

Evolution Goes Awry

Luciana Parisi, *Abstract Sex: Philosophy, Bio-technology and the Mutations of Desire*. London and New York: Continuum, 2004.

By Paul Hegarty

In the future, the past: biotechnology not only brings dramatic changes in life and how we view it, it reveals a world where those changes have already been occurring. Nature is revealed as an already biotechnological world, as the posthuman world of cloning, virtual sex and transgenic manipulation draws our attention to processes hitherto ignored or marginalized by mainstream biological thinking, notably in the field of evolution. The future, past: as sex changes, altered by, within and against machine technology and power technologies, it turns out sex has always already been something other. As have machines. Future, as past: things are moving fast, altering everything of our biological being as well as any

other being we might have, but futurism dates, and the endless return of biobeginnings is replayed in Parisi's insistence on the now, to the detriment of futures and pasts already offered, so that exciting new futures and futures past emerge from discourses that have already been surpassed.

Only Forward?

But that would perhaps be to insist on a competitive, linear model of thinking. Parisi offers, in her *Abstract Sex*, a 'turbulent' view, where no phenomenon can be seen to develop in a simple linear, progressive or hierarchical manner. Building chaos into forms we presumed were stable. The world is indeed different in the wake of the now familiar chaos theory, early applications of which looked at animal populations in given environments. I raise this point now partly because the application of non-linearity is central to Parisi's project of defining complexity as movement of complexity, rather than as product, but also because it highlights the danger of newness and a rhetoric of 'we can no longer...': this new physics (or microphysics? Minor physics?) is not particularly new in itself, but more worryingly,

in Parisi, one of its main achievements is to “question Newton’s conception of time” (131), when we have had about 100 years of different ways of conceiving time.

Non-linearity comes to us through the prism of Gilles Deleuze and Félix Guattari, and *Abstract Sex* as a whole can certainly be thought of as an application of their ideas – or maybe part of a rhizomatic spread they feature in. The other key reference point in this book is the evolutionary theory of Lynn Margulis. It is from Deleuze and Guattari that a new conception of ‘abstract’ emerges. Parisi refers to their concept of ‘abstract matter’, which rather than being constituted in fixed entities, is made up of movement, of endless crossing and re-crossing of lines of stratification. ‘Abstract sex’ itself signals how abstract matter is in motion. Sex occurs in a multitude of ways, few of which involve sexual reproduction, or even sex as humans understand it. The notion of ‘abstract sex’ is designed to enable us to adopt a much wider perspective on ‘sex’, so as to better conceptualize life and the interactions that make it up. Sex, then, is the “transversal mixing of information between bodies of all sorts” (17). This is occurring today, at a bacterial level, both inside and outside of already-constituted multicellular organisms, and is the

figure of a new permeability of those organisms. As we come to understand that, we have cause, according to Parisi, to rethink evolution and what it has to say in defining living processes and things. Many eons ago, bacteria combined in what sometimes seems an aggressive (“double parasitism,” 64), and at other times a benign, co-operation (61-5). This is the process of endosymbiosis proposed by Margulis, as an alternative to the identity-oriented selfish gene theory of Richard Dawkins and neo-Darwinism in general. This process then migrates across the scales, and ultimately occurs at cultural and digital levels. This continual occurrence and re-occurrence of endosymbiosis, it is claimed, overturns the teleological and linear model of evolution.

Matter itself is caught up within cultural assessment and cultural occupation of ‘nature’. Parisi moves beyond this perspective (essentially that of Donna Haraway) in order to suggest a malleable, fluid, turbulent reality where culture and nature are never separate but cross each other endlessly, just as bacteria can. There are three phases, so far, of how this occurs, or locations across which it occurs: the biophysical, the biocultural, the biodigital (see *Abstract Sex*, vii, for an ambitious mapping of this, and 21 for further clarification). The

first marks the move into life and the move to sex (whilst emphasizing that there is no linear once-and-for-all move from inorganic to organic); the second is the modern period identified by Foucault as the period of biopower and of the proliferation of discourses on sex and sex as discursive event; the third is where we are now – the era where cloning and capacity to intervene ‘on’ nature illustrates that we are not above nature, in control of it, but endlessly renegotiating our arrangements with it, and continually finding that human inventions are reiterations of other events, occurring across different scales and strata; for example, biotechnology is what is always already occurring when mitochondrial DNA joins cells with nucleic DNA.

The book is at its strongest when twisting the lines between nature and culture, the latter particularly in its positivistic, scientific mode, and accreting theoretical moments into a multilayered dynamism. Take, for example, the following statement on the process of evolution: “the biophysical order of matter is not dictated by a transcendent force of abolition, but emerges autonomously out of collective assemblages where particle-forces collide at the edge of chaos” (22), or this, on cloning: “mammal cloning involves a highly turbulent process of mitochondrial and cellular symbiosis irreducible

to the scissiparity of the Identical” (158). The text, though, has put itself in a difficult place, discursively, with its wish to endlessly return us to earlier phases of life, and then to argue that they are not former, but still there as present (or absent, at some fundamental level) phenomena, and that this is part of a turbulent non-order of things. It is hard to write the turbulence in, in other words, and the second chapter on ‘symbiotic sex’ is needlessly convoluted, due to its need to cover mindnumbingly dull biochemistry with Deleuze and Guattari. It is also in a difficult place due to its abstraction, in the most literal way possible, that is, in staying at the level of meta-principles with continual gestures toward examples, rather than letting the theory emerge from its own dynamic operations (or evidence, if you favor a more traditional view). There are exceptions to this. The slightly incongruous reading of David Cronenberg’s *Dead Ringers* (an interesting reading, but not really in synch with the rest of the book); the straightforwardness of the account of Elaine Morgan’s development of the ‘Aquatic Ape theory’ (more below); but more typical are the concluding claims for “microfeminine warfare” (194-201) which does not go into what this is other than a Deleuze and Guattari inspired ‘becoming-woman’ of everything; or chapter four’s

'biodigital sex' that, ironically, given the theory that drives the book, keeps the metaphysical or abstract speculation apart from the (short) sections on the human genome project, or cloning.

Abstraction itself goes through some mutation in the course of *Abstract Sex*. Firstly, the abstraction of sex from bodies is seen as an outcome of the coalition between virtualization of sex and some sort of inherent masculine drive to abstraction. Descartes is seen as perhaps fathering that sort of abstraction with his mind-body dualism, which I think is slightly misrepresented here since the dualism in Descartes is an inseparable one and the mind is always embodied, subject to a world of thought that informs its mindness. The abstraction of 'abstract sex' itself is a good abstraction, as it claims to not be an essence, or to deal with essences, but to operate as a process. It is abstract sex because sex is something wider than sex as an act:

sex is an event: the actualization of modes of communication and reproduction of information that unleashes an indeterminate capacity to affect all levels of a body – biological, cultural, economical and technological. Sex is a mode – a

modification or intensive extension of matter – that is analogous neither with sexual reproduction nor with sexual organs. (11)

But is it even sex any more? Why have sex at all? In maintaining a centrality of sex, however redefined, Parisi's theory runs the risk of falling into the trap identified by Foucault (in his *History of Sexuality*), as sex and sexuality go beyond even their human universalization to somehow map the living universe (and the now non-separate inorganic universe). As even Richard Dawkins (one of the prime targets of this book) admits, "alternatives to sex do exist" (Dawkins 1989: 43), and this even for reproduction. So is abstract sex abstract? It certainly does not seem to be abstract – it seems highly grounded, even if that grounding is a treacherous, precarious one. So abstract sex is neither sex nor abstract. In fact, the standard definition of (animal) sex is itself identified as an abstraction (in contrast to 'abstract sex'), one motivated by gender and other political power relations.

What then is 'abstract sex' doing, what does it allow? Occasionally, a glimpse of purpose can be seen: "these ['co-causal'] relations will enable us to map the mutations of a body-sex through the plasticity of material signs rather than signification, singularity

rather than specificity, abstraction rather than generalities” (28). The use of abstract materialism will “produce a map of the non-linear movements of connection between causes and effects unfolding the potential (force) of a body to mutate through an ecosystem of indefinite mixtures” (29), consisting of an “essence [that] is linked to the far-from-equilibrium dynamics of matter” (29). Sometimes, we have a sense of mission, one that arises from a concatenation of ‘good things’ (symbiosis, abstract, desire, machine) as opposed to something that coheres linearly: “micropolitics requires the *engineering* of abstract sex (symbiotic desire) where bodies of connection are not determined by the identity of sex but by incorporeal mutations of desire or the machinic compositions of essence (difference)” (41).

Bad Science

In this section, I will look at how Parisi categorizes key theories of evolution, and argue that there are some problems here.

Nonetheless, we have to also ask the question whether *Abstract Sex* intends to play by the rules of science at all, and therefore ‘bad science’ could emerge as a critical approach to scientific discourse.

Darwin, first. Darwin is of course not first in evolutionary theory, and, as I suggested at the beginning, Parisi's rewritings and/or 'swerve' readings of evolution could actually return us to pre-Darwinian thought, purposely or otherwise. Darwin is continually misrepresented in *Abstract Sex*, which asserts the priority of sexual selection for Darwin. This is absolutely not the case, as natural selection is about chance survival, and those who reproduce will be those who have survived to reproduce: "[any] variation [...] if it be in any degree profitable [...] will tend to the preservation of that individual, and will generally be inherited by its offspring" (Darwin 1985: 115). Sexual selection is, therefore, very much a secondary concern and even occasionally an unreliable source of variation as "sexual selection is, [therefore], less rigorous than natural selection" (1985: 136; see also 193). Darwin is also assumed to be some sort of right-wing economist (admittedly he claims inspiration from Adam Smith, as many neo-liberals have), insistent on competition (22). Parisi (51-3) resuscitates Bergson's sub-mystical view of evolution (via Deleuze) to offer a trenchant criticism of Darwin's 'negativity' - i.e., that selection is only ever negative, working through extinction. Leaving aside Darwin's perfectly valid argument for this – the

existence of a species or variation does not prove evolution, only extinction as opposed to perseverance does – it is wrong. Darwin offered many positive reasons for change, most of which are now seen as too corrupted by Lamarckianism. This is not the only occasion where Darwin’s theory is offered (by some other source) in opposition to a straw Darwin or Darwinism.

In any case, argues Parisi, evolutionary thought has moved on, taking in non-linear dynamics – but not only does this not challenge evolution in the slightest, it has been incorporated (see Depew and Weber 1997; Gould 2002) as a modification of Darwin’s original thought. Darwin, just like Lamarck before him, and most evolutionists today, accept some sort of co-evolution, but unless we adopt the bad bits of Lamarck, environment does not breed changes.

So how is it Parisi gets Darwin so wrong? Evolution, and life in general, is creative, she argues, and has to be seen more positively than the bleak image at the heart of Darwin’s thought (this despite the fact that Parisi correctly rejects evolution as favoring the inherently better, even if evidence can be found for and against this in Darwin). Bacteria “invented genetic engineering” (61 and 62) and “bio-technology is not simply natural. It partakes of the hypernatural

capacities of a body to become” (196). Darwin, of course, has no sense of agency, and, fundamentally, I would argue, no notion of causal goodness, or superiority of outcomes. Parisi implicitly opposes a vitalism owing much to Bergson (and Deleuze’s take on him) and Teilhard de Chardin to the supposed dualism of Descartes and what is clearly the troubling nihilist universe suggested by Darwin. What is interesting is that this removes the gain made by Darwin (and to some extent Lamarck) in looking at what evidence was there and incorporating that into hypotheses. Instead Parisi offers a metaphysical model of evolution (I doubt that term would be accepted by the author, but I think it would have to apply to a metanarrative about the history of life being about symbiosis, creativity and an intentional universe), and an explicit rejection of the rationalism of scientism. Now, this means that what we have is a critique of scientism, and not just a return to something less than science.

The problem here is that Parisi does take some models that come from science seriously, and presents them as a true picture of what is going on in evolution and technological developments of

today, so presumably the ‘science bits’ aren’t just to be taken as working in the realm of metaphor.

Dawkins, now. Dawkins, with his notion of total competition between genes, mirrored in competition between organisms, is identified as being wrong, on the basis that it is a linear, identity-driven, more or less ideological construct, compared to Margulis’ conception of endosymbiosis. Neo-Darwinism (with Dawkins as its main representative) does not work due to its insistence on individuation and individual moments (139). In contrast to this is Margulis’ notion of endosymbiosis, combined with a “mechanosphere [is] composed of abstract machines – symbiotic compositions of molecular bodies whose differences are ceaselessly engineered” (141). The latter arise from the combination of different bacteria within cells, with mitochondria crucial in the “emergence of such a machine” (66). I am not sure whether Dawkins would go along with the idea of ceaseless transformationism, but he does concur with the rest, and goes beyond it: having argued in favor of the symbiotic origin of the cell, he goes on to add: “I speculate that we shall come to accept the more radical idea that each one of our genes is a symbiotic unit. We are gigantic colonies of symbiotic genes” (Dawkins 1989: 182). He

also talks of a 'gene machine' that seems incredibly similar to Parisi's (46-7) view of life in that it favors, or even results from co-ordination. If even Dawkins agrees with this idea, then how much more have other evolutionists, who favor a misleadingly named 'hierarchical' model (see Gould 2002 for his view and that of the field in general) pre-empted what is on offer in *Abstract Sex*?

Time is foreshortened as well as fractalized in Parisi's account of life's development: Darwin's principal criticism of Lamarck was not for the notion of inherited acquired characteristics as such (he did not dispute it as a factor in evolution at all), but because it misunderstood the speed of evolution, and in so doing attributed a purposiveness to change. Any theory which insists on positive, creative evolution (placed in opposition to a negative force of extinction) will encounter this difficulty – as mentioned above, bacteria are described as inventing or engineering their future. Geological perspective is totally lost, and human(ist) perspective brought to the fore. Parisi has three moments in the history of life, and two of them are centered on humans and the last two centuries. Not only that, but change is speeding up: "from the Internet to virtual reality, from cloning images to cloning humans – [that] are rapidly changing the conception and

perception of sex” (25). Within this humanist (and/or anthropocentric) perspective, everything is happening now, through humans, and in a timescale humans can understand. Today, “sex is disentangled from genital sex and sexual reproduction, the symbolic representation of sexual difference. [...] Sex no longer individuates the body but becomes a machinic construction of a multiplicity of modes of information transmission” (39). Here and elsewhere, we encounter the assertion that until yesterday, sex was reproductive, patriarchal and sadistic. Only new biotechnology, Deleuze (whose *Coldness and Cruelty* is cited, but as observing something brand new) and endosymbiotic theory change this.

The net result of this foreshortening of time is that evolutionary perspective is utterly lost, and this is highly comforting, as is the notion of evolution being a positive, creative thing at *precisely the time humans can intervene and be creative*, thus removing humans from evolution, just as ‘creationist science’ occasionally allows. But none of this is science in the ‘traditional’ sense – we are not experimenting, and attempting to show objective truths... but are we only swapping metaphors in a world made only of competing discourses, language games? Larger claims are continually made by

Parisi, for science that suits, and I feel that Parisi's theory would benefit from taking the theory of 'abstract sex' into explicitly Nietzschean territory, and not claim any truth for any theory, any notion of evolution. Which brings us to the 'aquatic ape'.

Elaine Morgan has theorized that many of the features of humans can only be accounted for if ape ancestors lived essentially in water, for 2-3 million years. Other aspects of the theory point away from Darwin's belief in an essentially passive femininity and toward a view where females changed first, and effectively selected males from a position of evolutionary dominance. As bad science this is good stuff – no evidence, no argument, predetermined outcome. The theory of the aquatic ape has been ignored by a lot of mainstream evolutionary theory, and does seem fundamentally flawed on some really simple points, such as humans being hairless, or bipedalism being good for swimming. But all science is part of the passive nihilism of truth claims, so there's nothing better or worse about this theory. The theory continues, with a (as cited here in any case) Lamarckian direct influence of environment on genotype: "environmental adaptation involves not a passive but a potential modification of the body's field of action, inventing new internal

regions of reception which are resonances of an outside in which they are, as it were, in permanent metastable communication” (178).

Whatever terminology you use, this is what Lamarck is accused of (organisms choosing the future of species) but rejected. The theory is also highly teleological, and environmentally determinist.

Everything is utilitarian (whereas Darwin recognized chance and redundancy as significant), and everything in Parisi’s reading is peculiarly oriented to reproduction – astonishingly so for what claims to be a feminist work (recent work such as Bruce Bagemihl’s *Animal Exuberance* points to the vast amount of non-heterosexual sex and behavior throughout nature, and in a less convincing approach, Joan Roughgarden also highlights sexual diversity and transsexualism in *Evolution’s Rainbow*).

Abstract Sex raises a large number of issues: how can biotechnology and its natural counterpart be assessed with perspectives outside the main lines of evolutionary questioning?; once that is done, how can life’s development be thought in a non-linear fashion?; how can teleology be avoided?; how can patriarchal presumptions in science be undermined?; how can evolution be thought of as something other than a random destructive force?; how

can endosymbiosis be transferred through the strata of contemporary human cultures? In so doing, it provides a way into an interdisciplinary, ideologically aware future where we do not take scientists' word for evolution. However, it also believes its alternative sources too much, and this often entails misrepresentation of evolutionary theory, whether referring to Darwin or contemporary theory (which is, for example, perfectly capable of accepting endosymbiosis as a driver of evolution, and also able to assimilate non-linear dynamics). This has the odd outcome that we arrive not at a new future, but one that belongs to a pre-Lamarckian worldview, where science is metaphysical, and the world driven by a pseudo-religious vitalism. Humanity is restored to its superior position (long ago questioned by Lamarck and Darwin, despite their optimism that humanity was the latest bit of evolution). Contingency is redescribed as something in which we participate actively, and pure chance is rejected. Much of what Parisi argues has resonance in scientific discourse (despite a selective playing by its rules), and relevance for contemporary philosophical discourse, but in philosophical terms, it comes across as a resistance to a nihilist posthuman universe, one which has always (already) been post- or non- human. The more

abstract humans and sex became in the book, the more rooted they seemed in discourse. As sex became abstract, it colonized the universe, backwards, just as theories of evolution before the concept of natural selection started with humans and worked backwards. Ultimately, then, the book does many things, but ends up somewhere it probably did not intend to arrive at.

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