

Bijlage VWO  
**2014**

tijdvak 2

**Engels**

Tekstboekje

## Tekst 1

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Letter

### One Man's Meat

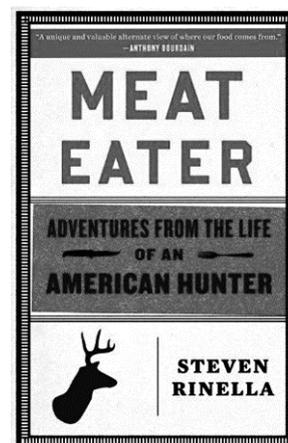
To the Editor:

Bill Scheft, in reviewing Steven Rinella's "Meat Eater: Adventures From the Life of an American Hunter" (Nov. 4), felt the need to hold his nose and set aside his "disdain toward hunters and hunting."

I'm wondering if Scheft feels the same disdain about eating factory-produced meat from chickens that spend their entire lives caged in boxes not much bigger than themselves and from cows on feed lots forced to eat corn products that simultaneously sicken and fatten them. One of Michael Pollan's favorite food aphorisms comes to mind: "Don't eat anything you aren't willing to kill yourself."

MIKE DEWEY  
Fort Collins, Colo.

*nytimes.com, 2012*



### Letter to the Editor

## Sorry speeders

Sir, I have followed the correspondence about speed cameras with mounting frustration (letters, Aug 4). The point being missed is that indiscriminate implementation of speed cameras by the previous regime destroyed the credibility of this excellent technology. As every police officer knows, any law, rule or regulation that fails to generate the respect of the majority is rapidly met with contempt and eventually is quite rightly circumvented or ignored.

The “law” of the speed camera was soon exposed as primarily a revenue generator. As with CCTV in public places, which has also failed to increase our safety and quality of life, speed cameras should be more strategically utilised alongside other proven technologies, the simplest and most effective of which surprisingly gets no mention from my fellow *Times* readers.

My particular interest is in safeguarding communities blighted by the historic main roads that scythe through their very heart. Controlling traffic speeds in such locations is simple and affordable. On entering, for example, the 30mph zone, every vehicle has its average speed monitored. In the centre of the town or village is a traffic light that remains green if all drivers adhere to the limit. The moment the limit is exceeded by any driver the light turns red. The waiting time is directly related to the amount of the excess speed. At a stroke the benefit of speeding is removed and the offender pays not with money, but a far more valuable commodity – their time.

To spice things up a bit, the offender’s registration appears on a screen next to the traffic light. There may even be an additional benefit to society with a reappearance of the word “sorry”. Or am I hoping for too much now?

NOEL EDMONDS  
Bristol

*The Times, 2010*

### Europe

## Charlemagne | Calling Time on Progress



- 1 VIEWED from afar, Europeans are a complacent, ungrateful lot. Nannied from cradle to grave by the world's most generous welfare systems, they squeal like spoiled children when asked to give up just a few of their playthings. As governments in the euro zone trim benefits and raise the retirement age in the wake of the sovereign-debt crisis, a wail of indignation has rung out and a wave of protests set in.
- 2 American commentators seem particularly amused to watch Europeans "dismantle" their welfare systems, just as America embraces European-style universal health care. Only a year ago Europe's leaders were laying into American free-marketry and declaring unbridled capitalism finished.
- 3 Could it be, though, that behind Europe's petty, possessive talk about rights and entitlements there is something more fundamental going on? What is the reason that Europeans struggle to accept the need to work more and get less from the state? Well, an abrupt reversal of the decades-long advance towards

an ever-more civilised society seems to be what's bothering them.

- 4 The construction of the welfare state is part of a European narrative that conjures civilisation from chaos. Take France, a country that, in welfare matters, more resembles Mediterranean Europe than its more rigorous northern neighbours. The incremental entrenchment of new rights in law, as a mark of progress towards a better society, dates back to just after the first world war. In 1919 the Senate limited the working day to eight hours. Léon Blum introduced the two-week paid holiday for all workers in 1936. François Mitterrand extended this to five weeks in the early 1980s. He also brought in retirement at 60, and the 39-hour working week. Ms Aubry, the French opposition socialist leader, only ten years ago, reduced that to 35. By progressively shrinking the number of hours worked a week, or years worked over a lifetime, society seemed to be rolling towards 5, with *vin rosé* and deckchairs on the beach for all.

- 5 Put simply, if Europe stands for something, it is decent treatment for all. To this way of thinking, to guarantee a comfortable retirement is akin to banning child labour or giving women the vote: not optional perks, but badges of a civilised society. Such social preferences are what Europe is for, and what makes it different from America. Europe may no longer be a global power, or have

much military muscle. Its churches may be empty, its spiritual fibre weak. It may not boast much cutting-edge innovation or economic growth. But it knows how to look after its sick and elderly, take a long lunch break and abandon the office in August. The cold realisation that time is up, and that such progress is over, prompts anger, denial and shock.

6     7, the ideal of progress has perhaps been a myth for longer than Europeans may care to admit. The oil shock in 1973 was Europe's first wake-up call. Since then many countries have been creating an illusion of continual progress by running up hefty debts to finance their welfare states.

7     Dealing with the end of progress is also partly about confronting the myth. Deep down, Europeans probably knew that they could not go on living beyond their means for ever.

8     To accept that progress is an illusion is only one step. To change behaviour is another. Until now, much of Europe has chosen to put its values before growth. In reality, the 35-hour working week in France was not a mark of progress, but a brake on job creation and a spur to deindustrialisation to lower-cost countries; the French may have more time on their hands, but they have little money to do anything with it. Retirement at 60 in an ageing society is not a sign of civilisation, but a cruel joke played on the next generation. The euro-zone crisis has exposed such hypocrisy. It may still take time before Europeans conclude that they must compromise their ideals in order to secure the growth needed to preserve what they can of their lifestyles. But if they did, that would be real progress.

adapted from an article in  
*The Economist*, 2010

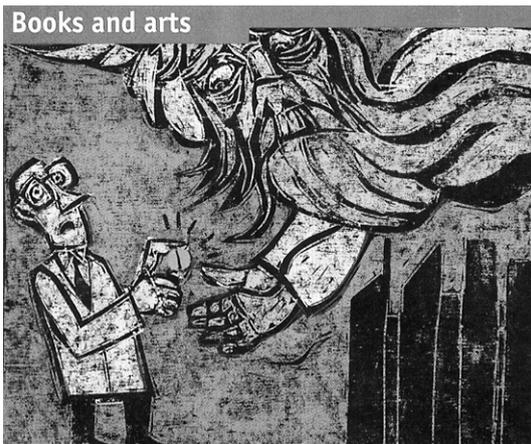
### Is climate shaping human evolution?

Jessica Hamzelou

- 1 AS THE climate changes and the world warms, will humans evolve to handle the effects? Maybe, if the Yoruba people of West Africa's response to living in arid conditions is anything to go by. Whether there is enough time to adapt is another matter.
- 2 The Yoruba have been exposed, historically, to the dry conditions of the Sahel on the edge of the Sahara desert. To find out whether they had evolved to cope, Andres Moreno at Stanford University in California and colleagues looked at the variation of a gene known to be involved in water retention in the kidney, called *FOX11*, in DNA samples from 20 Europeans, 20 East Asians and 20 Yoruba. The team found that 85 per cent of the Yoruba had an identical sequence of genetic information that was longer than it would have been if it was produced by random recombination and genetic shuffling. Instead, they suggest that it had been naturally selected.
- 3 The length of the genetic signature suggests that the change occurred in the last 10,000 to 20,000 years, which could have coincided with the initial stages of the desertification of the Sahara. They also analysed a region of the gene in 971 samples from 39 human populations around the world, including the Yoruba, and found that the same genetic sequence was found at higher frequencies in lower latitudes. Since lower latitudes are more likely to be regions of water-stress, this suggests that the selection pressure was climate-related, says Moreno. However, Steve Jones, a geneticist at University College London, points out that the evidence is only indirect, since we don't know whether the genetic variance in the Yoruba people actually boosts their survival.
- 4 Nonetheless, if Moreno's explanation is correct, the study opens up a new question: can humans evolve to adapt to climate change? "Over the long term, if the Earth keeps warming, I would not be surprised to see genetic shifts," says anthropological geneticist Anne Stone at Arizona State University in Tempe.
- 5 Predicting what a human of the future will look like is difficult, however, as there will be competing selection pressures. Take body shape. Stephen Stearns, an evolutionary biologist at Yale University, has suggested that because shorter, heavier women tend to have more children, who inherit these traits, we can expect the average woman to be shorter and heavier by 2049. But Stone predicts that because species in hot environments evolve body shapes that radiate heat better, climate change will cause humans to grow taller and slimmer. "It's likely we'll find a sweet spot where we're able to cope with higher temperatures, but still carry enough fat to be reproductively successful," she says.
- 6 Evolution is a slow process, however, so any adaptation would not save us from the imminent problems associated with global warming. "We're not going to evolve our way out of trouble," says Jones. "The answer lies in our skulls, not our testicles."

*New Scientist, 2010*





Anti-ageing research

### Methuselah's mixture

#### The Youth Pill: Scientists at the Brink of an Anti-Ageing Revolution.

By David Stipp.

1 **F**OR as long as people have been growing old, they've been wishing they didn't have to. The "Epic of Gilgamesh", one of the most ancient works of literature, chronicles the eponymous hero's quest for eternal life. Most religions offer an attenuated version of 13 in which the soul endures even after the body has died. Medieval alchemists hunted in vain for the rejuvenating Philosopher's Stone; industrial-age quacks got rich off their patent elixirs. Today, cosmetics companies dance around truth-in-advertising laws to imply that their creams and lotions can keep the years at bay.

2 Yet for all the gloomy fascination that surrounds ageing, precious little research has been done into its causes. The question of why we grow old and die still divides evolutionary biologists. Strictly speaking, ageing does not seem to be inevitable. After

all, both cancer cells and some very simple forms of life appear highly resistant to the passage of time. And while we know plenty about the consequences of ageing, we know much less about the exact biological processes involved. The little interest shown was until recently limited to quacks and cranks, leavened with the occasional iconoclastic scientist (such as Peter Medawar, a brilliant British zoologist) with a reputation strong enough to survive developing an interest in a thoroughly disreputable field.

3 In the past couple of decades that has begun to change. Improvements in technology, particularly the ability to sequence DNA quickly, have made the serious study of ageing possible. All this is carefully chronicled in "The Youth Pill" by David Stipp, a former medical writer for the *Wall Street Journal* and an able guide to this young science. His book draws readers down the blind alleys and experimental dead ends that are an inevitable part of 15, as well as explaining the advances that have been made and the hunches that led to them.

4 Plenty of progress has already been made. Genes have been found that boost the lifespans of laboratory animals by 30% or more, and research into the mechanisms of ageing has fingered some tantalising leads. Ageing seems to be associated with a low-level, chronic inflammation of many of the body's tissues, for instance. Insulin, a hormone that regulates the metabolism of glucose, also crops up.

5 Most intriguing of all is something that scientists have known for decades: feeding near-starvation diets to laboratory animals such as mice and fruit flies can extend their lifespans by 40% or more, and improve health along the way. If those results translated directly to humans (and there is some preliminary evidence that fasting may confer benefits in people), then the human lifespan could reach 150 years. Many explanations have been offered and discarded. Production of the harmful chemicals that are a side-effect of respiration, might be reduced, for instance, or there might be a lowering of blood-sugar levels, which seems to have a variety of health benefits.

6 Instead, Mr Stipp propounds a relatively new theory that low-calorie diets activate genes designed to help animals endure hard times, which boost cellular repair mechanisms. There is evidence that almost all animals, including humans, may have a similar suite of genes. Proponents of this theory are searching for drugs, so-called “calorie-restriction mimetics”, that can produce these effects without requiring aspiring centenarians to endure 100 years of non-stop dieting. Several firms have been set up to capitalise on the findings, in the hope of developing and selling pills that grant longer, healthier lives.

7 The book’s tone is refreshing, although its occasional passages of lazy journalese can be jarring. Mr Stipp is clearly enthusiastic about the possibility of life extension, and he mostly manages to avoid the breathless prose that mars so much reporting on the subject. Hype is an occupational hazard of anti-ageing research. There is a great temptation (rising with age) to inflate small advances into the idea that serious life extension, or even immortality, is just around the corner. It isn’t. But the discoveries of anti-ageing researchers suggest that some modest improvement in life expectancy, and a big reduction in the diseases of old age, are indeed pharmaceutically possible. Ageing, reckons Mr Stipp, is on the verge of becoming a respectable sub-discipline of medicine. That would be quite enough to constitute a revolution in its own right.

8 The final part of the book is philosophical, and considers whether extending lifespan is something worth aiming for. Some religious leaders and self-appointed sages have offered a variety of portentous reasons for embracing decrepitude instead of fighting it. Happily, Mr Stipp has little patience for such homilies, and demolishes them convincingly.

*The Economist, 2010*

#### Schumpeter | Mens sana in corporation sano<sup>1)</sup>

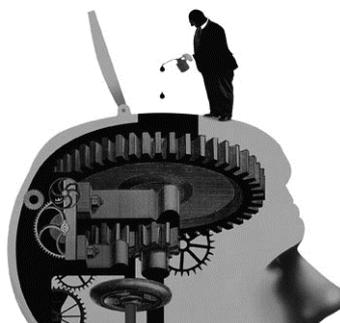
(1) ANNUAL check-ups and company “wellness programmes” have become a familiar part of the corporate landscape. More than half of America’s larger companies offer advice on stopping smoking and fighting flab. More than a third have gyms. Some have rechristened their canteens as “nutrition centres”. IBM is among a growing band of companies that offer workers financial incentives (such as cheaper medical co-payments) to encourage them to lose weight and exercise regularly. AstraZeneca has installed treadmills in its offices so workers can exercise their legs, albeit gently, while holding meetings.

PricewaterhouseCoopers provides massage and yoga sessions.

(2) Companies are now also starting to touch on a potentially troubling area: their employees’ mental health.

Companies as diverse as BT, Rolls-Royce and Grant Thornton have introduced mental-health programmes. These range from training managers to spot problems to rehabilitating those suffering breakdowns. A growing number of boutique consultancies such as Corporate Psychology and Mental Fitness are also offering to improve workers’ mental well-being.

(3) The fashion is being driven by simultaneous developments in two usually distinct areas — health care and management theory. Doctors report that more than a third of the physical problems they encounter have some psychological basis. Management



gurus are also discovering the joys of psychology. Business professors have taken to littering their texts with references to “toxic organisations” and “emotional contagion”. Several psychologists have become influential gurus in their own

right. Daniel Goleman of Rutgers University sings the praises of “emotional intelligence” in the workplace. Steven Berglas, a psychiatrist turned management professor at UCLA, offers advice on how to “reclaim the fire” after burnout. There is even a new business discipline, neuroleadership, that promises to use brain science to improve senior management.

(4) Both doctors and gurus can quote some compelling statistics. The Sainsbury Centre for Mental Health estimates that a sixth of the British workforce suffers from depression or stress, and that mental ill-health costs British employers almost \$26 billion a year. American research suggests that “presenteeism” (whereby the walking wounded turn up to work without contributing) costs twice as much as absenteeism.

(5) So far this trend has been most marked in the upper ranks of firms. Grant Thornton sends its partners on a two-day programme put on by Positive Health Strategies, a London company. Some of this programme deals with familiar things such as exercise and healthy eating. But it also screens people for psychological well-being, and offers advice on “optimising

performance” and “staying positive under pressure”. Focusing on their stars makes sense for companies. The stars not only represent huge investments. They are also most likely to live under stress while maintaining a stiff upper lip. But focusing on stars also makes sense for the mental-wellness movement itself: the best way to insert yourself into a company’s DNA is to seduce its leadership.

**(6)** What should one make of the corporate world’s new-found interest in promoting mental health? For sure, depression and anxiety can take a serious toll on productivity, and companies bear their share of the blame for promoting stress in the first place. And catching psychological problems early can prevent them from escalating. BT reports that its programmes have reduced levels of sickness absence due to mental-health problems by 30%. This all sounds promising. But there are nevertheless several troubling aspects.

**(7)** The first worry is that promoting psychological wellness crosses an important line between the public and the private, raising awkward questions. Should companies pry into people’s emotional lives? Can they be trusted with the information they gather? And should psychologically frail workers put their faith in people who work primarily for their employers rather than in their personal doctors? Workers rightly worry that companies will use psychological information in their annual appraisals. And that bosses will see the trend as an excuse for extending their power

over staff — using the veiled threat of somehow being classified as mentally impaired to make them obey, and conform.

**(8)** A second worry is about the 26 of the mental-wellness movement. A phrase like “mental fitness” is bound to attract charlatans and snake-oil salesmen. Warren Bennis of the University of Southern California has noted that the new “science” of neuroleadership is “filled with banalities”. Other people are less complimentary.

**(9)** The biggest problem with the movement lies in the assumption that promoting psychological wellness is as axiomatically good as encouraging the physical sort. It is one thing to help people deal with serious problems when they crop up. It is another to try to promote something that cannot easily be defined, let alone managed. Few would doubt that good physical health makes for good productivity; but it is not self-evident that a positive mental attitude is good for a worker or his output: history shows that misfits have contributed far more to creativity than perky optimists have done. 27, curmudgeonliness<sup>2)</sup> is a rational way to cope with an imperfect world, rather than a sign of mental maladjustment (or so your occasionally curmudgeonly columnist would like to believe). Companies that chase the will-o’-the-wisp of “positive attitudes” may end up damaging themselves as well as sticking their noses where they have no business.

noot 1 “Mens sana in corporation sano” means “a healthy mind in a healthy corporation” and is a pun on the Latin proverb “Mens sana in corpore sano,” which means “a healthy mind in a healthy body”.

noot 2 curmudgeonliness: sikkeneurigheid

### It's not all talk

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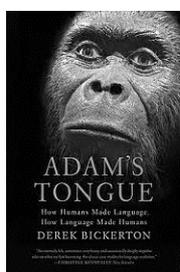
*Adam's Tongue: How humans made language, how language made humans* by Derek Bickerton

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*Finding Our Tongues: Mothers, infants and the origins of language* by Dean Falk

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1



WHY is it that 20th-century physicists could ask some of the most grandiose questions in science, but if a researcher wondered aloud where language came from, the response was derisive at best. Not only can you not answer the question, they were told, you shouldn't even ask. There are many reasons why language

evolution was a bit of a scientific embarrassment, but two are particularly significant.

2

First was the quite reasonable objection that there was no tangible evidence. You can't uncover earlier forms of language in the same way you can track a species through deep time. Fortunately, this is changing. Recent work in areas such as animal cognition, the genetics of speech disorders and the comparative evolution of the brain are contributing to our expanding picture of how language unfolded.

3

Language origins, moreover, had a whiff of taboo because a dismissive attitude had become entrenched among key figures in science. Now that too is changing. In the last 10 years there has been a flurry of papers, presentations and books on the subject. Two of the latest are *Adam's Tongue* by Derek Bickerton and *Finding Our Tongues* by Dean Falk.

4

Bickerton, professor emeritus at the University of Hawaii, Manoa, has been writing about language evolution for a long time. He began his career in language evolution as a devout Chomskian, committed to the idea that syntax is the be-all and end-all and, ironically, sceptical that we can know much about language evolution at all. Over the years, 31, he has shown more interest in other accounts of evolutionary change. In *Adam's Tongue* he elaborates on the compelling "niche-construction theory": the idea that a species creates its environment, which in turn shapes later generations of the species, and so on.

5

*Adam's Tongue* is not a measured overview of the field. Rather, it is an intensely felt, sometimes very funny and occasionally deeply impolite take on what are fast becoming the classic case studies for language evolution — vervet monkey alarm calls, singing gibbons, signing apes, tool use in different species, the emergence of

intelligent behaviour, language learning in babies and the lifestyles of hunter-gatherers. At its least balanced, the book caricatures the argument for continuity in language evolution, which says that humans' similarity to other animals is relevant to language. Continuists explore all the ways that animal thought and communication may have provided a foundation on which human language evolved. Bickerton, however, portrays this approach as a simple-minded belief that human language evolved directly from animal communication.

6 Bickerton's most intriguing argument is that scavenging meat had huge ramifications for human language. The logistical challenges of retrieving meat from, say, a mammoth are immense. You need a lot of humans to do the work — cutting the skin, getting the meat and, crucially, warding off other predators. How do you gather many humans to the right spot? To render a complicated theory in one word: language.

7 Where Bickerton is pugnacious, Falk is dispassionate, though she too sees a crucial role for food in eliciting language. Falk believes that human language arose from the relationship between mothers and babies. In her "putting the baby down" hypothesis, she notes that while ape infants can cling to their mothers, human children cannot. So when ancient mothers had to put their children down in order to harvest food, Falk

believes they used language-like communication as a way of protecting and guiding their behaviour 33.

8 Falk makes a strong case that communication between mothers and babies is a linguistic crucible. She refutes recent suggestions that "motherese", the highpitched sing-song otherwise known as baby-talk, is not a universal behaviour. Indeed, mothers from all cultures speak to their children with some kind of motherese, and one experiment even showed that mothers make unconscious distinctions if they are using baby-talk with a child as opposed to a pet. Falk, however, never makes a strong case for exactly how language was built over the platform of motherese.

9 Language evolution spoilsports will take the differences between these books as evidence of disarray in the field, or even that its underlying question is unanswerable. This would be short-sighted. Key ideas and themes, which are bound to influence future research, appear in both books. Watch out in coming years for more on cognitive/biological phase transitions, the evolutionary significance of social interaction, the asymmetry between speakers and hearers and, one for all of us including the physicists, the need to be wary of blanket explanations.

adapted from Christine Kenneally  
in *New Scientist*, 2009

### Preserving the rainforest

- 1 While having few quarrels with President Lula's pragmatic approach to managing Brazil's drive towards first-world status, I was alarmed to see his defence of "development" of the Amazon region and his demand that others must pay for the protection of the country's rainforest (Bridge to the unknown, 13 August). This myopic view, often repeated in the region, has within it the seeds of destruction for the UN-REDD (United Nations Reducing Emissions from Deforestation and Forest Degradation) programme. And it bodes ill for the future of the unique biodiversity of the invaluable Brazilian rainforest resource.
- 2 A system that extracts payments from polluters in developed countries to compensate for slower, greener development in developing countries does little to prevent continued increases in greenhouse gas emissions at a global level. Our planet is finite and is suffering because we are not doing enough to reduce global emissions.
- 3 Shifting the responsibility from one section to another does not alleviate our global stress levels. And it is sadly true that corruption and illegal logging will, in all probability, continue to see us squander our inheritance. Continuing natural resource depletion is likely to accelerate the demise of the human race; it will certainly add to poverty, hunger and disease as we reduce our capacity to produce food in the face of population growth that is still on track to take us to 9 billion by 2050.
- 4 The current destruction of our rainforests is having a negative impact on climate change, which is itself increasing the problems of meeting global food requirements. However, given that we live in a world whose future depends on the actions of imperfect humanity, the REDD approach is probably the best one to take. Even better is REDD Plus, which embraces conservation and re-planting. An evergreen agriculture, including conservation farming and agroforestry, alongside protected forests, is certainly a goal worth striving for. And we have the technology to achieve it.

**Brian Sims**  
Bedford, UK

*Guardian Weekly, 2010*

## Tekst 9

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### The Great British Weather

SIR – Having read your article on economics and religion (“Holy relevance”, October 29th), I'd like to propose the weather as a historical indicator of a nation's 39 and prosperity.

If Britain enjoyed warm temperatures and 300 days of sun a year, would its people so easily accept enclosing themselves in a workshop, factory or office for eight or so hours every weekday, even if it led to increased prosperity? Isn't life too short not to be enjoyed?

If the Greeks woke up four days out of five to find the sun was nowhere to be seen, with rain and wind more than probable, would they still opt for leisurely lunches on patios, noontime naps and short working days? One may as well stay inside and work, there's little else to do.

How would these two countries' economic destinies be different today had they gone through history with the other's weather patterns?

Saro Agnerian, Montreal

*economist.com, 2011*



### Made-up history

The *Assassin's Creed* video game series has spent five games taking historical figures and constructing fantastical narratives around them to advance its core story about an ancient religious order conspiring to control the Earth's population using alien artifacts (How Canada Exports Distorted History – editorial, Nov. 15). The protagonist combats them using assassination skills learned by reliving genetic memories of his ancestors stored in his DNA. And we're worried about historical accuracy?

Why is this conversation only happening now? What about the other portrayals in the series? And why not criticize HBO and Showtime's historically inspired dramas for their inaccuracies, as well?

If students are really getting their facts about history, unfiltered, from *Assassin's Creed*, our schools have failed them at far more than historical education. (Aside to the editor: Yes, five games. Two were unnumbered sequels continuing the story of *Assassin's Creed II*.)

Jason Robertson, Calgary

*theglobeandmail.com, 2012*