DANCE

Science in motion

As Wayne McGregor prepares his dance company for the world premiere of his latest work, at Sadler's Wells in November, *Emma Crichton-Miller* profiles one of dance's great pioneers

Last September, during two weeks in a rehearsal studio at the Laban Centre in Greenwich, I watched Wayne McGregor's company, Random Dance, put together a new piece for Sadler's Wells.

The work, *Dyad 1909*, was to be performed in October 2009—marking the centenary of the founding of Sergei Diaghilev's Ballets Russes, the revolutionary dance company that took Paris by storm in the early 20th century. To music by the Icelandic composer Ólafur Arnalds, I watched McGregor guide and link together segments from seven dancers, working in pairs or trios with an occasional solo—each body taking the distinctively angular, unintuitive movements they have developed with McGregor and making something convincing of their own.

Sitting on the rehearsal room floor in his white socks, recording every moment of the entire process of making *Dyad*, was David Kirsh—director of the Interactive Cognition Lab at the University of California, San Diego (UCSD). And it's McGregor's relationship with scientists such as Kirsh that lies at the heart of one of the most remarkable experimental processes taking place in the performing arts. For McGregor—creative director of his own company, resident choreographer of the Royal Ballet—has put science at the very heart of his work.

From 17th to 20th November this year, a major new piece by McGregor, *FAR*, receives its world premiere at Sadler's Wells. To music by electronic pioneer Ben Frost, ten dancers will spend an hour blending choreography with video and visual art. *FAR* is an acronym alluding to a book by the medical historian Roy Porter, *Flesh in the Age of Reason*. But equally important to the work's gestation has been an eight-year collaboration between McGregor and Philip Barnard, programme leader at the MRC Cognition and Brain Sciences Unit (CBSU) in Cambridge. As always for McGregor, the science serves neither as subject nor metaphor, but as a tool—a way of understanding and transforming his own practice.

Born in Stockport in 1970, McGregor studied dance in Leeds and New York before beginning his career in 1992 as choreographer-in-residence at the avant garde dance studio The Place, in London. He founded Random Dance in the same year and, almost from the start, ideas derived from science drove his choreography: not just the use of video screens and computer-generated imagery, but also concepts such as coding, decoding, generative systems and cognitive mapping.

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Wayne McGregor's company in action: a "dislocating, beautiful physical language"

This interest was already evident in his second collaboration with the Royal Ballet, *brainstate*, in 2001. Combining members of Random with dancers from the Royal Ballet, the audience was invited to ponder the neurological systems underlying both the dancers' moves and the audience's ability to read them. If dance can be a metaphor for a certain state of mind, it is also the consequence of a certain state of brain: the collective brain of the choreographer and his dancers. It's curiosity about this collective brain and how it produces dance—"the technicity of creativity" as McGregor and his team are currently naming it—that has driven much of his work for the past nine years. The result has been a series of research projects conducted in parallel with McGregor's dance-making work.

McGregor's engagement with scientists is not unprecedented among contemporary choreographers. The late American choreographer Merce Cunningham pioneered the use of computers with his dance software, Life Forms, as long ago as 1991. What is remarkable about McGregor, though, is the intensity and tenacity of his commitment. As he explained to me when we discussed the relationship between science and his work, "I find it fascinating. I don't find the interventions problematic. I don't hold with the old-fashioned idea that if you explain away creativity you are not going to be creative. I prefer to have the conversation. I feel that it really fuels the ideas. It's like having this cognitive toolkit that you can put with your choreographic toolkit to extend your possibilities, and I want as many possibilities as possible."

The person most responsible for setting up these "conversations" with creativity is Scott deLahunta, director of Random's research branch. With his help, McGregor's first extended foray into cognitive science began in 2002. McGregor set out with ten dancers, an anthropologist and six cognitive scientists to explore a whole series ▶

of questions. How do choreographic ideas get passed from choreographer to dancer? How can you disrupt the process of performing a perfect movement to create an alternative vocabulary? Do dancers experience their own movement from the outside, as though visualising it from the point of view of the audience, or from the inside, as relayed by their own proprioceptive system? How small a segment of movement can be registered as meaningful?

It was in January 2009, in his role as innovator-in-residence at UCSD, that McGregor and Random Dance embarked upon their study of “creative cognition in choreography” with David Kirsh. For 18 days McGregor worked with his dancers on the gestation of what would become *Dyad 1909*: feeding them a mix of stories about Ernest Shackleton’s Nimrod expedition to Antarctica and Diaghilev in Paris, encouraging improvisation, interjecting ideas.

Kirsh and his assistants recorded what took place, interviewing the dancers and McGregor every day. They were gathering data to shed light on the process by which a dance emerges from the distributed creativity of dancers and choreographer, all of them working through language, gesture, memory and physical intelligence. What McGregor gets from it is, he told me, more elusive: “It’s a bit like seeing a therapist. To have that person to talk to, who’s not looking at your choreographic decisions but just in general at your way of thinking, I find really clarifying.”

From the outside, McGregor’s process seems almost entirely intuitive: he works without narrative, often at first without music, inviting suggestions from his dancers. He sets improvisation tasks, or shows movements, before selecting and shaping the fragments of dance into a coherent whole, often keeping decisions about structure open until the last moment. And yet it’s perhaps because of this process that he is so eager to gain an objective, conceptual handle on his methods. As he explains of his relationship with Barnard: “He has a fantastic ability to make you look at your own process through a different filter.”

McGregor’s ultimate ambition, however, is more audacious than simply gaining a new set of tools for understanding his art. He aims to embody that understanding in an artificial choreographic intelligence: to build what he refers to as the “Entity.” Wacky as that idea might sound, it is already beginning to yield concrete expression. In collaboration with Barnard and the composer and software designer Nick Rothwell, he is developing on the one hand a set of “choreographic ideation tools” to augment his and his dancers’ creative processes and, on the other, “autonomous choreographic software agents,” able to generate unexpected solutions to choreographic problems alongside his own decision-making. For McGregor has always taken to heart Cunningham’s most famous dictum that “one of the hardest things to do in life is unlearn things.” In his desire to break the movement habits of a lifetime, he wishes to harness that most contemporary product of human thought: artificial intelligence.

Given the cerebral overload all this study implies, you might imagine that McGregor’s dances are impossibly dry and abstract. For me, though, it is always a surprise quite how viscerally they are able to move an audience. This is partly owing to the conviction of the dancers, who are able to imbue McGregor’s dislocating, beautiful physical language with great emotional resonance. It may be, as McGregor has often put it, “that the human body can never be without meaning. The body is inherently literal.” But it could be, finally, that through his dance, McGregor is able to mend the damaging division between science and art, by insisting that both are equal starting points for new creation.

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INTERNATIONAL DEVELOPMENT

“Food aid is killing us”

This is the unsettling story of Ethiopia since Live Aid brought the plight of Africa’s third most populous country to international attention 25 years ago, writes *Patta Scott-Villiers*

Famine and Foreigners: Ethiopia since Live Aid
by Peter Gill (OUP, £14.99)

Last year I met a woman and her disabled son who lived in a hut on the edge of one of Ethiopia’s frontier towns. Ethiopia’s ambitious, donor-funded “safety net” programme—which aims to boost food supplies and allow poor people to “graduate out of poverty”—asks able recipients to work in exchange for assistance. The woman told me how her food aid, for which she worked on a road built with spades and axes, made her weak. She was not talking of its nutritional value, nor the shame of it, but of the way it separates her from her community. “I chose to come and live here and take this aid,” she said, “because it lessens the burden on my family. But when I don’t come to clan meetings to ask for welfare, I neither give nor receive, and I don’t belong any more.” “Food aid is killing us,” said another.

The public works resulting from the aid programme are sometimes useful, sometimes not. Meanwhile, on the Bole Road in the capital Addis Ababa shops sparkle with costly clothes and electronic goods. New polytunnels filled with flowers and vegetables creep across the plain around the city, creating wealth but displacing the poor.

The characters in Peter Gill’s book tell the story of Ethiopia over the 25 years since Live Aid turned its famine into a global issue. Gill, one of the first journalists to report the famine, travels from one end to another of Africa’s third most populous country and reports the abstractions of officials and the unvarnished clarity of ordinary people. Each person recounts how she or he is involved in making Ethiopia. The elites argue and the people duck and dive, manage and sometimes thrive. Based on solid research and a reporter’s instinct for whom to speak to and which questions to ask, Gill’s writing reveals the precariousness of life for the country’s 80m people, as well as the firm beliefs of the powerful that they, and only they, know what to do about it.

Everyone speaks according to their script. The IMF wants a free market and it delays loans, arguing with the ruling coalition, the Ethiopian People’s Revolutionary Democratic Front (EPRDF). The coalition, in turn, persists with a centrally-controlled economy and a tight political grip. The aid donors—led by the World Bank and Britain’s department for international development—construct elaborate and expensive public programmes. Meanwhile, the aid implementers are sure of their simplistic solutions to the challenge of millions of urban and rural poor. The people themselves speak with striking realism, compared to the squabbling ideologues.

The ruling party still romanticises the peasantry, says Prime Minister Meles Zenawi in an interview with Gill. Zenawi ▶