

Review

Reviewed Work(s): *The Music of the Spheres: Music, Science and the Natural Order of the Universe* by Jamie James

Review by: Ivan Hewett

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THE MUSIC OF THE SPHERES: MUSIC,  
SCIENCE AND THE NATURAL ORDER OF  
THE UNIVERSE

Jamie James

Little, Brown and Company (London, 1994);  
xv 262pp; £18.99. ISBN 0 316 90906 8.

James describes his book as 'an anecdotal history of the symphony of science and its counterpart, the wisdom of music'. It sounds modest, but behind the breezy style you can hear the deeper undertones of a familiar myth being retold – that of the Golden Age followed by the Fall. Although James says in the preface to his book that 'I am not a believer in the golden age', it soon becomes clear that for him the 2000-year period from Pythagoras to Kepler was indeed a kind of Golden Age for both music and science.

It's no accident that they flourished together because, according to James, they were in essence one and the same thing. What united them was their lofty purpose, which was to reveal the orderliness of God's cosmos to man. Music was the deciphering of divine harmony as it revealed itself in sound. Science was the deciphering of the same harmony as it revealed itself in the heavens. Harmony was the visible or aural expression of number, which, according to Pythagoras, was at the root of all things. The number one expressed unity, persistence in identity, immutability; two expressed dichotomy and mutability; add these together and you get three, which underlies all things that have beginnings, middles and ends; four was the number of points required to describe the simplest perfect solid. Add four, three, two and one and you get ten, the most sacred number to Pythagoreans.

All this of course, had precious little to do with music as it was actually played and sung. That was for mere 'cantors', who were judged, by the sages who elaborated James's 'Great Theme', to be on a par with jugglers and acrobats. Music was to be thought and meditated on, not played. Likewise astronomy had little to do with observation, because as Plato said, the heavenly bodies 'are still part of the visible world, and therefore they fall

far short of the true realities – the real relative velocities, in the world of pure number and all perfect geometrical figures, of the movements which carry round the bodies involved in them. These, you will agree, are conceived by reason and thought, not seen by the eye.'

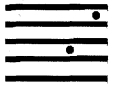
It's a beguiling myth, and from Pythagoras onwards the system was passed down through Plato, the neo-Platonics, the Roman rhetoricians and the scholastics – up to the Renaissance and beyond. But it wasn't the same system in all respects, despite its appeal to immutable, timeless mathematical truths. There were awkward gaps in the system, and the maths didn't always quite work. As the art of polyphony developed in the Christian Church, so the Pythagorean system had to be considerably stretched to embrace it. James recounts the vicissitudes of the Great Theme with an engagingly light touch, and has a gift for reducing a tangled theoretical controversy to its bare, vivid essentials. He takes care to point up the parallel difficulties in astronomy, where from Ptolemy onwards astronomers had to exert a great deal of ingenuity to 'save the appearances', square the observed data with what the theory of 'perfect' circular motion predicted. The tradition reaches its baroque climax with the astronomer Kepler, who gets a whole, brilliantly written chapter to himself. Kepler made efforts to modernise the Pythagoreans, who he said 'were so addicted to this kind of philosophizing in numbers... that they failed to keep the judgement of their ears.' His ingenious solution was say that for every consonance there corresponded a perfect polygon, one that could be constructed with a compass and ruler. Those that cannot are 'abominations', and the musical intervals that correspond to them (the heptagon intervals of 1:7 and 6:7) are likewise abominable and cacophonous.

But alas, just as the stubborn facts of the heavens caused the downfall of Pythagorean astronomy, so the Great Theme in music was driven out by the reality of music, which by now was altogether worldly in its aims. It's simply no good trying to explain a Mozart

minuet by comparing its motions to that of the heavens. Music theorists now have to look elsewhere to explain music's power to move the soul.

For James the Romantic era represents the Fall that follows the Golden Age. Man now becomes the measure of all things, and music and science lose touch with the notion of cosmic harmony. From now on they pursue different ends, both equally trivial. It's at this point that James's argument goes seriously off the rails. He says that 'The history of science is the continuing process of the widening gulf between the ideals and the practice of science.' But surely it would be truer to say exactly the opposite; that only in recent times has science approached its own ideal of being testable and therefore corrigible. James is gripped by the Pythagorean myth – and who can blame him? – but myths can't be tested, and so have nothing to do with science. He also makes the mistake of confounding science with the technologies that it has spawned, and then berating science for the trivial uses to which the technologies are put.

As for music, James takes the gloomy view that its history, too, can be described as the divergence – leading to a yawning gulf – between ideals and practice. The bleakness of this view is clearly more than he can bear, because he makes strenuous efforts to trace a continuing Pythagorean tradition running as it were underground, in opposition to the 'official' romantic ideology of self-absorption and self-expression. It's a rather motley crew who make up this *samizdat* Pythagorean tradition of modern times; Newton, the young Mozart of *Il sogno di Scipio* (but **not** the older one of *Figaro*), Schoenberg (for his numerology), Hindemith (for his moralistic harmonic system), Philip Glass, and Stockhausen (who can be used to support any dotty cause). As the tradition goes underground it loses its luminous rigour and slides into mystification, a change mirrored exactly in James's book. He can't resist seeing evidence for this underground tradition everywhere; for example, the phrase 'alles ist hin' (all is lost) in Schoenberg's second quartet he



takes to refer to a key stage in the alchemical process. It's all deeply unconvincing, though highly entertaining.

The irony, though, is that there's no need for James to make dubious claims about an underground continuation of the Great Theme, because the tradition actually continues above ground in full view. The Romantics weren't just interested in self-expression for its own sake; they were interested in it because they believed the self and nature to be mysteriously intertwined. Exploring self and exploring nature were, according to the romantic philosopher CG Carus, one and the same thing. The key to their view of the universe was the idea of plenitude, which holds that the world is an expression of God's exuberant creative generosity. Everything that can exist must exist – there are no gaps or omissions in creation, otherwise the Great Chain of Being would no longer be a chain. As Schiller put it, 'Every kind of perfection must attain existence in the fullness of the world... every offspring of the brain, everything that wit can fashion, has an unchallengeable right of citizenship in this larger understanding of creation. In the infinite chasm of nature no activity could be omitted, no grade of enjoyment be wanting in the universal happiness.' (Schiller, *Philosophical letters*, Cotta ed., XII, 189,188) In this novel twist to the ancient idea of the Great Chain of Being lay the perfect justification for romantic self-expression. God's creative generosity had to be matched by the artist's, so the pursuit of wilful individuality became a kind of duty. James mentions this ancient idea as being an essential component of the Great Theme, but he never refers to it again. This is hardly surprising, given that the idea of plenitude raises a vision of teeming, chaotic diversity which is hard to square with the radiant, still perfection of the Music of the Spheres. Perhaps one day James will write a book that tells the other story, the story of music as a reflection of living nature, rather than of an inert but perfect cosmos.

IVAN HEWETT

NEW MUSICAL FIGURATIONS:  
ANTHONY BRAXTON'S CULTURAL  
CRITIQUE

Ronald M. Radano

Chicago UP (Chicago & London, 1993);  
315pp; £ . ISBN 0 22670 196 4.

Anthony Braxton has a formidable reputation among new music listeners. His recorded work – vast in ambition and scope, scarcely a redundant piece of music in a discography of over sixty albums – looms as one of the few genuine encounters between classical music and jazz. Initially inspired by what any black youngster could hear in the Chicago of the 50s, Braxton was radicalised by the events of the next decade. In 1969 he created a stir in Paris as an exponent of the 'New Thing': free jazz interpreted as the musical wing of Black Power. In the mid-70s, Arista Records, then a major label, promoted him as 'the new Charlie Parker' – a saxophonist whose innovations could unify an increasingly fractured jazz scene and provide the next step in its evolution.

Perversely, Braxton took the opportunity to further his interest in composition. He produced complex orchestrations that sounded more like something written at Darmstadt than improvised in a night club. By the 80s, an increasingly conservative jazz scene viewed him as an eccentric, and Arista cancelled his contract. Today, Braxton's releases are restricted to tiny European labels like Leo and Black Saint. This commercial eclipse has only served to harden the resolve of his supporters: Richard Barrett, has called him 'more important than Schoenberg'. In a music world increasingly understood via the logic of the market, such claims are ripe for explanation.

Author Ronald Radano is assistant professor of Afro-American studies at Wisconsin University. When dealing with something as mercurial as jazz, academic discourse can easily sound laboured. Radano has come up with a virtuosic style, simultaneously authoritative and witty: deft and descriptive where necessary, he also recognises larger issues. He takes social facts into the very

interstices of his analysis. For example, he shows that by bringing tonality 'in and out of focus' in his bebop-derived *Composition 6*, Braxton is deliberately mediating between traditions previously thought of as racially distinct. This ability to relate social concepts to the notes themselves recalls the verve of Theodor Adorno discussing Schoenberg or Mahler.

Cultural studies gurus like Simon Frith and Dick Hebdige make non-classical music worthy of academic study by subjecting it to sociology. Pop music becomes an aspect of youth or minority 'resistance'. If music fails to reach the mass market it is judged irrelevant: the avantgarde drops from view. As Gillian Rose pointed out in *Hegel contra sociology*, such an approach is flawed by its repression of the writing subject. Radano, in contrast, uses sociology to articulate his own aesthetic responses. Thus Braxton is valuable because he refuses to be locked into binary oppositions (black/white, improvisation/composition, academic/homegrown), refusals that can be pointed to at specific junctures in his music.

Radano has a knack for the vivid phrase: 'brief stabs of buzz-lipped, harmon-muted colour engage an eerie flutter of abrupt violin attacks'; 'the stiff, amusingly awkward *arco* bass accompaniment parodies both 'serious' composition and Braxton's own 'intellectual' persona.' Unlike the somewhat grim resistance Adorno discerned in Schoenberg and Beckett, Radano's oppositional muse is colourful: perverse and satirical, humourous and angry all at once.

Radano has made an important contribution to the existing literature. Graham Lock's account of Braxton's 1986 Contemporary Music Network tour, *Forces in motion*, is the only previous book-length study. Braxton's researches into Egyptian mysticism, colour theory and astrology were aired with a reverence that bordered on new age idealism. Though Radano carefully avoids any slurs on private schematics that might stimulate Braxton's creativity, his approach is refreshingly down-to-earth. Unlike Lock (and his mentor Val Wilmer), Radano avoids hagiography. The Association for