

FORUM

University of Edinburgh
Postgraduate Journal of Culture and the Arts
Issue 16 | Spring 2013

Title	We <i>Have</i> Built You: On the Nature of Artificial Intelligence in <i>Blade Runner</i> and <i>Babylon Babies</i> .
Author	April Durham
Publication	FORUM: University of Edinburgh Postgraduate Journal of Culture and the Arts
Issue Number	16
Issue Date	Spring 2013
Publication Date	05/06/2013
Editors	Laura Chapot & Lizzie Stewart

FORUM claims non-exclusive rights to reproduce this article electronically (in full or in part) and to publish this work in any such media current or later developed. The author retains all rights, including the right to be identified as the author wherever and whenever this article is published, and the right to use all or part of the article and abstracts, with or without revision or modification in compilations or other publications. Any latter publication shall recognise *FORUM* as the original publisher.

We Have Built You: On the Nature of Artificial Intelligence in *Blade Runner* and *Babylon Babies*.

April Durham

University of California, Riverside

While “Artificial Intelligence” describes cognition occurring on the part of machines, over the last several decades representations in television, film, and literature complicate what might comprise “the natural” relative to intelligence. This article explores what is at stake, besides masterful control, in narratives of intelligence as mediated and technical.

The tensions and fears around engineered intelligence, informed by a particular idea of what it is to be human and natural, have been explored widely in science fiction literature and drama. While the phrase “Artificial Intelligence” (AI) is applied to cognition occurring on the part of machines, over the last several decades representations in TV, film, and literature complicate what might comprise “the natural” when it comes to intelligence and the bearing this has on the ontological relationship between “natural” humans and “constructed” tools. This article explores what is at stake, besides masterful triumph over technology, when considering human intelligence as technically mediated; the intention is to open possibilities for thinking the un-natural as a contemporary condition that ethically refashions the de-centred, de-naturalised human subject and its relations. I am not interested in reclaiming the rights of artificially intelligent, constructed beings who are opposed to “natural” humans; instead I intend to work across the notions of natural and artificial, complicate these constructions, and thereby make legible ontologies of relation apparent in media expressions of intelligence. The project aims to unfold narratives that shift privileged and singular subjective epistemologies toward a condition of “in the presence of,”¹ making polemics about natural and artificial, human and machine, self and other “as difficult as possible” (Stengers 998).

Much of popular culture seems to reflect the fear that technology and its intelligent actants (i.e., household robots, AI adoptees, or autonomous robotic weapons) will profoundly undermine the subjectivity so carefully ascribed to biological humans, which, in this age, has already been established as a fraught construction. By the last page or the closing credits, the goal of the film or novel is usually to re-establish mastery on the human “side” of the equation. Even so, there are some instances where the subtle representations, skewed iterations of key symbolic elements, and the language used to build the narrative render more complex understandings of AIs as viable “Someones” with psychological drives, ethics, and sentience that complicate conceptions of a separate, natural, and privileged humanity. Re-considering the 1982 film *Blade Runner*, thoroughly analysed for decades in terms of postmodernism, alongside the more recent French science fiction novel *Babylon Babies* (2005), reveals the potentials in a commingled natural/artificial relation, shifting narratives of artificial and natural intelligence into less oppositional, more cooperative spaces. The indeterminate boundaries

between the natural and artificial in these works engage a poetic relational ethics, complicating the histories of technical mediation toward a reworked concept of the “natural.”

In *Technics and Time, Volume I*, Bernard Stiegler argues that what we understand as “human” has always found a co-constituting companion in the tools deployed to evolve that humanness. He asks “‘who’ or ‘what’ does the inventing? ‘Who’ or ‘what’ is invented?” to emphasise that invention as action forges an inexorable relation between tool and user, the inventor and the invented; this reveals “...the ambiguity of the subject, and in the same move the ambiguity of the object, ... [and asks] what if the ‘who’ were the technical? And the ‘what’ the human?” (134). While he is concerned about the way in which technology creates a situation of highly industrialised memory, Stiegler nevertheless makes clear that the co-evolution of human and tool means history cannot be thought of as merely natural (material) or simply technological (discursive), with the human at its centre. The histories that emerge from co-constituent action/evolution come from technical, mediated memories. For Stiegler, this is deeply problematic, but if we begin to think memory as occurring in what Henri Bergson described as elastic pulses of time that ebb and flow with simultaneous overlap rather than shooting like an arrow, then what Alison Landsberg terms “prosthetic memory”, or memory of narratives not experienced first-hand, has the potential to reflect a live “intra-acting,” a movement between thought and action (Barad). Subjectivity can then be understood as emergent and even “distributed” in a network of complex layering, where surging processes among the fabricated and the birthed, the material and the discursive forge inter-relations.

“Intra-acting” is a term which physicist and feminist theorist Karen Barad coins in *Meeting the Universe Halfway* (2007), to describe a complex, co-constituting, active onto-epistemology among humans and non-humans, experimenters and their labs, substances and research. Knowing and being are joint ventures whereby material bodies and discourses arise together, making one another through their relational commingling. She calls this “being-doing,” where bodies and the subjectivities ascribed to them are neither entirely natural nor completely constructed, but “part of the world in its open-ended becoming” (“Posthuman” 139). Assuming no pre-existing, atomic substance or ideality, Barad replaces “things” assumed to have fixed boundaries, with phenomena that relate in specific circumstances; from this situated intra-action, *situated* being arises. This ontological orientation assumes no centrality or essence that pre-exists agency or liveness. Rather, it insists upon a process of ongoing emergence, occurring on both macro and micro (quantum) levels, and implicating the machine and the biological, the human and the robotic, in a co-creating dynamism. Discriminating strictly among carbon atoms comprising human bodily agency and silicon atoms comprising computational agency becomes complicated in intra-acting as partitioning intelligence, agency, and legitimacy relative to natural-ness is confounded by the co-constituting process.

In situated intra-activity, human bodies, animal bodies, viral bodies, machinic bodies, and informational bodies share causal materiality within and beside their discursive regimes: their histories render static notions of natural and artificial ineffective in that these categories fail to function in paradigms of co-constituting, intra-acting ontology. For Barad, “all bodies, not merely

'human' bodies, come to matter through the world's iterative intra-activity" (141), and the poetics of this relational co-constitution, the metre of iteration between what is made/used and the maker/user, become part of a larger fugue of mangled histories, occurring among tools and humans, organisms and technologies, the natural and the not-natural, in the act of making their own being in multiple and awkward rhythmic exchanges. Thinking bodies and tools, machines and flesh in a co-mingled mash-up, a remixed complication of materiality, we can make space for cognition and memory, narratives and ideas, flesh and circuit to share moving histories of naturally-artificial constructed being.

In the extensive literature analysing Ridley Scott's 1982 techno-dystopian film, *Blade Runner*, the general consensus is that the film contends with the destructive effects of imperial greed, science run amok, and the "pastiche and schizophrenia" of the "postmodern condition" (Bruno 62). For example, Giuliana Bruno suggests that the film considers "questions of identity and history, of the role of simulacra and simulation, and of the relationship between postmodernism, architecture, and post-industrialism" in terms of a jumbled fragmentation of cultures, histories, and spaces (62). Elsewhere, analyses include the android as a mirror of the human, the politics of industrialised economies, and the film's mixture of "science fiction, detective thriller and horror [with] little regard for the ultimate autonomy of any one genre...to capture the spectator in intertextual display" (Boozer 212). As many of these essays were published within ten years of the film's initial release, it can be expected that they address issues pertinent to cultural concerns of the last decades of the 20th century, including the disintegration of the telos of progress and the goals of Modernism. Re-reading this film through the lens of early 21st century theories of intra-active ontologies, formed in dynamic correspondence, offers a way to rethink some of the major considerations of the film: empathy as a strictly human capacity; "eyes" as gateways to "souls" that reflect profound experiences of time as both linear and non-linear; and the difficulty of maintaining strict categories of the artificial and the natural, especially in terms of intelligence.

Blade Runner establishes a contrast between the manufactured "Replicant," or biorobotic being, Roy Batty (Rutger Hauer) and the presumably human Rick Deckard (Harrison Ford) early on in the film by positing them as manufactured prey and human executioner, respectively. This opposition is quickly problematised in that the humans remaining on earth after the industrial rape of the planet are less than stellar examples of the species: diseased, perpetually "foreign," immoral, lacking compassion, and compelled by mere survival, they suffer dilemmas similar to those plaguing the ill-fated, beautiful androids they seek to control or eradicate. Furthermore, re-issues of the film in 1992 and 2007 include sequences that point more clearly to Scott's original conception of Deckard an advanced version of Replicant, who like Rachael, a Replicant programmed to believe she is human, has been implanted with memories and holds the capacity to evolve "human" qualities like trust, empathy, and love.

Batty, a Nexus 6, hyper-intelligent slave-robot, is described in the opening intertitles as "advanced robot evolution...virtually identical to humans...superior in strength and agility and at least equal in intelligence to their genetic engineers." He is both built – a tool for high tech warfare – and

evolved – vital and capable of autonomy. The intertitles provide a textual frame in which the exchange between technological progress and biological evolution exceeds human control. The corporate dominance of not only the home planet, but also of the inter-galactic colonies, has resulted in yet another colonial enslavement of a group, “virtually identical to humans” (a phrase comparable to the language used in the British, Dutch, or French imperial contexts to describe the inhabitants of areas colonised). This drive toward enslavement and extermination of the foreign (or technological) “Other” is compounded in the film’s rendering of an over-determined commitment to progress, where the “natural” embodiment of the enslaved is entirely manufactured by the enslavers, who strive to perfect the “product.” In other words, these made-for-slavery über-humans are designed to be genetically driven organisms with the capacity to evolve physically and engender emotionally charged memories, “more human than human” as Tyrell declares. Ironically though, this drive toward perfection is intended to make them more controllable, through their vulnerable ability to experience feeling as memory.

In a 1996 article comparing *Blade Runner* and cyber punk novels published around the same time, W.A. Senior states the central questions of both the film and the novels to be “...what does it mean to be human? What are the boundaries of humanity? How human or humane are humans?” (1). In *Blade Runner* these questions are mediated through technical devices, such as the Voight-Kampff machine that measures certain physical responses, calculated as standardised indicators of empathy. An empathy meter which has the potential to mis-read, to mis-measure man, could result, as Rachael indicates in her initial conversation with Deckard, in the “retirement” of a non-Replicant (or natural human). The failure of machines on their own to query the potential for measuring emotional capacity through banal questions about calf-skin accessories and desert tortoises, seems certain. When the machine-human hybrids, especially the Nexus 7 Replicants, which include Rachael and presumably Deckard, begin to measure empathy through their receptivity to the experiences of others, then the failure of machine or human operating as separate, autonomous empathy-measuring entities becomes complicated.

As stated before, Deckard’s own status as a human is ambiguous: he dreams of the mythical beast (which Gaff later leaves as an origami reminder that he knows Deckard might be a Replicant); like the Replicants, Deckard is more competent at his job than the other blade runner, Dave Holden; and, unlike the humans Bryant, Gaff and even Tyrell, he is capable of perceiving the dilemma of the Replicants through empathy. It is also possible that Tyrell’s insistence, via Bryant, that Deckard “retire” the rogue group, indicates an experiment on the part of the maker to test the limitations of his invention. Interfacing through the Voight-Kampff meter, Deckard perceives the Replicant “Other” from a distance but he *does* see her; then when he is placed on more intimate terms with the “false” human, such as when he listens to Batty’s last words or when he has sex with Rachael, this interface is revealed as a form of situated intra-acting, where Deckard becomes more aware of how his own sense of humanity, affected through inculturation, has failed him and the manufactured desires, longing, fears, and hopes of the Replicants reveal an ambiguous potential of the human in the presumably non-human.

Deckard's indefinite status as human complicates a strict division between human and machine that unfolds in an even more revelatory kind of vision than that provided by the Voight-Kampff meter. While at first, Deckard seems swallowed up by the metaphorical urban night and constant drizzle that is both the *mise-en-scène* of the film and the condition of life on earth, he ultimately "sees" Batty's vision of the beauty of exploding attack ships "off the shoulder of Orion... C-beams glitter[ing] in the dark near the Tanhauser gate." Even without the original voiceover with Ford explaining how much Batty loved life, "anybody's life. My life...", we understand that the very impulses driving Deckard to cling to the roof edge and then to listen closely in this scene with Batty are the same that motivate the Replicants. Batty, transfigured to such a degree in his final scene that he is rendered a figurative soul and released as he dies in the form of the dove, is clearly capable of understanding the same emotional and physical experiences as Deckard, whether human or Replicant, and machine and man constitute a new angle on empathic "sight." Batty's and Deckard's short but profound intra-action is comprised of conversation, assistance, and granting witness to a life passing into death, be that life human *qua* Replicants or *visa-versa*. Such intra-action within the film demonstrates the capacities that a co-mingled becoming-empathic, a passing through machinic functioning into a richer and more complicated awareness, renders in machines that may be more human than even the human characters in the film.

Seeing "soul-full-ness" (a capacity for having a soul) through complex figures of the eye occurs throughout the film, revealing the less-than-visible. In the opening sequence of the film, a perspectival travelling long shot slowly unfolds a dark cityscape, where the factories that manufacture the current version of reality belch fire into the night. This geography is then captured in an enormous eye overlooking the city, surveilling and containing. In the commentary on the 2007 release, Scott declares this eye to be that of Big Brother, and Judith Kerman indicates that "in this society seeing is the property of power" (20). Taking in the entirely un-natural landscape in its pale blue form, the eye can be read as a dominant gaze, but it also introduces the uneasy tension between the sight afforded to the natural as compared to the manufactured eye that sees to the heart of the thinking, feeling being. On screen for a mere four seconds in two cuts, the giant eye both reflects the "seeing" apparatus of the camera and situates the revelatory locus of commingled human-technology: without Scott's guidance, we imagine that this is Batty's eye, which at once takes in and constitutes its environment, colluding with the eye of the camera operating in roughly the same capacity. Quickly narrowing its focus on a pyramidal structure, the newly complicated eye of the camera swoops in to the Tyrell Corporation, the place where intelligence is consumed, manufactured, and controlled in the film, further narrowing its focus to a dim interior where the Voight-Kampff machine is being used to measure empathy as revealed in the eye of Leon.

Holden, the blade runner who measures the first Replicant, Leon, with the Voight-Kampff, is smoking as the scene begins. While Leon is clearly agitated by the uncertainty of what is being measured (as he "already had an IQ test this year"), the visual "screen" the smoke imposes between the blade runner and his subject keeps Holden from assessing emotional responses outside predetermined measurement criteria. Furthermore, Leon's request for specifics about the test

questions reflects an emotional desire for existential details that the human examiner deems irrelevant. The cognitive disconnection of the human observer from the Voight-Kampff machine tool he deploys renders him sightless as demonstrated by his smoky vision. The clearly distressed response which Leon has to the suggestion he would fail to help a tortoise baking in the desert sun does not register on the Voight-Kampff nor in the examiner's smoke filled sights; the hierarchies and clear separations between machine and man, experiment and material observation provoke only anxiety and blindness.

Later, Deckard meets Tyrell and Rachael at the Tyrell Headquarters where he is to test what Tyrell asserts to be a "person." Tyrell wears large, tinted glasses, which obscure his eyes and mediate his vision. He declines to be the "positive" test control, offering Rachael instead. Tyrell assumes Deckard knows what she is, but Tyrell's shielded eyes render him blind to the complexities of relational ontologies growing beyond his capacity to control. As Deckard administers the Voight-Kampff to Rachael, she asks if she can smoke. Deckard agrees, remarking, "it won't affect the test." While this might be true in purely mechanical terms, the smoke in fact obscures our view of her face and emphasises the strange metallic reflection in her irises not visible in the Voight-Kampff images of her eyes, implicating us with Tyrell in our assumptions about the capacities of the purportedly non-human. Extending the ambiguity concerning what can possibly be human and what "codes" as machinic (metallic eyes, stylised gestures), the film visually complicates its overt narrative of human versus machine.

The external gazing in the film reflects on capacities for internal reflection on the part of the Replicants. In "Androids as a Device for Reflection on Personhood," Marilyn Gwaltney asserts the potential for subjectivity in the Replicants by reading them as "selves." Gwaltney states "...a self is an individual consciousness that is aware of itself as being a whole... it is reflexive consciousness: consciousness conscious of itself" (35). Rachael demonstrates quickly that she has this capacity for reflection when she asks Deckard if he has ever retired a human by mistake; her commentary and expansive remarks during the Voight-Kampff test also reveal her complex cognitive and emotional aptitude. When she finally discovers she is a Replicant, highly evolved and with a relationship to time that allows for a deep consideration of her self as a self, her response is one which any human might experience when finding she is something other than she had always believed herself to be (e.g., adopted or illegitimate): denial, panic, despair. Regardless of their visibility through the measurements of the Voight-Kampff device, the expressions of sorrow, loss, fear, anger, passion, humour, and rapture expressed in the eyes and in the actions of the Replicants speak to their clearly human capacity to experience, suffer, and express emotions, including empathy.

While one of the problems in the Nexus 6, which Tyrell seeks to rectify in the seventh version, is emotional immaturity, the Replicants' ability to "see" with their manufactured eyes involves building emotional competency through experience and so also developing the "process of becoming person..." (Gwaltney 36). For some less intelligently designed models like Leon, this amounts to squirrelling away random photos that he can use to review a past only marginally his. But we might

say the same about Deckard, whose own dissociated photographic record is displayed on his piano. The photographic gazing, like the cinematic vision offered by the film, is layered and complicated by the quest for clear insight in a world of occlusion and short-sightedness. These still photographs inside the moving images of the film itself speak to us as viewers, consumers of images or mediated memory in the cinematic context, but they also constitute the manufacture of memory for those collecting them. The mechanically reproduced object intra-acts with the capacity in the Replicant to evoke situated, powerful, and perfectly valid emotional experiences.

Thirty years later, the narratives of machine-human interaction and evolution are even less clearly demarcated. In the 2005 French science fiction novel, *Babylon Babies* by Maurice Dantec, the resistance to a condition of fragmentation and “schizophrenic temporality” that Jameson cites in his writing on postmodernism, and which many critics attribute to *Blade Runner*, is long gone. Technology has become completely naturalised to the extent that the difference between waging war in the field and waging war in a computer simulation, in terms of outcomes, is negligible. The punk sensibility of fast moving cavalier but pathetic violence, drug consumption as a matter of course, and hurtling mash ups of French, Francophone, and American techno-slang which informs the narrative trajectory and comprises the literary style of the novel allows Dantec to ride the tidal wave of human technological mediation along with his insane characters, like a crazed and hysterical surfer. In his vision of the future-present, the anarchic chaos of late capitalism joined with technological progress gone mad is not a threat but a political and quotidian reality. However problematic his approach might be in terms of careful attention to political complexities, historical accuracy, and issues of mental illness, Dantec manages to navigate the crashing moves of transformation destroying the natural and technological divide with hope and possibility.

The novel is set in an alternate present where the Chinese and various groups of Central Asian Turks battle out ancient territorial rivalries, and Russian Mafioso control both the flow of capital and the balance of state power. Networks of political, scientific, and religious concerns interweave with trajectories of the psychotic “natural” and the human-like artificial in a bioinformatic conjoining: the technologically mediated body becomes a catalyst for unexpected human evolution and neither biological nor machine forms dominate. The novel is long (719 pages in the original French) and complex, developing several narrative trajectories through a series of thorny characters. For this analysis, I will focus only on the evolutionary relationship between Marie Zorn and Joe-Jane to discuss the way in which intelligence evolves in terms of the bioinformatic.

Marie is a homeless schizophrenic used by a group of genetic engineers as part of an experiment to control the expanded consciousness that the “breakdown of the relationship between signifiers” (Bruno 62) operating in her mental condition makes possible. As part of her therapy, she learns a kind of lucid dreaming that channels the conflicting narratives manifesting as multiple personalities in her consciousness toward something cohesive, if not entirely coherent. Rather than master the “disease” toward a normative notion of health, she learns to coordinate her intense

perceptions and their multiple symbolic manifestations, to build complex, networked, biological “databases” of knowledge.

The artificial intelligence, Joe-Jane, is an extraordinary, voracious, desiring network, operating on principles not unlike those governing Marie’s “sick” mind. While Joe-Jane is ostensibly genderless, she is an acquisitive brain-system that takes on the form of a cyber-Gaia with growing access to and the ability to synthesise all knowledge. When Marie and Joe-Jane are interfaced, at some point before the story begins, Joe-Jane is able to comprehend the intense schizoid character of Marie’s mind and incorporate its structure into her own cognitive algorithms. At the same time Marie’s interaction with the multiple identities schizophrenia affords her is ordered but not controlled by Joe-Jane’s computing mind. The two forge a symbiotic relation whereby the digital, silicon intelligence of the machine and carbon intelligence of the organism commingle to such an extent that both systems are forced into a new type of cognition that is no longer limited to merely the natural or the unnatural histories carried by the bodies they occupy.

Dantec makes a valiant if flawed effort to overtly engage every philosophical trajectory from Nietzsche onward. For his figure of the schizo-machine, he draws heavily on the theories offered by Deleuze and Guattari in *Anti-Oedipus* (1977) and *A Thousand Plateaus* (1987). While the erratic manner of his attention to these texts reflects a self-consciously “punk” style that forgoes precision to evoke something radical, the content of his novel points to the possibilities emerging from a refusal to pathologise various non-conforming mentalities. He entertains a fearless curiosity about how the territories of human-ness and the “natural” are reworked in an intimate and inexorable relation to machines. Furthermore, he does not limit his transformation only to the human actors, but understands that the machines evolve materially and intellectually as well: their material bodies, their agentic capacities, and by extension, who and what they are are altered along with those of their biological interfaces.

Deleuze and Guattari use the idea of “schizoanalysis” to rethink the normalising, hierarchical tendencies in psychoanalysis and posit a subjectivity of complexity, where “the self and the non-self, outside and inside, no longer have any meaning whatsoever” (*Anti-Oedipus* 2). While the theories of psychoanalysis strive toward a resolution of trauma and reconciliation with the symbolic, schizoanalysis offers a way to accommodate the entire complex range of experience-cognition without simplification or containment. The “schizophrenic out for a walk” rejects the rectifying procedures of the analytic couch and begins to understand himself as part of the “celestial machines, the stars or rainbows in the sky, alpine machines—all of them connected to his body;” the difference between the individual and the entire scope of social, environmental, and mental occurrences is understood as “a process that produces the one within the other and couples the machines together” (*Anti-Oedipus* 9).

When Marie and the team assigned to protect her and the top-secret cargo inside her body (which we finally learn is a set of cloned twins who have entirely assimilated the schizo-brain and the AI-brain to become an all-knowing bioinformatic system) take a trip to a lake outside Montreal, Marie begins with an experience of dreaming the vast consciousness of the world and ends in a kind of fugue

state from which she does not return to “normal” psychic stability. “Her mind-cosmos knew everything about the mysteries of the universe, for it followed its contours, lost itself in its infinitudes, in its slightest fold[s]” (“Son cerveau-cosmos savait tous des mystères de l’univers car il en épousait les contours, se perdait dans ses infinitudes, dans le moindre de ses replis”; Wedell 266; Dantec 363). At the same time, Joe-Jane, still connected to Marie in a sort of wireless psychic-machine network, undergoes a similar kind of transformation as she recognises the change in Marie:

For now, she was using a monochrome hybrid of Valentina Terechkova...and of Valerie Solanas... It was useless to look for any logical motivation, a semantics for human use. It was just the transitory shape of a certain image of her personality; in a few minutes, her metamorphosis would lead her to resemble Mother Teresa, Joseph Stalin, or Woody Allen, or more harrowing still, a mix of the three. (Wedell 252)

Elle usait pour l’heure d’un hybride monochrome de Valentina Terechkova...et de Valérie Solanas...Il était inutile...d’y chercher une motivation logique, une sémantique à l’usage des humains, c’était juste la forme transitoire d’une certaine image de sa personnalité, dans quelques minutes sa métamorphose la conduirait peut-être à ressembler à mère Teresa, Joseph Staline, ou Woody Allen, ou, plus angoissant encore, à un mélange des trois. (Dantec 343-344)

While Toorop, the war-machine in charge of her safety, assumes Marie is having a psychotic breakdown in which he is included by proxy, the poetic language of the novel seems to suggest instead the question posed in *Anti-Oedipus*: “why are [desires] repressed? To what end? Is it really necessary or desirable to submit to such repression?” (3).² For Deleuze and Guattari, desire is creative, a force that impels change rather than describes a situation of lack. The conditions of evolution are not exclusive to the biological and involve an extension of the singular self into the complex mechanics of the multiple, which Deleuze and Guattari characterise as non-pathological schizophrenia. Transformations of this sort involve ongoing and intense connections between the human and the robotic, include desires to operate beyond what is known or accepted, and are impossible to contain or master.

In his book on “hieroglyphic time,” media scholar James Tobias proposes that biology turned into information can exceed its intended productivity through excessively intense engagement with an algorithmic process. Tobias describes DNA sequences made into music by genomic scientists who “convert genome-encoded protein sequences into musical notes in order to hear auditory protein patterns” (218). The scientists’ goal was pedagogic: to make genetic information more comprehensible to children. Still, there is an excess of “rhythm” in Tobias’ theory that “doubles” time, repeated exponentially as the biological and the informational commingle, and time strays far from the linear, becoming complex and folded. The creative power of this excessive rhythmic movement, which Tobias likens to the “negentropic” energy of thermo-dynamic processes, transforms stray, uncontrollable “data” and begins to act and produce beyond the oppositions of useful/non-useful or human/non-

human. This process makes room for a different relation to evolutionary histories as these rogue data flows, which are biology and information forming a new character, the “bioinformatic,” “entirely renovate...immanence in the wealth of new possibilities engendered by the dissemination” of natural bodies and machinic functions (45). Tobias’s assertions reveal the potency of unanticipated effects emerging from the waste matter of “productive” data, which could include noise, madness, and faulty machine-body interfaces. In some ways, because they are ignored by systems of industrial or social productivity, these bioinformatic flows exist in a free relation to every other series of similar flows, and thus can directly produce the unexpected, the unimaginable.

Marie and Joe-Jane demonstrate Tobias’ radical proposal in intra-active and fully creative becoming, at first intended for political gain, but far exceeding the conceptions of their powerful handlers. Their interface results in the ultimate merging of the merely human and the statically artificial, generating an ongoing process of manifesting the unimagined. The mental suffering that Marie experiences as a child is re-wired *vis-à-vis* her bioinformatic transformation in her link with Joe-Jane, into something that creates open-ended onto-epistemologies. “She was no longer one, but a multitude...a wonderful synthesis of all that she’d ever been, all that she’d ever learned” (“Elle n’était plus une, mais une multitude...une merveilleuse synthèse de tout ce qu’elle avait jamais été, de tout ce qu’elle avait appris”; Wedell 267; Dantec 367-368). Not to privilege the human, Joe-Jane’s interconnectedness with Marie allows her to continually expand her own algorithmic consciousness, which has transmuted into something beyond mere “code;” no longer individual biology or machine, they comprise a complex, relational, poetic, networked multitude.

While the simple category of “humanity,” as it has been understood by centuries of post-Enlightenment thought, is long gone, the intermingling of the natural and the artificial in a profound and complex way affords an expansion of what it means to participate in co-constituting, agential intra-action extending beyond simple designations of “human” and “natural.” Far from mourning the loss of naturalness, it is possible in these texts to experience transformative moments in the violent disruptions that occur when static concepts of natural and artificial intelligences collide in a complex process of emergent action. When subjectivity and its ontological frames are activated in this collision they begin to decay immediately as they materialise, constantly refiguring what it means to be, in a multilectic, rather than dialectic, hybrid of natural and artificial. The pulse of this transformational movement, however violent, is a rhythm of creativity, of engaging the possibility of becoming that is not limited by the boundaries of individuality, human-ness, or even vitality as a function of beating hearts and fluttering lungs.

Notes

1. In “The Cosmopolitical Proposal” (2005) Isabelle Stengers proposes epistemologies that are forever mindful of the need to move slowly through structures of thought, that is the ways in which knowledge

is produced, in order to “arouse a slightly different awareness of the problems and situations mobilizing us” (994). Her concern is with assumptions informing the assertion of knowledge, especially in the sciences, where what Latour has called “matters of fact” eliminate the many other aspects contributing to a specific situation. Regarding my use of her text here, Stengers emphasizes an “idiot’s” approach to apperception where consensus that regards mostly the loudest, most authoritarian, or most popular voices are the only ones heard and bafflement ceases to be part of the thinking process. She proposes instead communities of knowledge that evolve out of “not knowing” rather than authority and which use imagination to conceive what might be rather than adhering to what is accepted as “truth.” The phrase “in the presence of” refers to a way of proceeding upon a situation where what is assumed as “fact” to society, a group of thinkers, or an omniscient narrator (like foreignness, otherness, non-normativity) is not clear or legitimate to the “idiot” or the one who seeks to slowly think through a topic without pre-existing assumptions (998).

2. The war-machine is another figuration in *1000 Plateaus*, which for Deleuze and Guattari, acts to constantly resist the power of the state to contain actions; it challenges static power by continually reinventing itself and using the knowledge from its actions to creatively fracture the primacy of accepted structures. While Toorop as war machine merits its own detailed consideration, which is beyond the scope of this article, it is important to indicate that without Toorop’s ability disrupt the static power systems of state, law, and religion, it would not be possible for Marie and Joe-Jane to emerge as the radical consciousness proposed in the novel.

Works Cited

- Barad, Karen. "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter." *Material Feminisms*. Eds. Stacy Alaimo and Susan Hekman. Bloomington and Indianapolis: University of Indiana Press, 2008. 120-154. Print.
- Blade Runner*. Dir. Ridley Scott. Perf. Harrison Ford, Rutger Hauer, and Sean Young. 1982. Warner Bros., 2007. DVD.
- Boozar, Jack. "Crashing the Gates of Insight: *Blade Runner*." Kerman. 212-228.
- Bruno, Giuliana. "Ramble City: Postmodernism and *Blade Runner*." *October* 41 (1987): 61-74. Print.
- Dantec, Maurice. *Babylon Babies*. Paris: éditions Gallimard, 1999. Print.
- Deleuze, Gilles and Félix Guattari. *Anti-Oedipus: Capitalism and Schizophrenia*. Tr. Robert Hurley, Mark Seem, and Helen R. Lane. 1977. New York: Penguin Books, 2009. Print.
- . *A Thousand Plateaus*. Tr. Brian Massumi. Minneapolis, MN: University of Minnesota Press, 1987. Print.
- Gwaltney, Marilyn. "Androids as a Device for Reflection on Personhood." Kerman. 32-39.
- Jameson, Frederic. "Postmodernism, or the Cultural Logic of Late Capitalism." *New Left Review* 146 (1984): 53-92. Print.
- Kerman, Judith B. *Retrofitting Blade Runner: Issues in Ridley Scott's Blade Runner and Philip K. Dick's Do Androids Dream of Electric Sheep?*. Bowling Green, OH: Bowling Green State University Popular Press, 1991. Print.
- Kerman, Judith B. ed. "Technology and Politics in the *Blade Runner* Dystopia." Kerman. 16-24.
- Landsberg, Alison. "Prosthetic Memory: *Total Recall* and *Blade Runner*." *Body and Society* 1 (1995): 175-189. Print.
- Senior, W.A. "*Blade Runner* and Cyberpunk Visions of Humanity." *Film Criticism* 21.1 (1996): 1-12. Print.
- Stengers, Isabelle. "The Cosmopolitical Proposal." *Making Things Public: Atmospheres of Democracy*. Eds. Bruno Latour and Peter Weibel. Cambridge, MA: MIT Press, 2005. 994-1003. Print.
- Stiegler, Bernard. *Technics and Time*. Trans. Richard Beardsworth and George Collins. Vol. 1. *The Fault of Epimetheus*. Stanford: Stanford University Press, 1994. Print.
- Tobias, James. *Sync: Stylistics of Hieroglyphic Time*. Philadelphia: Temple University Press, 2010. Print.

Wedell, Noura, trans. *Babylon Babies*. By Maurice Dantec. New York: Semiotext(e), 2005. Print.

Author Biography

April Durham is a PhD candidate in the Comparative Literature Department at the University of California, Riverside. Her dissertation investigates complex subjectivities emerging in creative collaborative practices, relative to labour, language, embodiment, and violence. She holds an MFA and has exhibited widely in the US, Europe, and Australia.