? If literature is a textual strategy of representing the other, then how can we represent this other of democracy amidst the totalizing of information-power and its digital networks which collapses the human-animal distinction into an economy of use and extermination?

The project then is to re-imagine the globe in terms of possible autoimmune futures—the catastrophic destiny as a possible destination of a posthumanist world order. This act of imagination is also an impossible possibility, which can be approached but never be arrived at. But the only way to expose the fallacy of the all-pervasive, shape-shifting world order that appropriates everything by its changing modalities (opposed to fixed modules of disciplinary power by Deleuze) (Deleuze 1992) is to abandon all theories of representation. Theories of representation cannot but be digitized into usable information for the network. The only route of challenging (but not programmatically attempting to dismantle as all programmes are channelized through digital networks) this mode of information-power could be to re-imagine the globe in terms of the catastrophic ends of man—in terms of possible dead-bodies the information-power may produce, but which it attempts to hide behind its project of immunity and security for all. The possible imaginings of information-power which supplements and corroborates biopower happen to be a literary strategy that 'can only multiply their strategic manoeuvres in order to assimilate that unassimilable wholly other' (Derrida 1984). The wholly other in the totality of information-power happens to be the dead-body—a body imagined through its vulnerability to death.

Following the Foucauldian scheme of power, we may choose to understand the human–animal relation according to Table 9.1. However, it must be remembered that these modalities of power overlap and the earlier modes continue to supplement and co-exist with the later modes.

Table 9.1 The human–animal relation (after Foucault)

Mode of power	Principle	Human/animal relationship	Rethinking/representing/imagining the other
1. Pastoral power	Divine principles/laws	The human–animal relationship resembles 'God as shepherd' and 'man as sheep' relationship	Representation of animals in fable standing for deeper meaning of human world—the inscrutable divine principles. *Here, animals represent humans*
2. Knowledge/power 2a. Disciplinary power	Reason: that protects both the self and the other from falling back to state of nature by disciplining both	The 'great confinement' of the prisoners, the madmen, the outlaw, and the detainees resembles zoological and botanical museums, confining the nonhuman other for reasonable use or as dangerous for use. Animal has to be contained and explained by man through reason, as it can feel pain like man, but cannot explain it for itself	Representation of the dystopic animal—the miscreated Frankenstein or inscrutable and untameable Caliban that fails and questions disciplinary world order. *Here, humans stand for untameable animals*
2b. Biopower	Reason: used to have knowledge of the other who may not be fully disciplined, but who can be served with rights and are subject to an economy of desire, for the sake of management	Animal stands for that unqualified life, the understanding and schematization of which makes it political. The human world is political as opposed to the animal world. Animals are used or killed for the purpose of political machinery without qualification	Representation of the dangerous outsider—the barbarian, brute terrorist who could jeopardize the reasonable management of liberal democracy. *Here, humans become either expendable and killable animals or monstrous animals. (metamorphosis displaces metaphor)**

Table 9.1 (continued)

Mode of power	Principle	Human/animal relationship	Rethinking/representing/imagining the other
2c. Information-power (that supplements biopower and the scheme of knowledge/power by information/power—it is both a continuation and displacement of knowledge/power)	Reason becomes information: in digital teletechnological networks, all knowledge is reduced to digitized information with respect to the sustenance of the network. Reason becomes externalized to this information network, which is invested primarily to its own sustenance	Human and animal both become digitized information of the teletechnological apparatus meant for use, extermination and exchange	Here, representation of the other becomes impossible as both human and its nonhuman other are subsumed as information in the digital networks. The only other is the complete collapse of the network. So the task of imagination is to: (a) Expose that economy of death which reduces both human and animal to information (b) Imagine the impossible possibility of a total collapse of this information-power. *Here, the human/nonhuman binary gets displaced by the posthuman future of total apocalypse*

Note *Deleuze comments on Kafka's treatment of animals: "Kafka deliberately kills all metaphor, all symbolism, all signification, no less than all designation. Metamorphosis is the contrary of metaphor… There is no longer man or animal, since each deterritorializes the other, in a conjunction of flux, in a continuum of reversible intensities" (Deleuze 1985). I developed this idea in my essay 'Dog-Story, or How to Write a Parable of Postcoloniality' (Sengupta 2012).

In Conclusion

In rethinking human–animal difference in the era of teletechnology, imagination can be a useful category. Imagination is freed here from its 18th-century connotation of grasping the unknowable and the sublime.[1] It is rather an approach towards the other, who is inscrutable and impossible to know. In the apparatus of information-power where the paradigm of the totality of life is totality of death—of apocalypse, imagination is directed against the pervasiveness of information only through an (im)possible attempt to approach the other—a certain responsibility—an ability to respond to the other without grasping it completely. The other of total apocalypse is mimicry of the biopolitical apparatus that flattens man and animal to the singularity of dead-bodies—bodies' potential to die. In a short story by Nabarun Bhattacharya in Bangla, titled 'Ekti Manush o Ekti Kukur' (in English, 'A Man and a Dog') (Bhattacharya 2010), we observe such a flattening of differences. In an overflow of water inside a small room, where an old limp man used to live, the dead-body of the man and a stray dog (which came inside) is seen floating. Derrida in 'The Animal That Therefore I Am (More to Follow)' (Derrida 2002) criticizes not only the assumed mastery of man over animals in a fixed economy of difference, but also resists the collapse of human and animal difference as a part of the species, as that would keep the question of animality unasked. He also criticizes the reversal of the model of Noah's ark where a single master is in charge of the animals. The animals are often assumed to be a singularity flattened against human individuality and subjecthood. But its reversal that would assume the animal as single and multiple is also not without the idea of a human master. It is a circus-like situation with a master in charge of sad animals. Yet the philosophical question of animality which strikes out the being from the beginning is unasked and unanswered. By arresting the 'undisclosable' (to borrow from Agamben) animal (Agamben 2004), the human act of thinking is produced. Human thinking, on the one hand, tries to escape this primordial absent–present animality and, on the other hand, tries to follow and hunt it, to know and tame. The neoliberal outsourcing of the technology of management apparently brings the human and animal into a single apparatus of use and extermination. Such flattening of difference is suggested in the story where the man and the dog die in water as bare lives outside biogovernance, without identity and name. This is the impossible possibility we live through which is imagined and approached in the story. The idea of literary imagination in a posthumanist mode of existence focuses on the expendable—the dust and garbage described in the story—the unsold *jeelabee*s (sweets). It is the

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[1]The notion of imagination here is borrowed from Gayatri Chakraborty Spivak: "Any theory of the imagination which uses the English word 'imagination' is no doubt linked in some way with the eighteenth- and nineteenth-century German theories. Our effort, however, is to reduce and rarefy this definition to a vulgar minimum—the ability to think absent things" (Spivak 2008: 4). Similar ideas resonate in several essays of her book *Aesthetic Education in the Era of Globalization* (Spivak 2012). Derrida's notion of literary imagination along similar lines is quoted in this essay (Derrida 1984).

economy of dead-bodies. The flow of human and animal in the same water does not simply reverse Noah's ark myth, but also bursts it. The irony is when this economy of death would be reversed against itself—when the totality of power would collapse by its own (im)possibility. In a novella by Nabarun Bhattacharya called *Lubdhak* (Bhattacharya 2006), we find a parallel story of the animal which is undecidable, undisclosable and emblematic of terror and apocalypse. As animals are made expendable, killable and as dogs are tortured and killed every day in the city of Kolkata, one fine morning, from the dog-star, the dogs get instructions to leave the city. The other animals follow them. The city of Kolkata waits for an apocalypse from a meteor to strike it. It also announces a limit to deconstruction— to the structure of iterability. The messianic future in the economy of dead-bodies is total apocalypse. The death-to-come supplements the a'venir—the future-to-come of democracy. 'The literary moment points towards the future possibility of justice —justice that is annihilation of the present logic of difference and coming of the unforeseeable' (Sengupta 2014). Amidst the reduction in phenomenological knowledge into information, we confront the primordial philosophical absence of the animal-other coming back as the undisclosable, in the form of apocalypse. Imagination can approach it while reality forecloses.

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Chapter 10
Durga, Supermom, and the Posthuman Mother India

Sucharita Sarkar

Maternal-Posthuman Intersections

Biological mothering, when defined as the power that enables the reproduction and continuation of the category of the 'human', is inevitably destined, by this very definition, to have a complex relationship with the category of the 'posthuman', which theoretically posits the transformation and/or supersession of the 'human'. The relationship is further complicated when we distinguish between the biological agency of mothering and the sociocultural construct of motherhood, with its accumulated resonances of oppression and loss of power. Maternal bodies, selves and identities intersect with posthuman technologies and ideologies in multiple, and often contradictory, ways. In this chapter, I attempt to systemically structure the maternal-posthuman enmeshing along four axes, especially focusing on mothers located in India. Since mothering is, as of now, rooted in the body, this paper attempts to critique the embodied and cybertechnological transhumanism and/or posthumanism that enhances and invades the maternal body and experience.

In 'Non/being motherhood', I explore the politics of ART (Assisted Reproductive Technology), surrogacy and the definition of motherhood. In the next section, 'Be (com)ing motherhood', I question the hegemony of images of maternal beauty, and the role of technology in perpetuating or fracturing this hegemony. In 'Performing motherhood', I trace the development and dismantling of the 'supermom' mask, constructed and maintained with technological assistance and the normative pressures of 'good motherhood'. In the next section on 'Writing mothering', I assess how mothers are using communication technology to refashion the maternal self and reclaim a community of their own. I conclude by interrogating a specific domain of maternal-posthuman intersection—the domain of temporality—wherein I attempt to

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re-weave the four strands separated in the above sections, and which, necessarily, ends with a speculative glimpse into the future.

Theoretically, this chapter is indebted to much earlier feminist—including the domains of cyberfeminism, postfeminism and motherhood studies—and posthumanist research. The chapter also includes findings from surveys taken and interviews held with thirteen mothers I am acquainted with, as well as my own experiences of mothering. All the respondent mothers, including myself, are resident urban Indians between 30 and 42 years of age, with one or two children and having university education. Ten of them are working outside home, and three have opted out of professional careers after childbirth. While such a small cross-section of correspondents cannot be representative of the diverse experiences of Indian mothering, such a selection was a deliberate strategy for this research because the enabling intersection of posthumanism and maternity in India is possible only at certain specific nodes of class, education, awareness, privilege and geographic location. As my paper will explore, there are other intersections of maternity and posthumanism as well, but those are more vulnerable to exploitation, silencing and disempowerment.

Surrogacy: Non/Being a Posthuman Mother

It has been commented that "Posthuman bodies do not belong to linear history" and are of the "past and future lived as present crisis" (Halberstam and Livingstone 1995: 4). My earliest remembered encounter with the posthuman mother was watching the idol of the Goddess Durga during the annual Hindu Bengali festival of Durga Puja. The "three-eyed, multi-armed, multiply armed goddess wielding weapons of all sorts" is the "paradigmatic Hindu Goddess of 'power, blood and battle' " (Ramaswamy 2011: 106–107). Yet, she is represented in Bengali iconography as (also) the domesticated mother of four grown-up children: Lakshmi, Saraswati, Kartik and Ganesh. She is "created by re-memberment", embodying "the energy (*tejas*) of the male gods", and is constructed by Brahminical patriarchal myth-making, which redeploys her agency or *shakti* for its own ends (Doniger 2009: 390). In a way, Durga is the mythic/folkloric prototype of the posthuman mother in India. Coincidentally, the first 'test-tube baby' created in India by Dr. Subhash Mukhopadhyay on 3 October 1978 was named Durga, maybe in a nod to the technological intervention that made both posthuman constructions—in myth and in science—possible (Keci 2010).

The posthumanizing (and medicalizing) of the birthing process precedes the development of Assisted Reproductive Technologies (ARTs). Rich (1995) traced it back to male attempts to control the reproductive process. Rich (1995) critiqued the alienation of women from labour by the invasion of the forceps and consciousness-altering anaesthetic drugs practised by the "highly developed (and highly dubious) technology of modern obstetrics" (p. 102). Foucault's critique of the objectification and surveillance of the body in the clinic is demonstrated in the

partograph's "active labour management" reduces the mother's birthing body to a "cyborg-cervix", "an organ functioning with machine-like precision" under the control and intervention of male obstetricians (Foucault 1973; Adams 1994: 52–53). Ectogenesis—extra-uterine gestation—has elicited fears that present incarnations of reproductive technology erases women discursively and physically, by "making procreation a high-tech affair" (Braidotti 1994: 79).

The reception of the posthuman—especially of posthuman mothering through surrogacy and/or ART—has been problematic and polarized in India, with its strong traditionalist patriarchal bias. Dr. Subhas Mukhopadhyay faced "social ostracism, bureaucratic negligence, reprimand and insult", and this "collective failure" drove him to commit suicide (Keci 2010). Kanupriya Agarwal, the posthuman test-tube Durga, also recollects how her parents "never quite recovered from the trauma they faced after my birth", although she herself was brought up to believe that "being born in a test tube" was "normal" (Chatterjee 2011). Surrogate mothers, couples undergoing ART, sperm donors and test-tube babies have to negotiate sociocultural biases against 'infertility' and the pressures of 'son preference'. Paradoxically, even as ART implies that private decisions like childbearing have become part of a larger socio-medico-commercial discourse, the prevailing social stigma against childless women often enforce secrecy, opacity and misinformation in the consumption, communication and reception of ART.

Kiran Rao, wife of actor Aamir Khan, is one of the few exceptions who has openly shared her experience of IVF surrogacy in 2011. She chose surrogacy because of multiple miscarriages, because she felt no maternal or compulsive need to opt for adoption, and mostly, because of her and Khan's "selfish need to have a piece of each other" (Sukumaran 2013: 45). In India, the easy, if expensive, availability of posthuman reproductive procedures also reinforces the patriarchal cultural practices of privileging the "deep-seated notions of blood and genetics", while "cheaper and more progressive" 'human' options like adoption are being marginalized (Qadeer and John 2008).

Celebrity endorsement of surrogacy marked a shift in the media and in urban audiences, as posthuman maternity practices began to be discussed more openly, although old prejudices remain. Semi-urban and rural mothers, also increasingly opting for ART over the stigma of childlessness, have to veil their posthuman motherhood in secrecy and silence. As K, one of my interviewees who teaches in a Mumbai college, says, her 'co-sister', who lived in a small town and had a "conservative upbringing", "opted to keep [her IVF mothering] a secret". A woman who undergoes ART is initially a non-mother. It is to erase the emotional pain associated with this category of non-mothering that women are willing to undergo physically painful ART procedures like in vitro fertilization. This pain is invisibilized in the official biomedical ART discourse, which instead employs the persuasive, wish-fulfilment trope of commercial language. In her e-mail interview, K, a posthuman mother who has a son through IVF, emphasizes that the "Doctors Do Not Warn You" about the pain and that she had suffered "extreme pain" due to hyper-stimulation of her ovaries and later due to Amniocentesis. She had learnt about the side effects of pain from her elder sister who had undergone the procedure

twice before, but she still chose "to undergo any amount of pain as not being a mother, paralyses your life, makes you feel inadequate and incomplete". Her sense of inadequacy is linked to the social prejudices against 'barren' non-mothers prevalent in India, and to the privileging of the genetic tie in patriarchal family structures.

The new ARTs can liberate women from the "constraints of reproductive biology" as more and more women try to "resolve the asynchrony between employment and age-related fertility decline" (Chavkin and Maher 2010: 8). On the other hand, these new technologies can—and often do—reinscribe "ideologies of patriarchy, technology and capitalism" (Rothman 2007: 401). ART and surrogacy can be empowering or exploitative experiences, depending on the situatedness of the posthuman mother in the globalized and localized power hierarchies. Most surrogate mothers in India—and other parts of the global south—are situated at extremely disadvantaged intersections in these new hierarchies. Behind the veil of silence and prevarications, posthuman maternity transactions in India operate with machine-like precision and totalitarian control of the "shop-floor subject": the "perfect commercial surrogate" mother who is "cheap, docile and dexterous" (Pande 2010: 969). The economic compulsions are obvious: Meenu (name changed), a surrogate mother, recounts the 'unprecedented luxury' she enjoyed during her term as a surrogate: "I ate better food during my 'paid pregnancy' than I had during my own" (Sarojini and Marwah 2013: 190). Meenu's memoirs, recorded by Sarojini and Marwah (2013), reveal the multiple, conflicting pressures on the surrogate mother: her husband's ambivalent and non-supportive reception: ["He may have wanted the money, but he could not accept the pregnancy" (192).]; the opportunistic doublespeak of the medical expert, whose 'offer' helped and exploited them when they were in debt, but who masked the transaction as "good karma…[as]to help a woman to be a mother is an act of God" (p. 188); her own grief and pragmatic erasure of that grief at parting from the girl child she had nurtured in her womb ["My chest was heavy…I felt I was giving away my own child. But I knew it had to be done" (p. 197)].

Meenu also becomes a 'surrogacy agent', tapping into the wide catchment of "young women….in low-income and low-status jobs" who can be "easily exploited by doctors, agents and clients alike" (Sarojini and Marwah 2013: 193). Hindu myths of quasi-surrogacy, such as that of Kunti and Krishna, are manipulated to deploy a ready frame of religious sanction that will persuade hesitant and god-fearing surrogates. The memoirs construct Meenu as a specifically located body with affect and, maybe, agency, whom the medico-legal gaze fragments into an empty container, a machine womb for hire, an organ without a body (Braidotti 1994). Surrogacy partitions the mother into multiple bodies: "the social or commissioning mother, the genetic mother (the egg donor), and the gestational mother (surrogate)", each with "potentially conflicting claims" over the foetus/child, although the surrogacy contract denies maternal ownership to the less-empowered surrogate (Sarojini and Marwah 2013: 196). The dehumanization and subalternization of the surrogate's body is aggravated by the "absence of the voice of the surrogates" as social prejudices coerce them into anonymity (Menon 2012: 194).

The large supply of surrogates and the "First World skill" of Indian ART practitioners sold at "Third World prices" have made places like Anand in Gujarat "the surrogate mother hub of the world" (Sarojini and Marwah 2013: 193). These posthuman spaces may be critiqued as either neo-colonized assembly lines of dislocated wombs or new markets of opportunity for women empowering themselves through maternal agency. The numerous promotional websites for ART and surrogacy services reveal "the link between reproductive technologies and technologies of reproduction" (Kaplan and Squier 1999: 5). The commercial practices of promoting ART and medical tourism in India, with the tacit support of the government, and the socio-economic inequities between the surrogates and the commissioning parents, who are usually affluent and/or non-residents and non-Indians, raise ethical issues of exploitation as well as problematize the non-interventionist role of the neoliberal state. ART is "every lawyer's and social policy maker's nightmare because it polarizes profound issues" (Kaplan and Squier 1999: 3). The Draft Assisted Reproductive Technology (Regulation) Bill and Rules 2010, prepared by the Indian Council of Medical Research, has further problematized many issues, like that of heteronormative hegemony. By being unclear on whether gay and lesbian couples, especially Indian couples, can avail of ARTs, the Bill has potentially denied the mothering rights of gay and lesbian non-mothers, who can become biological mothers only through posthumanization.

Surrogacy—the clinical partitioning and commercial transacting of posthuman maternity—complicates issues of commoditization of motherhood, and of agency and choice of the different mothers. The intervention of biotechnology in reproductive processes has forced feminists to reassess whether the commissioning mothers (and even non-mothers undergoing painful ART), situated in a position of privilege, have free choice or are they coerced by patriarchal bias for blood heirs and son preference? What agency and freedom do the surrogate mothers have when their choice is forced by economic compulsions and their 'careers' as surrogates are erased from the public gaze? The Indian surrogate mother is triply colonized: by biotechnology, by global surrogacy-trade inequities and by the commissioning parents. The emancipatory potential of the maternal-posthuman encounter at the juncture of surrogacy has been largely unrealized in India, where it has been reinscribed into the existing structures of domination by the collusion of state, media and socio-legal institutions.

While ARTs like IVF change a non-mother into a posthuman mother, prevalent surrogacy practices force the posthuman surrogate mother to shift to the category of non-mother at the end of the contract. The non-mother desperate to become a posthuman mother reverses Margaret Sanger's "modernist narrative of maternity", where birth control autonomy enabled them to break the cycle of continuing to become a monstrous "breeding machine" and a "dumb instrument" (Wilson 2013: 440–448). The surrogate mother, who repeatedly becomes a posthuman breeding machine but has to erase mothering at the end of the process, is a parodic subversion of the utopian vision of radical feminists like Shulamith Firestone (1970), who regarded the biological necessity of pregnancy as barbaric, and suggested that technology would free the posthuman woman from the oppressive category of motherhood altogether.

Surgery: Be(com)ing a Posthuman Yummy Mummy

The yummy mummy is another instance of the problematic categorization and shifting identities of the trans/posthuman mother, especially in India. The sari can be a flattering and forgiving garment for the maternal form; by stepping out of it—literally and metaphorically—the Indian mother has opened herself to the public gaze. While the issue of 'feeling fat' was non-existent (hidden?) in our mothers' generation, pregnancy and, especially, postpregnancy body image has become a matter of public discourse and private anxiety for mothers of our generation. Twelve out of thirteen respondents in the survey I conducted felt more pressure to look good than their mothers' generation.

The pregnant or lactating mother has often been visually represented as monstrous, "hippopotamus and crocodile, lioness and woman in one" (Erich Neumann qtd. in Rich 1995: 118). Mommy makeovers promise the erasure of the monstrosities of the pregnant/maternal body. The blog *Cosmetic Surgery Bangalore* represents the postpartum maternal body as grotesque: it has breasts that "sag" due to "loose volume" and a "large abdomen mimicking pregnancy shape due to fat deposition, lax muscles and protrusion of abdominal contents outside or combination of the both with stretch marks" (*Cosmetic Surgery Bangalore*, Mommy Makeover 2014). The grotesque postdelivery body which has outgrown its boundaries is re-contained in its posthuman transformation to become, once again, an "enclosed body, [a] closed mouth, [a] locked house" (Stallybrass 1986: 127). While the transformative potential of surgery may be used to contest the categories of gender and sexuality (for instance, through sex reassignment surgery), mommy makeovers tend to mimic the female body specifications idealized by the male gaze. The decision to undergo a mommy makeover is often rooted in enslavement rather than autonomy, although it is usually validated by an I-am-doing-this-for-myself narrative (Heyes and Jones 2009).

A distinction between the terms, 'yummy mummy' and 'mommy makeover' is perhaps required here. The 'yummy mummy' is a mother who has regained her pre-pregnancy body shape with the aid of dietary restrictions, a strict physical exercise regimen, and with or without surgery. Mommy makeovers refer to surgical/cosmetic procedures, often invasive, that will have the same desired effect without the requisite effort. Thus, mommy makeover is the invasive subset that constructs the posthuman yummy mummy. In fact, 'posthuman' is a particularly appropriate term for mommy makeovers, which is predicated on the erasure of the 'pre'-makeover body in the desire for the 'post'-makeover embodiment.

The mommy makeover websites sell this temporal disjuncture through the combined temptation of text and image: they promise the erasure of the human past to reach the posthuman future. The websites utilize the non-rational tropes of magic and miracle: *The India Surgery Blog* promises "modern plastic surgery techniques that can turn the clock back on women" (*India Surgery Blog* 2012, Mommy Makeover Combination Procedure). The mommy makeover is a technocultural fantasy created through before-ugly/after-attractive images and testimonials that attest to the transformative fiction of before-sadness/after-happiness, while

strategically erasing the pain suffered during the in-between stage. This desire for the constructed posthuman self is often contingent on deliberate omissions of side effects and/or pain. All the mommy makeover websites that I studied trivialized the pain involved in the invasive procedures. *Cosmetic Surgery Bangalore* claimed, "Any surgical procedure will have side effects", without elaborating further, and *Indosurgery.com* stated, "These surgeries are safe and do not have any side effects" (*Cosmetic Surgery Bangalore*, Mommy Makeover 2014; *Indosurgery.com*, Homepage 2014). Denial of pain, as in the case of ART, is intrinsic to the process of morphing the human into the posthuman. The mommy makeover blogs constantly fragment the body into 'unwanted' parts that can 'easily' be removed or reconstructed. As Wolf (2002) wrote in the larger context of the beauty industry, "a torrent of media images show the female face and body split into pieces, which is how the beauty myth asks a woman to think of her own body parts" (230). The website *Indosurgery.com* lists eighteen procedures that will provide customized and complete client satisfaction; these include breast lift, liposuction, tummy tuck, partial or 'total vaginal rejuvenation' and dermabrasion. The violent fragmentation of the body makes the posthuman yummy mummy one of the "walking wounded" (Wolf 2002: 220). Wolf (2002) critiques these surgical invasions as mutilating women's natural wholeness into "two-thirds of the women we could be" (232).

The yummy mummy cult fashions not only a new body/self, but also a new language of desire. The January 2014 issue of *HiBlitz* features celebrity actor-mother Shilpa Shetty Kundra on the cover, describing her as "completely mommylicious". The mother is re-figured as an object of aspirational consumption. The process of becoming "mommylicious" is "very difficult" and is "more than just looking good"; it is supposedly about feeling good as well (Dadyburjor 2014: 77). The state of being 'mommylicious' is marked by a strong revulsion for and denial of the earlier pregnant/fat self. Kundra says: "I was as fat as a cow. I was a size 14 for the first time in my life! It made me feel strange because it didn't feel like me – and I just wanted to be me" (Dadyjurjor 2014: 77). Expectedly, she claims to become 'mommylicious' "the natural way" through diet and exercise, "often working out in the hours that were meant to catch up on sleep". Karisma Kapoor, another celebrity actor who self-defines as 'yummy mummy', has written a manual-cum-memoir about how to attain the "body beautiful: fitness during and after pregnancy" (2013: 87). Continuously looking at "before-and-after pictures" of herself, self-hate motivated her identity and embodied transformation (Kapoor 2013: 102). Kundra emphasizes the continuous effort required: one has to "keep at it" (Dadyburjor 2014: 77). One can never permanently 'be' a yummy mummy and one has to continually 'become' it. It is an unstable, deferred state, always 'trying-to-be/ing'. Eating and exercising become an obsessive, incessant body project, a tightrope between hunger and desire. The process of becoming yummy mummy entails constant self-monitoring and control of the human body and appetites, and generates as much anxiety as satisfaction. Which is why, the temptation to enter the posthuman domain of mommy makeover veiled by a conspiracy of silence is very strong. Reasserting Judith Butler's definition of gender, the yummy mummy is "a repeated stylization of the body, a set of repeated acts within a highly rigid regulatory framework that congeal over time to produce the appearance of substance, of a natural sort of being" (Butler 2010: 45).

The yummy mummy images circulated in the media elicit ambivalent responses: women feel "pressured to conform to the yummy mummy model of contemporary pregnancy" or postpregnancy, yet they also feel that these celebrities are "hapless victims of normative beauty codes" and intrusive cultural surveillance (Nash 2012: 8). The mothers I surveyed expressed the stress they feel to look good—varying from 'yes, definitely' to 'yes, perhaps'. Many mothers feel that childbearing has altered their lives and bodies irreversibly. Their postnatal vulnerability and fear of loss of the earlier/prettier self are exploited by the cosmetic surgery industry and provide the entry point for posthuman invasion of the body. Eight of the thirteen respondents of my survey felt that the celebrity yummy mummy was a posthuman construct through surgical invasions, and not just of human efforts of diet and exercise. The yummy mummy embodies the potential for the maternal identity to be unfixed and changeable. Mommy makeovers may be read as instances of what Braidotti (2013) calls "posthuman subjectivity", characterized by "playful experimentations with the boundaries of perfectibility of the body". But the yummy mummy's embodied play in a gendered consumerist culture is restricted within strict regulatory and statistical parameters. The posthuman quest of happiness located in the yummy mummy's technobodied 'after' state becomes locked in normativity and loses its potential for destabilizing gendered ideologies.

Resistance to this enforced normativity can come from individual acts of insubordination. Actor Aishwarya Rai's self-chosen and embodied refusal to conform to the dominant prescriptive standards for postpartum maternal beauty (endorsed by so many other celebrity mothers) after her daughter's birth is one such instance. *India Today* reported how her maternal body became "the subject of intense debate": while anonymous commentators on social networks felt that "she needs to lose that weight" and that she should learn from other global celebrity yummy mummies like Victoria Beckham "who are back to size zero weeks after their delivery", designer Sabyasaachi commended her for being brave enough to show "her real side to the media" (PTI 2012). Another designer, Rocky S., commented, "She should not be pressurised and she doesn't have to look perfect at this moment", inadvertently revealing how even her well-wishers have internalized those very norms of yummy-mummy perfection from which Rai had deviated (PTI 2012). Any deviance from the boundaries of maternal beauty elicits phobic responses that reclassify "the transformations after childbirth…as ugly" and monstrous (Wolf 2002: 232). *The Guardian* reported: "One website posted a video, complete with elephant sound effects, entitled 'Aishwarya Rai's shocking weight gain', which has been seen more than 500,000 times" (Manzoor 2012).

In Foucauldian terms, Rai's refusal to embody the identity of posthuman yummy mummy was a tactic of insubordination that disrupted the dominant discourse of maternal beauty (Foucault 1982). In an interview, she makes her personal choice political:

> I didn't set out on any mission except *being myself*…. [I]n the mirror…I could see the weight gain. And I still chose to come out like this. And I am seeing all around, and even in showbiz, it has brought about a lot of change and I am glad. (Chopra 2013; emphasis added)

There is a difference between Kundra's construction of 'me' and Rai's 'myself'. Kundra equates the loss of her pre-partum body shape with the loss of 'real self', and attempts (and succeeds) to rediscover this self through be(com)ing yummy mummy. Kundra's 'as-if' maternal body project is an "affirmation of fluid boundaries" and of her own agency and experience in playing with this fluidity (Braidotti 1994: 7). Rai "chooses" to love herself 'as-is', resisting the pressures of her mirrored/public gaze. Confidence and pleasure in the 'as-is' rather than the panic-driven pursuit of the 'as-if' maternal body is locus for resisting the pressures to become the posthuman yummy mummy. Mommy makeovers graft the desired self-image onto the contours of the pre-existing 'real' body and erase the anomaly between desired image and actual body to make the desire 'real'. Internet forums like the ironically named *www.realself.com* abound with 'lost-and-found' testimonials of hybridized posthuman mothers who share their anxiety at losing their 'real' selves postdelivery and their subsequent elation at re/discovering it through surgery (*Realself,* Worth It Reviews 2014). 98 % of the posthuman mothers on this site feel that mommy makeovers are 'worth it'. Whether these transformations are on the surface of the body or are they achieved by "working through the multilayered structures of one's embodied self" is open to debate (Braidotti 1994: 171). Interestingly, though *www.realself.com* features over 400 reviews of mommy makeovers done *in* India, I did not find any reviews by Indian mothers admitting to undergoing mommy makeovers. Although her privileged affluence locates the posthuman Indian yummy mummy at a different socio-economic intersection than the economically deprived surrogate mother, yet they are both yoked by their silence.

The posthuman surgically reconstructed yummy mummy complicates the beauty discourse: either she is a victim of normative standards of feminine beauty and the 'oppressive, negative culture of body hatred', or she is at the vanguard of the "demand… for liberated bodies": "liberated to adorn and express…and to decide what happens to" her body (Redfern and Aune 2010: 20; see also Heyes and Jones 2009). Making a categorical distinction between posthuman mommy makeovers (with its sinister connotations of capitulation to totalizing, unnatural and invasive technologies) and human yummy mummies (regarded as more 'natural'), a majority of the survey respondents felt that the yummy mummy concept has arisen because women have started to value themselves more and because we have become more fitness-focused and health-conscious. They also felt that the yummy mummy was a good role model for their children, as she demonstrated the importance of exercise and healthy eating. Here, however, we can locate the slippage of meaning that is central to the contradictory reception to and desire to be(come) the yummy mummy: 'beauty' has also come to signify 'health', and correspondingly, non-beautiful or non-slim mothers (non-yummy-mummies) are perceived as unhealthy. When Kapoor writes of 'fitness after pregnancy', she focuses only on weight reduction and returning from a postpartum size XL to her pre-partum size S (2013: 94). The integrated, physical-psychical concept of fitness is reduced and marginalized to the outermost boundaries of the body. The *India Surgery Blog,* too, promises that mommy makeovers are a "complete solution to give… good health

and youthful appearance". Wolf accuses cosmetic surgeons of "manipulating ideas of health and sickness" and "taking the feminist redefinition of health as beauty and perverting it into a notion of beauty" as health" (2002: 220–224). Yet the survey respondents seemed unaware of this manipulation and slippage and instead, celebrated the agency of the human yummy mummy, while rejecting her posthuman advancement. While condemning the "self-obsession" behind mommy makeovers, most of the respondents felt that the yummy mummy concept is a potential space for mothers' identity formation beyond the stereotypes of self-sacrificing good motherhood that permeate Indian cultural institutions. Deepanjali felt that it was a "celebration of one's sexuality". Mimi said that it "improves the self-confidence when someone else also joins in complimenting the way you are projecting yourself": this reveals how often maternal self-worth is constituted (also) through the other. The hyphenated yummy-mummy embodies Braidotti's "I, woman", both maternal experience (mummy) and representation (yummy), simultaneously agent of her own body project and victim who has "paid in [her] very body for the metaphors and images that our culture has deemed fit to produce" of 'mother' (1994: 187). One respondent, Susan, summed up the ambivalences generated by the yummy mummy construct:

> … the trend could be both empowering and could also devalue mothers…depending on the way women approach it. If one is not secure and confident about oneself, one will try and enhance one's physical appearance in positive and manageable [human] ways. If one is insecure, one may be inordinately preoccupied with looking good and be willing to resort to desperate [posthuman] measures.

Supermom: Performing Transhuman Motherhood

All the respondents in the survey shared the desire to "look good and be a good mother", while eight out of thirteen felt it was quite difficult to find time for oneself (to look good) when there is both a career and a home to manage. There are multiple contradictions inherent in the oppositional claims of the 'good mother' and the 'yummy mummy' that are supposedly reconciled in the figure of the 'supermom'.

Balancing mothering and a career is not easy, but masking the struggle is a requisite for performing the supermom. The supermom myth perpetuates the "mask of motherhood": the unattainable media images of seamless perfection that makes mothers respond through "faking"—pretension and masquerade (Maushart 1999). Here, I would like to elaborate on the representation of Durga as the posthuman mother with which I began my paper. The Hindu Bengali iconography of the Durga fuses scriptural and folk versions of the mother goddess myth. In the *Devi Mahatmya* of the *Markendya Purana*, she is also called Chandika, the bloodthirsty, multiple-armed, lion-riding demon slayer (Doniger 2009: 389). In the later *Devi Gita*, the mother goddess is born as Parvati, who is the consort of Shiva, and the text "emphasizes her wisdom, in addition to her power" (Mackenzie Brown 1992:

199). In Bengali folk tales and the Durga Puja festival, Durga is the mother of four, who comes down from her celestial home to visit her earthly parents every year. The duality of Chandika/Parvati, "goddess of the tooth"/"goddess of the breast" (A. K. Ramanujan quoted in Doniger 2009: 390) is reconciled in the '*ekchaala*': the single common overarching backdrop that unites the martial with the marital, the 'Durga at work' with the 'Durga at home'. The image of the ten-armed mother goddess has been mutated and circulated as a representation of the 'supermom' working mother. I remember a 1990s print advertisement for *Sananda*, a popular Bengali women's magazine, which depicted a ten-armed mother equipped with kitchen and office implements. This mythic, multi-armed, multitasking, mutant domestic goddess was presumably effortlessly capable of conquering parallel universes of home, self and work. I also remember the simultaneity of hope and fear that this image imprinted on me.

The supermom myth was created in a specific historical context: women were breaking away from the "feminine mystique" of the selfless, nurturing stay-at-home mother by asserting their right to work away from home (Friedan 1963). Yet the gendered asymmetry and politics of motherwork (housework and childcare) forced the working mother to negotiate the "second shift": coming home to the unpaid labour of motherwork after a full day of paid labour (Hochschild 1989). The supermom is "a successful woman [who] should work full-time, be a mother, a wife and … look fabulous doing it" and it is "society" which is "telling" this to mothers and setting them up to "feel like failures" (Sheer 2011: 82). This 'society' operates through a hydra-headed institutionalized discourse of motherhood propagated via family, religion, culture, commerce and mass media, which places an untenable burden of expectations on the mother. The multiple roles that a supermom is expected to play causes "multiple identity crisis" and a feeling of "not being good enough in any of their given roles" (Davis 2011: 99). Negotiating the performance of this collage of femininities is like tightrope walking under the critical gaze/s of the other, shaped by conflicting feelings of fleeting satisfaction and constant guilt.

The functioning of the Indian supermom is usually, and ironically, dependent on her exploitation of underprivileged domestic workers (who perhaps represent the *vaahana,* the lion on which Durga is astride) who are also often mothers doubly disadvantaged by gender and class inequities. Despite their transhuman technological advancements, privileged Indian supermoms still continue to depend on the underpaid and unregulated human labour of their "baby maids" (Iyer 2013: 163; Kapoor 2013: 151). However, it must be admitted that the supermom–maid relationship, apart from its obvious economic inequities, operates through an elaborate code of conduct, process of bargaining and irregular rules of attendance (which includes sudden and unspecified absence): all of which considerably adds to the layers of panic and anxiety that the Indian urban supermom, especially in nuclear families, had to experience daily. Yet, representations of the supermom in Indian media, like the iconic ten-armed mutant mother, continue to invisibilize maternal exhaustion and guilt, strategically erase the ironies of available support (posthuman and human), and reposition the supermom as the ideal of good motherhood: "It is

certainly possible to be both good mothers and competent professionals….with opportunities aplenty and the help that is available" (Ramasundaram 2011).

Performing supermom, in India and elsewhere, is incessant and panic-driven mimicry of a normative nonhuman fabrication, experiencing the constant fear of lapsing into an inadequate, monstrous failed mom. Performing supermom is a state of continuous dis-ease: of inhabiting multiple worlds yet feeling restless and alienated in each of these worlds. The multiple and flexible identities that the supermom is supposed to *simultaneously* embody make her an unsustainable and 'inhuman' postmodern construct. We can make sense of and survive the oppressive expectations of the supermom ideal only hybridizing with the machine. It is this "technologically induced evolutionary programme" that allows us to "understand, modify and control" our surroundings and ourselves, which allows us to become new, improved, "enhanced" versions of the "transhuman", in this case, supermom (Allenby and Sarewitz 2011: 2). Experientially, I confess that the mobile phone is a transhuman umbilical cord that keeps my mothering-self networked to my daughters and their replacement caregivers. All supermoms have fatigued and fragmented selves, spilt into mind/body binaries shifting constantly—mostly on auto-response mode—between home and work. The mind/body duality of my supermom identity, which enables me to work somewhere and think of something else, is assisted by an assemblage of machine servants. The Sunbeam All-purpose Mixmaster, a popular gadget of the twentieth-century American kitchen, had "a food chopper, drink mixer, slicer/shredder, butter churn, can opener, bean slicer, ice-cream freezer, coffee grinder, knife sharpener, silver polisher, pea sheller and potato peeler" (Plante 1995: 271). The Mixmaster with its multiple attachments, like Durga's ten hands, is both mechanical metonym and metaphor for the trans/posthuman supermom: who 'mixes' her work/home selves with her techno-logical attachments—domestic gadgets, electric breast pumps, smart phones apps, etc—to negotiate the dual shifts of work and home. "Fruitful couplings" with the machine give us "pleasure in the confusion of boundaries" (Haraway 2013: 150). It gives us the freedom to play with our fractured identities, to privilege the perfor-mance of any of ourselves at any given point of time. For instance, at this moment I am performing the role of a researcher blocking out the demands of my other roles as teacher/mother/wife/cook, only because I am transhumanized through telephonic connectivity. This role-playing is precarious, still gendered and predicated on our anxiety and guilt at the absences elsewhere, but it is some freedom nevertheless. Haraway's cyborg belongs to "the utopian dream of the hope for a monstrous world without gender" (2013: 181). Our transhuman supermom is a multi-be(com)ing goddess situated in a gendered but changing world. Integration with the machine has allowed us to find and deploy our inner Goddess Durgas and enact "enabling representations of a new female…sense of the divine" (Braidotti 1994: 133).

There is no being called supermom; there can only be countless momentary becomings: each performance a transient faking and each lapse a negation of the superimposed ideal. Many successful working mothers have negotiated the pres-sures of the impossible ideal of the supermom by accepting that "however much

you try, you just can't be superwoman" (Purohit 2013: 3). Many other privileged mothers have opted out of their careers, refusing to fracture and frustrate their maternal experience (Iyer 2013). To combat the oppression of the supermom monster, mothers must deny the possibility of ever becoming one: they must stand up and declare: "I'm a mom, not a superhero" (Sheer 2011: 81).

Momblogging: Writing Mothering

It is only by reclaiming her multiple, fragmented voices that a mother can resist the coercion of postmodern and posthuman maternal stereotypes. Ironically, the cybernetic posthuman maternal blogosphere is one of the sites of such resistance. The momblogger becomes a mother twice over: once through the process of biological reproduction, and then, in her digital second life, birthing her blog through informatic reproduction. She is different from other posthuman mothers in that her choice to write her maternal subjectivity is possibly freer, and that her identity performance is collective and connected with a sisterhood of mothers.

Haraway's 'Cyborg Manifesto' states, "A cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction" (2013: 149). The momblogger is by definition such a hybrid organism, and her online 'momoirs' are both a political act of resistance and a fictive reinvention of her personal mothering experiences. Co-opting Haraway's cyborg, momblogger Bonnie Stewart declares in her "cyborg momifesto" that mombloggers have "incorporated" the "digital age" into themselves as "our networks of identity and friendship and expression and marketing" (2009). Momblogs are the "cybertechnological shareware" that permit the experience of mothering "to spill out" from the "biological vessel" of the maternal body into "self-conscious networks of identity" (France 2001: 175). In its connectivity and multiplicity, in its "intersection of mother and other", the mamasphere is inclusive and non-normative (Friedman 2013: 87). It is a sustaining and empowering space where posthuman mothers can record, share and validate their mothering experiences through online discourse, and resist dominant patriarchal discourses of motherhood through formation of alternate subjectivities and empathetic communities.

In India, mombloggers are a minuscule and privileged subsection of urban, educated, affluent mothers who have easy access and the inclination to use communication technology for the specific purpose of blogging: they do not represent the diverse and discrete maternal experiences across India. Despite its limitations, the Indian mamasphere is emerging as a space where the growing cyborg community of mothers form networks, use and share parenting resources to cope with their human responsibilities, and strategically fashion distinct posthuman identities. *Indian Moms Connect* is a blogging "community created by mothers, who are incidentally Indians/Indian origin, to bring together mothers from around the globe to share information, stories and experiences of bringing up children confidently" (Indian Moms Connect, Homepage 2013). At present, Indian Moms Connect has

eight mombloggers in its core team, as well as around 50 contributors located in the Indian subcontinent and the diaspora. Committed to the feminist privileging of diversity and difference, the blog becomes a space where the mothers can share their experiences and with others similarly situated, where mothers are given support to grow not just into mombloggers but mom-entrepreneurs as well, where they can reclaim their authority and agency and audience.

In *The Life and Times of an Indian Homemaker*, the blogger, Indian Homemaker, copes with the death of her daughter, Tejaswee Rao, by blogging about "motherhood, child loss, death and grief" as well as "gender bias caused by patriarchy" (Indian Homemaker 2013). The blog-space gives her freedom to express, as and when she chooses, her multiple selves of grieving mother and feminist social activist through her writing. In her posts, Indian Homemaker often reproduces emails sent to her by m/others and asks her readers to weigh in, discuss, and comment: this is individual problem-solving and healing through community intervention. Her grief mutates from the personal into the political, and it allows her to connect to other bruised mothers through commonality. The ever-mutating constellation of blogs enacts the "dialectic of pattern/randomness" which Hayles regarded as characteristic of the posthuman and which "opens up new ways of thinking" what being human/maternal means (1999: 285–287). A note of caution is required here, as these blogs often replicate the hierarchical, majoritarian structures of the real, human world. Yet, in their matricentric, articulate existence, in the very fact that they encourage mothers to speak, Indian momblogging is a radical posthuman space as it alters centuries of silent, submissive and child-centred representations of patriarchy-dictated good motherhood. At a personal level, in their infinite continuum and potentiality, blogs allow posthuman nomadic maternal identities to always become, to reconcile the public and private; the before, now and after; the pressures of change and the quiet, elusive pleasure of 'me time', the still centre.

Posthuman Mothers and the Tyranny of the Clock

A momblogger writes, "The pressure of motherhood in today's world is unbelievable, and it comes at us from every direction, every day, every hour, and every minute" (Sheer 2011: 82). The mothers of our generation, on the tightrope between 'my time' and 'baby time', are haunted by the always-ticking clock. The clock is the construct and ally of the male: there has always been a sharp asymmetry in masculine and feminine experiences of time. Negra writes of the postfeminist "chronic temporal crisis": "Although harried, fragmented subjectivity is deemed a hallmark of postmodern culture, a closer look at mass media images and texts reveals a distinct feminization of the time crisis" (2009: 48). Medical experts say that "the biological clock involved in reproduction seems to favour men" as sperm production continues through the lifetime of men, while women are born with a fixed number of ova and "these seem subject to aging" (D'Adamo and Baruch 1986: 73–74). For professional women, giving birth entails stealing time from their

paid work through 'maternity leave', leave that is often begrudged. The "double standards" of the "beauty myth" create an "artificial inequality", "[t]he prime of life, the decades from forty to sixty … are cast as men's peak and women's decline" (Wolf 2002: 230). The ageist cosmetic surgery industry exploits this natural maturing process, projecting it as a monstrous but operable condition that can be cured by expensive interventions like mommy makeovers. Behind the mask of supermom, all mothers are "tired, bone-deep tired": this fatigue is a "more wide-spread, political issue … about time and expectations and giving value and cre-dence" to the sustained, unpaid, intense labour required for birthing and nurturing (Peskowitz 2005: 134). The project of writing mothering is riddled with temporal "interruptions that are so endemic to parenting" (Friedman 2013: 101). The momblogger must buy blogging time from the clock, and she usually has to give up sleep or rest in exchange.

So, how do posthuman mothers resist the tyranny of the clock? ART attempts to freeze the ticking of the biological clock. By removing her ova and freezing it before she is thirty, and then fertilizing and implanting it later, "women would no longer be the prisoners of time" (D'Adamo and Baruch 1986: 74). The yummy mummy tries to reverse the inexorable ageing process of the clock, often using invasive biotechnology to re-inscribe standards of maternal beauty onto her body. The supermom must constantly elasticize the diurnal clock with her arsenal of machine servants to accommodate her multiple workloads. Her "non-formal female model of achievement" is often "very practical and satisfying" (Aravamudan 2010: 212). Unshackled from time and space constraints, the momblogger can "shift time itself" by linking, manipulating, editing or deleting her texts, by participating in online asynchronous, slow conversations as her own time and pace (Friedman 2013: 102).

Undoubtedly, the posthuman provokes both elation and anxiety (Braidottti 2013), and the particular subjectivity of each cyborg mother may narrativize dif-ferences as well as similarities in her engagement with the posthuman. Fears have been expressed at the possibility of the ectogenetic foetus, the pregnant man, cloning techniques and other hypermedicalized posthuman interventions in maternity leading to "a gynocidal future" that will erase both the maternal body and the category "of woman born" (Rich 1995: 111). Others like Haraway have wel-comed the imagined and hybridized female cyborg and even the "prospect of pregnancy with the embryo of another species" (1989: 377). The recent success of Swedish doctors in "transplant[ing] wombs into nine women" reverses the frag-mentation of the mother in the surrogacy-narrative to amalgamate broken and interchangeable wombs into one posthuman maternal body through advances in transplant technology (*Mumbai Mirror* 2014: 15). Such fragmented and re-membered maternal bodies reassert "notions of the self as process, complexity, interrelatedness… and the multilayered technology of the self" (Braidotti 1994: 157). Yet the fact that these wombs transplants are "temporary, just to allow childbearing" underlines the contingency and precariousness of posthuman maternity that paradoxically coexists with the continuing patriarchal premium placed on reproduction of the species (*Mumbai Mirror* 2014: 15).

The mother is absent from many narratives of posthuman futures, be it the consciousness-without-bodies uploaded onto computers envisioned by Moravec (1990) or in Kurzweil's (1999) timeline of neural-implanted human intelligences and machine-based intelligences engaging in dialogue in futuristic 2099. The clock, as it were, poses the dystopian *threat* of extinction, as the 'posthuman' transforms and/or supplants the 'mother' altogether. As a functioning embodied mother aware of and embedded in technology, I am obviously curious to know how the maternal body will be deleted from the evolutionary process in the not-so-distant future and what happens to the mind mother or the maternal intelligence thereafter. Maybe the erasure of corporeality would finally liberate and mutate the mother to the no-longer-necessary-to-be-mother. Or maybe the only way to survive as a mother in the future posthuman world would be to selectively engage with category-enhancing practices and resist all category-deleting practices.

In conclusion, and coming back to the present, in India as well as globally, we can observe with growing anxiety the co-opting of posthuman technologies into existing gendered structures of power and subjugation, such as patriarchy and neo-capitalism, in almost every node of maternal-posthuman intersection; the exploitation of the surrogate and the silences about mommy makeovers being two such instances. Yet, it also needs to be emphasized that posthuman maternity is a continuing, evolving project with immense potential for radical change both through self-making agency and through resistance, dissent and refusal.

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Chapter 11
The Paradox of Surrogacy in India

Amrita Pande

Transnational commercial surrogacy—women having babies for pay for clients from across borders—is a topic that has generated a substantial amount of moral panic. Some scholars have framed this industry as a form of class- and gender-based exploitation of women's bodies while others have highlighted the potential commodification of motherhood and children made possible with pregnancy and reproduction getting a price tag. This panic has increased in the recent decade once surrogacy arrangements started crossing borders into the global south, and subsequently made poor women from countries in the global south the primary providers of this service. In my previous works I have analysed transnational commercial surrogacy as a form of labour that challenges the socially constructed dichotomy between production and reproduction and argued that commercial surrogacy in India is a new kind of labour emerging with globalization—gendered reproductive labour, highly sexualized and stigmatized labour, but labour nonetheless (Pande 2014, 2015). In this essay I expand on this notion of labour by highlighting two fundamentally paradoxical characteristics of this labour market—one, that a market in assisted reproduction and pro-natalism is booming in an otherwise aggressively anti-natalist state and two, that a market that literally produces humans and human relationships is critically dependent on the maintenance of a global racial reproductive hierarchy that privileges certain relationships while completing denying others.

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Surrogacy in India

In recent years India has emerged as a prime destination for people seeking commercial gestational surrogacy arrangements estimated to generate US$ 2.3 billion annually (Perappadan 2014). While the sheer economics of the 'package deals' offered by clinics and hospital in India are the primary reason for the popularity of India, there are other factors making India one of the world leaders in transnational surrogacy—large numbers of well-qualified and English-speaking doctors with degrees and training from prestigious medical schools in India and abroad, well-equipped private clinics and hospitals, and few laws regulating the procedures, the contract or the gestational mother–client relationship[1]. As a consequence, intended parents are able to take advantage of the client-friendly policies of private clinics and hospitals, where doctors are willing to offer options and services that are banned or heavily regulated in other parts of the world. The clinics are expected to follow the National Guidelines for Accreditation, Supervision and Regulation of Assisted Reproductive Technology (ART) clinics in India in 2005, and in the more recent draft ART Regulatory Bill in 2010, but these are not binding or mandatory. The more recent 2013 clause added by directorate general of health services (DGHS) restricted surrogacy services to married, infertile couples of Indian origin. In essence, the DGHS proposal bans foreigners, homosexuals and people in live-in relationships from having a baby borne out of surrogacy in India. The full impact of the new proposal is yet to be gauged, but in 2013, it shifted the 'gay surrogacy' base to Thailand, and then to Nepal. With both these countries passing a ban on surrogacy, only time will tell where the next base would need to be situated.

Economics and the absence of regulations, however, are not the only forces motivating transnational clients to come to India and, specifically, to New Hope Maternity Clinic—a pseudonym that I have chosen for the clinic discussed in this paper. One of the biggest selling points of this clinic is that it runs several hostels where the women are literally kept under constant surveillance during their pregnancy; their food, medicines, and daily activities can be monitored by the medical staff (Pande 2010).

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[1]The origin of the term 'surrogacy' and its social and political implications have been widely discussed by feminists (Stanworth 1987; Snowdon 1994; Rothman 2000). Critics have argued that the terminology 'surrogate' suggests that the womb mother is somehow less than the genetic or social mother. The respondents in this study refer to one another as 'surrogate mothers', and when I explained what the term 'surrogate' meant in English, most agreed that the description was fitting. In this article, however, I have chosen the term gestational mothers over surrogates to avoid disparaging the work done by the women and as an attempt to recognize and label the relationships forged by the women with the foetus and the baby. There are two types of surrogacy: the first, called traditional surrogacy, involves the surrogate being artificially inseminated with the intended father's sperm. The second, termed gestational surrogacy is done through in vitro fertilization, in which the egg of the intended mother or of an anonymous donor is fertilized in a Petri dish with the sperm of the intended father or of a donor and the embryo is transferred to the surrogate's uterus. All the cases in this study are gestational surrogacies; that is, the surrogate has no genetic connection with the baby.

Research Methods

This essay is based on my larger research project on commercial surrogacy in India, for which I conducted fieldwork between 2006 and 2016. My research has included in-depth, open-format interviews with 64 womb mothers, their husbands and in-laws, twelve intending parents, three doctors, three surrogacy brokers, three hostel matrons and several nurses. Between 2006 and 2008 I also conducted participant observation at surrogacy clinics and two surrogacy hostels. I revisited the hostel and clinic in 2012, visited women who have given birth for pay more than once and organized some focus group discussion with them. I am currently involved in a multimedia docudrama *Made in India: Notes from a Baby Farm*, based on these workshops. This docudrama has toured 15 cities around the world and generated a lively discussion on the ethics and empirics of this industry[2]. The range of research methods allowed me to be immersed in the lives of the women as well as discuss the future possibilities of this industry with the women and people in different parts of the globe.

All the interviews were in Hindi and other local languages and were conducted either in the clinic, the surrogacy hostels where most of the women live, or at their homes. All the women in this study were married, with at least one child. Their ages ranged from 20 to 45 years. Except for three women, all were from neighbouring villages. Fourteen of the women said that they were 'housewives', two said they 'worked at home', and the others worked in schools, clinics, farms and stores. Their education ranged from illiterate to high school level, with the average education being middle school level of education. The median family income was about INR 2500 per month. If we compare that to the official poverty line of INR 447 (approximately $10) per person per month for rural areas and INR 579 (approximately $13) a month for urban areas, 36 of my interviewees reported a family income that put them below the poverty line (Planning Commission of India 2009). For most women the money earned through surrogacy was equivalent to almost five years of total family income, especially since many of the women had husbands who were either in informal contract work or unemployed. All were driven to surrogacy because of financial desperation and/or a medical emergency.

Transnational clients had hired thirty of the women in this study. While fertility clinics from several Indian cities have reported cases of surrogacy, New Hope Maternity Clinic is one of the only clinics where the doctors, nurses and brokers play an active role in the recruitment and surveillance of surrogates. By October 2015, the clinic had delivered over 1000 babies through surrogacy and has expanded its business to twenty times its earlier size (Private correspondence with Doctor and management of clinic).

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[2]For details on the making of this docudrama and the process by which I reworked my academic research into a creative interactive performance, see Pande and Bjerg (2014).

Indian State: Anti-Natalism to Assisted Reproduction?

The dominant conversations around the pro-choice debate amongst feminists in the global north often make invisible the complex and often contradictory layers of this debate in the context of women in the global south. In India abortion was legalized by the Medical Termination of Pregnancy (MTP) Act of 1971. But the act was not passed because of pressures by feminists, or because of state concern for women. It was just another indicator of the anti-natalist state's emphasis on population control (Pande 2014). Unlike in the global north, where most women (at least white women) historically had to struggle to get access to the most basic birth control methods, in India, the state forced it on them. In independent India, family planning became central to the state's strive for modernity, and the Indian state became the first in the world to initiate an official population programme in 1952. An underlying message of this official population control programme is that lower class women are recklessly reproductive and to be blamed for their poverty (Chatterjee and Riley 2001: 838). The narratives of women reveal this state propaganda. A 38-year-old Varsha is a mother of three and is a surrogate for a couple from North India. She recalls the many visits by the *dai* (family planning nurse).

> I never used any contraceptive just regulated intercourse according to my monthly cycle. But the *dai* would stop at our hut on her visits and tell me to think of getting the operation (sterilization or long term implants). But why do you not get it, she would say. She showed my sister and me pictures of women with one daughter, where the daughter and the mother would be smiling. She sometimes scolded us and said, 'That is why your condition is like this. The more babies you have, the poorer you get, do you not understand that?' Perhaps she is right. If I had not had my last child, the first two would be happier. *But now the tables have turned.* You see, it is my fourth pregnancy (the surrogate birth) that will make my entire family happy.

For Varsha, 'the tables have turned' with her participation in the surrogacy industry. While the state might portray her fertility as a cause of her family's misery, in fact, her surrogate pregnancy enables them to better their financial situation and, perhaps, get out of poverty. Rita is a 29-year-old woman pregnant for an Indian couple settled in New Jersey. Rita is one of the women to allude to the irony of surrogacy in an otherwise anti-natalist state. She reiterates Vasha's claim that 'the tables have turned', and reflects on the changing role played by her mother, an informal surrogacy broker:

> My mother used to convince women in her village to get sterilization operations or use other forms of (long-term) contraceptives. She would take poor women from our village to the city to get surgeries. But now with surrogacy catching up, she spends more time bringing surrogates to Madam's clinic. Now things are different, mothers of our age can make good use of our bodies and our motherhood. We can make good money by having babies.

Commercial surrogacy drives women like Varsha and Rita to think of their bodies as a possible source of value, a value denied by the state itself. In sharp contrast to the states' family planning propaganda, their fertility is now a source of

income for the family. The narratives of many respondents resonated with such paradoxes of commercial surrogacy booming in an anti-natal country. It was most striking when the women compared their past pregnancies, deliveries and post-natal care with their 'surrogate' pregnancy experience.

Although most women in this study had their previous deliveries at home with minimum medical intervention (usually with the help of a midwife), within they inevitably undergo a Caesarean section. Only two of the women in this study had natural births. This was partly for the travelling convenience of transnational clients and partly because the doctor believes that women are more likely to get attached to the baby in natural births. Elsewhere, I talk more about such medical strategies (Pande 2014). While the doctors and nurses assert that the surrogates are 'willing', the 'Scissor' (the name the surrogates use for the Caesarean section) was a subject of much debate, negotiation and, sometimes, resentment. Ramya, recovering from a Caesarean (she delivered twins to the intended couple from the USA), talks candidly about the use and abuse of women's bodies throughout the surrogacy process.

> I came to the clinic the first time around two years ago. Since then I have been just in and out of this clinic. I don't ever want anyone else to go through this. It's not child's play. It's very painful – the medicines, the injections and now this scissor operation. It's not like there can't be normal deliveries in this process but they (doctor and intended couple) don't want to take any risk. *The child is most important, not our bodies.* But I cannot complain. Nature gave me a healthy body. I decided to let others cut it apart (Emphasis mine).

Ramya is well aware of the doctor's priority, the 'precious baby', and contends that the high probability of a Caesarean delivery is a clear indication of the unequal power relations in surrogacy—where the child borne out of surrogacy is more valued than the health and welfare of the surrogates' bodies. Many respondents recognized and highlighted this stratification while comparing the experience of giving birth to their own children to the surrogacy birth process. While most candidly outlined the bodily interventions involved in the process of surrogacy (injections, medicines, tests and surgeries), they simultaneously emphasized some practical advantages and the 'luxuries' of their 'surrogate' pregnancy. Parvati compares her experience as a surrogate mother to her previous pregnancy.

> There is pain even with your own child. But with my own child, I did not understand what was going on with my body. I was too young; got married at the age of 16 and got pregnant with my son in just six months of getting married. This time is totally different. I am much more pampered… The Doctor does not allow us to do any housework so I have hired a maid. I pay her with the money the (intended) couple sends every month. And since they want me to be strong and healthy, I eat lots of ice creams, coconut water, milk etc. everyday. I pay for this out of the monthly cash. After all once the child is out, it's my body that will suffer and be weak if I don't eat healthy right now. I am supposed to take a lot of strength medicines (vitamins). The doctor recommends one a day but I take two!

For several women, the mandatory rest, the balanced nutritious diet and the professional medical care is a 'luxury' that they deserve. Regina is a 45-year-old surrogate in the ninth month of her pregnancy. Partly because of her age and possible complications in pregnancy, Regina has been instructed by the doctor to

remain in the clinic till the time of her delivery. Regina talks about the extreme surveillance at the clinic and compares it to her previous pregnancies.

> I know it will be a caesarian, after all the medicines and injections that they have been feeding me, do you think the baby will come out that easily! I've been staying at the clinic for the past six months now. Doctor Madam wanted me to stay here. And these nurses, they never leave me alone. Eat this, eat that, take this pill, don't walk so much. They even tell me whether I should bathe or not! I don't think even my mother worried so much when I was pregnant. With us it usually works like this: 'Give birth, take a deep breath, get back to work'.

Regina seems to have accepted the inevitability of the C-section as the final manifestation of the hyper-medicalization of surrogacy. At the same time her response to the high level of everyday surveillance by the nurses and doctors is marked by ambivalence. Like Parvati, Regina enjoys the luxury of being 'pampered':

> Of course, I don't like not being able to go home to my children. But I also don't mind staying here. Right now my son takes care of all the housework. But once I go back I will go back to being a mother, a house cleaner, a farmer, everything again! And it's not like I just work at home. I also clean other people's houses. All this (pampering) is my way of getting something back. Do you know, I sometimes ask my husband to give me a foot massage, I am sure he doesn't like that!

Although Regina resents not being able to visit her children, she relishes the opportunity to rest and get some reprieve from household and outside work. Parvati and Regina are able to use the intense medicalization of the surrogacy birth process, at least partly, to their own advantage. Curiously, they also believe that they are much more in control of the surrogacy birth as compared to the birth of their own children.

At first glance it seems ironic that the women often frame the hyper-medicalization and surveillance of the birth process (typically assumed to be exploitative and restrictive) as 'luxuries they deserve'. This counterintuitive portrayal of medicalization and surveillance can be understood only within the historical context, whereby most women in rural areas are exposed to relatively low degree of biomedicalization of reproduction. Child births are treated as routine occurrences, demanding little medical attention or care. The sudden professional care that they get as surrogates become 'luxuries' that allow the women to take much better care of their health and their body. Unlike their earlier pregnancies and delivery, the surrogate pregnancies involved not only better nutrition and medical care but also meant a reprieve from back-breaking work, the opportunity to spend some money on themselves, and to spend some time recuperating after the delivery.

Other scholars have indicated similar paradoxical responses by economically disadvantaged in other parts of South Asia and Africa. For instance, Ellen Gruenbaum (1998) argues that for the rural Sudanese women in her study the experiences of disempowerment are very different from women in the global north. She argues that people in the global north have experienced hyper-medicalization of many healthcare processes, which leads to a sense of disempowerment and a desire

for alternatives. The economically disadvantaged and rural people in her study, however, often have a very different response to medicalization. It is often the lack of access to medical services that seem to constitute disempowerment. When seen out of the context, these responses may be simply interpreted as women colluding in their own oppression. Yet from another perspective, their responses may be a way to resist other forms of subordination.[3] At the same time, it is vital to highlight the fact that the women are able to negotiate better natal care only because the foetuses they are carrying enjoy higher social status. As lower class women giving birth to lower class babies, their own pregnancies are treated as everyday occurrences that do not deserve any antenatal or post-natal care and attention. As surrogates, however, they become wombs for 'precious', middle class and international babies. Their bodies become only temporarily worthy of care because they are using their bodies, wombs, sweat and blood to produce babies for rich(er) clients (Pande 2014).

Surrogacy and a Global Racial Reproductive Hierarchy

In her study of the race-based reproductive hierarchy, legal scholar Dorothy Roberts stated, "The right to bear children goes to the heart of what it means to be human. The value we place on individuals determines whether we see them as entitled to perpetuate themselves in their children. Denying someone the right to bear children deprives her of a basic part of her humanity. When this denial is based on race, it also functions to preserve a racial hierarchy that essentially disregards Black humanity". (1997: 305). With the spread of new technologies to the global south, this racial hierarchy is effectively globalized to disregard the humanity of women of colour in the global south. This global racial reproductive hierarchy becomes ever so stark within surrogacy practices wherein Indian women are denied the right to reproduce their own children, while at the same encouraged to have babies for others. Simultaneously, the relationships that they forge during the contract period are unceremoniously disrupted and often, completely denied by the way the industry is currently unfolding.

From recruitment to delivery, nurses and doctors periodically highlight the transient nature of the gestational mother–child relationship within surrogacy. The gestational mothers are instructed not to get attached to the baby since they are 'just the wombs', 'the oven' or the 'house that the guest or foetus is resting in' (Pande 2014). Subsequently, their role is constructed as merely a vessel. Most gestational mothers resist these medical discourses of disposability by forging creative relationships with the foetus and the baby. Most highlighted their 'sweat and blood'

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[3]For more on such seemingly contradictory reaction to biomedicalization read *Pragmatic Women and Body Politics* (1998) ed. Margaret M. Lock and Patricia Alice Kaufert, which compares the responses of women (in a variety of cultural settings) to modern medical technologies. Several contributors to this volume report similar trends in other countries in the global south.

connection with the foetus, even without the 'genetic connection'. Raveena was pregnant for a couple residing in California. I spoke to her right after her second ultrasound and she said:

> Anne (the genetic mother) wanted a girl but I told her even before the ultrasound, coming from me it will be a boy. My first two children were also boys. This one will be too. And see I was right, it is a boy! After all *they just gave the eggs, but the blood, all the sweat, all the effort is mine. Of course it's going after me* (emphasis added).

This sweat (*paseena*) and the blood (*khoon*) tie between surrogate and foetus is often advocated by the surrogates as stronger than a connection based solely on genes, especially by some gestational mothers who were 'permitted' to breastfeed the baby after delivery. Sharda was one such gestational mother. She says:

> I am not sure how I feel about giving the baby away to her (the genetic mother). I know it's not her fault that she could not raise her own baby (in her womb) or breastfeed him. She has kidney problems. But she does not seem to have any emotional ties or affection for him either. Did you see when the baby started crying, she kept talking to you without paying him any attention? She keeps forgetting to change his nappies. Would you ever do that if you were a real mother? When he cries I want to start crying as well. It's hard for me not to be attached. I have felt him growing and moving inside me. I have gone through stomach-aches, back aches and over five months of loss of appetite! I have taken nearly 200 injections in my first month here. All this has not been easy.

According to Sharda, her substantial ties with the baby (blood and breast milk) as well as the labour and effort she has put into gestation makes her relationship with the baby stronger than that of the genetic mother.

But despite the powerful and resistive nature of these relationships forged by gestational mothers with the foetus and baby, most clients, apprehensive that the gestational mother would change her mind about giving the baby away, prefer to sever all ties with the gestational mother right after delivery. In 2008, Tejal was hired as a surrogate by a non-resident Indian couple settled in the USA. When I meet Tejal again in 2011, she recalls the delivery day rather bitterly.

> There was a lot of problem with the delivery and I had to have 15-20 bottles of IV in just two days. Ultimately I got a scissor (Caesarean section). I was unconscious when the couple came and took away the baby. They didn't even show it to my husband. The baby would have been three years today. But I don't even know what he looks like. I used to think they would invite us to America. I used to think of her as a sister – *all of it went to waste*. Forget an invitation, they did not even call to see if we are dead or alive. They just finished their business, picked up the baby and left.

Surrogate Munni has a similar tale. Munni delivered a baby for an Indian couple settled in the USA in 2007. Like Tejal, Munni is bewildered by the change in her client's behaviour immediately after the delivery,

> My party was from America but they used to come here (the city where the clinic is situated) often to visit their parents. They would call me every day from America and come visit me almost every month. They even allowed me to breastfeed the baby. They always said that when the baby grows up they would tell her about me – about her second mother in India. It's been over a year now; she would have been one year-old last week. There have been no phone calls, nothing. I don't know what has gone wrong.

Although Munni seems surprised by the sudden severing of ties, a client severing all ties with the womb mother is a common phenomenon. In fact, nurses and doctors actively discourage the clients from continuing any relationship with the gestational mothers, and in almost all cases, the relationships forged are erased with the payment of fees, often while the gestational mother is still recovering from her Caesarean section.

The Future of This Paradoxical Industry

What then is the way forward for this fundamentally paradoxical industry currently booming in India? I have previously argued against imposition of a formal ban and argued that banning surrogacy in India will just push the whole industry underground, and would reduce the rights of surrogates even more (Pande 2014, 2015). We see a similar repercussion in the sex work industry whereby bans and criminalization do little except eroding the rights of sex workers. Imposing a blanket ban on surrogacy in India will as likely just shift it to another country in the global south. We see concrete instances in India and its neighbouring countries as well—with the 2013 stipulations restricting surrogacy in India to married heterosexual couples pushing cases of 'gay surrogacy' to Thailand, and more recently to Nepal. In other examples, a 2012 news report on the surrogacy industry in China confirms this prediction. Although there is no specific law regulating the industry in China, in 2001 the ministry of health banned any trade in fertilized eggs and embryos, which in turn forbids hospitals from performing any gestational surrogacy procedures. The ban is regularly flouted by clinics and clients and has effectively driven the industry underground. While there is no official count of this fledgling industry, a 2011 study estimates that, to date, more than 25,000 children have been born in China through surrogacy arrangements. The article reports that, in fact, people of higher economic classes use surrogacy practices to bypass the one-child rule.[4] A similar controversy was unearthed in Taiwan—where surrogacy is illegal. A surrogacy company based in Taiwan was charged with human trafficking for allegedly holding Vietnamese women in hostels after confiscating their passports. In Guatemala, surrogacy seems to be replacing the industry of international adoptions, which has been featured in the media because of rampant human rights abuses. *A Washington Times* investigation reports that 'some of the same people who were arranging international adoptions are acting as surrogacy brokers in Guatemala' (Ehrlich 2011).

The second option could be to advocate for a ban on just commercial surrogacy, while allowing altruistic surrogacy, much like countries such as UK, Canada, South Africa, amongst others have done. But most countries that have national laws that only allow women to be surrogates without pay, end up pushing their people to

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[4]See http://www.guardian.co.uk/world/2012/feb/08/china-surrogate-mothers-year-dragon.

other countries to find women to be surrogates with pay. Essentially, restrictive national laws export the morally contentious industry to some other country.

Another alternative is to impose a ban on all cross-border surrogacy as it, arguably, increases the likelihood of exploitation. Legal scholars and bio-ethicists, especially in the European Union region, have been debating the costs and benefits of permitting cross-border reproductive travel for services like surrogacy. Some, like bio-ethicist Guido Pennings, believe that cross-border reproductive travel is an obvious and fair solution to restrictive national legislation. It promotes moral pluralism in democratic states, as it 'prevents the frontal clash between the majority who imposes its view and the minority who claim to have a moral right to some medical service' (Pennings 2002) Others, like legal scholars John Robertson (2004) and Robert Storrow (2010), see such kind of travel as not only a poor solution but also counterproductive to moral and political pluralism. It allows only a certain class of people—the ones with the economic means to travel—the option to escape the restraints of the law. Moreover, in effect, the availability of cross-border options allows national governments to enact stricter laws at home than they might otherwise have the political will to enact. Strict national laws, in turn, export the morally contentious industry to some other country, very often to a country in the global south. The increasing clientele of surrogacy clinic in India from countries with national bans on commercial surrogacy (for instance, the UK, Germany and Spain) is an indication of this trend. With the rise in cross-border surrogacy, most countries have started recognizing the need to incorporate these new complexities in their policies around surrogacy. Some countries, for instance Turkey and Malaysia, have extended their prohibitive approach to cross-border surrogacy and prohibit their citizens from obtaining surrogacy procedures aboard. Others, like France, UK, Germany, Spain and Japan, attempt to discourage their citizens from pursuing surrogacy abroad by withholding legal recognition to such cases (Storrow 2010). Children borne out of surrogacy arrangements abroad, for instance, may not be given travel documents or not granted citizenship status. With the rise in international legal disputes regarding the citizenship of children borne out of surrogacy in India, some countries are contemplating a different strategy—making their domestic surrogacy laws less restrictive so that their nationals need not travel outside their borders to access this technology. Iceland, Norway and Sweden, which currently prohibit all kinds of surrogacy arrangements, are currently debating a shift towards a less restrictive approach and allowing altruistic surrogacy at home to discourage its citizens from going abroad in search of surrogates. With more than 50 Australian families that had babies borne through surrogacy caught in a bureaucratic limbo in Nepal after the government passed an interim ban on surrogacy, the Australian government is under pressure to open up discussions on the domestic ban on surrogacy.[5]

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[5]In Australia, it is illegal to pay a woman to carry a child for someone else, except in the Northern Territory where there are no laws concerning surrogacy. For more on recent debates in Australia, see http://www.abc.net.au/news/2015-04-18/commercial-surrogacy-should-be-legalised-family-court-justice/6402924 and http://www.couriermail.com.au/news/queensland/push-to-make-surrogacy-legal-in-australia/story-fnihsrf2-1227308579743.

Along with the sending countries (where much of the demand for cross-border surrogacy exists)—receiving countries like India, Nepal and Thailand have also been debating changes in their national policies around cross-border surrogacy. Since its inception the surrogacy industry in India has been mired in scandals but these 'surrogacy scandals' have only recently started making media headlines. The Indian government's response to these scandals has typically been a defensive and myopic one with the primary aim of avoiding any international legal battles. The 2013 Home Ministry stipulation and the more recent 'blanket ban' on cross-border surrogacy proposed in October 2015 are not only 'homophobic' but also misplaced —by regulating only the 'cross-border' aspect of surrogacy, the ban deprioritizes the critical regulation of domestic surrogacy contracts and more broadly, the rights of the gestational mothers.[6] As I write this chapter, the interim government in neighbouring country Nepal has passed a resolution to ban surrogacy in Nepal. Some clinics working in Kathmandu are considering closing operations in Nepal leaving many clients and pregnant gestational surrogates in limbo.[7] Others are considering shifting their base to a neigbouring country in South Asia.

These recent events highlight the ultimate ineffectiveness of restrictive national laws—a global and complex issue like surrogacy cannot be resolved or regulated within national borders but urgently needs a global dialogue. Much like cross-border adoptions have been regulated and discussed internationally (for instance, by the Hague Convention on Protection of Children and Co-operation in Respect of Inter-country Adoption 1993), cross-border surrogacy needs a global platform. In my recent works I proposed a step towards such a global regulation by discussing the provocative notion of 'fair-trade surrogacy'—cross-border surrogacy founded on openness and transparency on three fronts: in the structure of payments, in the medical process, and in the relationships forged within surrogacy (Pande 2014). While I have previously discussed the first two in far more detail, here I want to end with a focus on the third front for transparency—that of relationships. If we indeed are in the midst of a 'biological century', with bodies, body parts, organs and gametes entering the market, we need to reimagine how we define and value relationships forged by these bio-markets.

What could fair-trade surrogacy mean for the relationships forged within surrogacy? In his book the 'Red market' or the market in body parts, body fluids, organs and wombs, journalist Scott Carney (2011) urges us to re-evaluate the emphasis on privacy and anonymity in these unusual markets. In the name of preserving the privacy of individuals involved in the supply chain, the providers of essential, emotional and bodily services are made nameless, faceless, anonymous and disposable and buyers can conveniently forget that what is being produced is not just a baby but also relationships. For many gestational mothers, for surrogacy

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[6]See http://economictimes.indiatimes.com/news/politics-and-nation/blanket-ban-likely-on-nris-pios-foreigners-having-kids-through-surrogacy/articleshow/49391832.cms.

[7]Private correspondence with clinic staff, also see http://www.news.com.au/lifestyle/parenting/australian-framilies-in-limbo-as-nepal-joins-india-and-thailand-in-banning-commerical-surrogacy/story-fnet08ui-1227508246150.

to be 'fair' what is required is not just an increase in the payments they receive for their labour, but as critically, an affirmation of their dignity as labourers. Almost all respondents emphasized the desire that their efforts at forging relationships with the foetus/baby are acknowledged and reciprocated and clients continue to respect the ties that they have forged across seemingly impossible borders of religion, race, class and nation.

One could well argue that cross-border surrogacy violates the womb mother's human dignity by reducing her to a mere object of contract. A related argument could be based on the welfare and dignity of another person involved in surrogacy practices—the child borne out of surrogacy. Recent works on donor–conceived offspring and transnational adoptees have highlighted the right and often the desire of such children to know about their origins (Adams and Allan 2013; Darvosky and Beeson 2014). Although it is not yet clear whether children borne out of surrogacy will have as much interest in their connections with womb mothers, more work is required on this front. Even without empirical data, the global trend away from secrecy in such reproductive options, the emphasis on right to information, arguments in support of disclosure all have implications for policies around cross-border surrogacy. More comparative and interdisciplinary work is required to take this critical dialogue further.

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Part III
Reconstructions

Chapter 12
P2P and Planetary Futures

Jose Ramos, Michel Bauwens and Vasilis Kostakis

Introduction

Our world has inherited the legacy of exploitation and power imbalances of many kinds. From the legacy of colonialism, the system of capitalist accumulation that underpins today's consumerist ideology, and the overbearing power of the state and its espoused monopoly on violence, to patriarchal forms of oppression and the exploitation of natural and living 'resources', multifaceted forms of exploitation have today brought us to the brink of global crisis—and transformation. Consequently, the twentieth century has seen massive social upheavals and social mobilization across many fronts, some disparate and some coordinated, which have aimed to create an alternative to the world as we know it.

Most recently, over the last 40 years the forces of capitalism, practising both primitive and advanced accumulation, have sharpened and quickened. Neoliberalism's ascent and global informational architecture has unleashed a tsunami of privatization, de-regulation and trade/investment liberalization. The grievances of common people were also unleashed, from the streets of Cochabamba, to the streets of Seattle; a new counter-hegemonic struggle has emerged among common people to protest and organize against an emerging neoliberal world order.

The turn of the millennium provided a fitting backdrop and context for the future century. 9/11 helped legitimate a neoconservative turn in the USA and strengthened the surveillance/security state globally—henceforth militarized neoliberal

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globalization. Meanwhile, across the world in Porto Alegre, the World Social Forum (WSF) launched with the proclamation that 'Another World Is Possible', kicking off an epic process of dialogue to envision and articulate an alternative globalization and post-capitalist world. A WSF vision slowly emerged: democratic and participatory control over our ecological, economic, cultural and political commons (Ponniah 2006). A vision in opposition to the power of Wall Street bankers, Russian oligarchs, Middle Eastern oil barons and Chinese princelings alike. Recent revolts, Los Indignados, the Arab Spring, Occupy Wall Street and others, embody the spirit and commitment towards creating this Other Possible World.

It is concretely in this context of historical struggle and transformation where this article seeks to make a contribution. Peer-to-peer (P2P) theory and practice is an integrative body of thinking and projects that draw from numerous intellectual traditions and theoretical positions. It starts from the analysis of an emergent 'contributive' economy, in which new technological affordances create the possibility of open and transparent production systems, and that thereby creating a new economic logic that is not based on labour creating capital, but on contributors creating commons. This shared knowledge, software and design resources created the double possibility of either an economy based on sustainable production and solidarity-based economic entities, or of the capture of such commons by private capital. However, P2P theory is focused on extirpating and making explicit the emancipatory potential of this techno-social change, and to observe the emergence of new political, social and economic forms. It changes the focus from seeing labour as the key subject of change, towards looking at the associated peer producers, i.e. the newly precarious cognitive and affective working class engaged in the creation of common goods, as a key driver of change. From this perspective, other and previous social movements can be analysed to the degree in which they recognize the current transformations, or not.

This chapter is organized through theoretical and practical engagements. In section two, the theoretical dimensions of P2P theory's intersection with globalization discourses is described. A number of counter-hegemonic discourses are then presented, and connections, critiques and synergies are identified. In section three, a case study which exemplifies P2P alter-globalization, the Free Libre Open Knowledge (FLOK) project in Ecuador, is presented. The chapter concludes with some reflections and potential next steps in both theorizing and practising P2P alter-globalism.

Towards an Integrative Theory of P2P Alter-Globalization

Critical globalization studies (CGS) is an approach to the study of globalization, which is a multidisciplinary, multi-perspective convergence of scholarship on 'globalization for the common good' (Applebaum and Robinson 2005; Mittelman 2004, p. 40; Robinson 2005). CGS is not only concerned with the empirical dimensions of globalization, but also the standpoints, epistemological assumptions and frames used to establish cultural hegemony. These include an awareness of the political and material conditions that correlate with globalization research; the

historical origins/social interests that influence globalization research (including the reliance on Western perspectives in constituting a perspective on globalization); gender dynamics on constructing our understanding of globalization; examinations of the historical (and ahistorical) constructions of globalization; local/regional discourses of globalization; the crossovers between different academic branches of globalization research; and counter-hegemonic, emancipatory visions for a transformational globalization.

This section is intended to be an in-depth exploration in the tradition of CGS, which engages multiple perspectives to develop, build and refine an integrative P2P theory of global political economic transformation. The engagement originated from a dialogue between Michel Bauwens and Jose Ramos in 2012–2013, on the relationship between P2P thinking and alter-globalization discourses, on the P2P Foundation wiki (http://P2Pfoundation.net/).[1] Our thinking has subsequently been refined through further dialogue, editing and most importantly the FLOK project led by Michel Bauwens himself.

Our engagement with critical and alter-globalization literature and thinking has been both broad and in-depth. This chapter did not have the space to hold the nuance and detail of the engagement. It does provide a summary, however, that we hope is useful in establishing the integrative and synthetic dimensions of P2P theory and practice within a wider body of scholarship. We can preview this engagement by saying that a P2P perspective:

- Disagrees with the Reform Liberalist approach of a reformed capitalism, e.g. promoting 'green' capitalism and accepting 'netarchical' capitalism, which we feel will ultimately lead to a deeper crisis.
- Sees a synergy with the post-development discourse through building shared innovation communities and commons, selective deglobalization and the combination of neotraditional and P2P/transmodern approaches.
- Agrees with much of the relocalization discourse on the need to re-localize much of our production and consumption, but sees a danger in over-romanticizing the local, or in ignoring the role of global solidarity systems and knowledge commons. Smart localization means 'cosmo-localization'.
- Agrees with the cosmopolitan discourse's emphasis on the need to create post-national structures to solve global problems, but would add the phenomenon of 'Phyles' (explained later) and would de-emphasize CSOs and NGO and re-emphasize the critical role of global collaboration communities.
- Would reframe the neo-Marxist discourse's commitments to global class formation, into the need for a global coalition of the commons, the forces of social justice (workers and labour movements), the forces for the defence of the biosphere (green and eco-movements) and the forces for a liberation of culture and social innovation (free culture movement), as the constituent blocks of a new hegemony.

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[1]See: http://p2pfoundation.net/From_the_Crisis_of_Capitalism_to_the_Emergence_of_Peer_to_Peer_Political_Ecologies.

- Agrees with the engaged ecumenist view on the need for spiritual awakening, but would argue that secular forms of spirituality, which emphasize the unity of humankind, nature and cosmos, are as important as the non-secular. A peer-to-peer spiritual practice is based on a common exploration of the spiritual inheritance of humankind, independent of, but not opposed to, denominational religious affiliations.
- Agrees with the meta-industrial and gender perspective that it is vital to take into account all peoples that have historically been excluded, with the female gender as paradigmatic example. A danger exists, however, for a reformed neoliberalism to embrace gender and sexual minorities and replace them with other inequalities and displacements. Therefore, a 'conscious' P2P approach is needed, aware of both structural externalities and the internal subjective and cultural characteristics which continue to drive inequality.
- Accepts from autonomism and horizontalism the logic of the network form, but argues a global movement requires coherence and needs to draw on the principle of 'diagonality'. A purely horizontalist orientation, which disowns leadership, embodied responsibility, as well as sequential and programmatic social development, cannot wage an effective struggle in the face of hostile and ruthless state and market forces.
- Sees itself as eminently compatible with co-evolutionary viewpoint: in particular because the advent of the P2P projects and communities are inherently global in their cooperative dynamics, and coincides with other scale shifts towards a planetary mode of thinking and action.

Reform Liberalism

cReform liberalism takes issue with centrist neoliberalism and the institutions that convey these ideas, arguing that, overall, global economic integration does not automatically lead to prosperity (Krugman 1996; Sachs 2005; Soros 1998; Stiglitz 2002). It argues for a general need to reform global institutions like the IMF and World Bank (WB) to make them more accountable and transparent, and to create mechanisms that can moderate the excesses of the global system (Mittelman 2004, p. 51). It is strongly associated with neo-Keynesian economic policy and the concept of the Third Way, popularized by Giddens (2003). The following can be summarized:

- Its historical view is that Keynesianism got it right, but then neoliberalism skewed global institutions like WB and IMF.
- It sees a healthy (regulated) global market as the foundation for global society, through processes of comparative advantage, economic interdependence, enterprise and technological innovation.
- Its mode of agency is through state-based policy intervention, introducing social redistribution, human welfare systems and social entrepreneurship.
- The image of the future is for a capitalist globalization with strong 'steering' and regulation to create innovation and prosperity.

Reform liberalism recognizes the reality of globalization, but absolutizes it. P2P distinguishes between the material aspect of globalization, which is subject to a severe resource and environmental crisis; and the immaterial, cultural, aspects of globalization, and especially the possibility of global cooperation, as a value to be maintained—'smart material relocalization'.

A P2P perspective looks at interlocking cycles: apart from the long wave Kondratieff cycle, which ended in a systemic shock in 2008, it recognizes a deeper cycle of civilizational decay due to the unsustainability of the present system. Transformation has to go beyond the mere reorganization necessary for a new Kondratieff cycle, but needs to preserve and strengthen enough post-capitalist elements so that the transformation can go deeper. It is adaptive and takes a meliorist approach, for an improved and reformed capitalism, that continues to make progress on social justice.

But it is not possible to have an infinite growth system, based on compound interest and other factors, within a limited natural environment. Thus, it is not possible in the long run to have a reformed capitalism. In short term, a reformed capitalism that integrates 'green' and 'P2P' aspects is only temporary and leads to a crisis at a later time. Proto-capitalist formations strengthened the feudal system in crisis; peer production mechanisms can strengthen a reformed capitalism but, at the same time, build the seeds of its ulterior transformation. To achieve this, we need an attitude that is not centred on the enemy, i.e., the abolishing of capitalism, but rather a constant engagement with the separate interests of the peer producers: we take what we can within capitalism, strengthening alternative social logics, and we strive for the optimally possible social contract under post-capitalism. The co-existence of P2P with capitalism is not a zero-sum game, i.e., an advantage of capitalism does not necessarily mean a negative for peer production.

Capitalism should also be distinguished from generic market mechanisms. P2P proposes a pluralist economy, centred around the commons, under supportive collective conditions of a Partner State, but also with a vibrant private sector, a 'reformed market' as it were. Thus, the era of quantitative growth is over, but can be replaced by qualitative growth, under the aegis of a steady-state economy and degrowth, compensated by well-being policies.

Post- or Alternative Development

The post-development discourse subverts the historical view that the West has progressed through stages into the most advanced form of civilization. For much of the world (India, China, Indonesia, etc.), colonialism ended relatively recently and the collective memory of the colonial experience is that of being 'de-developed' and economically exploited by the West (Marks 2002; Sardar et al. 1993; Zinn 2003). Historians like Marks turn this 'Rise of the West' conception of history on its head. For him, the so-called Rise of the West is better understood as conquest,

theft and genocide on a grand scale, which allowed the West to 'de-develop' the non-West, gaining key advantages in trade, technology and transport (Marks 2002).

After colonialism, ex-colonial countries or de facto spheres of influence (such as Latin America under the 'US backyard' policy) attempted to develop economic autonomy from their ex-colonial masters, through dependency economics which advanced import substitution as a pathway towards economic development. Projects for Southern development emerged, such as the United Nations Conference on Trade and Development (UNCTAD), which articulated a New International Economic Order (NIEO), as well as the birth of the non-aligned movement (NAM). In this context, led by the United States, the West offered 'development' assistance to the global South. However, this was often the economic carrot, and proxy war or assassination the political stick that formed parts of a strategy of containment (of socialism) and the extension of influence (of liberalism and capitalism) (McChesney and Foster 2004). The key aspects of the 'alternative' or 'post-' development discourse can be summarized as:

- A rejection of expert/outsider intervention and embrace of endogenous national/community building.
- A rejection of a 'social-evolutionist' model of history, and appreciation of imperialisms link to development or de-development.
- Critical structures are therefore aspects of state power within a geo-political arena, and a view that development is far more plural than economic growth.
- The future vision is for plural development paths depending on a nations or communities situation.

From a P2P perspective, countries of the South could employ a P2P model of shared innovation communities and commons, coupled with new forms of industrial and agricultural tools and technologies, which would enable a new type of selective de-globalization and dynamic localization, using P2P as a strategy for selectively nurturing innovation commons that suits their own priorities.

Between pre-capitalist social models and post-material priorities, a dialogue between both forms (e.g. 'neotraditional' economics) means that contemporary humanity critically engages with the conceptions of societies following 'immaterial priorities' rather than material priorities. This combination of neotraditional and P2P/transmodern approaches is an important political proposition. It will re-ignite local development and bring in global knowledge that can stimulate internal innovation. Second, open approaches, unlike intellectual property importation, create profound local knowledge. Thirdly, combining those strategies with distributed manufacturing is an important part of restoring local sovereignty and resilience. The successful regions and countries will be those who can create and attract the best contributors to the global innovation commons, and link them to local physical production capabilities. At the same time, the existence of the global innovation commons, and the intricate embeddedness of every local activity in such a global cooperative web, also makes sure that the localization is not regressive, but inscribed in the further evolution of humanity as a global cooperative organism.

Re-localization

Localization or re-localization has become a powerful current of thought in the debate around alternatives to economic globalization. Recent proponents of localization include the International Forum on globalization (IFG) (Cavanagh and Mander 2003; Mander and Goldsmith 1996; Mander and Tauli-Corpuz 2005), the New Economics Foundation (NEF) (Boyle and Conisbee 2003), which came out of the TOES summits (Schroyer 1997). Hines gives the most elaborated argument for localization (Hines 2002). The intellectual movement goes back to the 1950s, also drawing upon ancient traditions for inspiration. 'The Breakdown of Nations' is given as the first instance of such theory formation—an attack on the gigantism he experienced in the wake of World War II (Simms 2003, p. 4). Schumacher is also cited as an important influence for Small is Beautiful (Simms 2003, p. 3). The Club of Rome's Limits to Growth questioned assumptions regarding the sustainability of economic growth in a world system. Daly linked key localization concepts (i.e. subsidiarity) with a post-growth, steady-state vision of a global economy (Daly and Cobb 1994; Daly 1977). Illich is also credited as a contributor for Energy and Equity (Simms 2003, pp. 5–6). Sale is significant as one of the pioneers of bioregionalism (Sale 1996). Goldsmith has been an important contributor to the field, in particular through his critiques of industrialization and calls for de-industrialization (Goldsmith 1988). Shiva has linked localization with cultural and ecological diversity (Shiva 2000a, b). While much diversity exists, the following points summarize the perspective:

- Historically relocalization views industrialization as a critical phase, emerging from the exploitation of cheap embodied energy (fossil fuels) at ever increasing scales outstripping our environment's carrying capacity. It is both a cause of and produced by corporate globalization.
- This industrial expansion has real limits, such as finite resources, peak oil, to ecological resilience (sinks), the effects of climate change. Critical factors are ecology and geography (bioregions) and energy.
- The vision or image for the future includes a return to local scale, stronger communities, local economies, bioregional governance and a revaluation of local knowledge and culture.
- The critical agents of change are social movements contesting corporate globalization and localized communities rejecting global production, building local culture, building local economies and strengthening ecological sensitivity.

The P2P perspective broadly agrees with the historical necessity for re-localization, as a necessary corrective to the pathologies of capitalist globalization. However, a danger in this perspective is in over-romanticizing of the local, a reliance of dwarfish forms, which cannot out-cooperate capitalist forms and ignoring the global conditions which are necessary for relocalization to occur.

The recognition of the global commons is a very important aspect of contemporary relocalization. This is part of the necessity to combine both 'smart'

localization and smart alternative globalizations. One of the latter is the generalization of global and shared innovation commons and the end of artificial scarcities that impede global sharing in science and culture, but also joint global governance to deal with global problems that cannot be solved on any pure local level. Faced with a deterritorialized ruling class that has upended national sovereignties, there needs to be a counterforce. Mere localization is never enough, and would be counterproductive as well as too weak to effect change, and it is the reconfiguration of the local and global, which is the key.

Last but not least is the necessity of global mutualist 'Phyles', i.e. global material production cooperative entities that are the condition for localized open and distributed manufacturing. Phyles are the P2P answer to global corporations and are a necessary coordinating mechanism between local actors who need global cooperation. They are mission-oriented, community supportive entities responsible for the social reproduction of commons that cannot be conceived as purely local. Peer-to-peer dynamics can and must operate on both local and global levels, and smart re-localization must take that into account.

Cosmopolitanism

Cosmopolitanism describes "the view that all human beings have equal moral standing within a single world community" (Hayden 2004, p. 70). Hayden writes that "legal cosmopolitanism contends that a global political order ought to be constructed grounded on the equal legal rights and duties of all individuals" (Hayden 2004, p. 70). This view does not put the individual at the centre of global politics (in an exclusively self-interested way) but rather re-articulates the individual as part of a global polity with new rights and obligations.

Descriptive accounts focus on the way planetary governance is being constructed as 'cosmocracy' (Keane 2005) 'civil society going global' (Kaldor 2003) or as 'sub-political' agency (Beck 1999). Cosmocracy is described as an emerging empirical phenomenon, with the development of planetary governance (which is at once ad hoc and full of 'clumsy institutions' (Keane 2005, pp. 34–51). The normative thrust of the cosmopolitan vision articulates the creation of a 'transnational, common structure of political action', 'a global and divided authority system—a system of diverse and overlapping power centres shaped and delimited by democratic law' (Held 1995, p. 234), and "proposes the end of sovereign statehood and national citizenship as conventionally understood and their re-articulation within a framework of cosmopolitan democratic law" (McGrew 2000, p. 414). In summary, the key tenets within cosmopolitanism are as follows:

- Historically, we have seen the birth, rise and spread of the nation-state (from the Treaty of Westphalia onward) and associated enfranchisement of people into democratic citizenship.

- Yet we face a crisis of the state and 'communities of fate' transcend the limitations of nation-state to create global governance, universal enfranchisement and global citizenship.
- Social change comes from global civil society or global citizen movements —'globalization from below' and 'sub-politics'.
- Key structures to transform the interstate system and associational economic, political and cultural domains.

From a P2P perspective, we need post-national structures to solve the global problems facing us, such as global warming; and in terms of citizens' rights, for example regarding the rights of settlement and travel, urgent post- or transnational improvements are needed. The current form of globalization is both negative in environmental terms, socially unjust, and politically regressive because it disempowers local and national participation and there is distrust towards global governmental structures, especially in the context of democratic deficits. Thus, we need global treaties to establish rights that sovereign states will agree to. This becomes a matter of social struggle, to establish socially sovereign social charters that have a moral force against the failed responsibility taking of the nation-states system and weak international institutions.

A more pragmatic solution is the creation of Phyles, i.e. networked organizations that can take care of their members or issues on a global basis. Given the deficiencies on a national scale, and the failure of global governance mechanisms that can be instituted by national and international institutions, peer-based initiatives are paramount. An example of a small contemporary, but trend-setting peer phyle is lasindias.net. The P2P Foundation cooperative also intends to be organized as a phyle, showing global solidarity for its members.

A P2P perspective insists that civil society does not only consist of formal NGOs and CSO structures, but of the very important emergence of global collaboration communities, such as those involved in global 'informal' activism, peer production, and shared innovation commons. Peer producers, creating globally oriented commons that they love and want to defend, are the critical agents of social change. Peer production is nothing else than the concrete condition of freely cooperating cognitive workers, but also an important aspect of every productive citizen. Once such citizens are networked and creating common value, a process that is most often inherently global, you have the slow creation of an agent that also wants to create global rules and protections.

Neo-Marxism

World Systems Theory, Global Systems Theory (GST) and associated neo-Gramscian visions of a global (counter-hegemonic) civil society explore and articulate alternatives to status quo globalization. World Systems Theory (WST) pioneered the conceptual link between capitalism (and its alternatives) and

world-historical dimensions of social analysis. As Sklair argues, WST prefigured globalization discourses, influencing early critical conceptions of globalization (Sklair 2002, pp. 40–41). From the 1960s on, writers such as Wallerstein, Chase-Dunn and others developed WST into a large body of scholarly work (Chase-Dunn 1999; Chase-Dunn and Gills 2005; Wallerstein 1983). By contrast, GST is much newer, emerging in the mid-1990s through the work of scholars such as Robinson and Sklair (Robinson 2004; Sklair 2002). As with the other discourses, many varieties of analyses exist. However, the following is a general summary:

- The historical view is that capitalism, which had been tamed by the nation-state after the new deal, went global after the 1970s, with the advent of Reagan and Thatcher's rise to power, in conjunction with developments in information technology.
- The critical elements in contemporary globalization include the economic through trans-national corporations and their owners, politically through a transnational capitalist class, and culturally through the hegemony and ideology of consumerism.
- The image of the future sees an emerging crisis of capitalism (of both ecological and social dimensions) that has the potential to lead to transformation—the preferred vision being a socialist globalization based on human rights and responsibilities.
- The agents of social change are organic intellectuals who can map and mobilize an emerging global class formation.

From a P2P perspective and agreeing with the GST perspective, global markets are a 'real' autonomous force, not just using the nation-state. The post-2008 meltdown and its reaction clearly indicate that the nation-state is captured and victimized by global forces, which have instrumentalized even the European Union.

Yet P2P forces cannot simply abandon the nation-state to their enemies, and neither can they afford, in the long run, not to challenge the global corporate media and financial class and its dynamics. Similar to neo-Marxist commitments towards global class formation, we need a global coalition of the commons, which combines the forces of social justice (workers and labour movements), the forces for the defence of the biosphere (green and eco-movements) and the forces for a liberation of culture and social innovation (free culture movement), as the constituent blocks of a new hegemony.

We need to use the remaining essentiality of the state form. Even in its weakened form, it must be transformed and be made to serve peer producers, requiring a profound transformation of the present forms of the state. While the neoliberal corporate welfare state is the enemy, the social welfare state is also insufficient for the new social demands and must become a Partner State. Equally important will be to transcend such national limits and to create global networks and alliances that can tackle the global financial powers and their institutions, and replace them with new internetworked institutions.

Engaged Ecumenism

Religions form an important part of the globalization process (Beckford 2000; Lubeck 2000), and religious orientations have been an important part of visions for an alternative globalization. A survey of alter-globalization activists at social forums showed the majority belonged to some religious tradition, which 'seem[s] to point to the important role religion plays among the social groups fighting against neoliberal globalization…' (Santos 2006, p. 90). Therefore, spiritual or religious 'ecumenism' also comprise the movements for another globalization.

Gandhi is the seminal figure in this process, with direct and lasting influence on spiritual social activism globally. Notable campaigns influenced by Gandhi include: Martin Luther King's leadership during the US civil rights movement, the Dalai Lama's struggle against the Chinese occupation of Tibet, Thich Nhat Hanh's peace work during and after the Vietnam War and Cesar Chavez's farm worker justice campaigns in California (Ingram 2003). In this broader context, Gandhi represents the marriage of political action and spirituality, the offspring of which is non-violent *ahimsa* confrontation and (non-)participation (Schell 2003, p. 117). As a summary, the following points are offered:

- The historical dimension of engaged ecumenism is founded on the development of wisdom traditions/religions, the stories, narratives and lessons of great sages and teachers, and their transmission into a world of ignorance and suffering.
- To address ignorance and suffering, Gandhi's conception of *satyagraha* (truth force), and ahimsa (compassion/nonviolence), expresses the core logic of engaged ecumenist agency. *Satyagraha* (moral spiritual truth in practice) was the force that moved people to accept change. This was not the ideal truth of one's campaign or convictions (which others must accept), but the truth revealed through a person's practice of living according to their conscience, which then moves other people's conscience to change. Moral action and non-violent civil disobedience actualizes and instantiates *satyagraha*.
- These traditions provide metaphors for the brotherhood and sisterhood of all humankind, and the spiritual unity of humanity with the ecos and cosmos. The foundational reality is unity and therefore most forms of exploitation are contradictions in human behaviour.
- And therefore the image of the future is towards collective spiritual transcendence, a world free of exploitation, with love and care through the vehicle of moral community.

From a P2P perspective, it is important to include secular and post-secular spiritualities, i.e. the recognition that secular views are also spiritual views and can and do exhibit the same or similar moral qualities, even if there is no explicit recognition of transcendental realities. It is perfectly possible to have a sense of humankind's and nature's unity, directly from a place of perceived immanence.

Secondly is the recognition of the efficacy and interest of psycho-spiritual technologies that assist in recognizing such unity in diversity, technologies that are

of course embedded, but also relatively autonomous from the tradition in which they were embedded. This opens the way for a peer-to-peer spiritual practice that is based on a common exploration of the spiritual inheritance of humankind, independent of, but not opposed to, denominational religious affiliations.

Social change is an integrative process in which the outer and the inner cannot be properly distinguished, and true emancipation requires inner spiritual transformation, while structural changes in unequal societies can be an enormous catalyst for massive 'personal' change towards a civilization of love and care. What peer to peer brings to the table is the stress on the horizontal aspects of our relations to each other and how peer-to-peer dynamics are the most liberatory of all human relationships. As we move to true P2P dynamics in the production of common value, peer governance and peer property, we will also develop new spiritual forms, beyond those that were developed in gift-economical, hierarchical or market-based societies. Spiritual and engaged ecumenism is part of that evolution, but not the whole of it.

En-gendered Globalization and the Meta-industrial Class

Milojevic states that hegemony and ideological control through the imposition of a one-dimensional global future vision is a fundamental problem associated with masculinist globalization (Milojevic 2000). Hawthorne argues as well that economic globalization is deeply gendered and that "the dominant global forces at work are capitalist, masculine, white, middle-class, heterosexual, urban, and highly mobile"… which propagates a false universalism and homogeneity based on masculine, Western, scientific and neoliberal ways of knowing (Hawthorne 2002, pp. 32–33).

Salleh introduces a new concept of class that allows for a sharper analysis of the neoliberal displacement of value (surplus) and costs (externalization), which she calls the 'meta-industrial class'. She argues that not only this class suffers from industrial capitalism's displacement (externalization) of costs, but also this class is also 'regenerative' in that it underpins industrial capitalism's capacity to survive: "Meta-industrials include householders, peasants, indigenes and the unique rationality of their labour is a capacity for provisioning 'ecosufficiency'—without leaving behind ecological and embodied debt" (Salleh 2009, p. 6).

She argues, "by the logic of men's 'exchange value', he who bombs a forest with dioxin is considered to generate worth and is highly paid accordingly, whereas the woman who builds her hut of hand-cut wattle and daub, then births a new life within, creates only 'use value', is not considered to be working or 'adding value' and remains unpaid" (Salleh 2009, p. 12). Likewise, Waring argues that the systems used to measure 'growth', 'development', and 'progress' have excluded the majority of the work that women do (Waring 2009).

The eco-sufficiency of the meta-industrial class can be contrasted with the sustainability crisis that industrial capitalism faces. Salleh notes that the energy

consumption of industrial cities has "created a 'metabolic rift' …with environmental degradation the result", and as such the very survival of capitalism is based on appropriating the meta-industrial class's sustainability to redress its own inherent unsustainability: "the entire machinery of global capital rests on the material transactions of this reproductive labour force" (Salleh 2009, p. 7). This includes the unacknowledged work of women of the global South. The above epistemic inversion in the attribution of sustainability defines meta-industrial knowledge and practice (and low impact sufficiency livelihoods) as 'prefigurative', giving it critical 'political leverage' in the global policy debates (Salleh 2009, p. 7).

From a P2P perspective, the present system has historically relied on inequalities, and that the gender inequality has been a primary factor of enclosure and primitive accumulation of capitalism. It is vital to take into account all peoples that have historically been excluded, with the female gender as paradigmatic example. On the other hand, a reformed neoliberalism may very well embrace gender and sexual minorities and replace them with other inequalities and displacements. In this context, gender inequality is a marker for all inequalities in the system.

A purely naturalized peer-to-peer conception would fail to address this core issue of inequality. For example, while open-source and free software production has no overt discrimination, we can see that its meritocratic logic leads to particular forms of (male) dominance, because it does not challenge inequalities that are external to itself, as well as cultural habits of a traditional male-dominated field which may drive out differently gendered minorities. We therefore need a 'conscious' P2P approach, which is aware of both its structural externalities and the internal subjective and cultural characteristics, which continue to drive inequality. This approach would find its expression in positive use of social design and 'protocolary power', i.e. institutional design that is especially geared to ensure pluralism and diversity, and can work on specific issues such as the lack of gender equality both within its own community, and outside of it.[2]

Autonomism and Horizontalism

Anti-globalization protests drew inspiration and knowledge from the Zapatista uprising in Chiapas, Mexico. The Zapatistas launched their armed struggle on 1 January 1994, the first day of the North America Free Trade Agreement (NAFTA), as a statement against racist treatment by the Mexican state, and against the threat posed by corporate globalization to their livelihoods. Their strategic 'global framing' through new media approaches communicated a prismatism that prefigured the WSF(P)—theirs was a local

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[2]A good example of this is the institutional structure of Occupy Wall Street's General Assembly, which along with its Working and Operating Groups also has institute 'Caucuses', which are specific circles for minorities and oppressed 'majorities', who have certain privileges to block measures that would have discriminatory effects. These types of solutions need to be generalized within commons-oriented peer production.

struggle and a planetary one, a 500-year struggle against colonialism and racism as well as a contemporary one. Their uprising catalysed international solidarity, which culminated in 1996 in the First Intercontinental Meeting for Humanity and Against Neo-liberalism (Steger 2009, p. 102). Their savvy use of (digital) media, poetic culture jamming, and extensive networking prefigured the ICT intensive strategies used by the anti-globalization movement (and AGM) (Castells 1996). They were dubbed by the New York Times as the first 'postmodern revolutionary movement' (Gautney 2010, p. 40). Zapatismo as a cultural formation was also foundational, leading to the formulation of key organizational 'hallmarks' in the nascent AGM, which defined "the network as one without formal membership or leadership, and emphasized a shared commitment to decentralized, autonomous (independent) modes of organization and opposition to capitalism" (Gautney 2010, p. 40). Their ideas for a post-neoliberal world that contained organizational diversity and pluralism, a horizontalist utopianism, clearly prefigured the utopianism of the WSF(P) (Smith 2008, p. 20). The Zapatista inspired Peoples Global Action (PGA), a network which emerged from the 1996 *encuentro* in Chiapas, became an important cornerstone of the new network processes in the anti-globalization movement (Gautney 2010, p. 40). The WSF(P) contained organizationally what the AGM expresses culturally: a movement towards a diversity of struggles in relationship, rather than a unitary movement with a set agenda.

The network form that makes a global struggle/project viable requires a cultural counterpart, and this came to be seen as a culture/ideology of 'horizontalism'. From this vantage point, then, autonomism is not only a distinct ideological movement, it is actually a strong 'meme' deeply woven into the very fabric of the global movement/project. Hence, Occupy movement assemblies resemble Zapatista *encuentros*. Adbusters is extensively autonomistic in orientation and Anonymous' symbolism and practices also resemble this orientation. Autonomism and horizontalism involve the rejection of hierarchy, the emphasis on carving space outside of the dominant political economy, instantiating ideals through micro life-worlds, the mesh networked nature of the collaboration and deliberate employment of swarm tactics in protests and occupations, and the deliberative nature of decision-making in *encuentro* style gatherings.

The movement not only resists neoliberal capitalism, but incorporation into an ideology and movement dedicated to overcoming neoliberal capitalism. Symbolic of this double-negation, this Janus face of the movement, was the issuing by Marcos in 2003 of a declaration entitled "I Shit on all the Revolutionary Vanguards of this Planet" (Tormey 2005, p. 2).

From a P2P perspective, the specific weaknesses in autonomism and horizontalism are as follows:

- Consensus decision-making may lead to lowest-common denominator unity and therefore suppress 'mainstream' alternative approaches; for example in Occupy WS consensus unity is partly responsible for its relative defeat and for the resulting fragmentation, of all the sub-movements that wanted to go further than the Occupy agenda.

- The Assembly format seems to require too heavy a continuous investments in human effort, and seems to decay after a few months, devolving in the hands of the more radical minorities.
- The new movements seem to have an ability to mobilize rapidly and often massively, but their staying power seems questionable, especially in terms of human solidarity when faced with material hardship.

Thus, P2P, the commons, and 'horizontalism', might all be core aspect of the new modalities; however, any principle that is considered as an absolute becomes in itself problematic. Our approach should be integrative and still take into account long-term movement building, the construction of more lasting institutions that are able to provide more long-term support. A global movement requires coherence and organization, drawing from peer-to-peer movement principles of 'diagonality'. A purely horizontalist orientation, which disowns leadership, embodied responsibility, as well as sequential and programmatic social development, cannot wage an effective struggle to create another world in the face of hostile and ruthless state and market forces. Autonomism thus needs to be mixed and fused with other alter-global/world-changing modalities and energies.

Co-evolution

A discourse on 'co-evolution' can be discerned through literature on world futures [which preceded alternative globalization research by decades (Jungk and Galtung 1969)], and futures studies, with associated aspects of the evolutionary sciences. This emerging co-evolutionary vision incorporates somewhat eclectic and wide-ranging influences. The evolutionary discourse is valuable because it dramatically transforms of the ontological and temporal frames, which are generally used to make sense of human life (and as contrasted with other discourses in this study). Unlike other discourses, it situates humanity outside of history, as part of millions/billions of years of biological evolution, and thousands/millions of years of cultural evolution.

In conceptualizing the dynamics of change, Laszlo and Raskin use concepts like 'punctuated equilibrium' to describe movements from dynamic equilibrium states, turbulence and bifurcation points to new system states (Laszlo 2001, p. 172; Raskin et al. 2002). Their frameworks correspond with systems theories, complex adaptive systems and complexity research, where the evolutionary branching model is used (Gunderson and Holling 2002). Agency in this respect can be seen as humanity's wise intervention and skilful action when faced with planetary (tipping) points of turbulence, 'bifurcation points' and critical thresholds (Raskin 2006). Such authors argue for requisite consciousness towards planetary sensitivity in understanding potential tipping points in the planetary system we live in as a species, for example Spratt and Sutton's discussion on potential climate change induced tipping points (Spratt and Sutton 2008). In this context, agency implies co-evolution (Hubbard

1983), expressed as wise or unwise co-evolution within the ecological contexts of the species. The future is expressed as a vision of human co-evolution in and with an evolving Earth (transcending anthropocentrism) and the development of planetary consciousness.

From a P2P perspective, a co-evolutionary approach should neither deny materiality, nor deny human agency, but sees them in a mutual feedback loop. It puts human freedom in a realistic context, by bringing deterministic factors into awareness. These approaches also generally recognize emergence, i.e. that the new complexified layers of reality bring with them new capabilities. It is possible therefore to map peer to peer in the co-evolutionary understandings, not in a monological and deterministic way, but as a common factor which is changing our different social systems, both (inter)objective and (inter)subjective, in feedback loops that strengthen each other. This creates new 'potential' capabilities and affordances, but which are subject both to material determinisms, and social conflict. Hence, the need to work with potential scenarios, in which the P2P dynamics can take different form. P2P is eminently compatible with the co-evolutionary viewpoint.

P2P dynamics corresponds to a revolution in consciousness, because it is a 'full value' revolution, as important as that of the Christians vis-à-vis the values of the Roman Empire, or liberalism and socialism versus the feudal value system. Through its linkage with the global network, many P2P communities are 'born global'. By their very nature, the digital commons operate on a global scale, despite limits of language. If one participates in a knowledge commons (which is not restricted to the immaterial realm since knowledge commons are linked to 'physical' practices such as 'making things', or an engagement in eco-agriculture or what have you), one is inherently working on a global scale. While the link between human activity and consciousness is of course not direct, one cannot avoid that this has, in time, effects on human consciousness, and in the creation of global-local subjectivities. Peer production is also a synergistic process, i.e. it is not limited on the theoretical win–win dynamics of capitalism, and its structural denial of externalities, but it is a 'four-win' process, since it is a conscious cooperation around a commons social object (the third win), which benefits human society in general (the fourth win). Peer production integrates the common good in the very design of the human cooperation. It shifts the core of value creation to the commons, and it shifts many practices from owning to sharing, etc.… What this does is set the stage for a new 'capacity', an 'affordance' which facilitates a shift to normalizing more global forms of human awareness.

The key question is therefore how do we shift from this naturalized practice which 'predisposes' towards a planetary, co-evolutionary point of view with care for the whole, to its actualization and manifestation as a dominant form of human consciousness. This in my view is a social and political project, i.e., the active work of co-evolutionary minorities, individuals and groups, to enable this shift to take place, comforted in the view that greater masses of human beings are becoming more receptive for this phase transition. An integrative strategy that combines microscale prefigurative practices (which include ownership and governance), the

building of social and political movements, and an active orientation towards changing human consciousness, have to be developed to facilitate and quicken such transformations.

The FLOK Case Study

At the end of 2013, three governmental institutions of Ecuador asked a team of international and national researchers to draw up a participatory process in order to craft a transition strategy for a society based on 'free/libre and open knowledge' (FLOK). The project was primarily rooted in a particular local context: Ecuador is still essentially in a dependent situation vis-à-vis the Western-dominated global economy, which means that it needs to export raw material at low added value, and import consumer goods at high added value. Moreover, a large part of this extraction is based on non-renewable finite resources such as oil. It is a scenario for permanent dependency that the progressive government wanted to change. Following the lead of Rene Ramirez, who is National Secretary of the National Secretariat of Higher Education, Science, Technology and Innovation (SENESCYT), the project aimed to envisage an economy that would no longer be dependent on limited material resources, but on infinite immaterial resources.

The proposals of the research team consisted of a generic Commons Transition Plan (CTP), and 18 legislative proposals including a dozen pilot projects, which were validated in the Buen Conocer Summit at the end of May 2014. The synthetic proposals, based on a participatory process which involved both local and foreign input, were then presented by the research team at the end of June 2014, and are still being refined for scientific publication. The proposals are now being processed in the Ecuadorian administration and subject to local politics and balance of forces. Some projects, such as an open agricultural machining project in the Sigchos district, are pushed forward by committed local leaders and populations. Several aspects of the Ecuadorian process where highly innovative, such as the intense participatory process, and the openness to both local and foreign input, which is quite unusual.

However, the FLOK project and the CTP also significantly transcend the local context and have a global significance. The first important aspect of the process is of course its very existence. This is the first time that a transition plan to a commons-based society and economy was crafted. There are 'new economy', climate change centric, green, and other transition plans, but none of them focuses on reorganizing society and the economy with the commons as the core value creation and distribution system. We could argue that while previous plans start from real problems and wished for and necessary steps, the Ecuadorian plan is the first one to take into account the ongoing transitional (commons-oriented) paradigms.

The second important aspect are the conceptual innovations and analysis on which the transition proposals are based. The CTP is based on an analysis and observation of the already existing commons-oriented processes and economies,

and the value crisis that they provoke within the current political economy and the new form of 'netarchical capitalism' in which proprietary platforms both enable human cooperation and extract value from it (for an analysis of the conflicts within the digital economy, see also Kostakis and Bauwens 2014). The CTP is based on a simultaneous transition of civil society, the market and the state forms. For most of the history of industrial and post-industrial capitalism, the political conflict has been one between state and market, to either reinforce the state mechanisms for redistribution and regulation of the excesses of the market players or to re-privatize activities towards market players. This has been called by some the lib (for liberal) versus lab (for labour and its derivative social movements) pendulum. In our current political economy, the latter has often been discarded as a historical legacy without future, and indeed, the remaining physical commons that exist globally, mostly in the South, are everywhere under threat.

But the re-emergence of digital commons of knowledge, software and design does not only recreate commons-oriented modes of production and market activities around it, but also shows that value is now created through contributions, not labour per se, and creates commons, not commodities. Through its contributions, it can be said that:

- Civil society has now become productive in its own right, and we can make a leap from contributor communities to a vision of civil society that consists of commons contributed to by citizens.
- The entrepreneurial coalitions that are created around the commons, and necessarily should be in alignment with the commons, induce the vision of an ethical economy, a non-capitalist marketplace that integrates externalities, and reintroduces reciprocity in the market's functioning, while co-creating commons and creating livelihoods for the commoners.
- The emergence of commons-based foundations (e.g. Apache Foundation, Mozilla Foundation, Wikimedia Foundation) in the commons economy, organizations that maintain the flow of cooperation through the maintenance of its infrastructures, points the way to a new state form, which we have called the Partner State.

Thus, the commons introduces not only a third term next to the state and the market, i.e. the productive commons-producing civil society, but also a new market and a new state. The changes must happen concurrently in all three aspects of our social and economic life.

In a nutshell, the CTP introduces three interrelated concepts along with certain policy proposals for their realization:

- First, we should reintroduce the concept of reciprocity in the marketplace through 'commons-based reciprocal licenses' (see Bauwens and Kostakis 2014). We see this as an essentially non-capitalist market, since instead of enclosing the commons, or exclusively capturing its value for profit maximization, it is a market which actually generates capital for the commons. Hence, we should move from a condition of 'communism of capital', in which capital uses the

commons, to a condition of 'capital for the commons', in which the new form of capital strengthens the commons and the commoners.

- Second, we propose a second innovation for the ethical entrepreneurial coalition surrounding the commons, i.e. a new corporate format, that of 'open cooperatives' (see Bauwens and Kostakis 2014).
- The report also specifically innovates the concept of the state and, through the 'Partner State' concept, proposes the creation and use of public-commons partnerships, and the commonification of public services, and other innovative concepts and practices that could fundamentally renew our political economy. The concept of the state is derived from the emergence of the for-benefit FLOSS Foundations in the micro-economy, as key new institutions created by the peer production communities. Just as these foundations enable and empower the cooperation to take place, so would a Partner State, at the macro-level, enable and empower the individual and collective economy of citizens, as producers of value and contributors to the common good. A Partner State is not a market state which favours market forces, but a democratic and participatory collective institution, or a set of institutions that enables social production and an autonomous civil society with a thriving ethical economy.

So what now? What comes after the experience in Ecuador? First of all, through a new website and wiki at commonstransition.net, the P2P Foundation and its partners are making an effort to create an open public forum for further commons-driven and commons-oriented policy-making, which is distinct from its first iteration in Ecuador (floksociety.org), and is open to all contributions from commoners globally. With the CTP as a comparative document, a 'force de proposition' as they say in French, we intend to organize workshops and dialogues to see how other commons locales, countries, language communities but also cities and regions can translate their experiences, needs and demands into policy proposals. The plan is not an imposition, but something that is intended as a stimulus for discussion and independent crafting of more specific commons-oriented policy proposals in various specialized contexts. As part of this process, we have already concluded a workshop with the Reseau Francophone des Communs in Paris in September, and workshops with Syriza officials in Greece. The idea is not to support or choose any political or social movement, but to enable all progressive and emancipatory forces to look for commonalities around their approaches, and renew their political visions with the commons in mind.

This project therefore is itself a commons, open to all contributions, and which should benefit all who need it. In the CTP, we are making also very specific organizational proposals, to advance the cause of a commons-oriented politics and a 'peer production of politics and policy' on local, regional as well as global level. It is important to keep in mind the limitations of the first CTP. Indeed, the remit of the FLOK project in Ecuador was the implementation of a 'social knowledge economy', i.e., an economy that is centred on knowledge commons. Therefore, this plan did not include a transformation strategy for other commons, such as the Polanyan triangle of land and nature, labour and money. We partly went beyond this

limitation by putting a lot of attention to the material and immaterial conditions, and feeding mechanisms, which would guarantee the successful existence of the immaterial commons of knowledge, however, that is not sufficient. Thus, the CTP is waiting for its next iteration, in which the knowledge commons are not the only commons to be considered a priority, but would be rather seen as a more general, fully physical, transformation towards a commons economy based on the commonification of land, money and labour as well.

Conclusion

This chapter provided an engagement between P2P theory and the current challenges being faced in our global era. The chapter began by engaging theoretically with the large body of alter-globalization theory, much associated with the WSF and counter-hegemonic movements generally. From this engagement, points of synergy emerged across discursive and theoretical lines. The chapter then provided a foundational case study in the application of P2P theory in a national and localized context. This engagement applied P2P theory and led to robust experience in experimenting with the creation of the 'Partner State' model. P2P is then both a theory and project for transformation. It is dialogically open to the multiple voices for change, but with its distinctive perspective and contribution. In this sense, this chapter has been both a theoretical and practical hostel, which is part of a much longer journey.

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Chapter 13
Decolonizing the State of Nature: Notes on Political Animism

Federico Luisetti

Nonhumans

In *Politics of Nature*, Bruno Latour suggests leaving the overdetermined notion of nature behind, abandoning nature in the singular and instead addressing directly, through new concepts, the "multiplicity of nonhumans and the enigma of their associations" (Latour 2004: 41). Not only natural sciences and the humanities, but also ecology "will succeed only if it is not a re-entry into nature—this mixed bag of narrowly defined concepts—but if it gets out of it" (Latour 2010: 605). As taught to philosophy by comparative anthropology, the division of facts and values, the separation of what is objective and indisputable from what is subjective and disputable, and the totalization of the two domains under the umbrella terms 'nature' and 'society,' is the result of a specific project of modernization and naturalization: "non-Western cultures have never been interested in nature; they have never adopted it as a category; they have never found a use for it. On the contrary, Westerners were the ones who turned nature into a big deal, an immense political diorama, a formidable moral gigantomachy, and who constantly brought nature into the definition of their social order" (Latour 2004: 43).

Escaping the tyranny of nature in the singular and constructing an alternative approach to nonhumans requires us to pursue a double path: on the one hand the exploration of the political roots of the notion of nature; on the other hand the invention of a vocabulary capable of describing the nonhumanity of hybrid natural and technological realities, thus framing contemporary taught outside the conceptual dogmas of modernity. The redefinition of nature implies a simultaneous deconstruction of our current 'state of nature' and the imagination of a geophilo-

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sophical alternative: "Since politics has always been conducted under the auspices of nature, we have never left the state of nature" (2004: 235).

The epistemic separation of humans and nonhumans is for Latour the 'Great Divide' of Western modernity: on the one side, the transcendence of an indifferent, a-human, in-human, or extra-human nature, the impersonal matter and mysterious energy of a segregated realm of nonhuman life; on the other side, the cultural sphere, historicity, and social interactions (Latour 1993: 10–12). Subjected to an endless play of transcendence and immanence, the nature of the moderns is defined by spontaneity or causal determinism, while the human dimension is perceived as a locus of freedom or social necessity, will or fate. And yet, for all their dialectic reversals, these series are always heterogeneous, mutually exclusive.

Latour argues that although the institutional organization of knowledge reflects this split between nonhumans and humans, the conceptual chasm between two hermetically sealed ontological regions is constantly overcome by technical and scientific activity, by the proliferation of hybrids that are neither natural nor human: unthinkable in-betweens such as the communication technologies and the biopolitical regimes of contemporary capitalism.[1] Western modernity's dualistic 'constitution' thus multiplies hybrids, semi-technical objects, and nature–culture assemblages while simultaneously concealing its presuppositions. The radical separation of nonhumans and humans is the 'unconscious of the moderns,' what is masked although it simultaneously presides over the production of uncategorizable nature–culture mixtures: "Everything happens in the middle, everything passes between the two, everything happens by way of mediation, translation and network, but this space does not exist, it has no place" (Latour 1993: 37). Nature, which is theoretically a thing-in-itself and a dehumanized field of forces and events, is continuously mobilized by technosciences and biotechnologies, manipulated and exploited, constructed and reshaped while remaining unthinkable and inaccessible.

The Great Divide of human and nonhumans is for Latour an internal partition, a phantasmatic fissure internal to Western modernity's self-consciousness. Through an operation of epistemic purification, already at work in Thomas Hobbes's state of nature, this civilizational narration continually generates a hallucinatory virginity and divorces from all other collectives, which are reconfigured as disturbing arrangements of humans and nonhumans, sorcerers' fetishes: "moderns do differ from premoderns by this single trait: they refuse to conceptualize quasi-objects as such. In their eyes, hybrids present the horror that must be avoided at all costs by a ceaseless, even maniacal purification" (p. 112).

The colonial fracture between political society and premodern states of nature, the Western Hemisphere and the rest, is the other side of the coin of the nature/culture *dispositif*, a fictional and yet concrete universal, keeping together the violence of colonial domination and an ethnographic museum of animisms and

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[1]Among the quasi-objects mentioned by Latour are also "frozen embryos, expert systems, digital machines, sensor-equipped robots, hybrid corn, data banks, psychotropic drugs, whales outfitted with radar sounding devices, gene synthesizers, audience analyzers" (Latour 1993: 49).

totemisms, idolatry and epistemic confusion. Modernity is not a *Weltgeist* but the grammar of a process of modernization perpetrated by 'the moderns.' By charging all premodern collectives of "making a horrible mishmash of things and humans, of objects and signs" (Latour 1993: 39), modernity elects itself, in its multiple self-fashioned guises, as a planetary destiny: a triumph of humanism and technicity, historicism and positivism, liberal democracy and economicism.

States of Nature

Although Latour's theses are highly schematic and problematically Eurocentric, as all grand theories of a unified modernity based on the singling out of linear series of hegemonic and overarching dualisms,[2] I believe they may allow us to envision the seeds of a nondichotomic approach to posthumanism and postcoloniality. In his most explicit formulations, Latour considers the nature/society divide, the 'Internal Great Divide,' as the crucial invention of the moderns, the primary cause that accounts also for colonial relations (Latour 1993: 99–103). Despite its global reach and deep consequences on technicity, politics, and knowledge, coloniality is for Latour 'a simple exportation' of the Internal Great Divide, a by-product of the Western epistemology of nature and science (p. 133). If we dismiss this idealistic and Eurocentric reductionism, and concentrate instead on Latour's suggestion to reopen the struggle over the construction of the state of nature—replacing nature in the singular with collectives of nonhumans and human, and interlacing epistemology and savagery, technological networks and postcolonial ethnographies[3]—we may be able to gain some interesting insights into the resurgence of archaisms from within our contemporary machinic and biotechnological regimes of life, thinking the process of subjugation together with the emergence of critical primitivisms and political animisms.

From Frantz Fanon to Ashis Nandy, from Aimé Césaire to Anibal Quijano, postcolonial thought has focused on the external divide and traced its multiple connections to the conceptual vocabulary of modernity. The colonial difference, as argued, for instance, by Walter Mignolo, has produced a 'global linear thought' that can only be challenged by a counter-hegemonic geopolitics of knowledge, by a

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[2]For a critique of this approach, see Quijano (2000): "the Eurocentric pretension to be the exclusive producer and protagonist of modernity—because of which all modernization of non-European populations, is, therefore, a Europeanization—is an ethnocentric pretension and, in the long run, provincial" (p. 544). For a more complex diagnosis of the relations of science and coloniality, see the special issue on 'Science, Colonialism, Postcolonialism,' *Postcolonial Studies* (2009).

[3]"There is a long tradition in the history of philosophy in which imaginary savages were used in arguments within real philosophy. By way of reciprocation, I will claim the right to summon real savages to help me to do a bit of imaginary philosophy," from the unpublished lecture by de Castro (n.d.).

comprehensive process of de-Westernization sustained by a self-conscious and affirmative 'post-Occidental reason' (Mignolo 2012: 91–126). In the following pages I will provide some examples of the resonances between decolonial politics of knowledge and approaches that, from within the boundaries of Western philosophical discourse, question the foundations of modernity's state of nature, mobilizing the unsettling energy of archaic relations to nonhumans. What these Eurocentric critiques of Eurocentrism can offer to debates on critical posthumanism is a diagnosis of the invisible effects of the conceptual machinery of the state of nature, as well as the recovery of the nonmodern forces unleashed by the destitution of Western modernity's master narratives. In my opinion, it is exclusively by acknowledging the coexistence of archaisms and technological networks, colonial divides and technosciences, that we can avoid reifying the opposition between posthumanism and postcolonialism, thus deconstructing the attempts to purify posthuman approaches into a utopian and technophiliac transhumanism and reduce postcolonial perspectives to a denunciation of subalternity and marginalization.

Once the frightening indifference of nature and the violent confinement of nonhumans and nonmoderns to an uncivilized, nonhistorical outside are exposed as the episteme of colonial modernities, it becomes necessary to rethink also the topology of archaism and savagery, accepting the evidence that not even the Western moderns have ever been modern and that the "hybrids, half object and half subject, that we call machines and facts" (Latour 1993: 117) are more than extra-human things.[4] From a nonmodern perspective, which is also internal to neocapitalist modernization, the exoticisms and primitivisms that colonial ethnography imposed on the outcasts of Western humanity can be salvaged from their debased function and put into service as critical devices. When the boundaries distributing these conceptual dualisms collapse, and the mythography of the state of nature and state of society are replaced by a disenchanted gaze on the plethora of socio-technological networks, the nonmodern plane of immanence of things reappears, and with it the menacing connotations that were expelled into a hostile outside.

Dingpolitik

A telling example of the political potential of archaism is Latour's *Dingpolitik*, which is an expansion of his critique of colonial modernity. Having lost its modeling function, the moderns' nature is "no longer unified enough to provide a

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[4]"Real as Nature, narrated as Discourse, collective as Society, existential as Being: such are the quasi-objects that the moderns have caused to proliferate. As such it behoves us to pursue them, while we simply become once more what we have never ceased to be: amoderns" (Latour 1993: 90).

stabilizing pattern for the traumatic experience of humans living in society" (Latour 2005: 29). The first consequence of this shift is that Western political philosophy and its funding categories—which, as in Hobbes's *Leviathan*, have been projected against the background of a mute, inanimate and homogeneous parliament of things —lose the guarantee of the modern theater of nature. Things become unsettling monsters, an assembly of archaic preoccupations and desires, a demon that "interrupts any progression" (p. 30). And so nature, "instead of being a huge reservoir of forces and bottomless repository of waste" is transformed into a pandemonium, populated by the specter of emancipated colonial savages and enigmatic quasi-objects (p. 15).

From within European philosophy, Martin Heidegger had sensed this shift, opposing to the modern state of nature the archaism of a premodern relation with thingness:

> It is said that scientific knowledge is compelling. […] Science's knowledge, which is compelling within its own sphere, the sphere of objects, already has annihilated things as things before the atomic bomb exploded. […] The thingness of the thing remains concealed, forgotten. […] the Old High German word *thing* means a gathering, and specifically a gathering to deliberate on a matter under discussion, a contested matter (Heidegger 1971: 176).

By pondering on this 'gathering,' Heidegger presents an alternative definition of thingness, which questions the separation of subject and object, things and persons, replacing it with a weaving of topological properties, a hybrid 'thinging' at the intersection of "earth and sky, divinities and mortals" (p. 176).

Latour's *Dingpolitik* reprises this Heideggerian intuition and expands the redefinition of thingness into a full-fledged 'thingpolitics' that destitute the *Realpolitik* and body politics of modern political philosophy: "no doubt, the Body Politics is a monster—so much so that it's not even a body. But which type of monster is it?" (Latour 2005: 28). Without the guarantee of modern scientific naturalism and transcendental critical philosophies, nature drops its foundational service to the state of nature of modern political philosophy, and politics is immediately confronted by the puzzling arrangements of heterogeneous, dense and immanent things, by uncanny assemblages of techno-social hybrids demanding new assemblies. Things of all kinds, escaped from the prison house of nature, now gather and pertain, concern and question. They are not the usual objects, a calculable matter of fact or a pristine naturalness, but 'bodies without organs,' unstable matters, automated or catatonic, endowed with requests and needs or empty and passive. "Scientific laboratories, technical institutions, marketplaces, churches and temples, financial trading rooms, Internet forums, ecological disputes" (p. 22) are the quasi-subjects of this contemporary, and yet amodern, *Dingpolitik*.

It is interesting to witness how, in spite of its strong anti-exoticist stance, Latour's politics of nonmodernity rediscovers the epistemic force of critical

primitivism.[5] As argued by Philippe Descola, now that the grand evolutionary paradigms of Western philosophy of history are exhausted, instead of denouncing the colonial connotations of nineteenth century primitivism and exoticism, there is "more to gain from trying to situate our own exoticism as one particular case within a general grammar of cosmologies" (Descola 2013: 87–88).[6]

As in Latour's anthropology, which attempts to describe "the world as we now see it through nonmodern eyes" (1993: 103), critical archaisms are also reshaping biopolitical paradigms. Consider, for instance, Roberto Esposito's embrace of biological life as a positive territory for rethinking the political (cf. Esposito 2008, 2012a, b). Since traditional categories such as sovereignty and representation have become exhausted simulacra, philosophy must think through the current biopolitical and biotechnological constellation, inside and against the government of life. In *Persons and Things: From the Body's Point of View*, this vitalist project leads Esposito to recover a nonmodern relation with things:

> … in Brahmanic culture, the thing speak in first person […] the place where the power of the thing is exercised, and before that it is metamorphosed into a person, is the body of individuals and communities, of which it becomes an internal component (Esposito 2015a: 97).[7]

Borrowing concepts from ancient Roman law and Maori rituals, Friedrich Nietzsche and Marcel Mauss, Bruno Latour and Gilbert Simondon, Esposito thematizes the "archaic and postmodern encounter of persons that are not persons anymore with things that are not things anymore" (Esposito 2015a: 102).

What happens when, as suggested by Latour, we bracket off nature and society and we center philosophical investigation on the Middle Kingdom of quasi-objects and quasi-subjects that proliferate through manipulated bodies and technoscientific networks? Since the regime of sovereignty of modern politics is now coexisting with the communicative, medical, and demographic government of the biological

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[5]In order to be fair to Latour, I must make clear that the recuperation of exoticism and primitivism as a critical discourse would not be approved by Latour. When anthropology 'comes home from the tropics,' "it loses exoticism, but it gains new fields of study that allows it to analyze the central mechanism of all collectives, including the ones to which Westerners belong" (Latour 1993: 103). According to Latour, by learning from science studies how to analyze technological networks and see them as nature–culture hybrids and quasi-subjects, the ethnologist has to 'sacrifice exoticism,' which "constituted the very originality of his researches" (p. 100). It is curious to observe how, despite holding these beliefs and delegitimizing exoticism and primitivism as research tools, Latour vigorously reintroduces them and puts them on center stage, theorizing the nonmodernity of Western modernity, its repressed archaisms, and the efficacy of a contemporary parliament and politics of animated things.

[6]In Latour's words: "If we had been able to keep the human multitudes and the nonhuman environment repressed behind us longer, we would probably have been able to continue to believe that modern times were really passing while eliminating everything in their path. But the repressed has returned" (Latour 1993: 76).

[7]All the English translations from *Le persone e le cose* are mine.

life of populations, the enigmatic nature of collective and semi-artificial bodies becomes the target of biopower, as well as the source of theoretical and political resistance.

Esposito delinks the re-emergence of the archaic immanence of the body from the categories of Western political theology (Esposito 2015b), attributing it to the force of a nonmodern plane of immanence that breaks through the linearity of history and the immunitary ontological dualisms of modernity. Uncategorizable bodies appear through unexpected connections between heterogeneous strata of history, forcing us to experience a nonmodern confusion of persons and things: "this is a sagittal relation between origin and completion, the archaic and the actual […] that forces the historian, and even more the philosopher, to look beyond the most visible threshold of discontinuity" (Esposito 2015a: 99).

Machinic Animism

In Latour's science studies and Esposito's biopolitical philosophy, the critique of modernity is sustained by a conceptualization of power that does not rely on the nature/culture *doppelgänger* and that rediscovers the nonhuman vitality of technosciences, biotechnologies, and information technologies. We owe the clearest formulation of this vitalist episteme to Gilbert Simondon and his reflections on the humanist 'xenophobia' toward the technical object:

> Culture is unbalanced because, while it grants recognition to certain objects, for example all things aesthetic, and gives them their due place in the world of meanings, it banishes other objects, particularly things technical, into the unstructured world of things that have no meaning but do have a use, a utilitarian function. […] This, of course, gives rise to an intemperant technicism that is nothing other than idolatry of the machine and, through such idolatry, by way of identification, it leads to a technocratic yearning for unconditional power (Simondon 1980: 10; see also, Simondon 2011).

In order to reverse this schism, thus countering the purification of culture into an anemic aestheticism and of technicity into an 'intemperate technicism,' Simondon focuses on the technological object from the perspective of life processes of individuation (see Simondon 1964–1989). Technicity is not an assemblage of natural and cultural process, a synthesis of human creativity and material causality, but the outcome of processes of individuation of organic matter, a 'unit of becoming' that undergoes convergences and adaptations within a larger environment (Simondon 1980: 12). We must emancipate ourselves from the constraints of the Aristotelian tradition and recognize how technologies do not emerge from a combination of matter and form: they are not the isolated, self-enclosed products of a hylomorphic subjective activity, and they do not carry out a progressive humanization of nature. On the contrary, technical modes of existence can be described as a 'naturalization of man,' taking place in a 'technogeographic milieu' that is at the same time natural and artificial, human and nonhuman (p. 60). For Simondon, technical objects are the actualization of transindividual virtualities; they 'become active when they are

organized in relation to their base,' and they function only in connection to an associated milieu that is neither natural nor cultural, but both of them at the same time (p. 64).

> These vitalist motifs are the building blocks of the reinvention of the state of nature carried out by Gilles Deleuze and Félix Guattari in *Capitalism and Schizophrenia*. In these unprecedented texts, nomadic and shamanic themes converge with Simondon's epistemology of technicity, Bergsonian naturalism, and surrealist ethnography, spawning visionary political animisms and critical exoticisms.[8] Despite being ridiculed by mainstream philosophical discourse, the *Anti-Oedipus* and *A Thousand Plateaus* are not staging a comical reversal of Hobbes's state of nature, with battlesome savages waging war against the Leviathan, and the 'nomadic war-machine' of autonomist leftists fighting the 'bureaucratic machine' of the territorial state (Deleuze and Guattari 2004b: 351–423)

As explained by Guattari, the deconstruction of the vocabulary of modernity leads to an affirmative 'machinic animism,' to the imagination of other assemblages of archaism and technicity[9]:

> There has been a sort of de-centring of subjectivity. Today, it seems interesting to me to go back to what I would call an animist conception of subjectivity; to rethink the Object, the Other as a potential bearer of dimensions of partial subjectivity, if need be through neurotic phenomena, religious rituals, or aesthetic phenomena for example. […] How then does subjectivity locate itself both on the side of the subject and on the side of the object? It has always been this way, of course. But the conditions are different due to the exponential development of technico-scientific dimensions of the environment of the cosmos (Guattari, quoted in Melitopoulos and Lazzarato 2010: 97).[10]

In Deleuze–Guattari, the contour of a new state of nature emerges from variable compositions of humans that are not subjects anymore and things that are not objects, disclosing a lifeworld in which animist rituals and technosciences, political ecologies and indigenous mythograms cohabit.[11]

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[8]See in particular the chapter 'Savages, barbarians, civilized men,' in Deleuze and Guattari (2004a, b).

[9]On the resurgence of animism in the context of aesthetics, coloniality, and the technosciences, see the exhibition 'Animism' curated by Anselm Franke and presented in different chapters in Antwerp, Berne, Vienna, Berlin, and New York (2010–2012). See also the exhibition companion (Franke 2010) and Lazzarato (2012).

[10]On machinic animism, see the comments by Eduardo Viveiros de Castro: "if I understand Guattari, the first thing to do is to cut off the relation between the subject and the human. Thus subjectivity is not a synonym of humanity. The subject is a thing, the human is another thing. The subject is an objective function that one can find deposited on the surface of everything. […] That is how it is for Amazonians. For them, the subject is a way to describe the behavior and attitude of things, just as for us, objectivation is a way to describe things in this sense" (Melitopoulos and Lazzarato 2012: 4).

[11]"It's a world which at its root is anti-monotheistic. It opposes everything that belongs to monotheism, meaning mono-atropism, mono-subjectivism, and the idea that ONE is the form that being must assume in order to be of valuable. […] Animism is the ontology of societies against the state" (Melitopoulos and Lazzarato 2012: 7). On the political ecologies of social movements and decolonial relations to nature, see Escobar (2009: 111–155).

'Machinic animism' is a slogan capturing the translation of avant-garde artistic practices and vitalist epistemologies into a self-conscious philosophical discourse. Whereas the humanities and natural sciences have been fruitlessly struggling to overcome their divorce, from Baroque *Wunderkammern* to the historical avant-gardes' bachelor machines, several unconventional approaches to art and technology have been shaped by a nondualistic sensibility. Futurist poetics of 'geometric and mechanic sensibility' and surrealist psychotic automata blur the line separating the aesthetical from the technological, the archaic from the contemporary. Artists such as Marcel Duchamp and John Cage, Filippo Tommaso Marinetti and Kurt Schwitters, and Antonin Artaud and Joseph Beuys have produced hybrid works that destabilize the nature/culture and modern/archaic divide, transmuting the artist into a shaman and reconfiguring the balance of humanity and nonhumanity.

The convergence of posthumanism and postcoloniality, the intensification of technological domination and neocolonial dehumanization, is re-empowering an archaic actor, who can move across temporalities and spaces, back and forth between humans and nonhumans. As argued by Ashis Nandy, the contemporary shaman and his political animism is not just an instance of a return of a colonial repressed. The shaman is the promise of a necessary alliance between posthumanism and decolonization, a challenge to the states of nature of contemporary societies, the denunciation of modernization and urbanism, and the reinvention of nature and savagery:

> The shaman's whole existence is a defiance of civility and the city. But then, one may say, taking off from William Thompson, that if history represents an oscillation between the city and the wilderness, and by implication between civilizations and cultures, the shaman is a living warning that in that oscillation the wilderness—the insurrection of the little cultures, as some call it—may have to be taken seriously. […] Perhaps, in the present global culture, the shaman, taken metaphysically as the opposition to the king and the priest, remains the ultimate symbol of authentic dissent, representing the utopian and transcendental aspects of the child, the lunatic, the androgynous, and the artist (Nandy 2004: 474).[12]

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[12]In the same vein, Deleuze and Guattari (2004b) rehabilitate the philosophical character of the shaman from the perspective of an anti-capitalist philosophy of nomadism and animalism: "Shaman, warrior, and hunter organizations of power, fragile and precarious, are all the more spiritual by virtue of the fact that they operate through corporeality, animality, and vegetality" (p. 176).

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Chapter 14
Spiritual Pragmatism: New Pathways of Transformation for the Posthuman

Ananta Kumar Giri

[…] American pragmatism is characterized by its understanding of human action as a *creative action*. The understanding of creativity contained in pragmatism is specific in the sense that pragmatism focuses on the fact that creativity is always embedded in a *situation*; i.e. on human being's 'situated freedom.' It is precisely this interconnection of creativity and situation that has given rise to the repeated charge that pragmatists merely process a theory that is a philosophy of *adaptation* to given circumstances. This accusation fails to perceive the antideterministic thrust of the pragmatists. […]

It is perhaps best to trace the importance of situated creativity for pragmatism in the works of all four major representatives of pragmatism. The decisive innovation in Charles Peirce's logic of science—namely, the idea of abduction—is aimed precisely at generating new hypotheses and pioneering their role in scientific progress. Peirce's speculative philosophy of nature is built around the question of under which conditions the New can arise in nature. His philosophy also endeavours to find a niche for artistic creativity in an age characterized by both the dominance of science and Darwinism, a way of thinking that brought the Romantic philosophy of nature to an end. Of William James it can be concluded from his biography that for him a conflict between a belief in free will with religious justification and naturalistic determination was not simply an intellectual problem, but rather one that actually paralyzed all his mental powers. Accordingly, his attempt to find a way out of this dilemma by regarding the ability to choose as itself a function crucial to the survival of human organism in its environment not only signaled the beginning of functionalist psychology, but was also a step which unleashed his lifelong productivity. John Dewey's work was colored by his theory of art, or, rather his theory on the aesthetic dimension of all human experience. Far from being geared exclusively to solving problems of instrumental action, the unifying element running through Dewey's work, with the numerous areas it covers, takes the shape of an inquiry into the meaningfulness to be experienced in action itself. As for George Herbert Mead, his famous theory of the emergence of the self is primarily directed against the assumption of substantive self; his concept of the human individual and the individual's actions is radically 'constructive.' In all four cases the prag-

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matists' ideas are not devoted to the creative generation of innovation as such, but to the creative solution of problems. Despite all the pathos associated with creativity, the pragmatists endeavoured to link it to the dimension of everyday experience and everyday action.

—Joas (1993), *Pragmatism and Social Theory*, pp. 4–5.

We are not exhausted by the social and cultural worlds we inhabit and build. They are finite. We, in comparison to them, are not. We can see, think, feel, build, and connect in more ways than they can allow. *That is why we are required* to rebel against them: to advance our interests and ideals as we now understand them, but also to become ourselves, affirming the polarity that constitutes the law-breaking law of our being.

—Unger (2007), *The Self Awakened: Pragmatism Unbound*, p. 40.

At the horizon line of the near future toward which we gaze, pragmatically assessing the utility of truth, there lies a more distant future that we can never really forget. Rorty alludes to this with the term solidarity, which I propose to read directly in the sense of charity, and not just as the means of achieving consensus but as an end in itself. Christian dogma teaches that *Deus Caritas est*, charity is God himself. From a Hegelian viewpoint, we may take the horizon to be that absolute spirit which never allows itself to be entirely set aside but becomes the final horizon of history that legitimates all our near-term choices.

—Vattimo (2011), *A Farewell to Truth*, pp. 139–140.

Introduction and Invitation

Humanism has been in crisis for a long time, and for some time now there is talk about the challenge of the posthuman transformation of humanity and society. This challenges us in many ways out of which two deserve our special attention. One is the technological manifestation of the posthuman in terms of a new type of human being which is emerging out of the interaction between humans and technology, especially biotechnology. The other is a spiritual reading of the posthuman which resonates with perspectives such as Nietzche's *Übermensch* (overman) and Sri Aurobindo's superman or supramental being. In this essay, building upon these two streams of thought and practice, I look at posthuman transformation at the conjunction of practice and consciousness which can be facilitated creatively by technological transformations. I explore spiritual pragmatism as a pathway of transformation of the posthuman, i.e., how spiritual pragmatism can help us in creative transformation of the posthuman.

Spiritual pragmatism is a creative and transformative interplay of the pragmatic and the spiritual which is of immense importance in our current moment of transition and transformation. Pragmatism has been an important philosophical and sociocultural movement in the USA which has influenced our view of language, social reality and the human condition. American pragmatism as cultivated by C.S. Pierce, William James and John Dewey has a spiritual dimension which is not usually acknowledged and explored enough in conventional mainstream discourses of pragmatism. Similarly, spiritual seekers and actors from many traditions including India include a pragmatic dimension. In this context, Sri Aurobindo (1970) in his *Life Divine* talks about a nobler pragmatism "guided, uplifted and

enlightened by spiritual culture and knowledge." In his important reflections on pragmatism, Richard Hartz tells us that Sri Aurobindo had read William James and had a deep appreciation of his work and significance. In Hartz' words:

> A few years after the death of William James, we find Sri Aurobindo noting "that the gulf between East and West, India and Europe is much less profound and unbridgeable now than it was thirty or forty years ago." He commented particularly on the rise in the West of "new philosophies … not indeed directly spiritual, vitalistic rather and pragmatic, but yet by their greater subjectivity already nearer to Indian ways of thinking." Occasionally he mentioned names in this connection. He referred, especially, to "the thought of Nietzsche, of Bergson and of James." Speaking of the interest of Bergson, James and others in intuition and mysticism, he emphasized that the writers in question could by no means be dismissed as "incompetent dupes of the imagination," but were "psychologists of the first rank and the most original contemporary thinkers in the philosophic field."

> Sri Aurobindo clearly had a favourable impression of William James, but we have almost no clues to what he might have read of his philosophical writings. He recalled in the 1930s that "a long time ago" he had read a book on psychology by James (perhaps *The Principles of Psychology*, unless he meant the abridged version, *Psychology: Briefer Course*). He had found it "not at all an ordinary book in its kind," a rare compliment from the Indian Yogi to a Western psychologist. Otherwise on the few occasions when he mentioned James by name it was in connection with his philosophy. These passing references provide little specific information. But they do suggest that he regarded James as a key figure in a trend of modern thought that was important for the future (Hartz 2016: 11).

In his *The Human Cycle* Sri Aurobindo (1962) also talks about spiritual vitalism. Sri Aurobindo also urges us to look at language as *mantra* and cultivate the *mantra* dimension of language (Sri Aurobindo 1972, 1997). Harold Coward who has written on Sri Aurobindo's approach to language as mantra tells us:

> The term *mantra* signifies a 'crossing over' through thought (root man 'to think'), and tr (to cross over) from the Transcendent to the human levels. As *mantras*, the Vedas are primarily manifestations of the descent of Spirit into the world, and, through the repeated chanting of them, an ascent from the physical to the spiritual can be accomplished. As pure Sanskrit language, the *mantras* are conjunctions of certain powerful seed syllables which endure a certain rhythm or vibration in the psychosomatic structure of consciousness and arouse a corresponding psychic state. This is Sri Auobindo's theory as to how language evolves from certain seed-sounds into root words from which come an immense progeny. Not only does language evolve, but also seed-sound *mantras* represent concentration points of transcendental energy from which evolutionary spiritual growth can take place (Coward 1989: 145).

Sri Aurobindo strove to realize such a meaning of language as *mantra* in his *sadhana* of poetry. In Raghunath Ghosh's words:

> Sri Auorobindo's poetry is generally called "overhead poetry" which is the poetry of the overmind. The overmind in terms of Sri Aurobindo's philosophy, is nearest to the identity of being and becoming, the supermind, the sovereign truth—consciousness. From this plane of expression and vision, word and rhythm become at once intense and immense to the utmost. The overhead utterance is marked by a value and a form in which all qualities of the subordinate planes fuse in something diversely ultimate, and variously transfigured by an inmost oneness with the cosmic harmony and with the supracosmic mystery. Language in such an atmosphere becomes mantra. Sri Aurobindo's poetry has shown how and when mantra is possible (Ghosh 2008: 93).

Sri Aurobindo developed his approach to language by walking and meditating with the dance of words in the Vedas and with his own *sadhana* of poetry (see Chatterjee 2009). But this view of language is not confined only to these realms. *Mantra* constitutes a part of all languages as a reality or potential, and it can bring forth a different and a new world and word.

This urges us to go beyond a simplistic view of language as a reflection of society. This resonates with Martin Heidegger's conception of language as a way-making movement. What Heidegger writes in his essay, 'Way to Language' deserves our careful attention: "*What unfolds essentially in language is saying as pointing*. Its showing does not culminate in a system of signs. Rather, all signs arise from a showing in whose realm and for whose purposes they can be signs" (Heidegger 2004: 410). Furthermore, "What is peculiar to language thus conceals itself on the way, the way by which the saying lets those who listen to it get to the language" (p. 413). For Heidegger, "the way to language is the [...] way-making movement of propriation and usage" where "propriation propriates human beings for itself, [...] propriation is thus the saying's way-making movement toward language" (pp. 419, 418):

> What looks more like a tangle than a weft loosens when viewed in terms of the way-making movement. It resolves into the liberating notion that the way-making movement exhibits when propriated in saying. It unbinds the saying for speech. It holds open the way for speech, the way on which speaking as hearing, hearing the saying, registers what in each is case is to be said, elevating what it receives to the resounding word. The saying's way-making movement to language is the unbinding bond, the bond that binds by propriating (ibid: 419).

What Heidegger speaks about language as saying as part of 'way-making movement' is suggested in tradition of people's enlightenment in Europe namely the folk high school movement and people's enlightenment patiently cultivated by Grundtvig and Kristen Kold. Both of them challenged us to realize language as 'living words'—words that could enliven and energize us. This is also akin to Sri Aurobindo's suggestion to create poems which would work like *mantra*.

In Sri Aurobindo and Heidegger, we find streams of spiritual pragmatism in their meditations on language, self, being and reality which can also inspire us to explore spiritual struggles in Wittgenstein's conception of form of life which is related to spiritual struggles in his own life.[1] Veena Das building upon Stanley Cavell shares some insightful reflections here:

> When anthropologists have evoked the idea of forms of life, it has often been to suggest the importance of thick description, local knowledge or what it is to learn a rule. For Cavell

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[1]When the First World War broke out, Wittgenstein left Cambridge University where he was studying to join the war as a foot soldier of Austro-Hungarian empire. But being in the war led to profound crises in his own life. Tolstoy's *Gospel in Brief* was Wittgenstein's saving grace as he stumbled upon this book in his journey in a small town in Poland (see Bartolf 2014). In her work, *Wittgenstein: A Feminist Approach*, Alessandra Tanesini also writes: "In 1914, Wittgenstein brought a copy of Tolstoy's *A Gospel in Brief* which virtually kept him alive during the war years" (2004: 54).

[Stanely Cavell, the noted contemporary philosopher] *such conventional views of the idea of form of life eclipse the spiritual struggle of his [Wittgenstein's] investigations*. What Cavell finds wanting in this conventional view of forms of life is that it not only obscures the mutual absorption of the natural and the social but also emphasizes *form* at the expense of *life* […] the vertical sense of the form of life suggests the limit of what or who is recognized as human within a social form and provides the conditions of the use of criteria as applied to others. Thus the criteria of pain do not apply to that which does not exhibit signs of being a form of *life*—we do not ask whether a tape recorder that can be tuned on to play a shriek is feeling the pain. The distinction between the horizontal and vertical axes of forms of life takes us at least to the point at which we can appreciate not only the security provided by belonging to a community with shared agreements but also the dangers that human beings pose to each other. These dangers relate to not only disputation over *forms* but also what constitutes *life*. The blurring between what is human and what is not human sheds into blurring over what is life and what is not life (Das 2007: 15–16; emphasis added).

This spiritual pragmatic approach to language can help us to find a new language of interrelationship and border crossing between the human, the nonhuman and the posthuman.

With these many-sided dialogues, we can cultivate spiritual pragmatism as a multi-dimensional vision and path of self and social transformation. We can cultivate paths of spiritual pragmatism as new ways of looking at self, society, language and reality. In spiritual pragmatism, new languages and practices are born of multidimensional *sadhana* (strivings), and struggles touching both the social and spiritual bases of life and society. Spiritual pragmatism involves interpenetration of the spiritual and the material, immanence and transcendence, capability and transcendence. Spiritual pragmatism involves a transformation of anthropocentrism and a creative mutual interpenetration of the human, nature and the divine. In my essay, I discuss spiritual pragmatism as a possible pathway of embodiment and realization for the posthuman, including presenting a new ethics and esthetics of self-development, inclusion of the other and planetary realizations (cf. Giri 2013). For example, vitalism is an important aspect of posthuman meditations as it appears in the work of Bruno Latour who builds on Nietzsche. The vitalist streams in posthumanist meditations find a resonance in Sri Aurobindo's (1962) attention to the vital, but this includes the need for its transfiguration through art and spirituality. The posthuman strives to go beyond the dualism of human and nonhuman; in my essay, I argue how spiritual pragmatism can help us in overcoming these boundaries. The conventional representation of the posthuman mainly takes a technological turn; it does not explore the challenge of the divinization of the human. In my essay, I explore all the dimensions of the posthuman including humanization of the divine and divinization of the human. I explore the challenges posed by the conjunction of neo-liberal economic revolution, biotechnological revolution and communication revolution which leads toward a technological and commercial fixation of the human. I explore how spiritual pragmatism can suggest alternative pathways of humanization beyond technological and commercial determination (cf. Vandenberg 2014).

Crisis of Humanism, the Limits of Sociocentrism and the Challenge of Posthuman Transformations

Our quest for posthuman transformation emerges out of the crisis of humanism, especially European humanism and its critique. The critique of humanism in the West urges us to be cautious in our valorization of the human taking stock of the violence that humanism has generated. Gasper et al. (2008) talk about the need for a new 'political humanism' in the context of Europe, but this now needs to be based upon a foundational realization of the critique of humanism and the need for learning to be human in a 'posthuman' way. Arturo Escobar writes in almost the last sentence of his much discussed book, *Encountering Development*: "For what awaits both the First and the Third World, perhaps finally transcending our difference, is the possibility of learning to be human in posthumanist (postman and postmodern) landscapes" (Escobar 1995: 226).

But what is the meaning of posthuman here? Should Foucault's critique of humanism be taken at face value or should we explore the link between Foucault's critique and the humanistic strivings of savants such as Erasmus especially as Erasmus urges us to move beyond a power model of the human condition and cultivate *sraddha*, reverence for life. It is Foucault himself who has written: "[…] for Nietzsche, the death of God signifies the end of metaphysics, but God is not replaced by man and the space remains empty". Being human in the modern West is intimately linked to a power model of the human condition, and a new humanism which is simultaneously social, cultural, political and spiritual has to overcome this primacy of the political and nurture new modes of conviviality such as *sraddha* or reverence for life.

We are also invited to a critical genealogical work, for example, reflecting upon the images of the human in modern Western moral, social and spiritual traditions. As a case in point here, we can consider the *weltanschauung* of Martin Luther and Erasmus. Luther has a much more power-driven view of the human where critique of religious authority surrenders to the authority of royalty to the point of killing those who oppose this new alignment of the church and the state; but Erasmus looks at the human as embodiment of reverence (*sraddha*), a view that has close kinship with the perspective of the human coming from the Bhagavad Gita where humans are looked at not only as characterized by hunger for power but also hunger for *sraddha*, love or reverence (cf. Giri 2008; Wilfred 2008).

The critique of humanism urges us to be engaged in a foundational critique of the telos of power as also a nation-state-centered view of the human and the social. Our conception of humanity in modernity was confined to a nation-state-bounded conception of self and citizenship; the current processes of manifold globalization and cosmopolitanization challenge us to overcome such a bounded conception of humanity and realize a global humanity facilitated by postnational transformations and the rise of varieties of transnational public spheres and communities of feeling (cf. Ezzat 2005).

Our existent conception of humanity, including much of the anti-humanist declarations of certain postmodern thinkers, is anthropocentric as well as Eurocentric; but the called-for new humanism which is 'posthuman'—both politically and spiritually[2]—challenges us to overcome anthropocentrism, transform the relationship between the human and nonhuman through acknowledgment of shared suffering and realize what Nussbaum calls 'cross-species dignity' and Haraway (2006) 'companion species.' In this context, what Derrida writes referring to Bentham's question vis-à-vis animals "Can they suffer?" deserves our careful consideration: "the question is not to know whether the animal can think, reason or speak, etc., something we still pretend to be asking ourselves (from Aristotle to Descartes, from Descartes, especially, to Heidegger, Levinas and Lacan) […] but rather to know whether animals *can suffer*" (Derrida 2008: 27).

Our conception of humanity is also confronted with a foundational rethinking of the human not only as an agent of immanence but also as a seeker and an embodiment of transcendence—in fact of an immanent transcendence—but such a realization challenges us to go beyond a Eurocentric Enlightenment which arbitrarily cuts off the human and the social world from its integrally linked relationships with transcendence.[3] It must be noted here that many contemporary thinkers such as Habermas (2002) and Nussbaum are comfortable with some conception of internal transcendence, but they would like to confine themselves only to the shores of immanence. Consider here what Nussabaum writes in the chapter on "Transcending Humanity" in her *Love's Knowledge: Essays on Philosophy and Literature.* Nussbaum writes:

> […] there is a great deal of room for transcendence of our ordinary humanity… transcendence, we might say, of an *internal* and human sort […] There is so much to do in this area of human transcending (which I also imagine as a transcending by *descent,* delving more deeply into oneself and one's humanity, and becoming deeper and more spacious as a result) that if one really pursued that aim well and fully I suspect that there would be little time left to look about for any other sort.

But overcoming the limits of modernist humanism challenges us to embrace all manifestations of transcendence—transcendental immanence as well as immanent transcendence—and not confine ourselves only to internal transcendence.

The posthuman transformations build upon not only a critique of humanism but also a critique of what may be called sociocentrism and the accompanying state-centrism in modernity. In contemporary societies, especially Euro-American ones, there is recognition of the limits of the social in many spheres of life such as education, love and ethics (cf. Beck 2000; Beck and Beck-Gernsheim 1995). The ideal of society is now being foundationally rethought as providing a space for self-development of individuals. Even in sociological explorations, there is now

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[2]In this context, Dallmayr (2007) talks about an 'Other Humanism' beyond a 'high tide of old-style humanism' and embodying a 'tentative resurgence of subdued, self-critical and non-Eurocentric (i.e., non-hegemonic) view of human.'

[3]Here, we must note that such a cutting off, as Des Gasper comments, was true of Descartes and his followers rather than Wordsworth and Goethe (personal communication).

much more of a nuanced understanding of the place of the human and social in the context of the nonhuman and nature, which inspires us to look at cultures and societies beyond a conventional understanding of 'forms of life.' Conventionally building upon Wittgenstein, we look at both the human and the social as forms of life, but this invites us to reflect further on the meaning of life and not only feel secured with the formality and typology of forms.

Such a rethinking of the human and the social calls for deep reflection and our earlier critique of sociocentrism gets a new height and depth in John Clammer's pathways of a 'deep sociology' resonating with pathways of deep ecology. Clammer invites us to explore pathways of a deep sociology going beyond continued 'epistemological Eurocentrism' (2009: 333) and taking the philosophical dimensions of globalization seriously. Clammer also urges us to realize that "an oversocialized and overculturalized notion of self cannot provide the foundation for an adequate sociology of the real world, as the sociology of the body demonstrates" (p. 333). Clammer urges us to transform the

> … existential shallowness, culturalism and anthropocentrism of conventional sociology with the possibility of a rich and transforming engagement with the issues and approaches to life that artists, spiritual seekers, poets and deep ecologists have long pioneered and the absence of which is both the source of so much of aridity of sociology and the crises that global society and environment now confront (p. 344).

This resonates with Melucci's inspiring project of playing self and planetary society which helps us in rethinking the human and the social. Writes Alberto Melucci in his *The Playing Self: Person and Meaning in the Planetary Society*:

> We live on a planet that has become a global society, a society totally interconnected by its capacity of intervening on its environment and on social life itself, and yet still dependent on its natural home, the planet Earth. This twofold relation to the Earth, as the global field for social action and physical boundary, defines the 'planetary society' in which personal life takes place (Melucci 1996: 2).

But for Melucci, planetary realizations are not unitary and simplistic processes: Melucci speaks of complexity, difference and uncertainty which demand from "individuals the capacity to *change form* (the literal meaning of metamorphosis)" (pp. 2–3). This is in tune with de Chardin's stress on 'complexification of consciousness' as an important part of the evolutionary unfoldment of 'noosphere' a 'growing new organ of consciousness'—"an interlinked system of consciousness and information, a global net of self-awareness, instantaneous feedback, and planetary communication". Melucci speaks of the inner planet "consisting of the biological, emotional and cognitive structures that underlies the experience and relations of us all" (p. 56). Melucci also challenges us:

> An ecology of economic, political, and technological choices cannot operate independently of an ecology of the everyday, *of the words and gestures with which we call into being* or annihilate the inner planet. *To pay attention and respect to details*; to be aware that we are part of a whole and we need to connect the different elements into this whole, *to value the path and not only the end* […]" (p. 69; emphases added).

Contemporary rethinking of the human and the social also can creatively build upon savants of an earlier generation such as Sri Aurobindo and Rudolf Steiner who provide a foundational critique of both humanism and sociocentrism in their works such as *Life Divine* (Sri Aurobindo 1970), *The Human Cycle* (Sri Aurobindo 1962) and *Renewal of Social Organism* (Steiner 1985) and urge us to realize that human beings are not only rational and human, they also have a spiritual dimension to their very existence. In such critique of humanism as well as sociocentrism spiritual pragmatism can help us.

Spiritual Pragmatism as Mystical Pragmatism

Our current discourse of humanism is posited in a dualism between science or rationality and mysticism. The creative cultivation of the posthuman calls for us to go beyond this. Charles Sanders Peirce was the father of pragmatism, and he went beyond the dualism between science and mysticism and was deeply engaged with mysticism. He also walked in the paths of other religious and spiritual traditions such as Buddhism. As Paul Hague writes:

> Most significantly, Peirce's architectonic studies led him to a life-changing mystical experience in 1892, writing in a letter, "I have never before been mystical, but now I am." This experience led Peirce to see that there are no divisions in Ultimate Reality, which he saw as an Immortal Continuum, sometimes called 'Field' in science today. To denote this seamless, borderless worldview, he coined the word *synechism* 'continuity', from Greek *synekhēs* 'holding together, continuous, contiguous'. This is of central importance in Mystical Pragmatics. As Peirce wrote in an unpublished article titled 'Immortality in the Light of Synechism' following his profound mystical experience, "though synechism is not religion, but, on the contrary, is a purely scientific philosophy, yet should it become generally accepted, as I confidently anticipate, it may play a part in the 'onement of religion and science'" (Hague 2014: 54).

As is well known, Pierce developed triadic semiotics of firstness, secondness and thirdness. He also developed a theory of abduction[4] which 'rests on a philosophy of anticipation which includes a theory of divine on an evolutionary basis' (Brier 2016). Here, Soren Brier helps us understand that "In Pierce's philosophy, God as thirdness is agape or evolutionary love, which makes the universe grow evolutionarily by taking habits." Pierce helps us go beyond the dualism between science and religion and his "philosophy of pragmaticist triadic semiotic transcends the usual boundaries between philosophy, religion and science in modernity after Kant and Hegel" (ibid.). Furthermore, "Peirce's mature semiotic philosophy is especially focused on the connection between faith, love and logic as well as knowledge, truth, signification and ethics as means to obtain the *Summum Bonum*. One could call it

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[4]As Brier tells us, "Abduction is a concept Peirce invented as a supplement to induction and deduction. It is an advanced form of guessing at possible regularities that can explain surprising phenomena."

the best of all possible worlds. It is a magnificent philosophy encompassing both science and religion" (ibid.).

What is to be noted is that Pierce's semiotics embodied deep cross-cultural and trans-religious border-crossing and co-realizations. Pierce strove to realize not only some of the inner truths in Christianity but also in Buddhism. Brier tells us how Pierce "saw Buddhism and Christianity melting together within a transcendental religious view of empathy and love as the foundation of reality." In the context of the current war among religions and the still lack of interest in dialogue on the part of Euro-American philosophers and sociologists with other religious and cultural traditions, Pierce's semiotics of dialogues and pantheistic mysticism suggest us creative pathways to future. As Petrilli (2010: 167, 89) helps us understand this:

> Stressing the interpretant rather than the interpreter, pragmatics underlines the interpretant which does not merely identify the interpreted but rather responds actively and takes a critical stance.

> […] the problem of the relation to other, of dialogue an responsibility towards others, is no less than pivotal in Pierce's own conception of semiotics in the human world, and therefore in the human subject. In fact, an aspect of Pierce's sign theory that should not be under-estimated in the contribution he makes towards redefining subjectivity. In so far as it is made of signs, that is, sings becoming, subjectivity emerges as a dialogic and relational open unit.

Spiritual Pragmatism: Self, Culture and Society as Fields of Practical Mysticism and Practical Transcendence

Mystical pragmatism in Pierce encourages us to explore and realize streams of mystical pragmatism in other related movements of thoughts and practice as well. For Luchte, the pragmatists "focus upon the convergence between Wittgenstein and Heidegger in terms of their pragmatic criteria of meaning as use. This stream explicitly opposes the early mysticism of Wittgenstein, and the later mysticism of Heidegger[…]" (Luchte 2009). But we find "the shared appreciation by Wittgenstein and Heidegger of the mystical, of the wonder in face of existence, expressed in such questions as 'why is there something, rather than nothing?'" But the mystical and the pragmatic are not opposed to each other. There are also traditions of practical mysticism. For example, we see this in the works of both Meister Eckhart and Sri Ramakrishna. Eckhart was not just mystical but he also preached in the languages of people and gave support to the emancipatory movements of women in the church and society, what is known as the Beguines (cf. Mieth 2009). Sri Ramakrishna from India also embodied practical mysticism (cf. Rolland 1954). Ramakrishna's practical mysticism embodied both deep silence and creative communication. It was also passionately concerned with human suffering when consciousness does not merely witness but also weeps. Saint Arakshita Das from Odisha, India, tells us in one of his writings that *Parama*, the Supreme, weeps

with the suffering of humanity (cf. Das 2004). The weeping of the Supreme urges us to acknowledge that human beings also weep at the suffering of self and other. As Derrida urges us to realize in the following passage, our eyes are meant not only to observe but to weep:

> And Nietzsche wept a lot. We all know about the episode in Turin, for example, where his compassion for a horse led him to take his head into his hands, sobbing. As for *Confessions* […] it is the book of tears. At each step, on each page, Augustine describes his experience of tears, those that inundate him. […] Now if tears come to the eyes, if they well up in them, and if they can veil sight, perhaps they reveal, in the very course of this experience, in this coursing of water, an essence of the eye. […] the eye understood in the anthropo-theological space of sacred allegory. Deep down, deep down inside, the eye would be destined not to see but to weep.[5]

Ramakrishna wept seeing human poverty and suffering and tried to do his best to ameliorate it. Ramakrishna's practical mysticism was also border-crossing and dialogical as Ramakrishna strove to go beyond a single religious identity and lived as a seeker in many religious paths such as Christianity and Islam.[6] Ramakrishna's practical mysticism was thus deeply dialogical embodying what is now called 'dialogic dialogue' (cf. Cousins 1992; Panikkar 2010). This had a deep influence on Swami Vivekananda who in his own way strove to embody the dialogical quest of his master as well his concern with human suffering (cf. Giri 2014b). Swami Vivekananda "was formed by the mystical experience of his teacher" (Schouten 2012: 82). For him, "The best commentary on the life of [Jesus] is his own life. 'The foxes have holes, the birds of the air have nests, but the Son of Man has nowhere to lay his head.' That is what Christ says as the only way to salvation; he lays down no other way." He writes about Jesus:

> "He had no other occupation in life, no other thought except that one, that he was a spirit. […] And not only so, but he, with his marvelous vision, had found that every man and woman, whether Jew or Gentile, whether rich or poor, whether saint or sinner, was the embodiment of the same undying spirit as himself. Therefore, the one work his whole life

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[5]The following poem of the author also presents the work of tears in our lives for generation of commonality and solidarity:

Tear, Soul and Solidarity
Let me cry
My tear is
For soul and solidarity
My tear washes away my ego
Into an ocean of aspiration
An aspiration for mutualization
Gathering together for a soulful sociality
Evolution of a new humanity
Co-breathing and co-birthing a new divinity.

[6]Jan Peter Schouten tells us that once Ramakrishna saw a picture of Madonna in one Jadu Mallick's country house and he was immediately moved by it. After this he also realized the presence of Jesus. Ramakrishna was also deeply moved by the Biblical story of Peter walking on water: "A picture of this scene was later hung on the wall of his quarters in the temple; it was the only image that was borrowed from the Christian tradition" (Schouten 2012: 87).

showed was to call upon them to realize their own spiritual nature. […] You are all Sons of God, immortal Spirit. 'Know,' he declared, 'the Kingdom of Heaven is within you.' 'I and my Father are one.' Dare you stand up and say, not only that 'I am the Son of God,' but I shall also find in my heart of hearts that I and my Father are one?" (Swami Vivekananda 2011: 21).

With a creative dialogue with Meister Eckhart, Sri Ramakrishna, Swami Vivekananda, Sri Aurobindo, Martin Heidegger, Ludwig Wittgenstein, Jürgen Habermas and John Dewey, we can cultivate paths of spiritual pragmatism as a new way of looking at self, society, language and reality. Spiritual pragmatism involves practical discourse as suggested in the critical theory and practice of Jürgen Habermas and practical spirituality as suggested in the works of Swami Vivekananda, Sri Aurobindo as well as in many transformative spiritual movements in societies and histories. Spiritual pragmatism thus contributes to strivings for realization of non-duality as an ongoing *sadhana* and struggle in life, culture and society. It must be noted that there is an important legacy of overcoming dualism in American pragmatism as well which we notice in the work of social philosophers such as George Herbert Mead who urge us to go beyond the dualism of subject and object (cf. Giri 2012). Spiritual pragmatism in its more social manifestation of critique, creativity, struggle and emancipation resonates also with a tradition of American pragmatism which West (1999) calls 'prophetic pragmatism,' inviting us to the struggle and martyrdom of savants such as Martin Luther King, Jr. and the civil rights movement.

Spiritual pragmatism helps us to rethink self. In modernity, self is primarily conceived of and sought to be realized as a 'techno-practitioner' (cf. Faubion 1995). Rarely do we realize that self also has a transcendental dimension which is at work in the domains of our practice (cf. Giri 2006). A field of practice is not only a field of routine reproduction of existing habits, *habitus* and structures, *doxa* (cf. Bourdieu 1971) but also a field of creativity, critique, transformation and transcendence. This is not only a field of immanent transcendence but also a field of transcendental immanence (cf. Strydom 2009). Spiritual pragmatism invites us to rethink and realize self as a field of practical transcendence, immanent transcendence and transcendental immanence. Practice and pragmatics help us to be part of a flow of the practical and transcendental holding infinity in our palms and walking with the Infinite with our feet. Spiritual pragmatism thus calls us to realize the work of flow and border-crossing at work in practice as the poetic dimension of practice, or the poetics of practice (cf. Giri 2014a). The poetry of practice also challenges us to realize the performative dimension of practice and invites us to weave new words of life, regeneration and resurrection which then become a force for weaving new worlds (cf. Giri 2015). Here, what Bussey (2014) writes deserves our careful consideration:

> The poet's eye helps us approach the subject of spiritual pragmatics via the symmetry of head and heart. […] The aesthetic dimension of poetic expression is synthetic in nature and allows us to reflect on spiritual pragmatism and any attempt at synthesis. Such synthesis is understood poetically as a movement towards wholeness in a forever fractured world.

Fig. 1 Ken Wilber's
quadrant model

	Interior	Exterior
Individual	**Interior/Individual**	**Exterior/Individual**
	Upper Left (UL) Quadrant I Intentional - "I"	Upper Right (UR) Quadrant II Behavioral - "it"
Collective	**Interior/Collective**	**Exterior/Collective**
	Lower Left (LL) Quadrant III Cultural - "We"	Lower Right (LR) Quadrant IV Social - "it"

The performative here is linked to our continued movement of unfoldment of potential, self as well as other, and is part of manifold processes of self-realization and co-realization.[7] It is not only activistic but also meditative and is part of multi-dimensional realities and possibilities of meditative verbs of co-realizations involving self, other, Nature, society, Divine and the world.[8]

The reconceptualization of self in spiritual pragmatism has implication for rethinking and transforming our conception, organization and functioning of culture and society. The sociocultural field is not only a field of functional and mechanical practice, it is a space of life and regeneration; it also has a subjective and transcendental dimension. In Ken Wilber's quadrant model of the integral (Fig. 1), it seems as if society does not have a subjective dimension. It is not only a field of action but also a circle and flow of meditation.

Spiritual Pragmatism: A New Eros and Transformation of Democracy

Breath is the foundation of life and it is also the site of the work of the Spirit. But in Western tradition with the ideology of *cogito ergo sum* (I think therefore I exist), rarely do we realize that "I breathe therefore I exist." Spirituality challenges us to be aware of the flow of our breath and to cultivate it further. Spiritual pragmatism is a

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[7]Here, we can link to the creative work of Lois Holzman and her work on social therapy which builds upon Vygotsky's concept of 'zones of proximal development.' In Holzman's work on social therapy where participants speak and work with each other, being together constitutes a pragmatic field which also is a field of realization of each other's potential. See Holzman (2008).

[8]I have explored the idea of meditative verbs of co-realizations in my book *Sociology and Beyond: Windows and Horizons* (see Giri 2012).

way of working with our breath individually as well as in manifold webs of togetherness. It helps and challenges us to share our breath in a way of mutual assurance and trust. Sharing our breath is the beginning of a spiritual community as Irigaray writes: "This proto-ethical plane of shared breath is the ethical germ of a spiritual community, i.e., a community of embodied individuals, caring for each other" (Irigaray 2002: 136). Spiritual pragmatism creates a new eros of sharing of our breath and also cross-fertilization of our dreams and practices. Here, what Irigaray (2002: 115–117) writes deserves our careful consideration:

> Carnal sharing becomes then a spiritual path, a poetic and also a mystical path […] Love takes place in the opening to self that is the place of welcoming the transcendence of the other. […] The path of such an accomplishment of the flesh does not correspond to a solipsistic dream […] nor to a fin-de-siecle utopia, but to a new stage to be realized by humanity. […] Nature is then no longer subdued but it is adapted, in its rhythms and necessities, to the path of its becoming, of its growth. Caressing loses the sense of capturing, bewitching, appropriating […] The caress becomes a means of growing together toward a human maturity that is not confused with an intellectual competence, with the possession of property […] nor with the domination of the world..

The new erotic of spiritual pragmatism also helps us relate to ethics and esthetics in a new way. It seeks to renew both ethics and esthetics with spiritual pragmatism as well as to create flows and border-crossing between them. Spiritual pragmatism crates the emergent genre of esthetic ethics which helps transform our existing conception of practice. It also strives to realize responsibility as a manifold process of self-cultivation and care of the other. Spiritual pragmatism cultivates responsibility as a pragmatics of holding our hands, walking and looking up to the face of the each other with courage and compassion. It strives to cultivate responsibility as a manifold verb of activistic and meditative co-realization of the ethical and the esthetic as a quest for realization of Truth, Goodness and Bliss (*Satchidananda*) in self, culture, society and the world.

Spiritual pragmatism also helps us to rethink and transform democracy. Pragmatism has had a deep impact in rethinking democracy, for example, as evident in the vision and work of seekers such as John Dewey. Dewey's pragmatism not only challenged the technocratic reduction of democracy to expert control but also brought the challenge of the cultivation of art to democracy and the public sphere. Dewey inspired the formation of what can be called an 'esthetic ecology of public intelligence' (cf. Reid and Taylor 2010).

Dewey's pragmatism not only inspired philosophers such as Jürgen Habermas but also political pioneers such as B.R. Ambedkar. Ambedkar built upon Dewey for whom the conception of democracy and liberty are based upon 'communication' (Skof 2011: 126). But Ambedkar also added to Dewey's pragmatism the vision and practice of *dhamma*, righteous conduct from the Buddhist path (cf. Ambedkar 2011). For Skokf, "Ambedkar's 'pragmatist' vision of democracy rests on his views about *dharma*, religion and social ethics with related reconstruction of social (and 'political') habits" (ibid: 128). For Ambedkar, following Dewey's argumentation, use of force is allowed, while the use of violence is not permitted. As Ambedkar

argues: "Buddha was against violence. But he was also in favor of justice and where justice required he permitted the use of force" (quoted in Skof 2011: 131).

Walking with Spiritual Pragmatism as a Way of a Continued Adventure of Consciousness and Posthuman Transformations

The border-crossing between pragmatism and spirituality thus brings us to these interlinked themes and challenges of life, self, culture, society, history, future, and the world. It challenges us to go beyond one-sided absolutism of closure and violence of either the practical or transcendental, material or spiritual; and write poems, paint rainbows and dance across dualisms of many kinds taking inspiration not only from the dance of Shiva and Parvati, *Purusha* and *Prakriti,* but also the dance of Christ on the cross and the *dervish* in the streets and deserts. Apropos the dance of Christ, we can take note of the experience and realization of theologian Subhash Anand who taught at Jnana Deepa Vidyapeeth, Pune. Anand tells us that when he is in a chapel he realizes Natraj as the Lord of Dance and also Christ as Dance:

> Sometimes I sit for prayer in a chapel with darkness all around me. More than once I have caught myself contemplating the flame of the oil-lamp placed close to the tabernacle. The dance of the fire grips me, and I can go on watching it for long, unmindful of the passing of time. Slowly as I began to meditate on the Nataraj icon—and I have been doing this for quite some years now—I understand a little what was happening to me. The Spirit whom I received in Baptims has not pushed out the Spirit I received from my ancestors. The more I try to contemplate the Nataraj icon the more it fascinates me, and I thank God for making me a child of the land which has given to the world an icon which is aesthetically superb and theologically profound. This icon fascinates me all the more because I am trying to reflect on my Christian faith in the light of Hindu wisdom. I find the Nataraj icon very appropriate to express my own faith.

> Jesus tells us that God, who as the perfect Being (sat) grounds all being, is a most loving Father. He is indeed the Merciful One. He is Shiva. In Him there is perfect self-possession and self-awareness (cit): the primordial Word (logos or sabda). From this perfect self-awareness of perfect Being arises the perfect joy of Being (ananda), and from this springs forth Breath (pneuma), that Spirit which makes Speech (vac) possible. The Nataraj icon can be seen as expressive of this Trinitarian mystery (Anand 2004: 168–169).

The following thoughts of Henryk Skolimowski on dancing Shiva are also helpful here, and we can read these together with Anand and realize the deeper significance of a dancing Shiva and dancing Christ in our lives, societies and the cosmos:

> Dancing Shiva is the symbol of life unfolding, of recreating itself, partly destroying itself in order to create novo. Dancing Shiva is you and me engaged in the creative/destructive process of life. […] The eternal dance of Shiva becomes the dance of healing—of the planet and ourselves, becomes the dance of purifying our rivers, our mountains and our bodies […] The new dance of Shiva is a form of Eco-Yoga, for the whole society […] (1991: 5, 10, 13).

Such meditations challenge us to realize the violence of one-sided absolutism and find our paths of weaving threads of connections and integration amidst the continued violence of closure and fragmentation. Violence and non-violence are eternal and epochal challenges of life and today in the midst of growing violence, spiritual pragmatism challenges us to continue to strive for paths of non-violence in thought, action, organization of life and imagination. Here, Buddha, Gandhi, Habermas and Sri Aurobindo dance with Irigaray, Dewey, Pierce and Ambedkar and challenge us for a new pragmatics, politics and poetics of life in self, culture, society and the world. As our posthuman future also faces the danger of a one-sided technological determinism and singularity which can inflict unimaginable violence on the humanness of humanity and as human beings continue to inflict violence on the nonhuman, cultivation of a non-violent relation and non-injury in our modes of thinking is an epochal challenge before us and spiritual pragmatism can contribute to this epochal transformation and a different realization of the posthuman. As Habermas challenges us, echoing Gandhi:

> Only when philosophy discovers in the dialectical course of history the trace of violence that deform repeated attempts at dialogue and recurrently closes off the path to undistorted communication does it further the process whose suspension it otherwise legitimates: mankind's evolution towards autonomy and responsibility (Habermas 1971: 315).

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Chapter 15
Humans Have Always Been Posthuman: A Spiritual Genealogy of Posthumanism

Francesca Ferrando

> Be free from all dualities
> —*Bhagavad-Gita, Text 45*

This article argues that spirituality, in its all-encompassing signification, corresponds to the core meaning of the posthuman post-dualistic perspective. In this sense, humans have always been posthuman. The posthuman extends over the boundaries of the academic, technological, and scientific domains and can be genealogically traced in different types of spiritual knowledge and understandings, dating back to the beginning of recorded civilization. And still, the significance of spirituality as a genealogical source of the posthuman has not been fully acknowledged in the contemporary field of posthuman studies. The need for such recognition becomes clear when entering the field of pragmatics: What does it mean to be posthuman in our existence? How can we enact post-dualistic non-hierarchical posthuman approaches in the ethics of our daily practices of living? The notion of spirituality helps us answer these questions, as it dramatically broadens our understanding of the posthuman, allowing us to investigate not only technical technologies (robotics, cybernetics, biotechnology, nanotechnology, among others), but also technologies of existence. This article wishes to recognize the important contribution of different spiritual traditions in the development of a posthuman standpoint. In order to do so, it first provides an introduction to the topic of posthumanism and spirituality. Secondly, it highlights ancient spiritual traditions which are in tune with the posthuman approach; lastly, it elaborates on the development of the spiritual politics of the posthuman, by emphasizing the relevance of posthumanism as a contemporary philosophy of life.

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Posthumanism and Spirituality

Spirituality refers to the human tendency to conceive existence more extensively than the individual perception. Existence, in a spiritual sense, contemplates a non-separation between the inner and outer worlds. It is a connectedness between the self and the others: within the spiritual realm, there is no division based on caste, color, creed, gender, age, nationality, religion, or species. The etymology of the term speaks for itself. 'Spirituality' comes from the Latin word 'spiritus', meaning 'breath' 'life' 'soul', in relation to the verb 'spirare', 'to breathe' (The Concise Oxford Dictionary of English Etymology, n.p.). The term 'spirit' refers, more in general, to the animating, or 'vital principle' (ibid.) common both to human and to nonhuman entities, and it relates to key concepts found in other world traditions, such as 'pneuma' in ancient Greek, the yogic definition of 'prana', and the notion of 'qi' in traditional Chinese medicine. The interconnection of existence is one of the markers of the posthuman post-anthropocentric approach. Posthumanism deconstructs any fixity, dualism, or polarity for a nomadic trans-subjective, inter-dependent perception of the human. Rosi Braidotti in 'The Posthuman' (2013) proposes a re-evaluation of the idea of subjectivity, as a transversal domain which includes the human, the nonhuman and the earth as a whole. This "post-individualistic notion of the subject, which is marked by a monistic, relational structure" (p. 87) to use Braidotti's words is related to her notion of *zoe*,[1] that is, life conceived as a nonhuman generative and vitalist force common to all species (Braidotti 2006).

And still, although the spiritual realm is all-encompassing, the effects of the human and humanistic paradigms are actively enacting in the ways spirituality has been historically addressed. Many spiritual traditions still hold sexist, ethnocentric, and anthropocentric biases. One example can be found in rituals based on animal sacrifice, which are sustained on the anthropocentric assumption that human animals are entitled to take the life of nonhuman animals for divine purposes. Throughout the Torah, for instance, God consistently requires animal sacrifice (Genesis 4:3–5; 8:20–21; 15:9; Exodus 20:24; 29:10–42; Leviticus 1:5; 23:12; Numbers 18:17–19; Deuteronomy 12:15; 12:27, Coogan 2001). Another example of discriminatory traditions can be found in the sexist practice of forming male lineages of spiritual masters, marginalizing women, and their spiritual knowledge. The Roman Catholic Church, for instance, does not allow women to be ordained (Macy 2008); nevertheless, women have been strong supporters of the Catholic religion, finding ways to express their mystical experiences within the limits imposed. Think, for instance, of

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[1]Note that Braidotti developed such a concept in contrast to the zoē/bios divide set by Agamben (1995). Rosi Braidotti underlines the political and social implications of such a dualism, echoing the hierarchies enacted by other structural pairs, such as female/male, nature/culture, black/white. As she notes in 'Transpositions: On Nomadic Ethics' (2006): "Life is half-animal, nonhuman (*zoe*) and half political and discursive (bios). Zoe is the poor half of a couple that foregrounds bios as the intelligent half; the relationship between them constitutes one of those qualitative distinctions on which Western culture built its discursive empire" (p. 37).

the rich tradition of Medieval and Renaissance women mystics: from Hildegard of Bingen (1098–1179) to Catherine of Siena (1347–1380) and Angela of Foligno (1248–1309), from Joan of Arc (1412–1431) to Teresa of Avila (1515–1582). More in general, "despite being excluded from leadership positions, in almost every culture and religious tradition, women are more likely than men to pray, to worship, and to claim that their faith is important to them" (Trzebiatowska and Bruce 2012). Such contradictions inhabit the historical outcomes of the spiritual domain. How do we deal with them in mapping a spiritual genealogy of the posthuman?

First of all, we shall note that spiritual traditions should not be assimilated to the history of the religions enacting them: religion and spirituality are not synonyms and they shall not be assimilated. Here again, an etymological research can be of help. The word 'religion' is derived from the Latin 'religio' as 'an obligation (as of an oath)', 'bond between man' (The term "man" is used here in the sense of "human race"— Note ours) 'and the gods', 'reverence for the gods' (The Concise Oxford Dictionary of English Etymology, n.p.). The origins of the Latin term are uncertain. According to Cicero, 'religio' comes from 're-' 'ligere' (re-read), that is, to be knowledgable and careful with the cult of the Gods (Cicero, 'De Natura Deorum II', p. 28). Following the legacy of Lucretius, Lactantius and Agustin (Hoyt 1912), modern philologists, derive 'religion' from 'religare' in the meaning of 'placing an obligation on' (Max-Müller 1892: 33–36). In both cases, religions are characterized by an 'oath', an 'obligation', related to the knowledge of a set of principles of divine nature (dogmas), which specifically define each religion in respect to other religions. They are empirically sustained by hierarchical structures based on acquired levels of information, which are needed in order to preserve those same teachings throughout historical changes. The focal relevance of their legacies is clearly shown by their names, which are often inextricably connected to their prophets, taking their names from them, such as Zoroastrianism (from Zoroaster), Manichaeism (from Mani), and Christianity (from Christ). The divergence between Orthodox and Gnostic Christianity in the Early Christian movement (second century C.E.), regarding the relation between the authority of clergy and the access to the divine through the individual experience, is enlightening of what can be seen as the main difference between spirituality and religion. While orthodoxy highlighted the Church as the necessary intermediate with the divine, gnostics posed emphasis on gnosis, that is, self-knowledge as knowledge of God (Pagels 1979). Mary, in the 'Gospel of Mary', clearly states: "Be on your guard so that no one deceives you by saying, 'Look over here' or 'Look over there'. For the Child of Humanity exists within you. Follow it. Those who search for it will find it" (Meyer 2007: 742). 'The Child of Humanity' is Christ, as a symbol of human perfection: the key is searching for it spiritually, within the self, instead of following other people's rules. While religions, in their hierarchical outfit and centralized control, do not necessarily comply with a posthuman approach, the spiritual trends and doctrines present in each religion may.

The notion of spirituality is in perfect harmony with philosophical posthumanism. Here, I wish to clarify that the posthuman scenario is composite, formed by different movements which can hardly be assimilated (Ferrando 2013). For instance, although both posthumanism and transhumanism radically open to alterity

and extension of perceptions, they do not share the same perspectives nor origins (Ranisch and Sorgner 2014). The connection between transhumanism, religions, and spirituality has been widely investigated, both from an historical perspective (Mercer and Trothen 2014; Tirosh-Samuelson and Mossman 2012; Tirosh-Samuelson 2014; Cyborg Buddha Project n.d.) and from a theoretical one. Transfigurism is one example of a religion based on the syncretization of Mormonism and transhumanism; it is being developed by the Mormon Transhumanist Association, according to which:

> Mormonism and Transhumanism advocate remarkably similar views of human nature and potential: material beings organized according to law, rapidly advancing knowledge and power, imminent fundamental changes to anatomy and environment, and eventual transcendence of present limitations. (transfigurism.org)

The Turing Church Unlimited, Transhumanist Religions 2.0. represents a transhumanist approach to spirituality. As stated in their website:

> We are not interested in developing a new, rigid doctrine. We are interested in developing a loose framework of ideas, concepts, hopes, feelings and sensibilities at the intersection of science and religion, compatible with many existing and new frameworks. This is why we call the Turing Church a meta-religion (turingchurch.com).

On the contrary, the relation between spirituality and posthumanism (here intended as critical, cultural, and philosophical) is a field of investigation which has not been significantly engaged upon yet, with some exceptions. For instance, an attempt to rethink posthumanism through the Indian tradition of Tantra can be found in 'Avatar Bodies: A Tantra for Posthumanism' (2004) by Ann Weinstone. Overall, apart from sparse cases, no exhaustive study has been done on the contribution of spirituality to the constitution of the post-anthropocentric, post-dualistic approach of the posthuman. This article wishes to set a path in this direction. In tune with the comprehensive terms of philosophical, cultural, and critical posthumanism, this article adopts a methodology which is inclusive, rather than exclusive (Ferrando 2012), highlighting relations and points in common, instead of emphasizing why each specific spiritual tradition may not be fully representative of the posthuman. Let's now explore why the realm of spirituality shall be recognized as one of the genealogies of posthumanism.

Ancient Sources of the Posthuman

Posthumanism does not recognize humans as being exceptional, nor does it see them in their separateness from the rest of beings, but in connection to them. In such an interconnected paradigm, the well-being of humans is as crucial as the one of nonhuman animals, machines, and the environment. One of the main characteristics of philosophical posthumanism is its emphasis on a post-dualistic understanding of existence. Such an ontological approach finds revealing parallels in ancient Asian traditions. Advaita, one of the main Vedanta schools of Indian

philosophy, literary means 'non-two', 'non-dual' (Rambachan 2006; Timalsina 2009). According to this tradition, the inner essence of an individual (Ātman) corresponds to the transcendent existence (Brahman), and no frontal dualism between immanence and transcendence can be established: "Through the epistemological lens, what is cognized is essentially non-dual awareness only. Through the soteriological perspective, essentially there is no difference between Brahman and the individual self" (Timalsina 2009: 3). Advaita complies with another fascinating distention of dualistic perceptions: the one between being awake or being asleep (Sharma 2004). According to Advaita, there are three states of consciousness: waking, dreaming, and deep sleep: "In all three states, Advaita contends, *ātman* as awareness is common and constant" (Rambachan 2006: 40). The Advaita doctrine of 'awareness only' establishes the monism of Brahman. One of the main differences with posthumanism is the monistic ways Advaita develops such an understanding: "The rejection of duality can be interpreted in terms of the ontological perspective that there is ultimately no essential plurality in what exists" (Rambachan 2006: 3). By some schools of Advaita, plurality is seen as an 'illusion' (Rambachan 2006: 9). On the contrary, posthumanism recognizes diversity as one of the main technologies of evolution and sees pluralism as the necessary complement to monism: in this sense, posthumanism is both a monistic pluralism as well as a pluralistic monism. Plurality, according to the posthuman, is the ontological manifestation of the one and it physically represents what can be symbolically seen as the pure potential of being. Specularly, the one is the ontological manifestation of the plural: in the post-dual techno-genesis, as well as in the herstory of conception, there is no pure beginning, everything comes from something else. The passage from not being to being is marked by a collective effort. In the case of humans, for instance, their birth is based on the carnal union of two beings, if we consider natural conception; on the effort of a specialized team of humans and machines, if we consider artificial insemination.

The physics and cosmologist hypothesis of the multiverse is another striking example. It not only stretches any universe-centric perspective of existence, stating that this universe is one among many (Tegmark 2010; Randall 2005; Bars et al. 2010), but also it offers a quantum understanding of the posthuman ontology. Pluralistic monism, or monistic pluralism, can be accessed through physics, when considering that many dimensions may exist, each depending on different vibrations of quantum loops of energy called strings;[2] each string may create different dimensions depending on their vibrations: the one is many, the many are one. The multiverse deals with how the material materializes, revealing itself inductive for a posthuman ontology in tune with the posthumanist overcoming of any strict dualisms. The hypothesis of the multiverse resonates with shamanic understanding of energy and description of parallel worlds (Harvey 2003). Moreover, as McKenna suggests: "The survival through long centuries in Europe of witchcraft and rites involving psychoactive plants attests that the gnosis of entering parallel dimensions

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[2]For an understanding of the notion of strings, see note 5.

by altering brain chemistry was never entirely lost" (1993: 224). The multiverse can be seen as an inner and an outer plane of existence; it can be explored cosmologically and existentially. In a similar way, according to the Mahayana schools of Buddhism, there is no ultimate difference between the samsara (the repeating cycle of birth, life, death, and rebirth) and the nirvana (the perfect peace of mind, acquired by one who is liberated). The enlightenment, within this context, consists precisely in the realization of this ultimate non-dualism: "… coming to understand that objects and the Self are just a flow of experiences with no enduring elements set in opposition to each other (no duality), we attain enlightenment" (Williams 2009: 92).

Currently, nondualism is attracting an increasing interest[3] from scholars working on bridging modern knowledge and ancient wisdom. In Western science, for instance, the term is used to refer to an interconnectedness which, in tune with the posthuman approach, rejects Cartesian dualism. Such an approach stands on the path opened by Fritjof Capra with his groundbreaking work 'The Tao of Physics' (1975), which highlighted 'the parallels between the worldview of physicists and mystics' (p. 7), and demonstrated 'the profound harmony' (p. 10) between ideas and concepts as expressed in modern physics and Eastern mysticism. The contemporary attempt to rethink science, technology, and spirituality in a natural–cultural continuum honors the ontology of the cyborg, to use Donna Haraway's terminology, and highlights posthumanism as one of the most suited philosophical platform of discussion in the contemporary academic debate. The posthuman does not convey in any techno-utopianism, nor engage in Luddism: the machine is not the other, since the human itself is seen as a process developing within a material net, a hybrid, a constant technogenesis. Within the field of posthuman studies, the non-separateness between the human and the techno realm shall be investigated not only as an anthropological (Gehlen 1957), paleontological (Leroi-Gourhan 1943, 1964), phenomenological (Simondon 1958), and ontological issue (Heidegger 1953; Stiegler 1994),[4] but also as a spiritual one. Japanese roboticist Masahiro Mori, in 'The Buddha in the Robot' (1974), states:

> From the Buddha's viewpoint, there is no master-slave relationship between human beings and machines. Man achieves dignity not by subjugating his mechanical inventions, but by recognizing in machines and robots the same buddha-nature that pervades his own inner self. When he does that, he acquires the ability to design good machines and to operate them for good and proper purposes. In this way harmony between humans and machines is achieved (pp. 179–180).

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[3]Think of the success of the conference 'Science & Nonduality', according to which:

> The Mission of 'Science & Nonduality' (SAND) is to forge a new paradigm in spirituality, one that is not dictated by religious dogma, but that is rather based on timeless wisdom traditions of the world, informed by cutting-edge science, and grounded in direct experience. (scienceandnonduality.org)

[4]Heidegger, M. (1953) The Question Concerning Technology.

Although delivered in a sexist language (note the universalized use of the masculine 'man' instead of the gender-neutral 'humankind'), Mori's message is revelatory: for him, machines and robots are made of 'the same buddha-nature'. His view resonates with quantum physics and new materialism, a specific philosophical approach developed within the posthuman scenario. From a physics perspective, anything which has mass and volume is considered matter: humans, for instance, are made out of matter, as well as robots. The way matter appears on the large scale might be misleading, if taken as its ultimate state. Matter, on a subatomic level, is not static or fixed, but is constantly vibrating. Matter is relational and irreducible to a single determined entity: any reductionist approach has scientifically failed.[5] And still, the impact of such a historical redundancy of reductionist and dualistic approaches in human thoughts and actions should not be underestimated. Posthumanism recognizes its own standpoints as post-dualistic, rather than non-dualistic, in the sense that, within hegemonic systems of thought, the episteme has been repeatedly dualistic—think of the classic sets: body/mind, female/male, black/white, east/west, master/slave, colonizer/colonized, human/machine, human/animals, just to mention a few. In tune with Derrida's deconstructive approach (1967), posthumanism is aware of the fact that such dualistic presumptions cannot be easily dismissed.

Posthumanism does not necessary rely on the death of God (Nietzsche 1883–1885) nor on the death of Man (Foucault 1966), since the assumptions of a 'death' are already based on the recognition of the symbolic dualism dead/alive, which has been challenged by the posthuman post-dualistic reflection. Furthermore, if God or Man (note the masculine form) is dead, who killed them? This is a relevant question, for the simple fact that, if someone is talking about their deaths, it means that someone has survived: who is the survivor? Dualism keeps coming back, born out of its own ashes. Such a dualistic mindset creates an unbalance which needs to be acknowledged and deconstructed, in order to understand where and how it is silently enacting. For instance, sexism, based on the essentialist dualism female/male, is still uncritically engaged within non-dualistic schools of thoughts. For instance, Vajrayana Buddhism is a Tibetan tradition which has developed a highly refined deconstruction of the dual, including death, which, according to the 'Bardo Thodol' or 'Tibetan Book of Dead' (Fourteenth Century), is not considered an unredeemable end, but an intermediate state, or 'bardo'. And still:

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[5]Atoms were thought to be the building blocks of matter until early twentieth century, when, passing from the Bohr model (1913) to James Chadwick's atomic one (1932), it was discovered that they were also composite, made of electrons, protons, and neutrons. Then again, these models were discovered to be composed of still smaller particles, named 'quarks', which were independently proposed in 1964 by two American physicists Murray Gell-Mann and George Zweig. In the late 1960s, this model was again redefined by String Theory. On the history of modern physics, see, among others, Heilbron (2005).

> In the Vajrayana Buddhist scriptures, 'otherness' is commonly represented as either demon or woman, or as both. (…) women's 'otherness' is considered a real threat to the potential spirituality of the male. The monastic tradition emphasized the polluting aspect of women, and encouraged celibacy and physical distance from women (Campbell 2002: 150).

Biases cannot be simply erased but, once detected, they have to be deconstructed, in order to be transformed through present awareness and visions of the futures. Awareness is the path toward enlightenment. Recognizing the contribution of women to the manifestation of the human species is necessary in order to recollect post-individualistic realizations of the selves. By being excluded from the linearity of monumental history, actualized in an ongoing list of male protagonists, women have historically sustained non-hierarchical approaches such as sister circles, oral sharing of collective knowledge and cooperatives. In 'Quintessence… Realizing the Archaic Future', Daly (1998) states:

> For millennia women have been creating Memories of the Future. By performing actions and generating works that can affect/effect the Future, Wild Women have been creating Memories that will be Realized in the minds and actions of those who will come after us. We have been storing treasures of our own creation in the Treasure House of the Future (p. 145).

Posthuman ontology, as a monistic pluralism or a pluralistic monism, is free from the relativist/absolutist paradigm: no single point of view can be regarded as the complete one. According to the posthuman relational ontology proposed by Barad (2007), there are not fixed and established points of departure; the subject and the object are interchangeable cognitive positions reciprocally constituting one another. In her words: "relata do not precede relations; rather, relata-within-phenomena emerge through specific intra-actions" (334). Epistemologically speaking, posthumanism is a perspectivism, according to which every perspective is valuable and should be acknowledged and respected. It is important to note that the term 'perspectivism' etymologically bears a phenomenological, embodied legacy, coming from Latin, in the formula: 'per' (prefix meaning 'through') plus the verb 'specere' ('look at')[6] (Collins Latin Dictionary, n.p.); and still, the gaze should not be reduced to the physical sight. The embodied specificity of perspectivism allows for an agential turn: the embodiment of the perspective is not be confined to the biological/inorganic/autopoietic realms (Maturana and Varela 1972), but it is extended to social bodies and systems (Luhmann 2002).[7] Moreover, these embodiments cannot be considered independently from their environments, which are crucial to the developed perspectives.

Posthumanism shares a striking point in common with the ancient spiritual tradition of Jainism and the doctrine of *anēkāntavāda* (non-absolutism), that is, the principles of pluralism and multiplicity of viewpoints (Sethia 2004). Reality is

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[6]It is interesting to note that the Latin words *species* and *speculum* (mirror) derive both from *specere*.

[7]Sociologist Niklas Luhmann (1927–1998) developed his systems theory from Maturana and Varela's notion of autopoiesis.

perceived differently from diverse points of view, and no single point of view can be regarded as the complete one: "This ability to see the other person as no longer the 'other' but as identical to our own self, underlies the capacity for empathy and sympathy with the other that operationalizes *ahimsā*" (Koller 2004: 86–87). '*Ahimsā*' is a Sanskrit word which literally means 'not to harm' and is considered one of the main principles of Jainism (Koller 2004). For instance, in their outstanding attentiveness to respect all forms of life, some Jains, in their vegan diet, do not eat root vegetables, because the tuber's ability to sprout is considered characteristic of a living being. Such a choice displays a sensitivity to speciesism and deeply engages with the significations of a non-anthropocentric standpoint. Jainism shall also be granted a major role in the development of posthuman ethics of daily living. Situated in the recognition of the embodied multiplicity of possible perspectives, in tune with ancient wisdom and contemporary science and technology, fashionable and well-received by academia, posthumanism has now set the right conditions for its own development into a philosophy of life that can have an impact on society. It is time to engage with the pragmatics of the posthuman: what does it entail to be posthuman in our daily practices of living?

Spiritual Politics of the Posthuman

Posthumanism is a post-dualism: macro-politics are the mirrors of micro-politics. The politics of the posthuman are, in other words, spiritual politics. Spirituality has to do with the minutest things we do: from the food we eat, to our thoughts, dreams and actions. Existence is a process, constantly manifesting, enacting and evolving. Each being is part of such enactment, and thus has agency in the existential evolution of spacetime. 'I am who I am' God answers Moses in 'Exodus' (3:14): existence is in the present. The present is the act of manifestation, the physics performance out of pure potentials. Existence manifests itself through memory, repetition, and vision. Posthumanism, as well as transhumanism, foresees the potentials of partaking in the process of evolution with full awareness. Since its very beginning, transhumanism has particularly focused on humans being actively engaged in the next step of human evolution. The closest reference to transhumanism as the current philosophical attitude can be found in the writings of the evolutionary biologist Julian Huxley (1887–1975). This is how 'Transhumanism', a chapter of his book 'New Bottles for New Wine' (1957), begins:

> As a result of a thousand million years of evolution, the universe is becoming conscious of itself, able to understand something of its past history and its possible future. This cosmic self-awareness is being realized in one tiny fragment of the universe—in a few of us human beings (p. 13).

Huxley's transhumanism is anthropocentric, based on human exceptionalism. Such an ontological primacy will be mostly left intact in the current developments of transhumanism, for which human enhancement is the primary goal

(Bostrom 2003). Another antecedent of the transhuman is the term 'transhumanizing', found in the paper 'The Essence of the Democratic Idea: A Biological Approach' (Huxley 1949) included in the posthumous collection 'The Future of Mankind' (1959) by philosopher Pierre Teilhard de Chardin (1881–1955). De Chardin is an interesting thinker both for transhumanism and for posthumanism. Although his teleological view is not in tune with the decentralized approach of the posthuman, De Chardin's emphasis on the interconnection of evolution cannot be underestimated. As he states:

> Our habit is to divide up our human world into compartments of different sorts of 'realities': natural and artificial, physical and moral, organic and juridical, for instance. / In a space-time, legitimately and perforce extended to include the movements of the mind within us, the frontiers between these pairs of opposites tend to vanish (1965: 222).

Existence is connected, entangled and relational. The age of the anthropocene (Crutzen and Stoermer 2000) requires the development of daily post-anthropocentric ethics of living based on an integral investment of the notion of the posthuman. Ecofeminism underlines the fact that a holistic approach has never been dismissed within women's practice (Shiva 1988). And still, holism and individualism should not be seen in controversy (Zahle 2014); instead, according to a pluralistic monistic approach, they can be viewed as embodied perspectives, symbolic mirrors which, harmonically placed in front of each other, create infinite reflections, opening the doors to the multiverse. In this sense, the Tantra tradition is of key interest. According to this ancient style of meditation, "the practitioner's body became identified with the entire universe, such as all the processes and transformations occurring to his body in this world are now occurring to a world inside his body" (White 2012: 14).

New age movements underlie the fact that significant social changes require deep shifts in consciousness: evolution is to be preferred to revolution. In this respect, the global impact of yoga on contemporary society is significant. 'Yoga' is a Sanskrit word, meaning 'the act of joining', 'union' (Sanskrit-English Dictionary, n.p.). In the 'Bhagavad Gita', Krishna, the Divine, tells Arjuna: "He whose self is harmonized by yoga sees the Self abiding in all beings and all beings in the Self; everywhere he sees the same" (6.30). And also, "He, O Arjuna, who sees with equality everything, in the image of his own self, whether in pleasure or in pain – he is considered a perfect yogi" (6.32). The growing popularity of Yoga worldwide (Singleton and Byrne 2008) can be seen as a collective desire of transformation, based on the experience of existential and social empowerment offered by the practice (Nevrin 2008). In the non-dual tradition of Yoga, as well as in the post-dualistic tradition of the posthuman, self-transformation corresponds to the transformation of the entire plane of being. Sri Aurobindo (1872–1950), in his integral yoga approach, focused at directing the evolution of human life into a 'life divine' (1939–1940), on the belief that a spiritual realization would transform human nature: "A change in consciousness is the major fact of the next evolutionary transformation, and the consciousness itself, by its own mutation, will impose and effect any necessary mutation of the body" (1963: 10).

This emphasis on a spiritual evolution, related to a biotechnological one, should be more extensively addressed within the field of posthuman studies. Spirituality can be invested as a technology of the self, to say it in Foucauldian terms.[8] It is an open-source technology of existence, offered to anyone, anywhere. The resisting side of spirituality should not be underestimated: spirituality destabilizes the hegemonic order through a connected existential attitude, which can be silently expressed during the most challenging circumstances. A history of beliefs, visions, prayers and rituals have accompanied the historical outcomes of the most oppressed categories of human beings, and can be recollected during the most challenging times—for instance, by captives during slavery (Erskine 2014) or by women during high patriarchal times. This is of great interest for the posthuman, which challenges a hierarchical notion of the human. Posthumanism is aware of the fact that the notion of the human has been historically constructed by the same embodied subjectivities who have self-imposed themselves as the hegemonic voices in normalizing what the notion of the human should imply. Specifically, to be granted full recognition of human dignity in the Western exclusivist process of humanizing, the subject had to be: male, white, Western, heterosexual, physically able, propertied, among other terms. Spiritual practice can be viewed, from a posthuman perspective, as a technique which offers hybridization in a context where essentialism has been employed to configure fixed categories and hierarchies. Furthermore, spirituality may actively destabilize such a state of things through a connected existential attitude. In the post-dualistic frame of the posthuman, micro-politics are macro-politics. By our acts, our thoughts, our visions, we are co-constituting existence. In the interconnected rhizome of existence, what we eat, the products we use, the people we relate to, constitute who and what we are. The politics of the posthuman are enacted in each moment of being, manifested in full awareness. Posthuman politics are, in other words, spiritual politics.

Conclusions

This article wishes to unveil the relevance, significance and meaning of spirituality in the genealogy of cultural, critical and philosophical posthumanism. In its genealogical endeavor, this article expands the lens of the posthuman outside of Western academia, to Eastern traditions of thought such as Jainism, Hinduism, Buddhism, Yoga, and Tantrism, although in no terms does it seek to offer a comprehensive scenario of all the parallels which can be drawn between specific spiritual traditions and the posthuman standpoint. Furthermore, this article clearly highlights that no specific tradition can be regarded as fully representative of the

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[8]Shortly before his death in 1984, Foucault mentioned his idea of working on a book on the technologies of the self. In 1988, the book 'Technologies of the Self: A Seminar with Michel Foucault' was published *pos-mortem*, based on a seminar Foucault had originally presented at the University of Vermont in 1982.

posthuman. For instance, non-dualistic systems are still formed within anthropocentric paradigms: most Hindu and Buddhist teachings view the human as the highest reincarnation before achieving enlightenment, in a hierarchical system which does not comply with the post-centralized non-hierarchical perspectivist approach of the posthuman. This is why, although posthumanism is deeply indebted to the spiritual realm, its offerings are unique, original, and very much needed. In tune with ancient wisdom, contemporary science, ecology and technology, posthumanism is evolving from an academic theory into a philosophy of life that has an impact on society. In the age of the anthropocene, posthumanism is required to develop daily post-anthropocentric ethics of living based on an integral investment of its own post-dualistic process-ontological premises. Spirituality is a precious resource for this important task, as a practice which is enacted in each moment of being: the ultimate post-dualism of the posthuman resides in full awareness. Envisioning desirable posthuman modes of existence is a path of self-discovery, once the self has been recognized as the others within. In a spiritual sense, humans have always been posthuman.

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Chapter 16
Individuation, Cosmogenesis and Technology: Sri Aurobindo and Gilbert Simondon

Debashish Banerji

Cosmogenetic Individuation

The turn of the nineteenth–twentieth century saw an implementation of what has been called the Second Industrial Revolution marked by universal electrification, mass production and the birth of the world market. This brought the post-Enlightenment episteme into the properly modern phase of its actualization, the practical horizon of a global humanity. For the first time in human history, the assumption of a species identity for all humans and the yoking of all humanity in a common global life made itself a ubiquitous anthropological possibility. The ontological consequences of such an epistemic change were dimly grasped by the leading thinkers of the time, in their varied ramifications. These included ideas which projected a global expansion of human subjectivity, read retrospectively back to cosmogenetic processes. It should be noted that Enlightenment philosophies had already arrived at a formalization of an evolutionary ideology in Hegel's (1975) philosophy of history, which saw an involved rationality in Matter and a cosmic Time Spirit (*zeitgeist*) working out its experiments in synthesizing opposites towards the emergence of the Logos as free thought in social and political life. It is important to note that entity agency is undervalued in this process, the progressive experiments of the *zeitgeist* leave their results culturally fossilized moving on to other 'races' (an east-to-west drift), and human subjectivity remains bounded within predetermined limits. Nietzsche's refusal of ideological truths on the grounds of their being historically contingent and politically established and his exaltation of human agency as an effect of a cosmogenetic will-to-power was largely a reaction to Hegel's deterministic evolutionism. The new evolutionary philosophies which arose through the last decades of the nineteenth century and over the first half of the twentieth century were closer, in this regard to Nietzsche in positing immanent

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forms of evolution in which entity/human agency played a key part and human subjectivity underwent radical change/expansion. It should also be noted that such philosophies arose in the wake of Darwinian evolution, but whereas the latter was restricted to morphological change based on accidental functional adaptations in which agency or consciousness played no part, the new philosophies recognized changes in consciousness underlying evolutionary processes and resulting from immanent ideas actualized through acts of will.

   Three such thinkers of this period are the two Frenchmen, Henri Bergson (1859–1941) and Pierre Teilhard de Chardin (1881–1955) and the Indian, Sri Aurobindo (1872–1950). In looking for a common key to describe the works of these thinkers, I would use the phrase 'cosmogenetic individuation'. 'Cosmogenesis' is a term used by Teilhard (1959) to refer to a process of increasing complexity, self-organization and self-awareness of the cosmos. 'Individuation' seems more common in its usage but deceptive due to its varied connotations and inflections. Presently, this term is more usually associated with C. G. Jung (1875–1961), a psychological emergence of singular personhood out of the amorphous unconscious and its movement towards universalization (1971). Though such a process could have practical similarities with individuation as theorized by more recent philosophers like Simondon (1924–1989) (2005; Scott 2014) and Deleuze (1925–1995) (1995), these latter include an ontological foundation to individuation which is absent in Jung. Closer in sense to these later thinkers, Henri Bergson uses the term to refer to creative differentiation of instances (1988), and Teilhard and Sri Aurobindo, though they do not explicitly use the term, refer to ontogenetic processes akin to individuation. Teilhard, for example, writes of hominization, personalization, anthropogenesis and christogenesis, as roughly synonymous terms to a becoming-individual of the cosmos (1959) (which is simultaneously a becoming-cosmos of the individual), while a similar evolution towards universalization of the person element (purusha) in the cosmos is envisaged by Sri Aurobindo in what he calls psychisization (2005: 922–952).

Metaphysics of Conscious Evolution

In Teilhard (1959) and Aurobindo (2005), a cosmic/transcendental principle (*noosphere* or Supermind respectively) is immanent in all entities in the cosmos and seeks to individuate itself through them. In the case of Bergson (1988), a creative immanent consciousness in the cosmos and all its entities, the *élan vital*, multiplies diversity and pushes towards an increasing complexity that can be intuited and be the source of knowledge and action in each of its subjects according to their orientation and capacity. However, though such an ontogenetic foundation evades the hubris of anthropocentrism, it empowers the individual, variously locating the evolutionary will as entity agency. This is where these thinkers differ from philosophers of deterministic history, such as Hegel, for whom cosmogenetic agency, even when immanent, can be said to be located in a reified transcendence

within the immanence. In these thinkers, one finds both the dimensions of transcendence and immanence assuming active potency in beings/entities, along a gradient in which Teilhard can be seen as slanted closer to the transcendence and Bergson towards the immanence. Thus, all these thinkers can be thought of as panentheistic in various ways. Of the three, Sri Aurobindo, while acknowledging an immune transcendence, yet posits two other forms of self-perception of this transcendence, an objectified self-perception (Matter as cosmic immanence of the Subject) and a self-multiplied prospection as every individual possibility within this immanence, or in other words, the complete immanence of conscious Being (Brahman) in every particle of the material cosmos, thus representing a coeval individual agency in conjunction with cosmic agency (2005: 309–335). While individual agency has been instinctually active and secondary to cosmic agency ('Nature') prior to the appearance of the human, individualized consciousness in the human represents a new level of conscious independence from cosmic agency and thus able to determine its own destiny superseding Nature's will and capable of transforming it (2005: 856–879).

Sri Aurobindo's theological metaphysics has profound correspondences with Teilhard's Christology, founded on an exile and redemption mythos. In Teilhard's mystical Christology, the 'redemption' is not 'completed' by the historical personage of Christ, but this historical event becomes a symbolic promise for its multiplied realization in human individuals leading to a cosmic 'return' through christogenesis in the individualized collective realization of the 'Omega Point' (2001). The separation from Origin implied in a mythos of exile is also present in Sri Aurobindo; though, founded in the Vedic theme of Sacrifice as expressed in the Purusha Sukta,[1,2] such a separation is not an 'act of Evil' burdened on the human and thus requiring redemption, but rather an 'act of God' on the body of God, and thus a self-sacrifice, leading to an ontology of Separation in which, nevertheless, the One becomes self-multiplied as monadic immanence (1999: 106; Mother 1977, 2004: 74). Similarly, instead of 'redemption' then, the evolutionary drift of such a cosmic condition would be a recovery of cosmic and transcendental Oneness through identification of each individual with the fullness of Purusha (Being as Person), reconstituting its sacrificed body in a collective manifestation which Sri Aurobindo referred to as a 'divine life' on earth (2005: 1051–1108).

However, as mentioned in the previous paragraph, individual agency coexists with cosmic agency in Sri Aurobindo's metaphysics. This implies a theology in which the Vedic Sacrifice of Purusha (Person, the 'Who') is accompanied (in fact, preceded) by the Sacrifice of Prakriti (Cosmos, the 'What'), creating the substantial and operational cosmic condition of Inconscience in which the fragmented dismemberment of Purusha may seed itself (2012: 17). This cosmic latency of

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[1]The Purusha Sukta is hymn 90 in Book X of the Rig Veda. It presents infinite conscious Being as transcendental Person who presents himself as cosmos and 'sacrifices' himself (becomes immanent) as the creatures and humans of various castes.

[2]"purusha, prakriti, consciousness, who and what are capitalized in this text wherever they are used in a transcendental sense."

Consciousness self-constrained as Inconscience becomes the basis for the evolution of Nature. According to Sri Aurobindo, all evolution is accomplished through the double process of memorial aspiration (ascent of consciousness) and responsive grace (descent of consciousness) (2012: 3; 2005:730–753). The stirrings of the memory of Consciousness within the Inconscient turn into an 'ascending aspiration'[3] which invokes the 'descent' of successive gradations of Consciousness, each with its characteristic properties marking its difference in kind. Such a successive gradation of Consciousness in Nature (Prakriti) based in the Inconscience of Matter affords increasing possibilities of freedom and self-manifestation (swayambhu) to the individualized immanence of Purusha in each of its dispersed units. Thus, the evolution of Prakriti affords the evolution of Purusha (2005: 272–274).

Evolution and Psychological Praxis of Sri Aurobindo

The Purusha is present in the particulate appearance of Matter as physical or material purusha, a spiritual inherence; in discrete Life forms as vital purusha (pantheist or animist soul) and with the appearance of Mind, as mental purusha (conscious observer or witness). This immanence of Purusha acts as the cosmogenetic individuating property in each of its prakritic manifestations. Hence, each of these successive forms of purusha is more 'awake' than its predecessor, better able to experience its freedom and sovereignty from its constraining bounds of prakriti and hence expressing greater agency. In the human, the coexistence of physical, vital and mental prakriti implies the triple presence of physical, vital and mental purushas or conscious centres/souls, a compound existence in which the freedom of the intelligence (buddhi) from the rest of the human constitution enables a higher degree of potential freedom of the mental purusha resulting in an alienation from Nature but also holding the possibility of its transcendence (2005: 856–879). Such a possibility of purusha's freedom in one of the constituents of prakriti results in what may be called an anthropogenesis, a new form of ontogenesis (it should be noted that ontogenesis and anthropogenesis are terms more common to Teilhard than to Sri Aurobindo; nevertheless, I have used these terms since I feel them to be appropriate). This anthropogenesis is the birth of personhood, described by Sri Aurobindo in terms of the appearance of a new and more centralized dimension of immanent purusha in the human, capable of integrating the physical, vital and mental purushas and called by him 'psychic being' or 'soul personality' (Ibid). At this point, Purusha's emergent evolution is capable of taking an independent turn, no longer dependent on the evolution of Prakriti (cosmic nature) but able to transcend, master and transform Prakriti (Ibid).

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[3]Aligning this thought to that of Teilhard's and Simondon's, this may be thought of as a 'cosmogenetic intensity'.

Being free of the burden of guilt, Sri Aurobindo's evolutionary monadology may be seen as an individualized 'adventure of consciousness and joy' and in this respect closer to Bergson's (and Nietzsche's) personal exercise of a cosmic creativity (élan vital/will-to-power). It is also in this respect that such an exercise of personal creative will have been theorized by Sri Aurobindo as a praxis discursively continuous with long traditions of Indian yoga (1999: 41–52), though put to a life-affirming end of social and cosmic transformation. Thus, of these three thinkers, Sri Aurobindo provides the most developed methodology for a cosmic and transcendental expansion of (post)human personhood, based in the capacities of the source of individuation, the psychic being, to integrate the personality, identify itself with cosmic being (Overmind) and finally transcend cosmic existence in an identity with a transcendental source, the Supermind (2005: 922-952). Each such developmental phase may be thought of as a phase of cosmogenetic individuation, yielding collective (social and cosmic) transformations. Sri Aurobindo refers to this process as 'the triple transformation' (Ibid). Yet, as one can see from the above, such a process is intensely psychological, a 'practical psychology' (1999: 44) as Sri Aurobindo terms it, which seems to minimize or invalidate any concern for social or cultural conditions.

Such an appearance, however, is misleading and arises due to the disciplinary specialization of discourse as an epistemic aspect of modernity. We have noted how Sri Aurobindo's metaphysics involves relationally the evolution of universal conditions (prakriti) and individuation of consciousness (purusha). This relationality does not disappear with the emergence of the human. If the practical psychology of the triple transformation is concerned primarily with ontic evolution of the Purusha as outlined in Sri Aurobindo's philosophical *(The Life Divine)* (2005) and 'yogic' *(The Synthesis of Yoga)* (1999) works, Sri Aurobindo's social and political texts delineate the continuing evolution of prakriti (nature) at the level of human society, moving towards global conditions of human unity, a trajectory fraught not merely with promise but danger, needing political and ethical negotiation through its relationship with human agency (1997). But the implications of such ethical and political agency are easily lost sight of, due to the above-mentioned separation of his social and psychological texts and the privileging of the latter over the former.

Social Praxis and Technology

This continuing evolution of prakriti at the level of human society and civilization in its varied relations with human choices (evolution of purusha) can be elaborated into a critique of modernity, something Sri Aurobindo himself undertakes to some extent in his social and political texts (1997: 15–221). He presages a phase of globalization led by capital and outlines the dangers of 'economic barbarism' and fascist politics (44–54; 73–81). He predicts the eventuality of a world government and analyses the struggles of individual and subcultural agency in the face of homogenizing or hegemonizing tendencies (279–578). He stages the opposition of

superpower politics and federalist participation (505–547). He sees the importance of promoting the forces of individual freedom, fraternity and internationalism over the ideological investments of state controlled planning or aggressive nativism or religious fundamentalism (548–570). At the microsocial level of the individual and the community, he promotes increasing autonomy with direct individual participation in shaping the communitarian life moving in the direction of a spiritual anarchy. Yet, as I discuss in the next paragraph, the ubiquitous mediation of technology as the sign of contemporaneity, emerging after his time, is not independently addressed by Sri Aurobindo.

While a comparative study of these three thinkers would be very interesting (and has been attempted in part by several scholars), what concerns me in this essay is the contemporary relevance of the paradigm or episteme that finds form in these thinkers. In this regard, it is the unthought within the thought, the obvious medium of existence that often makes possible the perception of an idea but remains invisible or imperceptible, and concretizes itself over time demanding a new engagement. Such is the place of technology in the articulation of these thinkers. One may say that the question of human subjectivity and its transformations (the 'who') accompanies the thought of post-Enlightenment modernity from its inception as part of its anthropological project. But it is tied to the question of the transformation of the world (the 'what') as it arises from its knowledge (science). This project of world transformation is attributed to the application of science—technology—and thus the appearance of new assessments of the relation of human subjectivity to the cosmos with the advent of new technologies is almost to be expected. Yet the possibilities opened up by the new technologies on human consciousness are elided in the new philosophies of conscious evolution and/or the evolution of consciousness. To be fair to these philosophers, it is not as if they ignore the advances of science and technology. Along with other humanistic thinkers of this period, they hold an ambiguous view of technology, part critique of its alienating and destructive effects from/on nature and part admiration for its productive and world-uniting possibilities. But technology does not receive a systematic treatment in relation to the possibilities of human consciousness from any of these thinkers.

Heidegger and the Question Concerning Technology

Indeed, it is only after the passing of this generation of thinkers and more properly from about the 1960s that technology becomes increasingly addressed with reference to consciousness, due to its ontological ubiquity. Perhaps the first serious and systematic consideration of this kind was Heidegger's (1982) essay 'The Question Concerning Technology' published in 1954. In this essay, Heidegger seeks out the 'essence of technology' and finds it not in technology itself but in the kind of revealing it makes possible. Heidegger relates technology, in its essence to fabrication, a 'making' which is 'indebted' to four kinds of 'causes'—the earth as a

provider of raw materials, a form of self-disclosure and gifting in relationship to the human (material cause); the history of cultural forms, related to the function it serves (formal cause); the use and larger contextual goal or terminal function within which the fabricated object serves its function, ultimately a sacralizing or sacrificing to a transcendent realm or order (final cause); and the human fashioner who addresses all these causes and shapes the functional object (efficient cause) (6). Attention to all these causes or 'obligations'/'debts' makes the work of technology (*techne*) equivalent to a work of art, or invoking Heidegger's Greek term, *poeisis* (8, 34). Modern technology, Heidegger avers, does not respect the material cause or final cause. It challenges and sets itself upon the earth and it ignores the sacralizing function of aspiring for the Transcendent, the openness to the messianic future (9–10). Heidegger uses two terms, 'enframing' (*gestell*) and 'standing reserve' (*be-stand*) to describe the alienating and violent form of disclosure involved in modern technology (11–13), marked by information exploitation, ordering all subjects and objects in the cosmos as static resources always available to be put to one's bidding. This alienation from the temporality or seasonality of the earth and its power to disclose the self-manifestation of Being, as well as its rupture from the sacred sphere is the chronic malaise of our times, the epistemic violence of modern technology. Enframing thus refers to an attempt at a spatial reduction of cosmic contents, a mode of existence in which all things are objectified as resource, shorn of the mystery of temporal disclosure or spatial openness. Standing reserve is another way of addressing the status of beings or subjects thus reduced, objectified, commodified and exploited. As a mode of existence therefore, modern technology is seen by Heidegger as modernity's episteme, utilizing the methodology and systemic objectifying descriptology of science to 'gather' reality into a single flattened frame so as to order its contents at will (17).

Such an ontological critique of technology puts us in view at once of both the globalization and alienation of our times. An abstract absolute description of the world usurps the place of the world. Modern and contemporary continental philosophy leans heavily on this insight of Heidegger. It becomes the basis for Habermas' (1984) 'colonization of the lifeworld' and of Baudrillard's (1994) 'virtual reality'. Looked at in terms closer to us, in the key of contemporary technology which Heidegger was not privy to, one could say that what Heidegger describes here is a mode of existence where reality is perceived as an omni-database with all entities classified and organized in terms of their relations and properties, waiting to be 'harvested', 'utilized' or 'exploited' by whoever had power to access this construct. Undoubtedly, such a view seems bleak, holding little comfort or positive potential for human subjectivity. In relation to the philosophers of conscious evolution I started with, if human subjects are brought without exception under a regime of objectification and potential exploitation, they have little wriggle room to expand subjectively and the promise of an integration and cosmisization of the human subject would seem an impossibility. Of course, such an ontology would also be uneven, affording degrees of freedom and privilege in access and exploitation of the 'standing reserve'. But under a universal ontology, even such subject positions of privilege in power and capital would be constrained to the

maintenance of the ontological order. Heidegger's appeal is a return to *poeisis,* respect for the four causes or debts that human beings find themselves embedded in all their fabrications *(homo faber)* or technological undertakings *(techne).* This would need a 'wresting' of agency from the established order of our times and the re-establishment of a more 'authentic' mode of existence in the individual and the collective, the creation of a new 'I' and 'we' that resists the automatic gravitation of slippage into the 'they' (1962: 415).[4]

Apart from this foregrounding of technology as the epistemic ontology of our times, in situating beings existentially within a temporal horizon constituted by the self-disclosure of Being, Heidegger created a language that folded interiority in historicity, thus articulating simultaneously the realities of individual and society. The wresting of *poeisis* from an objectified *techne* is a praxis historically embedded within the modern horizon of Being. Such a praxis can be related to the practical psychology of yoga, a revolutionary transformation of subjective consciousness making possible a new horizon of Being's self-disclosure. This overcoming of the disciplinary specialization and separation of psychological and sociological studies marked a departure from the considerations of an earlier generation, like that of the philosophers of creative evolution we have considered, such as Sri Aurobindo, whose works had been produced in disciplinary isolation, as mentioned above, much to their detriment. Continental philosophers, such as Michel Foucault, Jacques Derrida, Pierre Bourdieu and Gilles Deleuze, who have followed in the wake of Heidegger, have continued an articulation that undercuts such disciplinary boundaries.

Heidegger's originality and break with the past may also be seen in his rejection of metaphysical idealism in favour of an ontology grounded in phenomenology. This turned in Heidegger may more properly be credited to his teacher, Edmund Husserl, the father of modern phenomenology, who felt that the modern domination of epistemology by science could no longer be overlooked by philosophy, which needed, in response to refuse metaphysical speculation but also to eschew science's privileged objectification. Heidegger takes one step further in overcoming the subject–object dualism through his ontology and thus inaugurates a trend in which the critique of and break with metaphysics is treated as final. Thinkers such as Foucault and Derrida, following in the wake of Heidegger and largely in continuation of his work, have shied away not only from metaphysics but also from ontology as a result, more concerned to situate ontology in historical and political determination. Among this generation of important late twentieth-century continental thinkers, only Gilles Deleuze (1995), influenced strongly by Bergson, has continued to address metaphysics and ontology, but from a vantage of empiricism and ontogenesis. As a result, Deleuze can be constellated in important ways with our philosophers of evolution. However, I am not including a consideration of his ideas here, except where relevant,

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[4]It would be interesting to bring this viewpoint to bear on Michel Bauwens' essay on P2P systems, which may be called a subject-oriented database model as opposed to a top-down algorithmic or horizontal object-oriented models implied in the 'enframing' of 'standing reserve'.

because though he has commented on technology in our times, this is not one of his primary concerns. On the other hand, he was profoundly influenced by his contemporary, Gilbert Simondon, who engaged deeply with the question of technology, and in this essay I wish to relate the ideas of conscious evolution to Simondon's thinking on ontogenesis and technicity (1989).

McLuhan: Media Technology and Consciousness

However, before that, in thinking of a later generation who have engaged the ideas of the philosophers of conscious evolution with the ubiquity and ontology of modern technology, one must consider the Canadian philosopher of media technology, Marshall McLuhan (1911–1980). Both McLuhan and Simondon may be seen to have direct links to the philosophers of conscious evolution—McLuhan to Teilhard de Chardin and Simondon to Bergson.[5] Though McLuhan's references to Teilhard are few, the cultural critic Tom Wolfe (2011) has pointed to the pervasive influence and substructural presence of Teilhard's ideas in McLuhan's insights on media. McLuhan is responsible for a large number of neologisms that have become current in contemporary popular culture, three of his most well-known phrases being 'global village', the distinction between 'hot and cool media (1964: 22)' and 'the medium is the message (1964: Ch. 1)' , later further finessed in the eponymous book title *The Medium is the Massage* (1967). Regarding technology both as an exteriorization and amputation of human organs and capacities, such as the nervous system or the memory (1964: 11), McLuhan articulated many of the ideas that have led to contemporary posthumanist thought. In seeing new technologies as amputations of human capacity, he was echoing Plato's concerns with 'writing' as a technology leading to the attenuation and eventual loss of human memory (*Phaedrus*), but this was counterbalanced, for McLuhan, by the global expansion of collective consciousness made possible by technologies of communication, transportation and exchange. Yet, though the gains of collective consciousness were promising, the natural attenuation of individual capacities and the subjection of the individual to mass determinants were problematic consequences of technology that McLuhan was much concerned about all his life.

He saw and wrote of the subject altering powers of media arising from new equations and engagements of the human sensory system (1962: 41) and reinflected this idea more powerfully in terms of ontological subjection in the tweaked variant 'the medium is the massage'. One can easily see the extended mileage of this idea in contemporary posthumanist thought, as in Katherine Hayles' books *How we*

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[5]Simondon is also known to have quoted de Chardin favourably and an important commentator on Simondon, Jean-Hugues Barthelemy, has drawn attention to Simondon's debt to Bergson and Teilhard de Chardin, especially to Chardin's cosmogenetic individuation: https://fractalontology. wordpress.com/2007/10/22/translation-jean-hugues-barthelemy-on-simondon-bergson-and-teilhard-de-chardin/ (last accessed 04/10/2016).

Became Posthuman (1999) or *My Mother was a Computer* (2005). McLuhan was developing his ideas in a world dominated by television and died in 1980, prior to the emergence of the desktop computer and long before the appearance of the World Wide Web. Yet, his pronouncements predict a world characterized by these developments in the 1960s. He discussed the ontological changes related to transitions of dominant media from print through film and television to multimedia and interdependent computing, coining the phrase 'global village' to describe the last phase. In his 1962 text *The Gutenberg Galaxy: The Making of Typographic Man*, he describes the promises and dangers of such a society:

> Instead of tending towards a vast Alexandrian library the world has become a computer, an electronic brain, exactly as an infantile piece of science fiction. And as our senses have gone outside us, Big Brother goes inside. So, unless aware of this dynamic, we shall at once move into a phase of panic terrors, exactly befitting a small world of tribal drums, total interdependence, and superimposed co-existence. [...] Terror is the normal state of any oral society, for in it everything affects everything all the time. [...] In our long striving to recover for the Western world a unity of sensibility and of thought and feeling we have no more been prepared to accept the tribal consequences of such unity than we were ready for the fragmentation of the human psyche by print culture (32).[6]

One can see here the recovery of a collective human unity, now extended to a global dimension, out of the fragmentation implied in the complexification of tribal culture with the ascendence of civilization, marked as per McLuhan by print media and its subjective correlate of individualism. But at the same time, it is a return of subjective inundation by mass behaviours and instincts (tribal drums), lowest common denominators of consciousness (terrors) and surveillance and control by corporate or ideological authority (Big Brother). Behind this global culture, one may intuit the cosmogenesis of Teilhard, a materialization of a cosmic consciousness or noosphere mediated by technology. Yet, for Teilhard, such a collective dimension could only be a stage in anthropogenesis, a precursor to christogenesis, or the generation of a cosmic and transcendental individual in each person. McLuhan could perceive the dangers and difficulties towards this eventuation, its easy derailment under the powers of subjection conditioning individuals more ubiquitously than ever before.

In response, he sought ways to maximize creative expression under these circumstances, indicating conditions and practices enabling agency, engagement and the autonomy and expansion of subjectivity. It is in such a context that, in his text *Understanding Media*, he distinguished between 'hot and cool media', media which enabled consumption and disabled participation (hot) as against those that were intrinsically interactive (cool) (22). Interestingly, he classes movies as being hot and television as cool, due to the latter needing more mental and emotional interactive response than the former. Today, such a distinction seems odd in the context of television, to which we more commonly attribute the function of producing 'couch potatoes'. However, the distinction could be seen as valuable in general for our

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[6]This passage is closely connected to McLuhan's discussion of a passage by Teilhard de Chardin in his work *The Phenomenon of Man*.

consideration. McLuhan was not blind to the relative scale of these terms and displays his prescience once again when he compares television and multimedia computing:

> The next medium, whatever it is—it may be the extension of consciousness—will include television as its content, not as its environment, and will transform television into an art form. A computer as a research and communication instrument could enhance retrieval, obsolesce mass library organization, retrieve the individual's encyclopedic function and flip into a private line to speedily tailored data of a saleable kind (1962).

When compared to Heidegger, we see that McLuhan does not subscribe to the former's unrelieved pessimism regarding modern technology, though he is not naive about the detrimental effects of conditioning and state or corporate control implied by it. Instead, he opens the possibility of achieving a Teilhardian vision of collective noogenesis through new technologies. This promissory note extended by McLuhan has informed a number of contemporary techno-optimists, who feel that the World Wide Web in conjunction with other global telecommunication technologies has inaugurated a new utopian age for humankind. In Gilbert Simondon, we will see another late twentieth-century contemporary of McLuhan who holds out similar horizons for the human future, albeit with greater nuance and further reach. The question of human subjectivity inaugurated by Heidegger in terms of modern ontology remains however. To what extent are human beings available to realize such a promise, or are they all the better transformed into fodder bereft of agency within enormous global systems of surveillance, classification, control and use, conditioned to believe that they are happy and free through dynamic and ubiquitous technologies of memory, persuasion and invisibility, as predicted by Gilles Deleuze (1992) in his *Postscript on the Societies* of *Control*?

Simondon's Process Metaphysics

Gilbert Simondon (1924–1989) is undoubtedly the most sophisticated of the late twentieth-century philosophers of technology, who have continued in the wake of the early twentieth-century philosophers of evolution. As mentioned before, he was influenced by Bergson, whose idea of creative evolution and inventive fertility of becoming receives an updated treatment contemporary with a constellation of more recent concepts associated with modern science such as emergence, systems theory, chaos theory, information theory, cybernetics and self-regulating systems (Barthélémy 2005). This is not to say that Simondon drew from these concepts, rather he represents a milieu of thought in which such concepts were emerging and have since become current. As per my characterization towards the beginning of this article, the central idea in Simondon's oeuvre could be delineated as 'cosmogenetic individuation', though as a form of becoming not as a metaphysical principle (1992). In keeping with the post-Husserlian dictum in philosophy to keep away from idealistic metaphysics, Simondon does not develop an elaborate theory

grounding becoming in a transcendent principle or choice, as does Teilhard or Sri Aurobindo. Rather, he positions the structures of becoming within becoming itself, proceeding empirically to verify and describe his ontogenetic processes. In this however, he is not too far from Sri Aurobindo, whose metaphysics (darshan) is based in a praxis of transformation (yoga) which has an empirical basis for participation in a 'cosmogenetic individuation'. Moreover, though Sri Aurobindo's panentheism involves a spiritual transcendence and material immanence, these do not exist as an ontological duality, or as a top-down/active-passive hylomorphism,[7] but rather as an 'effective' duality existing as forms of self-perception in perpetual relation. As such, it would not be too far to see them as coexisting heterogeneous orders of becoming in disparation, using the model of Simondon.

Simondon's process metaphysics (1992) deals with a pure immanence of becoming. In his thought, a stable unitary Being would remain transcendent and be incapable of manifestation. On the other hand, a purely unstable being would lead to a chaotic manifestation. Instead, he posits a 'metastable' Being, 'more than a unity and an identity', in other words marked by a radical excess, which can double itself through a phase shift (referred to by Simondon as 'disparation') and thus generate gradients of exchange between two heterogenous series, which are problematic fields of becoming (1989, 2007). Each solution to such a problem would be a singular individuation that would remain in metastable equilibrium with the larger field or problematic (the milieu) and the totality of the metastable being (preindividual being). Though relatively stable at the point of individuation, each individuated being and its milieu would remain capable of further individuation due to its continued metastability in relation to preindividual being. Such further individuations may push an individuated being into another order of solutions belonging to a different problematic gradient, expressing new properties and degrees of freedom and agency. The information exchange along each gradient of becoming would be modulated by the properties of the medium of exchange, thus determining commonalities, degrees of variance and boundaries of each order of individuation. Simondon referred to these information transfers between heterogeneous gradients and media and leading to resolution and individuation as 'transduction'. Thus, individuation remained an 'open' and ever-unfinished process, representing a negentropic tendency of Being generating ever higher orders of cosmogenetic individual and collective becoming.

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[7]Simondon is concerned to reject the hylomorphic model which subordinates one principle to another in a dualistic master–slave or original–copy relation. Metaphysics, since Plato, has generally been conceived in this key, as, for example, spirit/matter, soul/body, mind/body, culture/nature. Sri Aurobindo's panentheism also eschews this form of hylomorphic relationship, extending agency relationally along all heterogeneous orders, as may be viewed from the following quote: "In a sense, the whole of creation may be said to be a movement between two involutions, Spirit in which all is involved and out of which all evolves downward to the other pole of Matter, Matter in which also all is involved and out of which all evolves upward to the other pole of Spirit" (Aurobindo 2005: 137).

Orders of Individuation: Simondon and Sri Aurobindo

Simondon identifies three such orders of individuation, the physical, the vital and the psychic. Physical individuation pertains to entities of material nature, vital individuation refers to the order of living beings, and psychic individuation is of mental subjects (human beings). As discussed, each of these individuations occurs at the levels of the individual and the milieu. One may bring to mind here the evolution of purusha (person) and prakriti (cosmic/psychological nature) along the modalities of physical, vital and mental consciousness in Sri Aurobindo. The evolution of prakriti along each of these levels can be related to the individuation of the milieu, while the evolution of purusha corresponds to the individuation of the individual. One may also note that Sri Aurobindo includes the evolution of the psychic being, which expands into the triple transformation and leads to the cosmogenesis and beyond of the individual.

In Simondon's case, psychic individuation is an order of mental evolution which extends vital individuation, just as the latter extended physical individuation into an order of living beings (1989, 2007). The transition from physical individuation to vital individuation is accompanied with the formation of an interiority and exteriority (individual and milieu) with more elaborate relations between the two through the development of sensation (perception) and intensity (affect) marking the interior and leading to increasingly efficient phylogenetic lineages (evolutes) of internal structuration and external action conserving an autopoietic dynamic entity. In the further transition from vital to psychic individuation, mentality emerges as a new order of properties transforming the vital elements and structures of the interior and resulting in a new relation with the exterior milieu. Thus, perception and affect of vital individuation are mentalized into thought and emotion, along with other properties of their commingling, such as imagination, ethics, aesthesis and eros. Mediating the transfer of information between interior and exterior, these properties tend to structure not only the interior but also the exterior of the individual through their ability to develop commonalities of signification. This sets up a collective individuation in synchrony with individual individuation (1989, 2007). The leap in power of agency represented by this new order of psychic individuation is given distinction by Simondon by naming the interior (individual) individuation as individualization and the collective individuation as transindividuation. Thus transindividuation is the process towards a universalized collective socius enabling an open-ended diverse individuation in individual and collective.

It is important to keep in mind that for Simondon, ontogenetic individuation is an ongoing and never-finished process. It expresses and conserves the ubiquitous drive for unity and eternity (Scott 103; IPC 127) across the differentiated though undetermined potentia of the radically infinite preindividual. Thus, every order and instance of individuating entities preserves within itself the infinity of the preindividual, expanding its structure of relationality across both interiority and exteriority through an evolution of its powers. At the level of psychic individuation, individual agency participates in elaborating individuation across the boundary

separating inside and outside in terms of 'two seemingly opposite, though recip-rocally codependent directions:… interiorizing the exterior, while, exteriorizing the interior' (Scott 103). Such an agency grants content to Simondon's revised idea of 'soul' (Scott 103, 104; Simondon 1989, 2007: 157–58). Soul for Simondon, then, is an emergent property, the appearance of an individualized personality as a stage of cosmogenetic individuation, that of the transindividual.

As we saw earlier, Sri Aurobindo uses the term 'psychic being' to refer to the soul personality in human beings. Though in his case, the immanence of the principle of individuation or personhood in all entities, which he calls purusha or 'psychic entity', ensures their ongoing evolution, conscious agency towards the integration of interiority (inner being) within itself and with its social and natural milieus is also accomplished through the emergence of the psychic being at the level of the mentalized human. Thus, psychic being, for Sri Aurobindo, is not a static structure. Moreover, if we are to consider Sri Aurobindo's psychic principle of individuation in terms of essential operational property rather than substance, this is given by him as 'aspiration', whether subconscious agent in non-human living beings (psychic entity) or conscious agent in humans (psychic being). Sri Aurobindo's description of 'aspiration' can be expressed in terms identical with Simondon's description of the essential 'soul' power operational within the indi-viduation of every individual—'the desire for eternity' (Ibid). As mentioned earlier, in Sri Aurobindo, it is this immanent aspiration which receives a response from the Transcendent, opening new possibilities of becoming which allow for the creative expression of new powers of being in the individual resulting in greater states of stabilized relational integration. At the human level, the emergence of conscious agency in the psychic being allows for this aspiration to be consciously formulated focused and intensified leading to the integration of the internal elements of the physical, vital and mental beings (the 'inner being') around the psychic aspiration, a process called by him 'psychisization'. This is further extended by the universal-ization of the individual (cosmisization), followed by the integration of the psy-chisized and cosmisized individual with a transcendental consciousness (supramentalization), affording a cosmic transformation so as to express states of being not yet manifest in Nature. This is the revised content Sri Aurobindo gives to the Sanskrit term 'yoga', traditionally used to refer to processes of psychophysical practice leading to an escape from the cosmic condition, either in an ineffable transcendental trance (samadhi) or an extra-cosmic 'heaven' (loka) of perfection.[8] In Sri Aurobindo, yoga instead becomes a process for the transformation of life through a heightened power of integration achieved through an extension of con-sciousness. Translating to the Simondonian key, if psychisization can be thought of as the individuation of the individual, cosmisization may be related to states of collective integration tantamount to transindividuation.

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[8]As pointed out by Rich Carlson in this volume, it is the traditional understanding of 'escape' or 'retreat' from life that has made thinkers such as Gilles Deleuze reject Indian yoga as represen-tative not of a life-transforming praxis leading to a mastery of the 'folds' of contemporaneity but rather of an 'unfold'.

In Sri Aurobindo's own texts however, he does not see cosmisization and supramentalization in terms of transindividuation, but as the results of the freedom and extension of individual consciousness and personhood (psychic being) achieved through the exercise of consciousness. Rather states of cosmic and supramental consciousness achieved by groups of individuals are seen by him as the prerequisites for a kind of transindividuation, which he calls the 'gnostic community'. Theorized by him more in terms of a universal philosophical anthropology and individual psychological praxis in his philosophical and psychological texts, in his social and political texts and in practice in the habitus of his ashram in Pondicherry, the relationship between the psychic and the collective developments included a cultural dimension pertaining to global or planetary unity. In 1968, after Sri Aurobindo's passing, his spiritual partner and collaborator, Mirra Alfassa aka The Mother, founded the city of Auroville, as a 'planetary city' and a 'site of material and spiritual researches for a living embodiment of an actual human unity'. She also coined the term 'collective yoga' to refer to the relational extension of the individual yoga at the collective level, open to a planetary culture, and increasingly spoke of the processes of universalization or cosmisization in terms of 'collective yoga' using a language which, though inflected in terms of consciousness, is distinctly reminiscent of what Simondon would call transindividuation (1989, 2007).

Dynamics of (Trans)Individuation

To draw this comparison closer, we may consider the dynamics of individuation and transindividuation as described by Simondon and Sri Aurobindo/the Mother. In Simondon, there is no substantial principle of individuation in beings, but a process which expresses it as a result of ontogenetic metastability. The process monism implied in this gives significance to the becoming of being and all beings of becoming for Simondon. Thus, time takes its meaning from evolutionary processes of individuation leading to transindividuation and beyond. Time here does not follow a pregiven telos, but stabilizations of individuation increasing in complexity and efficiency towards the integration, power and relationality of transindividuation. Each such stabilization is effected through an integration of elements expressing their powers and properties in ways that maximize their efficiency of functional integration of interiority and formation of a stable relationship with the external milieu. This state of stabilization in an individual's individuation is termed 'concretization' by Simondon. Simondon speaks of the concretization phase of individuation in a being as a precipitation of 'the future', demonstrating the operation of a nascent transindividuation at all stages of individuation. In effect, this idea of the communication of information from the future, a reversal of time's arrow is hardly different from the precipitation of transcendental conditions as a response to psychic aspiration in Sri Aurobindo.

Tracing back to the cosmogenesis of Teilhard, one can see here how Simondon revises the transcendental metaphysics of the former to affirm the simultaneity of a

double process of cosmogenesis materializing itself through transindividuation—individuals becoming cosmos and cosmos becoming individual. Though the structuration of this double process becomes materially articulated at the level of psychic individuation, the process itself is primordial and originary.

Individuation at this level, as at all levels, is accomplished across heterogeneous orders of being through transduction. The process monism of Simondon makes for the emergence of analogical morphologies and potentia across the different orders of becoming. These form nodes of resonance within and across the emergent orders that can amplify through intensification and exchange information through transduction. Such information transfers between elements of a unit and between units in a collective, interacting under the immanent impulse of 'the desire for eternity' motive the relations of individuation and transindividuation within and between self-organizing individuals and across different orders of their becoming. This causes the internal and external structures and functions to differentiate and evolve in classes of beings along phylogenetic lineages. The concretization phase of individuation occurs at a stage when the autopoietic entity achieves a state of functional integration where its elements express their powers not merely as parts of the whole but as co-adapting superpositionalities of the whole.

In comparison, Sri Aurobindo's monism is both substantial and processual.[9] The immanence of the purusha as psychic entity and in the human as psychic being catalyses a similar information transfer within and across the different orders of being in the individual and between individuals in the form of physical aspiration, vital aspiration and mental aspiration, evolving in agency and power of integration around the psychic centre. At the human level, it is possible to intensify this action more consciously, leading to an accelerated tendency towards integration (psychisization) in the individual and the collective (transindividual).[10] As mentioned earlier, for the transindividuation of the human being, the Mother articulated this integration in terms that echo the condition of elemental superposition in the concretization phase of Simondon, though in terms appropriate to the expansion of individual consciousness:

> Sri Aurobindo tells us that a true community - what he calls a gnostic or supramental community – can exist only on the basis of the inner realisation of each of its members, each one realising his real, concrete unity and identity with all the other members of the community, that is, each one should feel not like just one member united in some way with all the others, but all as one, within himself. For each one the others must be himself as much as his own body, and not mentally and artificially, but by a fact of consciousness, by an inner realization (1977, 2004: 141–142).

One may think of such an expansion of individual subjectivity as an emergent property of transindividual transductive intensities, a stage prepared by earlier

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[9]In this sense, it is closer to the monism of Spinoza, and following him, Deleuze. This is what allows Deleuze to theorize extraordinary states of consciousness based on experimentation. Simondon, who is also deeply influenced by Spinoza, nevertheless, eschews the latter substantialism.

[10]Echoing Vivekananda, Sri Aurobindo defines yoga in a number of places as 'accelerated evolution'.

extensions of consciousness across heterogeneous orders of being, as in this experience of the Mother from 7 April 1917:

> A deep concentration seized on me, and I perceived that I was identifying myself with a single cherry-blossom, then through it with all cherry-blossoms, and, as I descended deeper in the consciousness, following a stream of bluish force, I became suddenly the cherry- tree itself, stretching towards the sky like so many arms its innumerable branches laden with their sacrifice of flowers. Then I heard distinctly this sentence: "Thus hast thou made thyself one with the soul of the cherry-trees and so thou canst take note that it is the Divine who makes the offering of this flower-prayer to heaven". When I had written it, all was effaced; but now the blood of the cherry-tree flows in my veins and with it flows an incomparable peace and force. What difference is there between the human body and the body of a tree? In truth, there is none: the consciousness which animates them is identically the same. Then the cherry-tree whispered in my ear: "It is in the cherry-blossom that lies the remedy for the disorders of the spring" (1979, 2003: 364).

Again, in 1973, the year of her passing, the Mother gave a New Year message which tied the goal of psychic evolution to a collective yoga at the planetary level: "When you are conscious of the whole world at the same time, then you can become conscious of the Divine" (1973).

Transindividuation, Technology and Collective Yoga

What is meant by being conscious of the whole world at the same time? It seems to me the preparation of a psychic subjectivity identified with the subjective life of the world and its preindividual excess. How can one prepare oneself to be conscious of the whole world at the same time? For the followers of Sri Aurobindo's yoga, who have privileged his yoga texts, this might mean the expansion of individual consciousness through meditation and union with a cosmic consciousness. But those who read his social texts or who have been privy to the Mother's texts on collective yoga, or her words related to Auroville, may say—through the intensification of aspiration, its extension in relations and its psychic engagement with the cultural history of the world. For Simondon, this would be the preparation for the planetary transindividual:

> All individual ensembles have thus a sort of non-structured ground from which a new individuation can be produced. The psycho-social is the transindividual: it is this reality that the individuated being transports with itself, this load of being for future individuations (1989, 2007: 193).

Such a preparation would bring to light the history of technology for Simondon. If the major part of Simondon's doctoral thesis at the Sorbonne was titled 'Psychic and Collective Individuation', his minor paper, which got published first both in the French original and the English translation, and for which he is better known is 'The Mode of Existence of Technical Objects'. Following the anthropologist Leroi-Gourham, Simondon sees a techno-genetic individuation co-evolving with psychic individuation in the human as an inevitable differentiation towards transindividuation. Machines intervene to bridge the rupture between humans and nature

arising from the displacement of a primitive vital individuation to the order of a 'civilized' mental individuation; yet machines, which emerge to heal human alienation, eventuate in alienating humans even further. Yet technical objects are neither fully determined nor contiguous with humans. As a mode of existence, though conceptually and functionally bound to human becoming, they represent an order of independent individuation. The evolution of lineages of technical objects, Simondon shows, follows like other forms of individuation, a transductive process leading to an efficient stabilization of elements that has its own life outside of individual inventors, manufacturers or commercial interests. Simondon sees the individuation of technical objects following three orders related to three historical phases of human individuation—the premodern agrarian phase marked by artisanal manual tools, the modern industrial phase marked by thermodynamic engine driven machines and the postmodern and postindustrial phase marked by information processing.

If the human relationship with technology during the preindustrial phase was one which involved physical skill and implied a harmonious relationship between human, technical object and nature, the modern industrial phase has been one of increasing alienation between these three. Modern industrial machines have an enormous footprint, consume huge quantities of natural resources, disturbing the earth's ecological balance and depleting her reserves; mass produce enormous quantities of finished products, for which large industries of persuasion must be formed so as to manufacture desire for consumption; and excrete tremendous quantities of waste which must be disposed, poisoning the earth and the habitats of the underprivileged. To produce, operate and maintain these machines, human beings must subject their bodies to the movements, speeds, temperatures, pressures and other unnatural properties of large-scale thermodynamic machines and their ensembles. Simondon sees these conditions of human–machine interaction as an unpleasant phase in their mutual transduction, resulting in the alienation that humanists have attributed to the machine. However, even in the 1960s, Simondon foresaw the overpassing of this phase and its replacement by a new postindustrial phase of information processing, where the individuation of microprocessor-based information processing computational devices would tend towards networks of collective ensembles accessible through terminals and offering an ubiquitous milieu for planetary transindividuation. Indeed, like McLuhan, Simondon was seeing these visions of the future in the 1960s. Freed from subjection to industrial complexes, human beings would be able to interact creatively with nature and world through a mostly invisible layer of the being of technology individuated collectively in relation to human transindividuation.

Utopia or Dystopia?

Is this the inexorable future utopia towards which global humanity is moving today with its p2p smart phones and other networked digital prosthetics and bionics? Is the experience of 'being conscious of the whole world at the same time', announced

by the Mother as the distant goal of an arduous spiritual development just a form of cheap purchase universally bestowed upon humanity through the transindividuation of technology? Was Heidegger's ontological subjection by the new mode of Being's disclosure through technology, seen as modernity's episteme, but a mistaken identification of a passing phase for the noons of the future?

Simondon's brilliance has been acknowledged by many major thinkers of his and our times. One of his greatest contemporaries, who reviewed his thesis with unreserved praise and borrowed heavily from him in his own work, was Gilles Deleuze, and one of the great philosophers of our times, who continues to be indebted to him and thinks using his concepts of psychic and collective individuation, is Bernard Stiegler. Writing in the 1980s, Deleuze, in his Postscript to Societies of Control, warns about the mutations of capital from the industrial to the postindustrial age. If the ubiquitous presence of the machine extended an era of biopolitics related to the disciplining of human bodies in keeping with the needs of industry in the age of thermodynamic machines, our age of information processing sees a new kind of subjection. The miniaturization and invisibility of the machine hides its versatile and flexible control over human lives. The enhanced flexibility of work and movement, increased plethora of choices and extended reach over time and space present a commodified freedom and happiness, within which capital controls human lives, denying true creative engagement with preindividual being, which would make possible new individuations. Similarly, in our own times, Bernard Stigler has warned about real-time corporate and governmental profiling and targeting, fragmentation of subjectivity through chronic technologies of attention capture and the remaking of public memories through mnemo-technics.

What Simondon saw as the promise of a new utopian phase of human–machine transduction/transindividuation leading to an individual and collective cosmogenesis is not a given that will arise automatically through the press of new buttons. Simondon was not oblivious to these dangers. The transindividuation of humans and their co-individuation with machines could move, in his opinion, towards the fulfilment of its positive possibilities, only following the break from conditioning, the habitual structures of the 'inter-individual' and the emergence of individuating personal agency. In asserting this, Simondon aligns himself with Nietzsche, drawing on the latter's rendition of Zarathustra, the prophet who extricates himself from his entanglement with the crowd that has embraced mediocrity, devoid of aspiration, through a period of isolation and silence. This asceticism and the related parable of the funambulist lays the ground for the conditions of subjective agency towards transindividuation, a preparation not dissimilar from that enunciated by Sri Aurobindo and the Mother, drawing on the traditions of yoga for their own purposes of planetary unity.[11] Moreover, as articulated by the prophet at the end of the parable, what is further required is the need for a milieu of like individuals available and ready for transindividuation, collective conditions requiring a wresting of the

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[11]See the discussion of Nietzsche's Zarathustra and the funambulist in Richard Carlson's essay in this volume.

individual from the ubiquitous co-optation of global capital, analogous to the call given by Heidegger in his analysis of modern technology.

Looking at the yoga of Sri Aurobindo, the arduous subjective disciplines necessary for 'the triple transformation' also need a milieu dedicated to inner development for its habitus, something less and less possible in our present age globally networked for corporate interests of production, seduction and consumption. Yet, to speak about an expansion or integration of consciousness without recourse to an engagement with technology is a romanticism that wills its self-exile and eventual obsolescence in the face of a globalizing technical milieu. New experimental collective environments are required for the development of subjective technologies (technics) freed from conditioning and rendered creative to co-individuate alongside distributed ensembles of information processing. Simondon's techno-aesthetic milieu and Sri Aurobindo's expansion of consciousness through yoga need creative engagement with a world culture made available through new forms of McLuhan's 'global village' dedicated to perpetual cosmogenetic individuation. In this regard, it may be noted that McLuhan's play with the quasi-agency of media—'the media is the message/massage'—opens the bivalent potentia of technology theorized by Simondon. As the 'massage', technological media make us over, subjecting us to the technocapitalist Empire, but as the 'message', technical objects are themselves the content mediating transindividuation. For this, enhanced subjective disciplines of psychisization and cosmisization as per Sri Aurobindo, or psychic and collective individuation as per Simondon, moving towards the self-making of new subjects 'conscious of the whole world at the same time' must arise as the subjective correlate of co-individuating technical ensembles under experimental conditions of the collective life. This is the promise of the future but it needs relational posthuman agency and a subjectivity that can measure itself against the objective materialization of the cosmos in the form of global technology.

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Erratum to: Critical Posthumanism and Planetary Futures

Debashish Banerji and Makarand R. Paranjape (Eds.)

Erratum to:
D. Banerji and M.R. Paranjape (eds.), *Critical Posthumanism and Planetary Futures*,
DOI 10.1007/978-81-322-3637-5

The original version of the book was inadvertently published without the biography of "Francesca Ferrando" in FM "List of Contributors". The book has been updated with the change.

The updated original online version for this book can be found at DOI 10.1007/978-81-322-3637-5

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