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To the Dogs: Companion speciesism and the new feminist materialism

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Introduction: Matter Matters

Feminist productions in the fields of literary, cultural and social studies are almost exclusively – though for good reasons – informed by a radical constructivism. Drawing on discourse analysis and semiotics, such work relies predominantly on gender as a category of analysis in order to examine the social, cultural and psychic construction of subjectivity, while neglecting questions of biological sex. The general refusal of scholars from those disciplines to engage with the materiality of bodies, with their physiological, biochemical or microbiological details, forms and formations, is indicative of an anti-essentialist stance which is very understandable from a historico-political perspective: When politicians and scientists have for centuries recurred to “natural” (because biological) differences to explain and legitimate social discrimination, oppression and inequality between the sexes and between human beings of different classes and ethnicities, it was more than necessary to counter, if not downright deny, biologicistic argumentations. Meanwhile, however, the

hostile attitude towards the natural sciences and empirical research has “naturalised” itself and the socio-cultural framing of bodies and gender has simply become the counterpart of the ideology known as biological reductionism, insofar as influences of the environment and society as well as individual technologies of the self count as the determining factors now that, in their turn, can be acted upon by the feminist subject.

As a consequence of this disciplinary division of labour, scientific debates between and within different academic fields remain trapped in the dead-end street of the dualisms nature/culture, essentialism/constructivism, materiality/discourse and sex/gender. Judith Butler’s attempt (in *Gender Trouble* and even more so in *Bodies that Matter*) to dissolve the sex/gender dichotomy by negating the preceding materiality of gender or, conversely, by postulating sex as a discursive and performative construct, is not particularly fruitful for transdisciplinary models of explanations and research questions beyond the nature/culture or nature/nurture divide. I am not arguing for the abandonment of the (de)constructivist method in gender studies – on the contrary: as I will argue in more detail later, I would like to foster a much broader and literally deeper understanding of the constructedness of bodies as “material”. This understanding would result in an approach that balances the overemphasis of discursive analyses not only by including aspects of bodily (self-)experience, how bodies are present in space and time, and the social practices of the corporeal, but also brings in the weight of biological dimensions in the construction of subjectivities – without, however, reinforcing naturalist-essentialist assumptions. If this

engagement with corporeal material(ities) fails to take place in gender studies, then, as feminists from various research cultures have emphasised for over a decade now, feminism runs the danger of playing into the hands of a regressive politics. According to Elizabeth Wilson, whom I quote here as a representative of a growing number of proponents of a new materialist feminism, feminist scholars should give up this anti-biologistic and broadly anti-technoscientific stance precisely in order to keep feminist theory progressive and differentiated:

if our critical habits and procedures can be redirected so that biology and neurology are not the natural enemies of politics – that is, if we defer gender theory from the start – then we will find a greater critical productivity in biology than theories of gender would lead us to believe.ⁱⁱ

With her call Wilson aims above all to encourage feminists to trace the critical potential for challenging and deconstructing the taken-for-granted stability of material structures and the unchangeability of what is presumably given *within* the natural sciences. Her book *Neural Geographies* thus presents an invitation to feminists „to envisage the possibility that neurology may already enact and disseminate the malleability, politics, and difference that they ascribe only to nonneurological forces”.ⁱⁱⁱ With the help of new research findings in the natural sciences, Wilson counters the orthodox view that nature/sex is unchangeable and that, hence, an intervention in those areas of research

is futile for a feminist politics of social transformation; the true target for feminist resistance, so the accompanying story goes, is via counter discourses, alternative images and narratives on the level of culture/gender – even though it is obvious how stubbornly stereotypical hetero- (and homo-)normative representations of gender and gender roles persist in the media, in the arts, in literature and, last but not least, in daily life. Thus, instead of wasting feminist energies in debates that revolve around the question whether *either* sexual difference explains why girls cannot think abstractly and therefore do not choose to study for a degree in mathematics, for example, *or* whether this choice is not ultimately determined by traditional patterns in education, we should rather begin to think differently about nature, biology, the body and materiality. Wilson's term *gut feminism*^{iv} for these alternative approaches joins a growing number of studies that I consider as examples of a new feminist materialism or "neo-materialism". This latter term is used by Rosi Braidotti for her Deleuze-influenced nomadic philosophy in which *radical immanence* figures as a central concept: "a deeply embedded vision of the embodied subject. ... it compasses the body at all levels, also, and especially, the biological body".^v

One of the pioneers of a new materialist-feminist direction in gender studies, molecular biologist Anne Fausto-Sterling, has convincingly shown that with regard to the construction of sexuality, categories of difference do not only inscribe themselves on the surface of bodies, but go literally beneath the skin: "events outside the body become incorporated into our very flesh."^{vi} At every moment of one's lifespan,

socioculturally-shaped behavioural patterns as well as reactions of the neural system to external signals affect one's muscles, bones, nerves and even the architecture of one's cells. In other words, cells are in a never-ending process of (re)formation and enter into material relations with their internal environment (affecting the very inside of a system/body) as well as its external environment or outside (influencing cultural practices, norms and values of a society). Given these dynamic processes, it does not make sense any longer – if ever it really made – to oppose nature to culture as contenders in shaping bodies and subjectivities. Rather, as Fausto-Sterling proposes, we should talk of a “biocultural systems in which cells and culture construct each other”.^{vii} Already the choice of the word *system* implicitly signals a shift in paradigm from a reductionist towards a system-oriented thinking that can be observed for quite some time already within biology. As I hope to show later with recourse to so-called *Developmental Systems Theory*, to adopt the central premises of a systems approach would also be fruitful for feminist gender studies and cultural analysis more broadly as well as for the forging of truly interdisciplinary or, rather, transdisciplinary research projects.

Systems theory, as well as feminist neo-materialism, introduce concepts and topics into gender and cultural studies that do not, at first sight, have anything to do with the human species nor directly touch upon gender or the woman question but could enrich feminist theorising and sharpen the argumentation of all emancipatory movements. Among such seemingly inappropriate themes I clearly favour the “animal question” (in analogy to and critique of Heidegger's focus of the question of being as

the question of technology) which I consider as having the greatest theoretical as well as political potential of fundamentally redirecting the humanities and which, for this very reason, is placed at the centre of the present essay.

More concretely, this essay follows the imperative to engage concepts and theories from the life sciences in order to revise dominant posthumanist paradigms. I find – and this might seem slightly provocative, even though I certainly do not want to put poststructuralist feminism and certain tendencies of posthumanist theory on the same qualitative and political footing – that a feminism that focuses almost exclusively on the sociocultural construction of gender and gender roles similarly impoverished as a posthumanism that can only imagine the hybridity of human existence in the figure of the cyborg and endeavours to separate the material body from the immaterial mind to gain heroic invulnerability, perfection and immortality. After my critique of what is currently referred to as “cybernetic” or “popular” posthumanism, I will present the anti-speciesist approaches literary critic Cary Wolfe has developed in line with Jacques Derrida’s thinking of the animal as well as briefly introduce the new manifesto of biologist and historian of science Donna Haraway. I conclude with a modest proposal directed mainly at scholars from the humanities to give up their largely anthropocentric stance and participate in the building of the posthumanities by drawing on yet another paradigm shift that currently marks a number of fields; i.e., the shift from questions of being to questions of becoming.

Posthumanism has gone to the dogs

In many respects, my contention (that posthumanism has gone to the dogs) is both correct and false. As a part of postmodernist anti-humanist movements of thought and poststructuralist theory, posthumanism first appeared on the academic stage in the late 1960s, primarily in literary departments of North America. Its philosophical roots, however, can be traced back to European thinkers Friedrich Nietzsche and Martin Heidegger. After Nietzsche's proclamation of the death of God in *Die fröhliche Wissenschaft* (*The Gay Science*, 1882), Heidegger's *Brief über den Humanismus* (*Letter on Humanism*, 1947) in particular can be seen as the initiator of the post/humanism debate that then received a new and powerful impetus with Michel Foucault's wager, proposed in the final sentence of his book *Les Mots et les Choses* (*The Order of Things*, 1966), that "man would be erased, like a face drawn in sand at the edge of the sea."^{viii} The phenomenon "posthumanism" was initially noticed with a certain "helplessness"^{ix} and met with resistance but increasingly gained respect due to its radical critique of traditional humanism and civilisation. Meanwhile, attempts such as those by US-American political scientist Francis Fukuyama^x to reinforce the belief in an essential human nature are seen as "helpless" responses to the crisis of modernity and – rightly, I think – classified by many as reactionary contributions to the post/humanism debate. Posthumanist thought, posthumanist art and posthumanist bodies by contrast are considered to be progressive, cool

and sexy. We have thus not seen the end of posthumanism yet; posthumanism has gone anything but to the dogs.

And yet it seems to me that posthumanism casts quite a poor figure: its formula has become something of a cliché and bites its own tail. When I speak of the posthumanist formula, I mean the grand narrative of technological and cultural progress that leads from hierarchical differentiation in traditional humanism, which is strongly associated with the Enlightenment, to at least the possibility and “active utopia” of non-hierarchical difference in posthumanism. My discontents with this story rests less on the somewhat banal observation that the androcentric, ethnocentric and anthropocentric premises of traditional humanism are not dead yet, but on the observation that these premises are also haunting narrations that purport to be anti- or post-humanist, be it literature, film or the arts and the sciences more broadly. To put it schematically: posthumanist texts are often all too humanist.

This should come as no surprise either. N. Katherine Hayles already shows in her genealogy of the posthuman, that it was no coincidence that the posthumanist redefinition of human nature or, to be precise, the definition of what she labels *cybernetic posthumanism*, happened during and after the second World War: at a time of general – but especially male – anxiety and insecurity, the visions that Norbert Wiener and others presented at the Macy Conferences on Cybernetics between 1943 und 1954 were aimed not only towards providing a position of dominance and control to the humanist subject in crisis but also to bring order and stability into chaos with the help of an information theory

that was strongly based on the principle of homeostasis.^{xi} Hayles regards the posthumanist paradigm, developed during this time and radicalised over the next decades as a kind of world-view that is premised on four major assumptions: (1) “Life“ does not inevitably depend on being embodied in a biological substrate; i.e. information triumphs over materiality; (2) (self-)consciousness is a relatively recent phenomenon in the evolutionary history of humankind and quite insignificant with regard to human nature and identity; (3) the human body is a prosthesis and can thus be extended and its parts replaced *ad infinitum*; (4) intelligent machines are the „natural“ descendants of *homo sapiens*.^{xii} This latter point finds one of its most prominent proponents in Hans Moravec in whose “family history” robots figure as the “mind children” of human beings, “built in our image and likeness, ourselves in more potent form”.^{xiii} The description is characteristic of the desire of cybernetic posthumanists to maximise and perfect the human in a modular fashion. Even though cybernetic posthumanism contributes to the deconstruction, decentring and fragmentation of Enlightenment notions of the unitary and autonomous subject, its vision of a disembodied or postbiological future is ultimately but the continuation and reinscription of the Cartesian tradition of thought in new discursive clothes.

The above version of posthumanism, which Hayles considers a “nightmare“^{xiv} and which is referred to in cultural criticism^{xv} as “popular posthumanism,” is diametrically opposed to the attempt of a growing number of theoreticians to forge a *critical posthumanism* or, as Stefan Herbrechter and Ivan Callus have proposed recently, a

metaposthumanism, with the prefix “meta-“ signalling a critically-distanced stance and not a totalising one (as in metaphysical thought); namely: “theory’s disposition to step back from the general breathless excitement over the digital, the cybernetic, and the technologically prosthetic to cast a sober eye over posthumanist orthodoxy.”^{xvi}

What is equally sobering, however, is the fact that the most radical metaposthumanists (and the humanities more broadly) do not quite manage to make an epistemological break with liberal humanism, insofar as their writing is also marked by an unquestioned “speciesism”; i.e., in the definition of ethicist Peter Singer who popularised the term three decades ago in his book *Animal Liberation*, “a prejudice or attitude of bias in favour of the interests of members of one’s own species and against those of members of other species.”^{xvii} Both postcolonial, feminist and queer theories and discussion of subjectivity, identity, and difference as well as the claims on the right to freedom by new social movements have recourse to an Enlightenment concept of the subject whose *conditio sine qua non* is the absolute control of that subject over the life of nonhuman others/objects. The rhetorical strategy of radically separating non-white, non-male and non-heterosexual human beings from animals in order to have the subject status of these members of the human species recognised was and is successful and also legitimate – given that the racist, sexist and homophobic discourse of animality or an animalistic „nature“ has hitherto served to exclude most individuals of those groups of people from many privileges – but the speciesist logic of the dominance of human animals over nonhuman animals has remained in

place. If we fight racism and (hetero)sexism because we declare discrimination on the basis of specific and identifiable characteristics – such as “black“, “woman” or “lesbian“ to be wrong and unjust, then we should also vehemently oppose the exploitation, imprisoning, killing and eating of nonhuman animals on the basis of their species identity. Moreover, if our research and teaching as cultural critics endeavours to do justice to the diversity of human experience and life styles and feel responsible towards marginalised others, should we then not seriously think about Cary Wolfe’s question „how must our work itself change when the other to which it tries to do justice is no longer human?“^{xviii}

Wolfe is not making a claim for animal rights here – at least not primarily. This is also why his book puns on “rites/rights“: *Animal Rites* is the intervention of the anti-speciesist cultural critic who scrutinizes the rituals that human beings form around the figures of animals, including the literary and cinematic enactments of cannibalism, monstrosity and normativity. Wolfe subsumes all of these stagings under the heading *the discourse of species*, with “discourse“ understood in the sense of Michel Foucault as not only a rhetoric but above all as the condition for the production and ordering of meaning and knowledge in institutions like medicine, the law, the church, the family or universities. In addition, Wolfe wants to sharpen our awareness that a speciesist metaphysics has also a deadly impact on *human* animals, especially because speciesism is grounded in the juridical state apparatus: “the full transcendence of the ‘human‘ requires the sacrifice of the ‘animal‘ and the animalistic, which in turn makes possible a symbolic economy in which we engage in what

Derrida [calls] a ‚non-criminal putting to death‘ of other *humans* as well by marking *them* as animal.“^{xix}

The dog lies buried in the singular: “The animal – what a word!”, Derrida exclaims: “[t]he animal is a word, it is an appellation that men have instituted, a name they have given themselves the right and authority to give to another living creature [*à l'autre vivant*].”^{xx} In order to problematise this naming, Derrida has created the neologism *l'animot*:

I would like to have the plural of animals heard in the singular. [...] We have to envisage the existence of ‘living creatures’ whose plurality cannot be assembled within the single figure of an animality that is simply opposed to humanity. [...] The suffix *mot* in *l'animot* should bring us back to the word [...]. It opens onto the referential experience of the thing as such, as what it is in its being, and therefore to the reference point by means of which one has always sought to draw the limit, the unique and indivisible limit held to separate man from animal.

As I propose in what follows, this clearly defined caesura of the „anthropological machine”,^{xxi} which according to Giorgio Agamben was already set in motion by the old Greeks and the messianic thinkers and then accelerated by scientific taxonomies and the birth of anthropology, can be bridged with the help of a zoontological approach and *companion speciesism*.

Posthumanist zoontologies

The desperate cry of the historical person Joseph Carey Merrick (in the movie *The Elephant Man* of 1980), “I am not an animal! I am a human being! I...am...a man!” – for recognition of his human identity through which he claims his right to social integration and personal integrity, is very understandable and hurts. But his words nevertheless reflect the poverty of the humanist stance, insofar as traditional humanism can only secure the “proper” essence of *humanitas* via a rigid separation from *animalitas*. If one reads the reports by the victims and witnesses of the tortures in the military prison of Abu Ghraib, it seems to me that it is precisely the continued insistence and reinforcement of the animal-human boundary that legitimises the committed atrocities:

Some of the things they did was make me sit down like a dog, ... and ... bark like a dog and they were laughing at me ... One of the police was telling me to crawl ... A few days before [this], ... the guy who wears glasses, he put red woman's underwear over my head ... pissing on me and laughing on me ... he put a part of his stick ... inside my ass ... she was playing with my dick ... And they were taking pictures of me during all these instances. ... [Another prisoner] was forced to insert a finger into his anus and lick it. He was also forced to lick and chew a shoe. ... He was then told to insert his finger in his nose during questioning ... his other arm in the air. The Arab interpreter told him he looked like an elephant. [They were] given badges with the letter ‘C’ on it.^{.xxii}

The US soldiers reduce their prisoners to their corporeal being, to animal being, and then make fun of this “bare life“^{xxiii} Instead of accepting their own vulnerability and mortality that they share with their victims as well as with other living beings, the torturers use the “systematic bestialization“^{xxiv} of the prisoners to strengthen their own sense of freedom and autonomy and to concomitantly withdraw the right to protection guaranteed by the humanitarian rights of the Geneva Conventions; after all, as barking dogs, crawling insects and ‘elephant men’, these ‘creatures’ cannot respond to the name, the word, the interpellation “human.“

The implicit and explicit analogies between racism, sexism, homophobia that accompany the above description of the torture methods, confirm that the power of the “discourse of species” to affect *human* others depends on the prior acceptance of the institution “speciesism;” i.e. on taking for granted that the inflicting of pain and the killing of nonhuman animals by human animals does not constitute a criminal act but, on the contrary, is legal. This is why Derrida speaks of the “carnophallogocentrism“^{xxv} of Western metaphysics. And here Wolfe’s argument comes full circle:

[Since] the humanist discourse of species will always be available for use by some humans against other humans as well, to countenance violence against the social other of *whatever species* – or gender, or race, or class, or sexual difference. . . we need to understand that the ethical and philosophical urgency of

confronting the institution of speciesism and crafting a posthumanist theory of the subject *has nothing to do with whether you like animals*. We all, human and nonhuman alike, have a stake in the discourse and institution of speciesism; it is by no means limited to its overwhelmingly direct and disproportionate effects on animals.^{.xxvi}

Wolfe's own analytical tool for what is a decidedly anti-speciesist strand of posthumanist thinking is *zoontology*, a term that is both fully deconstructive of Enlightenment anthropocentrism and simultaneously self-deconstructing: on the one hand, the term signifies the recognition that animals (*zoon* is Greek for 'animal') are worthy of ontological investigation or, put differently, that ontology is not just about the ontology of the human. On the other hand, however, the term makes it clear that taking the question of the animal seriously calls into question the very being (that is, the ontology) of ontology itself; in other words, ontology is itself revealed to be a humanist approach to ethics and politics.^{.xxvii} Being fundamentally humanist, a purely ontological approach seems to be incommensurable with an anti-speciesist posthumanist theorising that should also do justice to various 'species' of human beings. Based on these premises, Wolfe calls for a more intensive philosophical encounter with the material and multiple embodiments of the subject rather than a continued concern with "anthro-ontological" questions about the nature or identity of "Man".^{.xxviii} This shift in focus would also imply a reopening of the question of ethics and humanism (and posthumanism) that places

what Derrida calls “the living in general”^{xxix} at the centre of critical attention. Moreover, this new emphasis would have the humanities engage the question of animal rights (and rites) in order to precisely discuss issues of sameness/identity and difference with regard to human beings outside humanist parameters. With *The Companion Species Manifesto (CSM)*, Donna Haraway joins this critical-posthumanist project and has – quite literally – gone to the dogs.

**Revisions of feminist slogans: from “Cyborgs for earthly survival!”
to “Run fast; bite hard!”^{xxx}**

The central question of Haraway, whose socialist and feminist “Cyborg Manifesto” has been highly influential in various academic disciplines and beyond, is the following: „how might an ethics and politics committed to the flourishing of significant otherness be learned from taking dog-human relationships seriously”.^{xxxi} In the age of technoscience, cyborgs can no longer guide us, it seems: “I appropriated cyborgs to do feminist work in Reagan’s Star Wars times of the mid-1980s. By the end of the millennium, cyborgs could no longer do the work of a proper herding dog to gather up the threads needed for critical inquiry.”^{xxxii}

Haraway’s “dog writing” begins – as many of Haraway’s stories – with a personal and quite intimate confession:

Ms Cayenne Pepper continues to colonize all my cells – a sure case of what the biologist Lynn Margulis calls symbiogenesis. [...]

I'm sure our genomes are more alike than they should be. There must be some molecular record of our touch in the codes of living that will leave traces in the world, no matter that we are each reproductively silenced females, one by age, one by surgery. Her red merle Australian Shepherd's quick and lithe tongue has swabbed the tissues of my tonsils, with all their eager immune system receptors. Who knows where my chemical receptors carried her message, or what she took from my cellular system for distinguishing her self from other and binding outside to inside? We have had forbidden conversation; we have had oral intercourse; [...] We are training each other in acts of communication we barely understand. We are, constitutively, companion species. We make each other up, in the flesh.^{.xxxiii}

The exchange of organic tissue between the woman Donna and the dog Cayenne, as well as the assumption inherent to this manifesto that humans and dogs co-evolved, are indeed very good examples of the mentioned Lynn Margulis' thesis, insisted upon again in her recent book *Acquiring Genomes* (co-authored with her son Dorion Sagan) that “we people are really walking assemblages, beings who have integrated various other kinds of organisms”.^{.xxxiv} Known as *endosymbiosis* or *symbiogenesis*, Margulis' theory presents an alternative to the Darwinist idea of the so-called *modern synthesis* according to which biodiversity

and the emergence of new species in the course of evolution stems from the natural selection of random gene mutation. For many decades already and rejecting the militaristic and capitalist rhetoric of *survival of the fittest*, Margulis has defended the thesis that the eukaryotic cells of plants and (non)human animals owe their existence to prokaryotic (nucleus-free) bacteria which “devoured” each other millions of years ago: new types of cells and organs, and even new species, evolved, first, through the mutually parasitic co-habitation of bacterial cells and, later, through the exchange of genetic material between different living entities. In other words, biological newness and growing complexity is the result of absorbing genes that did not originally belong to a system but are then a permanent component in the genome of the life form. As organisms who have always already “alien” material in their flesh and blood, “we” are not the autonomous and self-contained individuals of modernity who can fashion themselves in their own image and are separate from other living entities.

The simple fact that human beings are above all organic and mortal bodies as well as the observation that “multidirectional gene flow – multidirectional flows of bodies and values – is and has always been the name of the game of life on earth,”^{xxxv} provided Haraway with additional reasons for abandoning her *alter ego*, the cyborg, and for convincing her readers that dogs might be the better guides through the thickets of 21st-century technobiopolitics. Haraway’s intensive attention to dogs – she and Cayenne train each other for participation in agility competition – does not mean, however, that the figure of the cyborg has completely lost

its usefulness as a feminist model of analysis; widening Margulis' notion of symbiogenesis, we may say that cyborgs are companion species, too, who live together with human beings in a kind of "symbiotechnogenesis". Organic and technical companion species form a 'family' of material-semiotic figures that should help us in formulating posthumanist alternatives to discriminating and humanist and strictly dualistic definition of the human and of male/female. Beyond romancing the relation between animal and human, also beyond an uncritical technophilia, and in the interest of a radically democratic politics, Haraway urges us to embrace positive configurations of the unavoidably close encounters between humans, animals, machines, and various hybrids in a technoscientific era in order to react quickly and effectively to negative and predominantly neoliberal discourse – *run fast, bite hard*.

Articulating a critique of the subject of classical humanism and modernity does not necessarily have to be synonymous with declaring the death of the human subject in an irresponsible postmodernist spirit. In the age of globalised technoscience, the apocalyptic discourse of the "end of man" needs to be reconsidered precisely in the name of humanity and human rights. To counter this prevalent rhetoric, however, one does not have to remain within the liberal-humanist tradition of separating "I" from "world", nor follow the moral-philosophical stance as "cultivated"^{xxxvi} by Martha Nussbaum, for example, but to contribute to a culture that accentuates processes of transcorporeality and in which human beings are not (in) the centre of the universe: human and non-human bodies are

in constant exchange with each other and with their environment; they constitute each other through relationality and dynamic interactions.

The above premise is the starting-point of *Developmental Systems Theory (DST)*, which I include as a branch of neo-materialism: with regard to the development of biological system, *DST* rejects gene fetishism or biological determinism, but does not privilege the influence of the environment on the system neither, as if each system was a *tabula rasa*; rather, *DST* insists that a (re-)combination of genes within a system and environmental factors that impact on the system from without, co-produce a unique and, above all, an incalculable result. This perspective enables a thinking beyond the dead-end street of nature-versus-culture without abandoning the interpretative paradigm of constructivism. Biological beings are indeed 'constructed' but, as Susan Oyama, who coined the term *DST*, observes:

not only in the sense that they are actively and discursively construed by themselves and others, but also in the sense that they are, at every moment, products of, and participants in, their own and others' developmental processes. They are not self-determining in any simple sense but they affect and 'select' influences on themselves by attending to and interpreting stimuli, by seeking environments and companions, by being susceptible to various factors, by evoking reactions from others.^{xxxvii}

The politically and ethically relevant potential of *DST* consists in the argument that system and environment condition each other: power, control and agency do not reside with either side, neither with the self nor with the other, but prove to be multiple and distributed. What we experience as “I” is thus a self that was and continues to be fashioned in a relational process that is not grounded in a negative difference between self and other – be it nature, an animal or a human being of a different gender, ethnicity or religion, etc. By the same token, *DST* also strongly mitigates against a definition of information we encounter above all in Artificial Life and Artificial Intelligence research: information as a binary code of ones and zeros, a blue print, fixed programme or stable representation of what something or someone unavoidably and eternally *is*. A systemic and process-oriented approach opens up lines of research flights that do not only take genetic determination into account but also seriously attend to the economic, social and cultural factors in the emergence and evolution of bodies; a perspective that also shifts the analytical focus from being/Being to becoming.

This turn in thinking towards the dynamics and processuality of the world, reality and subjectivity has already been proposed by philosopher of science Alfred North Whitehead in a lecture series of 1927-28^{xxxviii} and finds its continuation in the rhizomatic, molecular or nomadic philosophy of Gilles Deleuze and Félix Guattari who have inspired further generations of thinkers and scholars of all tendencies. In the framework provided by philosophical nomadism, as Braidotti summarises, the human subject is “fully immersed in and immanent in a network of non-human

(animal, vegetable, viral) relations”.^{xxxix} In ethical and political debates this symbiotic embeddedness and embodiment of the human in a material network of complex and multiple relations as well as the continuity and mutual dependency between human and non-human environment needs to be taken into account much more than it has been hitherto: anthropocentrism needs to be abandoned and, as Braidotti urges, be replaced by “biocentric egalitarianism” and “trans-species solidarity” so that an attitude of ecological empathy and intimacy across the species barrier can be fostered which is also likely to impact positively on the relationship between the diverse members of the human species.

In all the approaches introduced so far the biological body is given agency: genetic mutation and evolution, for example, occurs through an organism’s adaptive response to its surrounding elements and its changes. The definition of corporeal matter as (co-)creative principle allows ridding also the sexual body (*sex*) of the passivity attributed to it in gender theory so far. For neo-materialist feminist research practices the *sex/gender* divide clearly loses its relevance and analytical potential. Instead, the “sexuality/*sex* nucleus” and the category of sexual difference – i.e. the material, sexualised structure of the subject, are given importance (again).^{xl} This refocusing of *sex* and the celebration of sexuality in all its forms of expression seems particularly urgent in these days of patriarchal and homophobic conservatism which in the West shows itself in an enormous hostility to *sex*. When – probably as part of the backlash against new definitions of sexuality by homosexual, transsexual, transgender and other queer forces – reproductive,

heterosexual sex and artificial reproduction without sexual intercourse is given priority in neoliberal, late-capitalist countries, then a space of *jouissance* needs to be reopened in critical theories.

In the pleasurable sexual act, humans literally become the animals they have always been, as Alphonso Lingis observes in a beautiful “zoopoetic” text: “When we ... *make* love with someone of our own species, we also make love with the horse and the calf, the kitten and cockatoo, the powdery moths and the lustful crickets” and, when having an orgasm, “[o]ur impulses, our passions, are returned to animal irresponsibility”.^{xli} Lingis’ perspective is diametrically opposed to Freud and followers: in accordance with its concomitant speciesist trajectory, Freudian psychoanalysis would interpret such fantasies of becoming-animal as the manifestation of the “perverse” desire to blur the boundaries between human and animal, a perversion that could be cured therapeutically by taming the animalistic side of the human, by eradicating all that is not “purely” human. In the words of Braidotti:

...non-human drives for multiple encounters, wild bodily motives, heightened sensory perception and unbridled sexual activity, have to be assimilated or incorporated into a well-organised and functioning organism and by analogy, into well-regulated and normal orgasms.^{xlii}

This mainstreaming of sexual acts corresponds to the central split Foucault identified in his history of sexuality at the onset of modernity in

Western societies; i.e., the split between *ars erotica* and *scientia sexualis*. Philosophical nomadism of Deleuze and Guattari provides an antidote to these scientific and phallogocentric discourses and normative constraints in that it cherishes desire as an affirmative and productive force. It is above all the concept of “becoming-animal” developed by these two thinkers that provides us with an altogether different way of viewing the human-animal relation. In contrast to Freud, Deleuze and Guattari do not attempt to domesticate and thus humanise the drives and fantasies that bring human beings closer to animals. For them, the domesticated human and nonhuman animals, the pets and female crickets on the hearth, belong to the category of oedipal animals.

The incitement to becoming-animal is often misunderstood: Deleuze and Guattari do not mean that human beings should really turn into animals or engage in sex with a dog. The idea is, rather, that while having sex our organs *function* like those of animals and, for the duration, manage to escape the organisational and stratificatory power of societal norms:

Sexuality is the production of a thousand sexes, which are so many uncontrollable becomings. Sexuality proceeds by way of becoming-woman of the man and the becoming-animal of the human: an emission of particles. ... Becomings-animal are basically of another power, since their reality resides not in an animal one imitates or to which one corresponds but in themselves, in that which suddenly sweeps us up and makes us

become – a proximity, an indiscernibility that extracts a *shared* element from the animals far more effectively than any domestication, utilization, or imitation could: ‘the Beast’”.^{xliv}

Becoming-animal is thus not only a metaphor but an axis of transformation of the human and, thus, an appropriate paradigm to use in a critical-posthumanist and anti-speciesist theory that recognises that it is the animal (or the beast) *within* us that makes us “all too human”. Nietzsche’s postulate, as Diana Fuss argues, “syntactically locates at the center of the human some unnamed surplus – some residue, overabundance, or excess.” Fuss adds that this excess “may be internal to the very definition of the human, an exteriority embedded inside the human as its own condition of possibility.”^{xlv} In this sense we have never been human but always already the kind of posthuman mixtures that modern bio and information technologies increasingly produce and that also grow in numbers in popular culture. The humanities will still have to develop the adequate concepts, models and methods for the analysis and ethical intercourse with those material-semiotic hybrids. But they should do so in dialogue with the technosciences.

Afterword: Towards the posthumanities

In this brief coda, I would like to parallel the growingly obvious kinship between animals, machines and humans to the hybridisation of knowledge production. To establish this analogy, I draw on sociologist of science Bruno Latour whose so-called “symmetrical anthropology” (*anthropologie symétrique*)^{xlv} offers and impressively enacts a method that does justice to the interactions and entanglements between nature, culture and representation and that provides useful categories for transdisciplinary research. Literature, the arts and other fields of the humanities are an extraordinary resource for qualitative, cultural and socially-acceptable developments of any modern knowledge society. However, in order for this enormous potential not be wasted but

to become usable for dealing with pressing tasks and problems of the contemporary world, the traditional disciplines would have to morph into cultural studies. The required paradigm shift has already happened in many European institutes and is reflected in some of these places in their efforts to build bridges between the natural and humanistic sciences. I do not regard such efforts as a necessary strategy of survival, nor as chumming up to the "hard" sciences or bowing to their assumed authority – even though it is indeed my belief that the humanities only have a future if they collaborate with the technosciences or, just as the technosciences (and academia in general) need to rebuild themselves through transdisciplinary research programmes and projects involving artists and thinkers outside the university walls. As I hope to have demonstrated in this contribution and as my own engagement with biological and cybernetic systems theory as well as process philosophy has made me realise, we can find in disciplines like biology or the neurosciences new paradigmatic models for the revision of traditional concepts of gender, subjectivity and humanness by means of which the transformation of the humanities into the posthumanities could be accelerated. The posthumanities would above all be the home of post-anthropocentric and anti-speciesist cultural studies whose practitioners are aware that "culture" is not "ours" only but who nevertheless take responsibility for the consequences of human culture for nonhuman others – for their sake, for human's sake and for the sake of retaining the meaning of humanity and humanism in posthumanism.



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Notes

i To be fair to Butler, I would like to add that *Bodies that Matter* has certainly contributed substantially to the thematisation of matter in feminist debates and to a renewed concern with the relation between matter and discourse.

ii Wilson (1998): 62.

iii Wilson (1998): 17.

iv Wilson (2004): "Gut Feminism".

v Braidotti (2002): *Metamorphoses*, p. 63. Next to Wilson and Braidotti, I include on my list of neo-materialist feminists, and limited to the English-speaking context I am familiar with, the following persons: Stacy Alaimo, Karen Barad, Anne Fausto-Sterling, Donna Haraway, Lynn Margulis (even though not explicitly feminist),

Moira Gatens, Elizabeth Grosz, Myra Hird, Vicky Kirby, Luciana Parisi and Nancy Tuana.

vi Fausto-Sterling (2000): *Sexing the Body*, p.238.

vii Fausto-Sterling (2000): *Sexing the Body*, p.242.

viii Foucault (1989): 387.

ix In 1977 literary critic Ihab Hassan observed: „ We need first to understand that the human form – including human desire and all its external representations –may be changing radically, and thus must be re-visioned. We need to understand that five hundred years of humanism may be coming to an end as humanism transforms itself into something that we must *helplessly* call post-humanism” (843; my emphasis, M.R.).

x Fukuyama (2002).

xi Cp. Hayles (1999): esp. Chapter 3.

xii Cp. Hayles (1999): 2-3.

xiii From the summary of his book *Mere Machine to Transcendent Mind* (Oxford: OUP, 1998) on Moravec’s website:

<http://www.frc.ri.cmu.edu/~hpm/book97/index.html>.

xiv Hayles (1999): 5.

xv *Cultural Critique* 53, special volume on posthumanism.

xvi Herbrechter and Callus (2003): e-text. See also their book series *Critical Posthumanisms* (Rodopi).

xvii Singer (1990): 6.

xviii Wolfe (2003): 7.

xix Wolfe (2003): 6.

xx Derrida (2004): 118. Needless to say, the title of the French original, „L'animal que donc je suis (à suivre),“ plays with Descartes’s famous axiom *cogito ergo sum* which not only marks the dualism between body and mind but also defines consciousness as the defining characteristics that separates humans from machines and animals.

xxi Agamben (2004): Chapter 9.

xxii *The New York Review*, June 24, 2004: 70-71.

xxiii Agamben’s notion “bare life” signifies “neither an animal life nor a human life, but only a life that is separated and excluded from itself” (2004: 38).

xxiv Balibar (1991): 56.

xxv Derrida (1991): 113.

xxvi Wolfe (2003): 8 and 7.

xxvii *Zoontologies* is the title of a collection of essays Wolfe edited in 2003. I thank Cary for explaining this term to me in a private conversation.

xxviii Wolfe (2003): 9.

xxix Derrida deals with ‘the living in general’ in various texts but most thoroughly in his essay “The Animal That Therefore I am (More to Follow)”, Derrida (2004): 113-128.

xxx Haraway (2003): 5.

xxxii Haraway (2003): 3.

xxxiii Haraway (2003): 4.

xxxiiii Haraway (2003): 2-3; italics in original.

xxxv Margulis/Sagan (2002): *Acquiring*, S. 19.

xxxvi Donna Haraway (2003): “From Cyborgs to Companion Species”, online audio-lecture.

xxxvi Nussbaum (1999): *Cultivating Humanity*.

xxxvii Oyama (2000): *Evolution's Eye*, S. 180-181.

xxxviii Whitehead (1929): *Process and Reality*.

xxxix Braidotti (2002): *Metamorphoses*, 122.

xl Cp. Braidotti (202): *Metamorphoses*, 33.

xli Lingis (2003): "Animal Body, .171 and 172.

xlii Braidotti (2002): *Metamorphoses*, S. 140.

xliii Deleuze/Guattari (1987): *Thousand*, 279; my emphasis, M.R.

xliv Fuss (1996): Introduction, 4.

xlvi Latour (1991): *Nous*