Examen VWO

Voorbereidend Wetenschappelijk Onderwijs 20 06

Tijdvak 2 Dinsdag 20 juni 13.30 – 16.00 uur

Tekstboekje

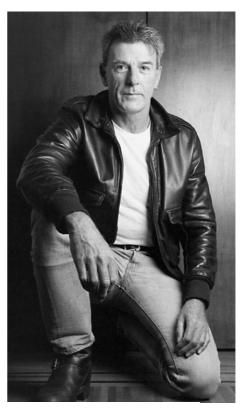
THOM GUNN

Poet (1929-2004)

Key works: The Sense Of Movement (1957). Moly (1971)

CELEBRATED GRAVESEND-BORN poet Gunn (first name Thomson) has died in his sleep at his San Francisco home, aged 74. As recently as his final book, 2000's Boss Cupid, Gunn's poetry still mixed melancholy with the rush and buzz of electric youth. Outside of the American Beatniks, he was arguably the first 'serious' poet to embrace and eulogise the restlessness of rock'n'roll, motorbike culture and the teen spirit. In "On The Move" from '57's The Sense Of Movement, he quoted the Brando film The Wild One ("Man, you gotta go"), and covered (then radical) subjects like Elvis, Hell's Angels and the open road.

After growing up in London during WWII and then studying at Cambridge, he moved to California in the late '50s with lifelong partner Mike Kitay. Often mistaken for an American poet ever since, he was initially promoted by Faber as an establishment figure, alongside the likes of Larkin and Hughes. But his open gayness and dress sense (a leaner Marlon Brando) confused and inspired many in equal measure. My Sad Captains (1961) contrasts Englishness and Americanness; in Touch (1967) he was liberated by free verse. The '60s in San Francisco were "the fullest years of my life, crowded with discovery, both inner



Gunn: poetry's own Brando

and outer", and '71's *Moly* – joyous, drugfuelled, implicitly soundtracked by the era's music – was soon a youth cult. His UK profile faded, but *The Man With Night Sweats* (1992) was one of the definitive responses to AIDS. On a recent visit to London to receive the Cohen Prize, he was greeted ecstatically by his largest ever audience. It's hard to overstate how important Gunn's role was in loosening poetry's tie, and getting it to join in with the counterculture's dancing.

UNCUT

The Paperless Newspaper

To the Editor:

The essay about reading news on-line calls to mind a phenomenon of longstanding interest to social scientists and critics: the 2 newspaper reading. At issue is the comfort of a context for the disturbing news we experience immediately and viscerally on television. The mediation of a familiar front page and calm editorial commentary reassures us that the world has not been jarred loose from its moorings. Or as Marshall McLuhan put it: "People don't actually read newspapers. They get into them every morning like a hot bath."

ROBERT STEIN Barrytown, N.Y.

New York Times

The following text is taken from the first chapter of Enduring Love, a novel by Ian McEwan.

he beginning is simple to mark. We were in sunlight under a turkey oak, partly protected from a strong, gusty wind. I was kneeling on the grass with a corkscrew in my hand, and Clarissa was passing me the bottle – a 1987 Daumas Gassac. This was the moment, this was the pinprick on the time map: I was stretching out my hand, and as the cool neck and the black foil touched my palm, we heard a man's shout. We turned to look across the field and saw the danger. Next thing, I was running towards it. The transformation was absolute: I don't recall dropping the corkscrew, or getting to my feet, or making a decision, or hearing the caution Clarissa called after me. What idiocy, to be racing into this story and its labyrinths, sprinting away from our happiness among the fresh spring grasses by the oak. There was the shout again, and a child's cry, enfeebled by the wind that roared in the tall trees along the hedgerows. I ran faster. And there, suddenly, from different points around the field, four other men were converging on the scene, running like me.

I see us from three hundred feet up, through the eyes of the buzzard we had watched earlier, soaring, circling and dipping in the tumult of currents: five men running silently towards the centre of a hundred-acre field. I approached from the south-east, with the wind at my back. About two hundred yards to my left two men ran side by side. They were farm labourers who had been repairing the fence along the field's southern edge where it skirts the road. The same distance beyond them was the motorist, John Logan, whose car was banked on the grass verge with its door, or doors, wide open. Knowing what I know now, it's odd to evoke the figure of Jed Parry directly ahead of me, emerging from a line of beeches on the far side of the field a quarter of a mile away, running into the wind. To the buzzard Parry and I were tiny forms, our white shirts brilliant against the

green, rushing towards each other like lovers, innocent of the grief this entanglement would bring. The encounter that would unhinge us was minutes away, its enormity disguised from us not only by the barrier of time but by the colossus in the centre of the field that drew us in with the power of a terrible ratio that set fabulous magnitude against the puny human distress at its base.

What was Clarissa doing? She said she walked quickly towards the centre of the field. I don't know how she resisted the urge to run. By the time it happened – the event I am about to describe, the fall – she had almost caught us up and was well placed as an observer, unencumbered by participation, by the ropes and the shouting, and by our fatal lack of co-operation. What I describe is shaped by what Clarissa saw too, by what we told each other in the time of obsessive re-examination that followed: the aftermath, an appropriate term for what happened in a field waiting for its early summer mowing. The aftermath, the second crop, the growth promoted by that first cut in May.

What were we running towards? I don't think any of us would ever know fully. But superficially the answer was, a balloon. Not the nominal space that encloses a cartoon character's speech or thought, or, by analogy, the kind that's driven by mere hot air. It was an enormous balloon filled with helium, that elemental gas forged from hydrogen in the nuclear furnace of the stars, first step along the way in the generation of multiplicity and variety of matter in the universe, including our selves and all our thoughts.

We were running towards a catastrophe, which itself was a kind of furnace in whose heat identities and fates would buckle into new shapes. At the base of the balloon was a basket in which there was a boy, and by the basket, clinging to a rope, was a man in need of help.

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Claims about global warming poison the atmosphere

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1 The attempts by the global warming industry to use the hot weather in Europe to hype up the dangers of extreme climate change are a moral disgrace. In quite breathtaking examples of climatic colonialism, global warming protagonists have been baldly asserting this week that the people of India and China cannot be allowed to develop as the world's wealthy have done because of the imagined effects on the world's climate.

> It is cant. The poor are even chastised for being poor, for having the audacity to disrupt European climates through an Asian brown haze derived from their dung and wood fires. The facts that the Asian brown cloud has been around for thousands of years and that it cools as much as it warms are conveniently forgotten.

> Such insulting sentiments often emanate from organisations that claim to support the poor. We must always remember that more than 1.6 billion people have no access to any form of modern energy. Solving their problems is the real issue in achieving a global "sustainable" energy policy. Unfortunately, our hot air over global warming is diverting much-needed focus and finance from key development aims such as the provision of safe, clean drinking water for all.

> It should not go unnoticed that the so-called UK temperature record was being claimed two to three days before it might, or might not, occur. Facts are not always the strong point of true believers, and global warming has morphed into an ancient-style religion, demanding sacrifice to the Earth, especially, it would seem, by the poor of the developing world.

> Readers may thus be surprised to learn that, on August 4, 1881, for example, temperatures in Spain attained a truly siesta-sapping 50C. Moreover, the extremes for the different continents are spread out over the past 120 years like a line of English backs at Twickenham – that is, all over the park: 1889 for Australia (53.3C); 1905 for Latin America (48.9C); 1912 for Oceania (42.2C); 1913 for North America (56.7C); 1922 for Africa (57.8C); 1942 for Asia (53.9C); and 1972 for chilly Antarctica (15C).

There is no pattern whatsoever to these highs, although they might, I suppose, reflect a staggered rise of the world out of the Little Ice Age, which ended sometime between 1850 and 1880. But who knows? One of the world's longest temperature curves comes from De Bilt in the Netherlands. It makes a Blackpool rollercoaster look like a gentle ride for Teletubbies. It does show, however, that after

the rise out of the Little Ice Age there was a relatively cold period from the late 1940s to the 1970s – difficult to explain if climate is all down to us.

In truth, the global warming industry is just like Monty Python's Life of Brian. We all remember that glorious scene when the excited crowd



persuades the luckless Brian that, whatever he says, he just has to be the Messiah. Brian: "I'm NOT the Messiah!" Girl: "Only the true Messiah denies His divinity." Arthur: "I say you are Lord, and I should know. I've followed a few."

Thus, if it is an especially hot summer, it is dire global warming, and you are unquestionably to blame, you selfish, greedy, rich Northerners, particularly if you are unfortunate enough to be American. Likewise, if it floods, it is global warming; if the land is parched and fires rage, it is global warming; if the monsoon is too wet or too weak, it is global warming; and, if winter freezes poor old robin redbreast, it is still global warming. Come rain or shine, hot or cold, it is always global warming. So there's an end of it, Brian.

Predicating long-term climate trends on single weather events, however extreme they may seem, is plain bunkum. During the Little Ice Age there were very hot summers in Britain. In his Selborne journal of 1778, Gilbert White records 88F in the shade, "... a degree of heat not very common even at Gibraltar". In 1779, by contrast, temperatures in August plummeted into the 60s

10, a little warming in the UK can only be a good thing, reinvigorating our wine industry and increasing the number of resident bird species. Birdwatchers should note that we may even get to host such splendours as the penduline tit, the kaleidoscopic bee-eater, and the cattle egret. And, in stark contrast, who would want to return to the Little Ice Age and to 1816, the "year without a summer"?

Please can we grow up over the weather? It was Ludwig Wittgenstein who reminded us in his masterpiece, the Tractatus Logico-Philosophicus, that "whatever a man knows, whatever is not mere rumbling and roaring that he has heard, can be said in three words". And those three words are: "Climate always

The author is Professor Emeritus of Biogeography at the University of London

The Times

FRANK FUREDI

Diana syndrome: we get the conspiracies we deserve

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1 There was a time when only eccentrics were interested in conspiracy theories. However, in recent times conspiracy



has gone mainstream. One recent survey found that 27 per cent of the British population believed that Princess Diana¹⁾ and Dodi Fayed were assassinated. As many as 43 per cent of the 4,170 people surveyed by London's *Evening Standard* answered yes to the question, "Do you think Diana was murdered?" Almost all the viewers who phoned in to *The Richard and Judy Show* last week about Diana's death, believed that there was more to it than meets the eye. The British establishment itself lacks the confidence to dismiss unsubstantiated rumours of conspiracy.

These theories are no longer ignored but investigated. That is why the official inquiry into Diana's death has turned into a de facto murder inquiry. Michael Burgess, the person appointed to head it, has indicated that he wants to investigate every theory about the death of Diana.

Burgess is likely to be kept busy well into the next decade. Since the 1997 Paris car crash, the rumour mill has been working overtime. So which of the many conspiracy theories is Burgess going to investigate? That Diana was killed by Mossad? Or that she was murdered on the orders of MI6 or the CIA? Will Burgess investigate Mohamed al-Fayed's claim that responsibility for this "horrendous murder" rests with the Prince of Wales and his father, Philip? Is he going to investigate the rumour that points the finger at Osama Bin Laden? Apparently Osama feared that Diana served as a poor role model for Muslim women so, it's claimed, he ordered the hit. While he is at it, Burgess could do worse than investigate the rumour that the singer Morrissey predicted the princess's demise in his 1986 song "The Queen is Dead".

Of course, there is nothing new about our fascination with conspiracies. For decades, people have speculated about who really killed President Kennedy. But at least we know for certain that Kennedy was murdered – so that rumours about his demise correspond to something that occurred in reality. Today an accidental death is sufficient to provoke officialdom to search for conspirators. Why? Because of an all-pervasive sense of mistrust in official authority.

The public's scepticism towards the official version of events surrounding Diana's death is the result of a profound sense of distrust in conventional authority. We live in an age of rumours where official facts often carry little more authority than an internet site devoted to alien abduction. We are increasingly cynical about the official "version of events" precisely because it is official.

Another important cultural pressure is the tendency to endow any form of misfortune with meaning. People find it difficult to accept the fact that a misfortune was due to bad luck or an accident. You don't need to be a Diana to have questions raised about your death. When a child meets an untimely death, parents frequently look for something that will explain their tragic loss. Desperate mothers and fathers will seize upon rumours of cover-ups to make sense of their children's affliction. The belief that "we are not being told the truth" helps shape contemporary public debate.

That is why the instinct is to assume that "they" have lied about matters such as weapons of mass destruction in Iraq, the death of David Kelly or the true risks of the MMR vaccine. It appears that there

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Princess Diana: first wife of Prince Charles. She died in a car accident in Paris together with her lover Dodi Fayed.

is always a story behind the story and a conspiracy theory fills a need created by a culture of mistrust. Some associate rumours and conspiracy with uneducated people who find it difficult to engage with our sophisticated knowledge economy. Yet, conspiracy theory is not confined to a misguided culturally illiterate sub-class.

It is the sophisticated Michael Meacher, one of Tony Blair's longestserving ministers, and now a backbencher,

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who argues that the US government knew in advance about 11 September but did nothing about it. And crackpot theories about the MMR vaccine are far more likely to be believed by middle-class professionals than ordinary folk. It may well be the lack of trust which afflicts the middle class that accounts for the mainstreaming of the conspiracy.

The Independent on Sunday

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Poor little ex-rich people

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CAROL TAVRIS

Mel Krantzler and Patricia Biondi Krantzler DOWN AND OUT IN SILICON VALLEY The high cost of the high-tech dream

California is prone to gold rushes. We have them every few decades, starting with the discovery of actual gold in 1849: just lying around like pebbles! The image was irresistible, and people all over the world yielded to it, packing away their brains along with their winter clothes as they set forth to get rich fast. California was known as the Golden State ever after. The dream of the quick riches to be found here lasted long after the search for gold in particular turned to dust.

The latest gold rush in California began in the mid-1990s in Silicon Valley, a sprawl of cities in the northern part of the state. (The area got its name, the authors of this book explain, in the early 1970s, when a reporter sought to describe the emergence of the microchip companies that were setting up shop there.) "Literally thousands of new companies sprung up overnight", write Mel Krantzler and Patricia Biondi Krantzler, "and almost every one of them was presented in the media as the birthplace of numerous millionaires". People were investing small amounts of money and becoming rich almost immediately and ordinary investors were assured that they could do the same. Young people in their teens and twenties suddenly commanded gargantuan salaries. Silicon Valley became the symbol of fast wealth, fast times, youth and beauty: the California dream reincarnated.

This was too good to last, of course, and it didn't. With the stock-market crash of 2000, the bubble burst. Fortunes made in a week collapsed in a week. And, as the Krantzlers observe, just as in the original gold rush only a tiny percentage of prospectors actually became wealthy – leaving the rest to perish financially and emotionally – so in 2000 a few multimillionaire company heads remained, while their businesses went bankrupt or "downsized" and thousands of their employees lost their savings, their hopes, and their jobs.

American psychotherapists know where the gold is, too, and the Krantzlers are director and co-director of a psychotherapy service that itself sounds like a California parody: The Creative Divorce, Love, and Marriage Counseling

Center. Their observations about the dark side of Silicon Valley life – the high rates of drug use, divorce, depression and fear; the dawning realization that money can't buy you love – stem, they say, from their work counselling hundreds of CEOs, managers, engineers, computer programmers and other employees in the high-tech industry. Thus the reader is prepared for sad stories of poor little rich people, and poor little ex-rich people.

But Down and Out in Silicon Valley is better than that. Though written in a light, popular style, it is deeply political, placing the story of the rise and fall of Silicon Valley firmly in the context of the corruption of unregulated corporations and their exploitation, in this case, of naive, young, inexperienced workers. With no unions to represent their interests and ignorant of the lessons of history, the young dreamers who flocked to Silicon Valley were easily gulled by managerial lies that they weren't "workers" but just "one big happy family" along with management. They were unprepared for Silicon Valley's vicious patterns of discrimination based on age (employees are over the hill at thirty, irrespective of their experience or knowledge) and gender. And, blinded by optimism, individualism and greed, they were unprepared for their sudden, heartless "terminations".

The irony, observe the Krantzlers, is that the same employees who despised the label of "worker" and who gloried in the Ayn Rand philosophy of I've-got-mine-and-to-hell-with-you, and reviled "government interference", show no hesitation about appearing at the unemployment office where they stand in line waiting to obtain their unemployment checks. They apparently are unaware that the checks they receive are coming from a government-operated program (fought for and won by millions of demonstrating men and women in the 1930s) and that they receive their checks precisely because they are unemployed workers.

The Krantzlers are psychotherapists, and to them, being "down and out" refers not only to a state of unemployment and lost income but also to psychological states of despair and loneliness – the "high cost" of their subtitle, the price of the obsessive quest for wealth. This is hardly a new message for Americans, though the Krantzlers convey it eloquently through their research and case studies, and though it always bears repeating for each generation.

Times Literary Supplement

Are we right to treat animals the way we do?

From a lecture given by the Professor of Rhetoric at Gresham College in the City of London

HOW did the West get the idea that it is perfectly all right to kill animals? According to Genesis, the first book of the Bible, dominion over animals was granted to the first human couple, Adam and Eve, but that dominion did not extend to killing animals, so food was 22. An important influence came from the pagan side. The pagan Greek philosophers had an evenly matched debate on whether it was all right to kill animals. The most influential of the anti-animal views was that of the ancient Stoics, who started around 300BC. They had a striking and in many ways a very humane view. All rational beings are bound together by bonds of attachment and owe each other justice. 23 all humans are rational, justice is owed to slaves and foreigners. They criticised Aristotle's view of slavery and said there is no such thing as a natural slave.

The 24 the Stoic view was that, in their opinion, no animals were rational, so none belonged to the community to which justice was owed and nothing you did to an animal could be an injustice.

In recent times, a book of 1975 had an exceptional impact, Peter Singer's *Animal Liberation*, which in no way condones the violence of the English branch of the Animal Liberation Movement. This is a case of a modern philosophy book having a tremendous impact on our views on _25 and on practices in scientific and medical research. It would be hard for any reader not to be moved by the empirical chapters describing the treatment of animals in scientific research and in factory-farming.

Another leading book, *The Case for Animal Rights*, published by Tom Regan in 1984, offers a different basis. Mammals, and probably many other animals, have rights as individuals not to be harmed, because of their inherent value, and their value is due to their rich mental life.

I applaud the conclusion of these books that we must pay far more attention than we do to the welfare of animals. But I can now state my chief doubt about the moral basis put forward for the conclusion. It is that the theories take only one main consideration into account, preference-satisfaction or inherent value, just as the ancient Stoics took into account only one factor, rationality. But life is more complex.

<u>26</u>, there is an indefinitely large number of considerations that may need to be taken into account, and there is no limit to how far we may need to expand our imaginations in order to recognise them.

I think that the present order of discussion is the right one. The concrete case of animals makes clearer than an abstract discussion could why multiple considerations are needed.

What consequences would multiple considerations have for recent dilemmas about animals? The country has recently had to consider foxhunting, foot-and-mouth disease, and medical research. A violent version of the animal-support movement harmed the one institution that has 27, in my view, when they recently attacked members of a medical research unit. Of course, medical researchers need to be under constraint not to be cruel, or needlessly wasteful of life, but medical research is a far more serious purpose than cuisine or styles of clothing.

We have just killed over a million healthy farm animals for commercial reasons, in case they became infected with foot-andmouth disease, having rejected the route of vaccination. 28, it does not look as if any consideration at all was given to animals, and they should surely count for something. All of us who eat animals and animal products are 29 how farm animals are treated, so first we should consider more carefully how we as a country treat farm animals on a massive scale, before we direct a small group of people on how they should treat foxes. When we have put our own house in order, that will be the time to attend to cruelty to foxes.

The Independent

The Commons clocks off

ill Britain be better governed when ministers and MPs "clock off" for the evening, knowing their attendance is no longer needed in the Commons chamber or the division lobbies because the mother of parliaments has closed for the night? Women MPs with young families, ambitious Labour loyalists and lazy backbenchers on both sides of the house may think so. But the guaranteed welcome for this idea in both Downing Street and Whitehall is a warning.

Given half a chance, every government with an overwhelming majority treats

parliament like a rubber stamp and Tony Blair's is no different. Ministers hate having their decisions questioned by MPs, particularly at short notice. Sustained attacks against shaky legislation are even more loathed. The less time there is for the opposition and independent-minded mavericks to make trouble, the easier life becomes.

The support of Robin Cook, currently
Labour's leader of the House, for the latest
move to "modernise" Westminster's arcane
practices with a four-day working week of

10am to 5pm will doubtless be approved by newer MPs who see no point in hanging
30 around for hours while a debate drags on or a bill is fiercely contested. The maxim that governments are entitled to get their legislation through, but oppositions also have rights, leaves them cold. If they could,
35 they would reduce every debate to the sort of charade it is in other parliaments, where MPs cannot speak unless the whips say so.

The omens are not good. Senior ministers take their cue from Mr Blair and 40 attend the Commons as little as possible. Michael Martin, the Speaker, shows scant interest in holding ministers to account or encouraging vigorous debate. Eric Forth's appointment as Mr Cook's rival on the Tory front bench promises well, but the Tories have a long way to go before they give Labour a hard time in Commons exchanges. While Westminster slumbers, public interest in the political process reaches a new low. 50 There is still time for MPs of principle and courage to refuse the beguiling offer of more time off. But don't hold your breath on the result.

The Sunday Times

Who pays the piper?

Three years ago a German-American research team revealed in the journal Circulation that garlic powder, in tablet form, seemed to help prevent hardening of the aorta, the artery that carries blood to the heart. The finding was a plausible one. Garlic has consistently been linked to lower levels of heart disease. It was nevertheless a help to be told that the research was funded by Lichtwer Pharma GmbH, which manufactures garlic pills.

Last week Nature, the titan of science journals, announced that from October 1 it will expect all its authors to declare "any competing financial interests" with the research papers they submit. This is a welcome decision. Science is intimately linked 15 with industry. Scientists go to agribusiness to finance research into plant science or genetic engineering; they go to pharmaceutical companies to get their backing for pioneering studies of promising molecules. And, increasingly, scientists 20 themselves are involved in new companies, the cash-generating, research-financing enterprises of tomorrow. Don't blame the scientists: blame the system. Successive governments have declared that science is intimately linked with national wealth. 25 But there is always the suspicion that those who pay the piper have the power to call the tune. Or, to put it another way, it is hard to imagine that particular German-American research team reporting that garlic powder tablets make no significant difference 30 to heart health (which would have been an equally

If people are aware who pays for knowledge, and who will benefit most from it, they will also know how best to value it. Such frankness will help the scientist and the consumer. People with nothing to hide have everything to gain.

plausible outcome). But scientists who use money only from the taxpayer, whose only obligation is to provide a result, would have no such inhibition.

Guardian Weekly

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Bikram Choudhury gets caught in a legal tangle

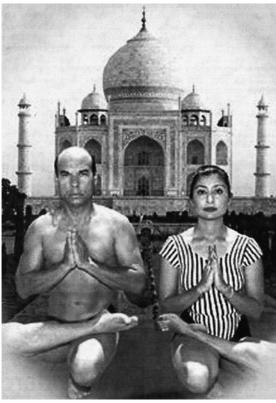
By Sally Pook

IN the peaceful and harmonious world of yoga, lawsuits are about as rare as a teacher laughing at your tree pose.

But litigation has brought discord to the brave new world of Bikram Yoga, the sweaty version of the ancient Indian discipline, practised in mirrored rooms in sweltering heat.

Created by Bikram Choudhury, 57, the yoga style has won fans among celebrities such as Madonna, Raquel Welch and Serena Williams, and is claimed to have curative qualities.

Mr Choudhury, one of America's bestknown yoga masters, who practises in Beverly Hills, recently copyrighted, trademarked and franchised his set of 26 poses. He has sent a flurry of "cease and desist" letters, warning people not to teach his style or anything derivative unless they



Bikram Yoga: its creator has copyrighted his set of 26 poses

have graduated from his training programme and paid a franchise fee.

This has angered many US yoga teachers. A California-based group of them, the Open Source Yoga Unity, is suing Mr Choudhury, claiming that yoga is a 5,000-year-old tradition that cannot be owned. The lawsuit asks a judge to determine whether he is entitled to copyright his material.

"We are not disputing that Mr Choudhury did something creative and useful in putting postures together in a certain order," said Elizabeth Rader, a copyright attorney representing the group.

"Our belief is that you can't treat the poses as private property. We want this clarified. Right now, people out there are trying to teach yoga and they are not sure what is going to get them sued."

Jacob Reinbolt, the lawyer who helped to copyright Bikram Yoga, said: "We are not talking about copyrighting the individual steps, but the selection and arrangement of steps."

He compared it to the choreography of a ballet

Mr Choudhury, a former yoga champion in his native India, has seen the number of Bikram studios in America grow from 10 in 1996 to about 600 today. The first in Britain opened four years ago, and about 20 teachers now instruct on the discipline in this country.

Helen Currie, who opened her studio, Bikram Yoga Chiswick, in west London, a year ago, said of the copyrighting: "He is just trying to keep the yoga professional and pure, well-taught and well-managed. He doesn't want anyone just going off and teaching it.

"His 26 positions are unique. He is not saying you can't teach the positions. He is just saying, 'Don't call it Bikram – don't teach Bikram style unless you have done the proper training'."

Daily Telegraph

Birds and buildings:

How to stop one flying into the other

CAN modern man pursue his urban ambitions and still coexist with nature? The question seems particularly relevant if you are a bird and you are heading for Chicago, where the annual spring migration is just reaching its peak. Perched on the edge of Lake Michigan, this huge city is directly in the path of some 300 species of avian travellers, many of whom prefer to hug the shoreline rather than cross the huge lake.

That is not always a safe choice, given Chicago's lofty skyline. In the late 1960s, flocks of warblers, thrushes, cuckoos and other species flew headlong into the newly built, 96-storey John Hancock Centre. The birds, which navigate at night using celestial cues, were attracted by the building's lights. Their dead bodies littered the sidewalks below as the sun rose.

Mirrored glass is a growing hazard, even in daylight. Michael Mesure of the Fatal Light Awareness Programme (FLAP), a Toronto-based environmental group, recalls seeing at least 500 birds hit two mirrored office towers in his city one morning a few years ago. "It was literally hailing birds," he recalls. His group now tries to aid the injured, and rather bizarrely stores masses of dead birds in a freezer until it can photograph them en masse.

On the worst count, some one billion birds a year hit glass in America. Those that die on the spring migration are the fittest of the flock, having already survived thousands of miles in the air. Chicago and Toronto are trying to help. Both cities pursue organised "lights out" programmes during peak migration periods, when tall office buildings are asked to turn out the lights on their upper floors overnight - and death rates have fallen sharply. New York has a similar but smaller programme.

Chicago is trying particularly hard to lure in feathered visitors. The mayor, Richard Daley, has added lakefront parks, bird sanctuaries and nesting grounds, and the result has been dramatic. As many as 7m birds use the city's lakefront parks annually, says Doug Stotz, an ornithologist at the Field Museum, many of them rare.

The Economist

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