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# THE 'MATERIALIST' BENT IN CONTEMPORARY FEMINIST THEORY

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**Abstract:** Since the late eighties, feminist literature has produced a great number of contributions on the body. It has forgotten, however, its more properly biological dimension. Despite the desire to reconcile nature and nurture, this oversight has been encouraged by the fear of falling into some forms of essentialism and the difficult dialogue between social sciences and natural sciences. In recent years, however, some authors have tried to restore the body's material dimension to center stage. This has happened because neuroscience and genomics have revived, in a more or less hidden way, a biological conception of race and sex. In this new context it has become more and more urgent to strive for an alliance between the natural sciences, the social sciences and feminism able to confront the challenges of the current phase of biocapitalism and biocolonialism. A new feminist materialism seems necessary to contrast the present form of reductionism, a molecular reductionism that decomposes the body into molecules, manipulable and exploitable bits of informational sequences that are transformable into "biovalue". As Sarah Franklin maintains: "This instrumentalism has become inseparable from the capitalisation of life itself" (Franklin, 2000: 189).

**Keywords:** biology, materialism, human and non-human animals, race, sex, gender, feminism

## 1. Race and sex between biological reductionism and social constructivism

To those who have fought against racism and sexism biology has always seemed above all an enemy. Biological determinism and essentialism have been, in fact, widely used in the past to mark the inferiority of groups characterized by certain physical characteristics: women, blacks, disabled and elderly persons. No wonder these groups have lived their anatomy as a destiny to which they had to surrender, relinquishing any hope of possible social change.

From the seventies to date, the weapon used against sexism and racism has been mainly social constructivism. When the UNESCO General Conference, in November 1978, unanimously voted in favor of a declaration stating that race is a social construct with no biological basis, this was interpreted as the inevitable and permanent decline in the use of the concept of "race", at least in the scientific field (cf. Haraway, 2004b; Fausto-Sterling, 2004). A few years earlier, Anne Oakley, in her *Sex, Gender and Society* (1972), had adopted the distinction between "sex" and "gender" as proposed by the psychologists John Money and Anke Ehrardt and the psychiatrist Robert Stoller, and the idea

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that gender should be considered as nothing more than a cultural interpretation of sex, and that biology, compared to culture, plays a minimal role in determining the differences between males and females (cf. Gremon, 2009; Warnke, 2011). Thus, biological predispositions can be overcome through education (cf. Oakley, 1972: 170).

In the patriarchal system, biological sex and social gender coincided and were considered the same thing, so that natural inferiority determined social inferiority. Now, according to social constructivism, the separation of gender from sex leaves the natural status of sex undisputed: sex is an inert and unchangeable reality. At the same time, though, the implications arising from biological givenness are neutralized with the importance attributed to the change in attitudes, mentality and values.

Nowadays, contemporary medicine and biology, using a seemingly neutral and objective language, are reproducing a conception of sexual and racial differences that seems to mark a dangerous return to the past, with one key difference: if in the past the focus was on the phenotype, now it is on genotype. The body, in fact, is decomposed into molecules: genes and neurons are "at the helm of life itself" (Haraway, 1997: 161).

Cordelia Fine has extensively documented, in her *Delusions of Gender* (2010), the spread of neuro-sexism in contemporary scientific and popular scientific literature (see, for example, Pinker, 2002). For the Cambridge psychologist Simon Baron-Cohen, for example, there is a female empathetic brain and a male logical and systematic brain: "*The female brain is predominantly hard-wired for empathy. The male brain is predominantly hard-wired for understanding and building systems*" (Baron-Cohen, 2003: 1). The origin of this differentiation, according to Baron-Cohen, must be traced back to the fetal stage, to the sixth/seventh week of pregnancy. At this stage, it is the level of testosterone that decides whether one will develop a male or a female brain. Baron-Cohen is explicit in emphasizing that these differences do not imply the inferiority of one sex over the other, as has been stated in the past. He even confesses that he long hesitated to publish the results of his research for fear of not being considered politically correct (Baron-Cohen, 2003: 10-11). However, as noted with some irony by Cordelia Fine (2011: kindle edition), the idea that women are more likely to put others at ease, and men to build and understand the world, seems to evoke an all too traditional, predictable and stereotypical image of female psychology.

In another recent work, *Fatal Invention. How Science, Politics and Big*


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*Business Re-Create Race in the Twenty-First Century* (2011), Dorothy Roberts documented the return to a new bio-politics of race, based on cutting-edge research conducted in the field of genomics and biotecnology. Roberts denounced the danger arising from the scientific attempt to link to genetic causes the lower life expectancy of the American black population and its most common diseases[2], thereby diverting attention away from the economic, social and, not least, health and environmental injustices that affect racial minorities in the US.[3] As Anne Fausto-Sterling (2004) explains, the trend reported by Roberts was to some extent also the perverse effect of a move that initially seemed destined to produce inclusive and positive social effects: namely, the introduction of clinical trials extended to women, ethnic and racial minorities.[4] All this had some unexpected and unwanted consequences. It resulted, first of all, in a further legitimization of old gender and racial stereotypes that have never really disappeared; second, in a shift of attention away from the economic and social causes that are at the root of many of the current inequalities in health between men and women, colored and white peoples; and, last but not least, in giving a new form of legitimacy to a biological conception of race and sex: a conception resting no longer on a reference to anatomical features, but on the more hidden reality of hormones and/or molecular genetics, which is often spoken of as if it were possible to trace their effects independently from the interaction of the body with the environment.

Countering this trend and following in Richard Lewontin's and Richard Levins's footsteps (cf. Lewontin and Levins, 2007),

2 According to Dorothy Roberts, science is redefining race as a biological category inscribed in the genetic code. At the same time, based on the results of genetic research, pharmaceutical companies are producing new drugs developed and marketed with a specific racial target in mind, such as the drug BilDil, approved in 2005 by the Food and Drug Administration as a specific medicine for black people suffering from heart disease (cf. Roberts 2011: x-xi).

3 Some genetic diseases, such as Hungtinton disease, are unrelenting, and little or not at all influenced by environmental factors. In most cases, with regard to other types of pathologies, however, the situation is different. Many of the diseases that affect the highest mortality of the black population in the United States, such as cancer, diabetes and hypertension, for example, have a much more complex etiology. Investing in scientific research to find the genes that predispose a person to such forms of diseases may be much less efficient than spending public money on social intervention directed at changing lifestyles and increasing the general level of education in order to improve the health of particular groups (cf. A. Fausto-Sterling, 2004: 22). On this subject Fausto-Sterling's works are all very important, see: Fausto-Sterling, 2000, 2003, 2005, and 2008.

4 In 1993 the US Congress decided to have a sufficient number of women and ethnic minorities participate in the clinical trials sponsored by the National Institute for Health. Its intention was to use the statistics for ascertaining whether certain medical treatments would work differently depending on gender, ethnic or racial group. Behind this decision it is not difficult to recognize the implicit assumption that gender, ethnicity and race can exert a fundamental influence through innate or genetically determined mechanisms (cf. Fausto-Sterling ,2004).


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Stacy Alaimo suggests that we should rather think of a "co-determination" of social and biological causes. Outlining a "new materialist" feminist philosophy, Alaimo recalls that biology itself is in fact a socialized biology: racism is an environmental factor, as is class, which means that it is "socio-political forces" that "generate landscapes that infiltrate human bodies": "the 'pancreas under capitalism' and the 'proletarian lung' testify to the penetrating physiological effects of class (and racial) oppression, demostrating that the biological and the social cannot be considered separate spheres" (Alaymo, 2010: 28).

Similarly, Anne Fausto-Sterling (2007) and Ellen Annandale (2007) invite us to rethink the relationship between sex and gender in light of an open and continuous interaction of the biological and the social body, which allows for a greater fluidity of gender identity and sexual identity. For Annandale, biology and culture once again get tied together, but in a new way, so that "new identities, attitudes and behaviours reach deeply into the body's interior and alter its traditional health profile. As health problems that were once largely the province of males begin to increasingly affect women (e.g., lung cancer), and vice versa (e.g., melanoma), the materiality of the biological body is modified and takes on characteristics more typical of the 'opposite sex' (the damaged lung, skin lesions)" (Annandale 2007: kindle edition). In this new vision of the relationship between sex and gender - as pointed out by Fausto-Sterling – "Instead of asking how anatomy limits function, one asks how the function shapes anatomy" (Fausto-Sterling 2007: kindle edition): in the course of its life story, the body engaged in the process of its becoming changes its own biological characteristics.

## 2. The return to the body's materiality

Faced with the return of new and more subtle forms of determinism, social constructivism is interpreted by some contemporary authors as a kind of "flight from nature" (Alaimo 2000), an escape from materiality that reveals a dangerous weakness. Social constructivism is now proposing a new insidious form of dualism in which the body becomes a passive, irrelevant and immaterial facticity. According to Elizabeth Spelman (1990), constructivist feminism was the victim of a sort of "somatophobia": after centuries in which women were associated with their corporeal reality, the road to their


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emancipation seems to involve the removal of the biological dimension of the body.[5]

In the late eighties, the body returned strongly in the reflection of gender studies, inspiring the production of many important works, for example the theoretical contributions by Moira Gatens, Judith Butler and Elizabeth Grosz.[6] Even then, however, despite their attempt to overcome all forms of dualism and binarism, these feminist philosophers seemed – as Lynda Birke writes – to linger on "the malleable surface of a internally stable corporeality" (Birke, 2000a: 137). Thus, the ghost of biology kept coming back and reappearing periodically (cf. Birke, 1999: 42).

This explains why, according to some authors such as Nancy Tuana (cf. 2007: 57), feminism does not appear entirely without blame before the re-emergence of the contemporaneous forms of sexual and racial determinism. On the epistemological level, it appears guilty of the irresponsible tendency to leave unquestioned the idea of a fixed and unchanged natural essence. Some contemporary feminists are convinced that it is pointless, if not counterproductive, to ignore the biological body. While remaining within the paradigm of post-structuralist and post-modernist philosophy, they have tried to recuperate some kind of materialist vision and to work out an approach that allows a constant dialogue to take place between biology, sociology and feminist theory, in order to overcome the dichotomies that characterized modernity, from that between nature and nurture to that between humans and animals, and at the same time to avoid biological reductionism. For these authors, it is necessary to go beyond the dualism between nature and culture, between the material and the discursive, and between realism and social constructivism. This is possible by imagining nature, objects and non-living nature, not as

5 An important exception has been the Women's Health Movement, as epitomised by the Boston Women's Health Collective's book, *Our Bodies, Ourselves* (1973). Lynda Birke points out, however, some major limits of this movement: it strengthened the idea of the centrality of reproduction; it simplified the language of medicine, but mostly by acritically repeating accounts and assumptions presented in male medical texts - so, for example, it continued to consider common female experiences such as menstruation and menopause as deficiencies; "the very focus in women's health books on control over the body helped to reinforce the separation of biological body from social self" (Birke 2000: 12). For a critique of the women's health movement and the epistemology of feminist self-help books of the seventies, such as *Our Bodies, Ourselves*, see also Haraway (1997, chapter 5).

6 In *Volatile Bodies* (1994), Grosz tried to outline an approach that would make possible a definitive subversion of the Cartesian dualism between mind and body, interior and exterior. The model that the author uses to illustrate a possible way of overcoming the dichotomy between inner and outer, between thought and materiality, is the so-called "Mobius strip": a three-dimensional figure in the form of a figure-eight, in which it is impossible to clearly distinguish two sides and one can pass from what seems the inside to what seems the outside without climbing over the edge, but simply by continuing to follow it. This figure shows, Grosz explains: "the inflection of mind into body and body into mind, the ways in which, through a kind of twisting or inversion, one side becomes another" (Grosz 1994: xiii).


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static and ahistorical, but – in the footsteps of Latour and the actor-network theory – as agents themselves. Scientific activity cannot be explained on the basis of the separation between subject and object. It calls into question a network of relationships in which each actor (human and non-human) plays an active role. Nature and bodies materialize by emerging from an intricate web of interactions between actors and actants. So Karen Barad writes: "Nature is agentic – it acts and those actions have consequences for both the human and nonhuman world" (cit. in Alaimo, Hekman, 2008: 5). An example given in Barad's "agential realism", to illustrate the active character of matter as agent, is constituted by the technological, discursive and material practice that nowadays allows us to see the image of the fetus in the womb. This practice has contributed to the creation of the image of the "fetus as a self-contained object floating freely in the eye of science", an image which strengthens at the same time the illusions of fetus's autonomy and of the objectivity of the scientific gaze (cf. Barad, 1998: 110-114).

There are different positions that can be considered an expression of so-called material feminism.[7] See, for example, to name but a few of them: the rediscovery of Darwin's theory of evolution by Elizabeth Grosz, the recovery of Bergson's and Deleuze's vitalism in Claire Colebrook and Rosi Braidotti, Barad's "posthuman performativity", Haraway's idea of natureculture", the "new realism of the body" recently proposed within the disability studies to counter both the social model and the previous medical model, or Stacy Alaimo's notion of transcorporeality. One of the basic ideas that emerge from the so called new material feminism is given by a conception of becoming as an open, non-purposeful, contingent process, characterized by a "becoming-with" – in the words of Donna Haraway, who is one of the forerunners of this new trend in contemporary feminist thought. Nothing is excluded from this becoming with, which sees interacting, and being transformed in the interaction, human and non-human living creatures, landscapes and technologies.

This vision considers symbiogenesis the norm in both the biological and the social world. It offers important suggestions not only for a new environmental policy and a different kind of globalization, attentive to the relationship between environment, health and social justice, but also to redefine the relationship between the social sciences and the natural sciences. This must be so because – as Haraway and Birke both insist – biology

7 For a general overview on these "new materialisms", cf. Alaimo, Hekman (2010) and Coole, Frost (2010). See also: Amhed (2008) for some initial critical remarks.


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refers both to the material and to a discipline, a field of knowledge, which has a history, historical origins and developments. If it is impossible to deny the material and its productive character, this does not mean that a discourse is possible that can reflect on it in its immediacy. Thus, in *Messengers of Sex, Hormones, Biomedicine and Feminism*, inspired by Haraway, Celia Roberts writes that, rather than asking whether hormones may explain the difference between the sexes - as does Baron-Cohen -, one should ask what their "material-semiotic role [is] in combination with - rather than in opposition to - sociocultural factors such as language and social norms", or in other words, what their role is in the materialization of actants of sexual difference (Roberts, 2007: 19).

## 3. The responsibility of tracking and maintaining boundaries

Classifying and tracking knowledge boundaries, starting from particular standpoints. The role of feminist science, as taught by Donna Haraway, is to prevent the concealment of the construction and maintenance of borders, and, at the same time, to ensure the possibility of their constant re-discussion and redefinition (cf. Haraway, 1997: 67). The construction of maps, which characterized the production of modern knowledge, from geographic to DNA maps, is not an innocent activity: spatialization "can be fetishised as a series of maps whose grids nontropically locate naturally bounded bodies (land, people, resources and genes), inside "absolute" dimensions such as space and time" (Haraway, 1997: 136). The map fetish contributes to creating a world of things in themselves, where everything seems clear, objective, indisputable, in which the abstract is mistaken for entities and tangible links. Against the advance of a genetic fundamentalist rhetoric, according to Haraway, one must develop a "critical and cross-cutting multidisciplinary, multi species and multicultural savvy" that is able to develop a "critical hermeneutics of genetics" (cf. Haraway, 1997: 160).

The removal of the processes that lead to drawing boundaries often leads us to forget that the term "biology" indicates at the same time all life processes, the body, the material reality, and the knowledge that has been produced about them, and that, as knowledge, it is a historically determined cultural practice: "Biology – Haraway writes - is restlessly historical, all the way down. There is no border where evolution ends and history begins, where genes stop and environment takes up, where culture rules and nature submits, or vice versa. Instead there are turtles all the way down" (Haraway, 2004a: 2). As a field of


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knowledge biology was born in the late nineteenth century, and with it originated also the division between the natural sciences and the social sciences. Based on this division, human behavior and social practices have become the object of the social sciences, while the human body and the animal world have become the subject of the natural sciences – biology, medicine, physiology and anatomy. If biology is historical and there is no way to establish an ahistorical boundary between nature and culture, it is very important to pay attention to the operations, metaphors, analogies, classifications, narratives and images with which facts are transformed into natural products and the foundation of cultural practices is raised. In particular, we must pay attention to the scientific construction of historically situated discourses on race, on the dichotomy between sex and gender and on the boundary between human animals and non-human animals. Through taxonomies and classifications natural sciences have constructed boundaries. The activity of drawing borders even in the natural sciences has political implications: for it delimits areas of domain. The figure of the cyborg, "a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction", evoked in the famous Cyborg Manifesto (cf. Haraway, 1991), is promising to the extent that it leads to an implosion of some of the fundamental divisions and boundaries of the modern sciences (the boundaries between human and animal, between body and machine, and between physical and non-physical). Thus, it creates a space for contestation.

Haraway knows very well that feminists are generally suspicious of science and technology. The cyborg itself, born of military technology, risks being considered an expression of an imperialist and patriarchal culture. Nevertheless she offers an alternative reading: in questioning the boundaries, and in recalling the responsibility of their construction, she sees the cyborg as prefiguring a world where there will be no more fear of the coexistence between humans, machines and animals, where one will settle for partial points of view, and will opt for a post-gender, post-race and post-speciest identity. The contemporaneous and interrelated processes of creating boundaries between races, species and genders, in fact, were, according to Haraway, "dangerous and rickety machines for guarding the chief fictions and powers of European civil manhood" (Haraway, 1997, 30). In her most recent work Haraway highlights how human beings emerged in an evolutionary history that has seen a significant role of other "companion species".

"The discursive tie among the


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colonized, the enslaved, the noncitizen, and the animal – all reduced to type, all Others to rational man, and all essential to his bright constitution – is at the heart of racism and, lethally, flourishes in the entrails of humanism. [...] Species reeks of race and sex; and where and when species meet, that heritage must be untied and better knots of companion species attempted within and across differences. Loosening the grip of analogies that issue the collapse of all of man's others into ine another, companion species must instead learn to live intersectionally" (Haraway, 2008: 18).

**4. Human and nonhuman animals**

One of the consequences deriving from an acritical and optimistic acceptance of social constructivism, according to biologist Lynda Birke, has been to implicitly reaffirm the validity of the distinction between what counts as sociocultural and what should be considered as natural. "As a result – she writes – "biology" all too often comes implicitly to mean an underlying bedrock, inaccessibile to analysis. It is just as often equated with unchanging essence" (Birke, 2000a: 587).8 A further consequence has been not paying attention to the nonhuman animals' world, and to the relationship between the animal world and the biological knowledge that historically was often produced precisely through laboratory experiments conducted on guinea pigs.

Historically associated with their biology and with the care of dependent people's bodily needs, often apostrophized with epithets taken from the animal world, women have not only seen a source of emancipation in the removal of the biological dimension of their body and its implications, but have also tried to separate themselves from the animal world. Thus the reflection on the relationship between human and non-human animals remained alien to feminist theory until very recently[9]. Uncritically accepting the position of the dominant culture, feminism has taken for granted that not social sciences but natural sciences should study the animal world. The feminist cultures have also assumed the validity of dualism between sex and gender, bringing back gender to culture and sex to nature – as we have seen. This has made it impossible to read the interconnections between gender, race and species, or between sexism, racism and speciesism. To understand these linkages it is necessary to "explore the biological" and ask questions that dig up the

8 On this theme, see also: Birke, 2010: 337-349. For a general assessment of Birke's position, see: Asberg, 2010: 413-423.

9 The "animal turn" in feminist thought has produced a number of interesting works; see, for example, J. Donovan e C. J. Adams, 2007 and S. Laugier, 2012.


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deep reasons for the division of labor between social sciences and natural sciences, or the reasons why the social sciences have taken over the study of human behavior, leaving to biology the study of animal behavior. One needs to ask why the natural is understood as that which refers to a fixed, ahistorical and immutable reality. Studying the animal world with the exclusive means of biology means placing animals out of history and considering them as "biological automata" (Birke, 2010: 340).

One of the consequences resulting from the inability to distinguish between nature and culture in a renewed materialistic vision is the possibility for contemporary feminism to overcome speciesism, to recognize the continuity between human and non-human animals and, last but not least, to historicize biology itself. Biology is a science that has had its historical evolution, which has also been used to support racist, speciesist, sexist and hetero-sexist policies. One of the contributions of feminist biology has been to highlight the presence of binary concepts of gender in natural sciences. Science fiction abounds in references to the gender dichotomy by which life processes are read, as if the division between male and female regarded even the molecular world. The case that has garnered more attention by feminist scholars is that of hormones, which is also an example of the effect of these circular narratives (cf. Oudshoorn, 1994 and Roberts, 2007). Since the beginning of the twentieth century, when they were discovered, scientists have tended to speak and write as if they could be divided into female hormones and male hormones. In fact, Birke explains, each one of us produces all kinds of hormones, although in different amounts (Birke, 2000a: 40). In some animals, on the other hand, sex change or "gender bending" is quite common": “Fishes, for example, can change sex depending on environmental and social conditions, while the sex of the turtle depends on the temperature at which the egg is held before birth. In short, the binary assumption, or the assumption of the existence of only two sexes in nature, is a projection of the human and cultural habits and rests on a very limited type of animals (especially those more like us, the mammals)" (Birke, 2000b: 592).

The phenomenon of hormonal alterations produced by chemical agents present in the atmosphere (cf. Birke, 2000b: 587-589) was interpreted within this binary scheme. Both scientific literature and, even more, popular literature have highlighted the deviating effects that chemicals produce on gender norms, denouncing in particular the danger they pose to masculinity. Basically, Birke writes: "The differences between different bodies are minimized, while


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'deviations' are emphasized". This is not of course to deny the effects that environmental toxins have on human bodies and on the reproductive system, but to put what is going on in a more complex picture, which makes it possible to take into account the fact that "the biological body is not hermetically closed to the physical-chemical (including the presence of potentially toxic chemicals) in which it lives, nor to the culture in which small changes in the body make sense" (Birke, 2000b: 597). We need a biological knowledge able to think critically about the categories with which it works. We need approaches to biology that escape determinism and allow us to look at the body, now broken down into molecules, in its creative and dynamic complexity, in its ability to transform and change with what is going on inside and outside of itself. Having abandoned the old model of biology, feminism should work to build new models able to counteract old prejudices. So, if heterosexism has been read as a norm inscribed in nature, and homosexuality has long been considered unnatural, it is important to illustrate and explain the countless examples that rather reveal nature as "queer".

In 2006, the Naturhistorik Museum in Oslo, Norway, inaugurated the first exhibition devoted to homosexuality in the animal world, entitled *Against Nature? An exhibition on animal homosexuality.* Through photos, samples, texts and models it showed a small selection of the more than one thousand five hundred animals displaying homosexual behavior, studied and documented by now numerous scientific papers.[10] All these cases testify the far from normative and normal nature of heterosexuality, and the fact that animals, like humans, have genders in addition to sexes. The goal of these studies, however, is not so much to "naturalize" homosexuality as it is to show the plot of "natureculture". The variety found in animal sexual behavior is such, according to Baghemil (2010) and Hird (2004), that we should talk of cultural variations. For these authors, it makes no sense to continue to think that only human beings are cultural animals: the pursuit of pleasure could be a dynamic force also in the culture of some species (cf. Alaimo, 2010). Indeed, nature and culture seem to be inseparable even in the animal world, an animal world that escapes the vision of a static world, mechanically determined by instincts, to which it had been condemned by the myth of "human exceptionalism".

10 See: http://www.nhm.uio.no/besok-oss/utstillinger/skiftende/againstnature/index-eng.html. On the queer character of the animal world, see: Bagemihl 1999; Roughgardern, 2004; Hird, 2004; Alaimo, 2010.


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