

Czeller, Stefana. *Ozz*. Editura Tracus Arte, Bucuresti, 2013.

Deleanu, A.R. *Acluofobia*. Editura Herg Benet, Bucuresti, 2013.

Lyotard, Jean-Francois. *Conditia Postmoderna*. Editura Babel, Bucuresti, 1993.

## Biography

CATALIN is a 45 year old Romanian scholar with a PhD thesis on Romanian sf&f literature called “Romanian Fantastika After WW2.” He has been active in Romanian sf&f fandom since 1984, and has three books published in the Romanian language on sf&f between 2001-2013, mainly critical articles spiced with some theoretical essays.

Catalin has one booklet in English on the history of Romanian sf: *Short (Hi)Story of Romanian Speculative Fiction*, MediaTech, Iasi, Romania, 2012, available here: <http://www.barnesandnoble.com/w/short-c-x0103-t-x0103-lin-badea-gheracos>. Since 2012, Catalin signs the weekly column about Romanian sf&f subjects, “SFada cu Literatura” (“Quarrell with Literature”) in “Observer Cultural” ([www.observatorcultural.ro](http://www.observatorcultural.ro)).

## Biopunk 101

Lars Schmeink

IN THE APRIL 2002 issue of *Rolling Stone*, “The Cool Issue” (#893), the prophets of cultural significance, who determine music fads, fashion icons and the attitudes of our times, professed to know the newest trends of anything cool in culture. On page 80, a smallish item of geeky science fictionality appeared in pop-culture’s great chronicle of cool. The self-proclaimed Zeitgeist-icons had identified a concept promising the new millennium the “trendiness of cyberpunk” (“Gene Hack-Men” 80) not simply in literature but as a wholly new cultural formation: biopunk. Biopunk purportedly follows up the last two decades of cyberpunk but instead of computers and information technology it rather deals with “biotechnology and hacking the gene pool” (80). *Rolling Stone* identifies biopunk culture in the works of writers, such as “Jeff Noon, Paul Di Filippo, Octavia E. Butler and Michael Marshall Smith” (80), in James Cameron’s TV show *Dark Angel*, but also in bio-artist Eduardo Kac’s creation of a glow-in-the-dark “transgenic bunny”

and an order website for bio-technological equipment—biopunk is everywhere, the short and slightly sardonic piece suggests, and it is most definitely being noticed in popular culture.

Moreover, by the time the first workable assembly of the human genome was released for public use in 2000, the term “biopunk” had already been connected to a new form of non-professional research practice and an anti-corporate agenda in science journalism. As early as 1990, Sylvan Katz had, in an article in the *New Scientist*, polemically (and prophetically) warned about the “emergence of amateur genetic engineers,” whom he dubbed “biohackers” (66), within the next decade or so. Ten years later, biohacking had become a reality, prompting Annalee Newitz to announce in the *San Francisco Bay Guardian* that “Cyberpunk is passé,” before claiming its radical potential for “the biopunk revolution”:

Biopunks are the visionaries whose imaginations were set on fire by the knowledge that we had finally sequenced the human genome last year. Biopunks get off on creative genetic engineering, RNA research, cloning and protein synthesis. Biopunks hack genomic data, lining up human genomes next to mouse genomes to find out what the two species have in common and what they don’t. (Newitz, “Biopunk”)

Newitz identifies several cultural aspects of the “movement in the making” in addition to the scientific ones and remarks that one of its strengths is that “the biopunk revolution has yet to be codified or legitimized” and that “it’s as ill-defined as the genome itself” (“Genome Liberation”; cf. also “Biopunk”). A look at internet platforms and blogs dealing with biopunk<sup>2</sup> reveals though, that the same ill-defined nature might also be recognized as a weakness. Bloggers and self-declared biopunks indulge in squabbles over which cultural objects to include under the title (if any), and understand artistic production only as a minor aspect of a possible definition. The continuous debate about the *Wikipedia* entry reveals a clear lack of coherence: the entry originated in literature, but

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2 The most impressive array of discussion forums on the topic can be found at <http://www.biopunk.org>; blog examples are: [http://www.genomealberta.ca/blogs/main\\_07290801.aspx](http://www.genomealberta.ca/blogs/main_07290801.aspx) and <http://sciencefictionbiology.blogspot.com/2009/04/gregor-mendel-died-for-your-sins.html>; (Sites have been accessed on 25 Apr 2014.)

by today science fiction has become merely a “related” subsection of the larger socio-political movement.<sup>3</sup> Possible candidates to be included in this cultural variant of biopunk now include: Bruce Sterling’s *Schismatrix* (1985), Margaret Atwood’s *MaddAddam* trilogy (2003-13), Greg Bear’s *Blood Music* (1985) and *Darwin* series (1999-2003), Peter Watt’s *Rifter* series (1999-2004), Marc Budz’s *Clade* (2003), Paolo Bacigalupi’s *The Windup Girl* (2009), Paul McCauley’s *White Devils* (2004), Octavia Butler’s *Xenogenesis* trilogy (1987-89), Nancy Kress’s *Sleepless* series (1991-99), the TV-series *Heroes* (2006-10), *Dark Angel* (2000-02), and *Alphas* (2011-12), films such as *Gattaca* (1997), *I Am Legend* (2007), and *Splice* (2010), the films and video games of the *Resident Evil* franchise (1996-) and video games such as the *BioShock* series (2007-).

Biopunk, in its broad definition, can thus be a designation for the individual biohacker, who uses public domain information about genetics in order to work on do-it-yourself (DIY) biology in their home basement laboratories—people like Meredith Patterson, whom Marcus Wohlsen in his journalistic study of entrepreneurs and figureheads of DIY biology calls a “self-taught bioengineer [who] spliced genes at her dining room table” (37). Patterson epitomizes the biohacker because of her “primal urge to tinker” (Wohlsen 40) and because she has written the movement’s first unofficial statement of intent. Her “Biopunk Manifesto” is a form a self-proclamation and call to join ranks. Both Newitz and Wohlsen further argue that these individual DIY scientists form a loose network—the biopunk movement as proclaimed by Patterson—with lawyers, social and political activists, writers and artists, all of whom fight for public domain access to genomic data. The move-

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3 The original entry from Wikipedia <http://en.wikipedia.org/wiki/Biopunk> dates to September 2004 and defines “biopunk” as a subgenre of science fiction. In October 2005 a section on a “Movement” was added. By January 2007 the focus had shifted and the socio-political meaning of the term had been moved to the foreground. One year later, January 2008, the order had been rearranged again, and by the end of February 2008 the entry provided a tri-part definition (the hacker as person, the movement and the literary genre). A discussion on which cultural products to include under the term ensued, which was cut short in January 2012, when the tripartite definition was removed and the above mentioned subsection established.

ment is decidedly anti-corporate and empowered by the “‘information-wants-to-be-free’ hacker ethos” (Newitz, “Genome Liberation”; cf. Wohlsen 5) that originated in the computer hacker scene of the 1980s and 90s. The inclusion of artists and writers in this movement reflects the need to culturally negotiate these technoscientific processes and concepts as well as the political consequences—it is here that biopunk functions as a literary and visual genre and thus forms a larger cultural formation, to use Lawrence Grossberg’s concept of apparently disparate but nonetheless interconnected cultural practices producing a new cultural articulation (70).

What most definitions of biopunk fail to properly acknowledge and what is necessarily important in terms of the “historical relations which *enabled* its appearance” (70), is that the term originated *specifically* in relation to science fiction, long before the technological development made the realization of such a movement even possible, and that it is thus already pre-determined in its cultural associations and metaphoric signifiers.

### The Origin of Biopunk—Some Historical Notes

IN HIS SF-dictionary *Brave New Words* Jeff Prucher defines the term “biopunk,” etymologically a derivative of the words “*biology* + *cyberpunk*,” to mean “a subgenre of science fiction which explores the societal effects of biotechnology and genetic engineering” (16). He then cites the roleplaying game GURPS as the earliest use of the term in 1992, before his second citation, in *Interzone* 54/1 in 1997, reveals the strong connection that the etymology describes and that his own definition neglects: “cyberpunk described ways of positively enhancing the body by mechanical or silicon chip implants; biopunk examines a more fundamental consumerist option, change not just of our bodies but of our cells” (16). Aside from the dubious opposition of “body” and “cells,” this use of the term implies that biopunk is not just a subgenre of science fiction, but a subgenre of cyberpunk, a variant on the themes and tropes of this notorious science fictional subgenre itself.

Prucher not only neglected to stress the relation of biopunk to cyberpunk, but also its most likely coinage by Brian McHale in his 1992 book *Constructing Post-modernism*. In his final chapter “Towards a Poetics of Cyberpunk” McHale identifies cyberpunk not as a literary movement or cultural object but as a literary mode, whose poetics can be described in “three large bundles or complexes of motifs”: “worldness,” “the centrifugal self,” and “death, both individual and collective” (246f.). As part of the second complex, McHale identifies cyber-

punk's tendency to deal with the "dispersion and decentering" (255) of the self by creating visions of a diversity of posthuman futures. It is here that Thomas Foster most strongly identifies cyberpunk as an "intervention in and inflection of a preexisting discourse" (xiii) on the posthuman, blazing a popular cultural trail for the different inherent concepts.

In order to understand the historic debt of biopunk to cyberpunk (and thus the prototypical elements of its cultural formation), a closer look at McHale's differentiation might be warranted. He provides a "convenient taxonomy" (255) of the possible representations of the posthuman within cyberpunk science fiction by using Bruce Sterling's *Schismatrix* story cycle to map out its extreme positions. In *Schismatrix* two posthuman factions vie for power, the Shapers and the Mechanists. The Mechanists "use electronic and biomechanical means to augment themselves," while the Shapers "use bio-engineering techniques—cloning, genetic engineering—to achieve the same ends" (255). This opposition of mechanical versus biological augmentation then prompts McHale to conclude, in regard to his cyberpunk poetics, that there are two sets of aesthetic conceits employed by the authors: "We might call the first set, corresponding to the Mech option, cyberpunk proper, and the second set, corresponding to the Shaper option, 'biopunk'" (255). Thus, McHale coins the term to mean a subgenre of "cyberpunk proper" that he understands to function within the poetics of that parental literary mode, citing Greg Bear's *Blood Music* (1985) as another example of biopunk.

In 1993, the British journal *Vector* devoted a special issue to a little known and short lived 1980s Czech literary movement dubbed "biopunk." In this issue, Miroslav Fiser, in a reprinted and translated article from 1991, argues that "Biopunk is, after the robot, the second original contribution of Czech fantastic literature" (17) and then contends that it is limited to former socialist Eastern Europe due to its lack of technological advancement and the corresponding mindset of a technologically saturated society. To him, "biopunk is an antithesis of cyberpunk" (17), the answer from socialist societies lacking most of cyberpunk's imaginary. He argues that Czech biopunk refrains from using cyberpunk tropes of information technology, that it is a dystopian rather than a utopian outlook at technology, that it is charged with questions of environmentalism and feminism and that it is even more indebted to the punk movement because in a socialist political climate punk represented not only a gesture of rejection but equaled political

revolution. Therefore, Fiser refers to biopunk as "a cry from the depths of the maltreated soul. A cry expressed through programmatic foulness, allegory and rebelliousness" (17).

Neither article had been published in English before 1993, so it remains unclear who originally coined the term. But as the introductory notes to the issue state, by 1992 "biopunk" had become a localized referent for a historically specific, concluded movement—socialist oppression ended and neither Hauser nor Fiser wrote biopunk anymore, leaving the mode to be regarded as "the afterimage of a [*sic*] artistic impulse which belongs to a completely different social paradigm" (Simsa 12). Just as Bruce Sterling attempted in his preface to *Mirrorshades* to establish cyberpunk as science fiction's literary avant-garde, antagonistic to established SF-forms, Hauser and Fiser similarly enact a sort of literary self-exaggeration by emphasizing differences to cyberpunk (such as the socialist experience) and downplaying similarities. They are setting up biopunk as something radically new and use the dominant science fiction mode at the time to do so in comparison. Viewed with historical distance the statements thus, in my opinion, need to be relativized—cyberpunk is not always utopian or ignorant of feminist and ecological concerns, nor is it always created in privileged societies, though all of these critiques have been rightfully brought up at *some* point, against *some* cyberpunk writing. Nonetheless, both historic literary uses of the term "biopunk" emphasize a connection to cyberpunk (either through contiguity or adversity), and both see the tropes of the latter transformed from cybernetic to genetic—the scientific emphasis shifts from physics to biology, if you will.

### **Towards a Definition**

HAVING ESTABLISHED the socio-political practices surrounding biopunk, as well as the literary historical relations from which it stems, at this point a short interjection might be necessary. As I have argued in my dissertation, I believe that biopunk in its contemporary usage might be somewhat of a misnomer (cf. Schmeink 18ff.), or at least signaling an emphasis where none should be. Given the original themes of early cyberpunk—the devil-may-care stance, the dirty and beaten settings, the low-down loser characters and the open connection to music culture—the emphasis of "*-punk*" in cyberpunk seems obvious. In biopunk, on the other hand, most of the time the emphasis of punk seems construed, sometimes even disparate and jarring. As Paul

Di Filippo notes in his “Ribofunk: The Manifesto,”<sup>4</sup> a new, biologically-themed science fiction would need to take leave from any cyberpunk roots, because punk was already a “dead music when cyberpunk was born, a cul-de-sac” (Di Filippo). But since punk itself is a protean monster of variant definitions, of course, some generic elements still resonate even in biopunk. As noted before, the biopunk movement declares itself anti-capitalist and anti-government, and authors sometimes still feel drawn to down-and-out-characters for their stories. Nonetheless, the perceived historic specificity of cyberpunk—the connection to 1980s popular culture and socio-political realities—has led many scholars to declare the genre dead time and again (cf. Murphy and Vint xi-xii) and, in an attempt to move beyond it, all that follows as second-wave cyberpunk, “post-cyberpunk” or “cyberpunk-flavoured” (Butler 15; cf. Frelik). Biopunk seems similarly fraught with historic connotations that are mostly unjustified. And as much as I would like to propose an alternative, the examples from my introduction here have made it abundantly clear that biopunk has already become a cultural formation—misnomer or not, it is here to stay.

Acknowledging its generic debt to cyberpunk then, the question still remains: what qualities make a work of literature, a film, a video game, “biopunk”? In short, what is “biopunk”? Some working theses:

*Biopunk thematically emphasizes biologically driven nova, especially genetic engineering.* The proliferation of genetics as the site of the most radical scientific progress since the late 1990s, with successes like the genetic manipulation and patenting of foods (i.e., the Flavr Savr tomato in 1994), cloning (i.e., Dolly, the cloned sheep in 1997), transgenic experimentation (i.e., the “earmouse” of Dr. Vacanti in 1995 or the spider/goat splice of Dr. Randy Lewis in 2010), and the deciphering of the human genomic code, its mapping and publication (in 1999, 2000 and 2001 respectively), prominently placed genetic engineering at the centre of a public debate of science (cf. Ness 336, 351). Biopunk reflects this shift of scientific prominence in general discourses and provides a creative exploration not only of the technoscientific possibilities of further progress in genetics, but also of the environmental and social consequences that

they might bring with them. Atwood’s *MaddAddam* trilogy, for example, discusses genetic engineering and the social cost of transgenic experimentation. Bacigalupi’s *The Windup Girl* deals with genetic patenting and the terrible consequences of genetically altered food plagues. In *Gattaca*, humanity is able to manipulate fetal DNA to the wishes of parents, creating a superhuman society. In both *Heroes* and *Alphas*, a genetic mutation brings forth a superior species with superhuman abilities. *Splice* extrapolates the moral battlefield of creating a human-animal hybrid. And *Resident Evil* explores the consequences of genetically altering viral DNA in order to create biological weaponry.

*Biopunk addresses a critical posthuman subjectivity.* Contemporary posthumanism consists of not one but several strands of discourse that try to describe the posthuman condition, though most of them seem to reference an end or crisis in humanism (the conceptual condition of the human) and/or a change in the technological environment of life (the ontological condition the human). I would like to point out two main strands of posthuman thought as being important for the distinctiveness of biopunk. On the one hand, there is the “trans-humanist fantasy of escape from the finite materiality of the enfleshed self” (Braidotti 91), best represented in William Gibson’s *Neuromancer* (1984) and its depiction of the body as prison and an escape to the virtual world of the matrix. For Pramod Nayar, this strand is defined by its popular cultural appeal, as it simply describes the technoscientific improvement of a flawed and ultimately failing body. At the heart of this argument though, as Nayar points out, lies the implication that “there is a distinctive entity identifiable as the ‘human,’ a human ‘self’” (6). This is the posthumanism depicted in most cyberpunk texts and quite a few of Hollywood’s more successful franchises, from *Terminator* (1984) to *The Matrix* (1999).

The second posthuman strand then, critical posthumanism, by contrast represents a non-anthropocentric view of subjectivity, preferring to see the posthuman as “becoming-animal, becoming-earth and becoming-machine” (Braidotti 66), as “co-evolving, sharing ecosystems, life processes, genetic material, with animals and other life forms” (Nayar 8). Subjectivity is understood as complex, evolving and interrelated to all life (*zoe*) on earth. This is, at least prototypically, the posthumanism of biopunk—and it resonates with critical theory discussing feminist studies, animal studies, disability studies, post-colonial studies and even teratology studies, all of which interject new forms of subjectivity into a privi-

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4 Di Filippo suggested “ribofunk” as an alternative term, which in turn was just as limited in scope—basically describing only his own writing style—and never got established as a genre in academic discourse of science fiction.

leged humanist perspective as the suppressed Other. In *Resident Evil*, human society is thus literally eaten up by a better suited, genetically altered species: zombies. In *Splice*, the human-animal hybrid proves much more complicated in her subjectivity than a mere division into human and animal sides. And in Bacigalupi's *Drowned Cities* (2012), a human-dog splice becomes the central character for reflections on the morality of a post-capitalist world.

And because of this interconnected zoe-centric view, most biopunk texts emphasize the human as a global force, pointing towards the earth's entry into a new geological era, the anthropocene. Geologists argue that considering the effect human activity has had on the planet—from climate change to fresh water collection to the spread of domestic animals—"humankind, our own species, has become so large and active that it now rivals some of the great forces of Nature in its impact on the functioning of the Earth system" (Steffen et al. 843). Biopunk picks up cyberpunk's idea of "worldness," which enacts culture and technology as global, and turns it against itself, extrapolating the environmental and social costs and consequences of a global society. In Atwood's *MaddAddam* trilogy, in Bacigalupi's *The Windup Girl*, in the *Resident Evil* film series, and Alfonso Cuarón's film *Children of Men* (2006), human activity causes cataclysmic changes of the earth's environment—droughts, rising sea levels, mass extinctions, all of which cause a need to change human existence. Biopunk, then, enacts the anthropocene.

### Conclusion

AS I TRIED TO SHOW, biopunk has become an independent cultural formation of the new millennium. As such, it has its historical origins and generic development in 1980s cyberpunk, but has since grown into an independent array of cultural tropes; it has evolved and been shaped into something quite distinct from being simply the biological version of "cyberpunk proper" (McHale 255). With the rise of biology within the general public debate as the forerunner of scientific progress, and genetics delivering the most radical advances in technoscience, biopunk texts have become inextricably linked with other cultural practices: DIY biology, biohacking, an anti-corporate sentiment in matters of biology, scientific critical concepts such as posthumanism, an awareness of the new geological era of the anthropocene. As such, it represents a chance for science fiction, both creatively and academically, to explore the dystopian and the utopian possibilities that these new tech-

nologies open up and the theoretical frameworks they bring with them. Biopunk, then, is a recently discovered but strongly growing field of science fiction inquiry.

### Works Cited

- Braidotti, Rosi. *The Posthuman*. London: Polity, 2013. Print.
- Butler, Andrew M. *Cyberpunk*. Harpenden: Pocket, 2000. Print.
- Di Filippo, Paul. "Ribofunk: The Manifesto." *Dvara.net*. 1998. Web. Jun 05, 2014. <<http://www.dvara.net/hk/ribofunk.asp>>.
- Fiser, Miroslav. "A Few Notes about Biopunk." *Vector: The Critical Journal of the British Science Fiction Association* 174 (1993): 17-18. Print.
- Frelik, Pawel. "Cyberpunk (1980s–1990s)." *Video Lecture. A Virtual Introduction to Science Fiction*. Ed. Lars Schmeink. Web. Sep 01, 2012. [http://virtual-sf.com/?page\\_id=328](http://virtual-sf.com/?page_id=328).
- Foster, Thomas. *The Souls of Cyberfolk: Posthumanism as Vernacular Theory*. Minneapolis: U of Minnesota P, 2005. Print.
- "The Gene-Hack Men." *Rolling Stone*. April 2002. 893 (2002): 80. Print.
- Grossberg, Lawrence. *We Gotta Get Out of This Place: Popular Conservatism and Postmodern Culture*. New York: Routledge, 1992. Print.
- Hauser, Eva. "Biopunk: A New Literary Movement for Post-Totalitarian Regimes." *Vector: The Critical Journal of the British Science Fiction Association* 174 (1993): 15-16. Print.
- Katz, Sylvan. "Roses Are Black, Violets Are Green: The Emergence of Amateur Genetic Engineers." *New Scientist* 125.1698 (1990): 66. Print.
- Latham, Rob. "A Rare State of Ferment: SF Controversies from the New Wave to Cyberpunk." *Beyond Cyberpunk: New Critical Perspectives*. Ed. Graham J. Murphy and Sherryl Vint. New York: Routledge, 2010. 29-45. Print.
- McHale, Brian. *Constructing Postmodernism*. London: Routledge, 1992. Print.
- Murphy, Graham J. and Sherryl Vint, eds. *Beyond Cyberpunk: New Critical Perspectives*. New York: Routledge, 2010. Print.
- Newitz, Annalee. "Biopunk." Column. *San Francisco Bay Guardian*. 08 Aug 2001. Web. 05 Jun 2014. <http://www.ekac.org/biopunk.html>.
- . "Genome Liberation." *Salon.com*. 26 Jan 2002. Web. 15 Jan 2010. <http://www.salon.com/2002/02/26/bio->

[punk/](#).

- Ness, Bryan D. *Encyclopedia of Genetics*. Revised Edition. Pasadena: Salem, 2004. Print.
- Patterson, Meredith. "A Biopunk Manifesto." 30 Jan 2010. Web. 08 Feb 2012. <http://maradydd.livejournal.com/496085.html>.
- Nayar, Pramod K. *Posthumanism*. Cambridge: Polity, 2014. Print.
- Prucher, Jeff, ed. *Brave New Words: The Oxford Dictionary of Science Fiction*. Oxford: Oxford UP, 2007. Print.
- Schmeink, Lars. "Biopunk Dystopias: Genetic Engineering, Society and Science Fiction." Dissertation. Humboldt University Berlin, 2014.
- Simsa, Cyril. "Biopunk: Two Short Articles about Biopunk (Introduction)." *Vector: The Critical Journal of the British Science Fiction Association* 174 (1993): 12-14. Print.
- Steffen, Will, et al. "The Anthropocene: Conceptual and Historical Perspectives." *Philosophical Transactions: Mathematical, Physical and Engineering Sciences* 369.1938 (2011): 842-67. Print.
- Wohlsen, Marcus. *Biopunk: DIY Scientists Hack the Software of Life*. New York: Current, 2011. Print.