

The hip-hop Richard Dawkins?

The Rap Guide to Evolution by Baba Brinkman. Lit Fuse Records 2009. www.babasword.com.

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Evolutionary biology and poetry might not seem remotely suited to each other but nonetheless, some have experimented with bringing them together. Erasmus Darwin, grandfather of the more famous Charles, famously wrote his work on the transmutation of species in the form of verse [1] and much more recently, in the days before impact factors gathered enough tyrannical power to put a damper on anything the least bit quirky, this very journal re-published some of the evolution-inspired poems written by friends and colleagues of J.B.S. Haldane to mark his 60th birthday [2]. Suffice it say, both works are of more note for their intrinsic interest than their literary merits.

Perhaps this just shows that evolutionary biologists are not much good at poetry and poets don't see anything in evolution to inspire them. The first of those sentiments might well be true but the second has now been comprehensively disproved. Canadian rapper Baba Brinkman's *The Rap Guide to Evolution* is an intelligent, lyrical, witty collection of performance poetry that also manages to be an accurate, popular-science discussion of modern evolutionary theory and its wider implications. Those of you with an aversion to rap music bear with me; this is not rap as you might know it. This is rap with an intelligent twinkle in its eye. It is rap with warmth and humanity, far removed from the stereotype of the style as aggressive, violent and divisive. It is also rap that doesn't simply use its subject matter of evolution as an amusing gimmick but rather draws on modern Darwinism with accuracy and insight. The accuracy is ensured by instigator of the project Mark Pallen, Professor of Microbial Genomics at the University of Birmingham, author of *The Rough Guide to Evolution* [3] making this the first rap album ever to be peer reviewed (as Brinkman is justly fond of telling his audiences). The insight I'm sure is Brinkman's own, particularly when he becomes self-referential and cleverly uses the process of writing and performing rap as an example of the evolutionary process on *Performance*, *Feedback*, *Revision* or of sexual selection on *Hypnotise*.

In common with many works of popular evolutionary biology, there is a bias towards those topics that appeal directly to our primate brains (*Hypnotise*, *Sexual Selection* and *Sexual Selection Theory* all exploiting that obvious, perennial primate favourite, for example). But given the wide and unusual audience the music is likely to reach, that can hardly be a criticism, particularly when the material is handled by someone with the wit and humanity of Baba Brinkman. For example, in Brinkman's hands a rap inspired by a song promoting Black Nationalism (Dead

Prez's *I'm A African*) becomes a plea to recognise the unity of our common descent: genetically we are all Africans, which, in Brinkman's words, makes *I'm A African* the most ironically inclusive song ever written. What makes this much more than well-intentioned humanism is the frequent reference to the scientific evidence. To continue with *I'm A African*, there is reference to the fossil and mitochondrial evidence for the Out Of Africa theory, all in rhyme and with a rhythmical beat. And again in *Group Selection* there is no vague philosophising but instead the sometimes difficult ideas about altruism and cooperative behaviour are faced head on with exuberant openness. Find me another rap album that references endosymbiosis, the evolution of multicellularity, *Dictyostelium* and cheater detection, let alone one that uses this evidence to such high-minded effect or includes suggestions of further reading in the sleeve notes.

I have just two criticisms. Once or twice there seems to be an equating of fitness with physical strength. It would be a pity if such an insignificant part were quoted out of context, especially since Brinkman eloquently describes the complexities of fitness elsewhere on the album. My second criticism is not strictly a criticism at all. I wonder if the Rap Guide will remain something enjoyed by those of us in the know, those who already get all the jokes, the allusions to evolutionary theory and the references to biologists. As Brinkman himself regrets with a knowing wink in *Sexual Selection*; while educated, thinking, older women wait to talk to him after his performances, their daughters and granddaughters are at gangsta rap gigs, being exposed to a very different set of views. There is an opportunity here to communicate good science to those who might never think of it as having anything to do with them. Fortunately, Brinkman seems well aware of this and is working tirelessly to promote the work as widely as possible.

I will leave you with some thoughts on the album's last track, *Darwin's Acid*, in which Brinkman argues against the claim that an acceptance of evolution means an end to compassion and personal morality. It is quite the opposite, his rapping tells us over a gentle musical background: the choices we make directly influence the evolution of culture, current biological fitness and the composition of future generations. In Brinkman's vision, Darwinism becomes the ultimate argument for personal and democratic morality and his humanistic version of directed reproduction means that "refusing to sleep with mean people" gives us a good shot at utopia. While the complexities of inheritance and human mate choice make this less simple in practice, such a sincere argument for a Darwinian morality at least

points to the absurdity of claiming that an evolution-based worldview means the collapse of society into violence, selfishness and greed. To Brinkman, this personal responsibility combined with unity of common descent is the grandeur Darwin saw in the evolutionary view of life. With humility, Brinkman leaves the last word to Darwin with a reading by Richard Dawkins of the famous last sentence of *The Origin of Species*, in which there is grandeur and the evolution of endless forms most beautiful [4]: perhaps the one sentence above all others that shows

evolutionary biologists might know a thing or two about poetry after all.

References

- 1 Darwin, E. (1803) *The Temple of Nature*, J. Johnson
- 2 Maynard Smith, J. (2001) Cautionary tales for aspiring species or the beast's book of blunders. *Trends Ecol. Evol.* 16, 717–720
- 3 Pallen, M. (2009) *The Rough Guide to Evolution*, Rough Guides
- 4 Darwin, C. (1859) *On the Origin of Species*, John Murray

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