

Bijlage VWO
2015

tijdvak 1

Engels

Tekstboekje

Fair incentive

From David Mason

Brian Farrington suggests that people who do not want wind power on their doorstep should be offered an incentive to accept it (2 February, p 28). I suggest that for equity those affected by thermal power stations should be offered an incentive, backdated to when the facility was built. While we are at it, how about those affected by overhead power lines?

Or we could just accept that we have our part to play as citizens.

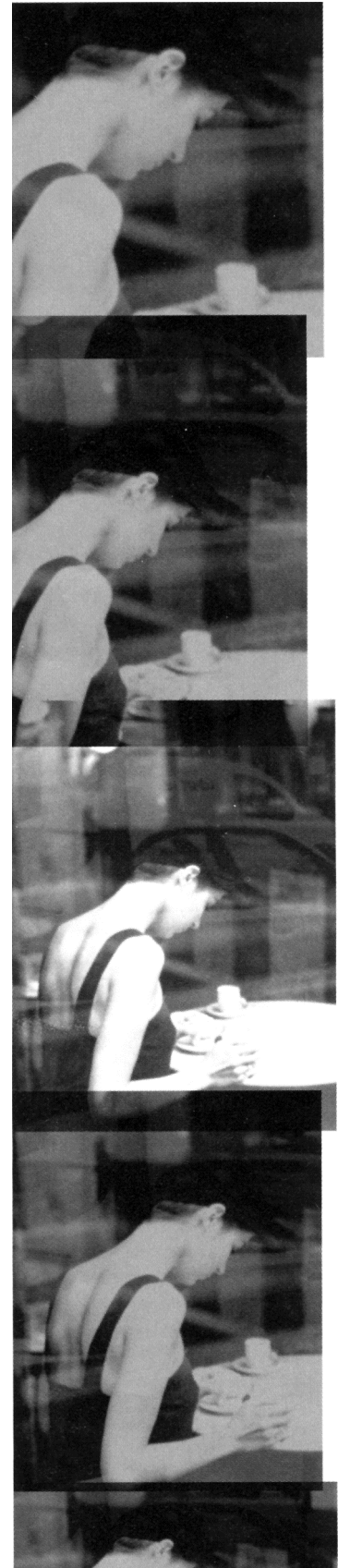
Swindon, Wiltshire, UK

NewScientist, 2013

Executive Focus

If the qualities that make a good spy were obvious, they wouldn't make a very good spy.

- 1 Spy. It says it all, doesn't it? Covert surveillance. Peering around corners. High-speed chases and shoot-outs in casinos.
- 2 Everyone knows that this is what spies do. It's obvious, isn't it? Well, the first thing to know about MI6 is that nothing's obvious. The skills that make for a good Intelligence Officer certainly aren't. Let's face it, if they were, counter-espionage would be the easiest game in the world.
- 3 So while it's true that the work is often challenging and even exciting, the qualities we look for are more ordinary than you would imagine. And more subtle. The simple ability to get on with all sorts of people from all kinds of cultures, for example. To talk and to listen. To develop the sort of relationship that means you can convince them to do what's needed to protect our national interests. This is a vital skill, along with the drive and imagination to link up pieces of data to reveal opportunities others may have missed.
- 4 What other pre-conceptions can we shatter? Well spies are loners, aren't they? Expected to fend for themselves, even in dangerous situations. In reality, while spies need to be resilient and resourceful, this is a team game and every member is constantly supported.
- 5 Oh, and let's not forget the old 'Tinker, Tailor...' image of the hyper-intelligent, slightly dysfunctional oddball. In fact you'll find that we value both emotional intelligence and academic achievement. Now what about the image of the globe-trotting secret agent, rushing abroad at a moment's notice? Certainly we're an organisation with an overseas focus, so that does happen sometimes. But while we actively seek people with an interest in global



affairs, many operational jobs are in our London HQ¹⁾ and fit well with family life.

- 6 What about secrecy? Well obviously the details of your work will be secret and we ask you not to discuss your application with anybody. That said, once you join us you'll be able to disclose your role to one or two close friends or family. We'll help you create a credible cover story for everyone else. 4, the need for secrecy creates a uniquely open and supportive working culture within the organization.
- 7 As for the white, male stereotype, the truth is that we don't care what sex you are or where you're from, as long as you're a British national. We don't even care what you do now, only what you can do.
- 8 Finally, what about the belief that those who work for MI6 are extraordinary people doing extraordinary things for their country? Well, perhaps that's one you can investigate yourself.

For outstanding candidates we are introducing a Fast Track programme. Find out more at sis.gov.uk/intelligenceofficer



SECRET INTELLIGENCE SERVICE

The Economist, 2012

noot 1 HQ: headquarters

The end of the male gene pool?

Ian Sample

Science correspondent

- 1 Nature deals some unkind blows, but none is more hurtful to the pride of man than the looming demise of the Y chromosome.
- 2 When it comes to sex chromosomes, women are XX and men are XY. But the modern male chromosome is not what it used to be. Over millions of years of evolution, the biological keeper of all things male has withered and shrunk. So dramatic has the decline been, that one day the Y might vanish completely.
- 3
- 4
- 5
- 6
- 7 Aficionados of the "rotting Y" theory point to other species known to have lost Y chromosomes. Some Japanese spiny rats thrive without a male chromosome. Were the same to happen in humans, the genes for maleness would have to hitch a ride on another chromosome.

The Guardian, 2012

LETTERS

Don't follow leaders

Sir, Your letters page has featured a lively discussion on when and whether audiences should clap at concerts. Schoolmasterly purists say only at the end. Free spirits say after any distinct section that the audience has appreciated. Jazz enthusiasts say whenever. I say that I've watched too many leaders' speeches at too many party conferences, too routinely punctuated by too-dutiful applause (20 or 30 rounds is not uncommon) to want the practice to spread.

So I propose a synthesis between the tut-tut and the hang-loose brigades. Applause that interrupts should be considered unusual, faintly embarrassing and slightly inappropriate. Then, when it happens, we'll know that it's spontaneous and passionate.
TONY GARRETT
Bath

One hand clapping

Sir, Peter Lawson (letter, July 28) is correct to point out that applause after jazz solos is very much the done thing. What he fails to mention is that very often this is more a sign of relief than appreciation.

JOEL HANLEY
London N8

Rumble thy bellyful

Sir, Who is being applauded — the creator, or the performer?

A great work sweeps us along with it and silence is an integral part of that. Applause stops the flow and distracts us from the timeless work of art to the more ephemeral performance, whether by the singer, instrumentalist, or orchestral conductor. It is the original work that must be paramount.

Imagine you are at a production of *King Lear*, with a great actor in the title role. How would you like it if the audience applauded after "Blow, winds, and crack your cheeks!"?
MORAGH GEE
London NW3

The Times, 2010

Books and arts



REVIEW

The Rational Optimist: How Prosperity Evolves. By Matt Ridley.

Getting better all the time

THIRTY years ago, Julian Simon and Paul Ehrlich entered into a famous bet. Mr Simon, a libertarian, was sceptical of the gloomy claims made by Mr Ehrlich, an ecologist best known for his predictions of environmental chaos and human suffering that would result from the supposed "population bomb". Thumbing his nose at such notions as resource scarcity, Mr Simon wagered that the price of any five commodities chosen by Mr Ehrlich would go down over the following decade. The population bomb was defused, and Mr Simon, author of the now famous book "It's Getting Better all the Time" (2000), handily won the bet.

Now, Matt Ridley has 9 bet in mind. A well-known British science writer (and former *Economist* journalist), Mr Ridley has taken on the mantle of rational optimism from the late Mr Simon. In his new book, he challenges those preachers of negativity who argue that the world cannot possibly feed 9 billion mouths, that Africa is destined to fail and that the planet is heading for a climate disaster. He boldly predicts that in 2110, a much bigger world population could enjoy more and better food produced on less land than is used by farming today — and even return lots of farmland to wilderness.

10, mankind cannot hope to achieve this if it turns its back on innovation. Feeding another 2 billion people or more will, of course, mean producing much more food. Genetically modified (GM) agriculture could play an important role, as this technology can greatly increase yields while using smaller inputs of fertiliser, insecticide and water. Many years of field experience in the Americas and Asia have shown GM crops to be safe, but, Mr Ridley rightly complains, the Luddites¹⁾ of the green and organic movements 11.

The progress (and occasional retardation) of innovation is the central theme of Mr Ridley's sweeping work. He starts by observing that humans are the only species capable of innovation. Other animals use tools, and some ants, for example, do specialise at certain tasks. But these skills are not cumulative, and

the animals in question do not improve their technologies from generation to generation. Only man innovates continuously.

Why should that be? Some have suggested that perhaps it is the chemistry of big brains that leads us to tinker. Others that man's mastery of language or his capacity for imitation and social learning hold the key. Mr Ridley, a zoologist by training, weighs up these arguments but insists, in the end, that the explanation lies not within man's brain but outside: innovation is 12. Trade, Mr Ridley claims, is the spark that lit the fire of human imagination, as it made possible not only the exchange of goods, but also the exchange of ideas. Trade also encouraged specialisation, since it rewarded individuals and communities who focus on areas of comparative advantage.

It is this culture of continuous improvement, which was only accelerated by the industrial revolution, that explains the astonishing improvements in the human condition over time.

As Mr Simon did in his classic work, Mr Ridley provides ample statistical evidence here to show that life has indeed got better for most people in most places on most measures. Whether one counts air and water pollution in California or vaccination rates in Bangladesh or life expectancy in Japan, his conclusion is indisputable. It does, however, highlight one of the book's minor flaws: an over-anxious cramming in of too many obscure statistics and calculations that should have been relegated to footnotes or an annex.

Another is the author's slightly unfair attitude towards government. Mr Ridley makes it abundantly clear that he is a free marketeer, and he provides ample evidence from history that governments are often incompetent and anti-innovation.

He is right that the leaden hand of the state has often suppressed individual freedom and creativity. However, he does not fully acknowledge that some problems do, in fact, 13 — especially because markets themselves can sometimes fail spectacularly.

Mr Ridley is also generally sceptical about global warming, and worries that government policies advocated by greens today will be like treating a nosebleed by putting a tourniquet around one's neck. He argues that the problem, if it 14, will be solved by bottom-up innovation in energy technologies. But to accomplish that, he wants governments to "enact a heavy carbon tax, and cut payroll taxes."

That is a sensible prescription (often advocated by this newspaper), but surely a "heavy" tax suggests there is a role for government in fixing market failures?

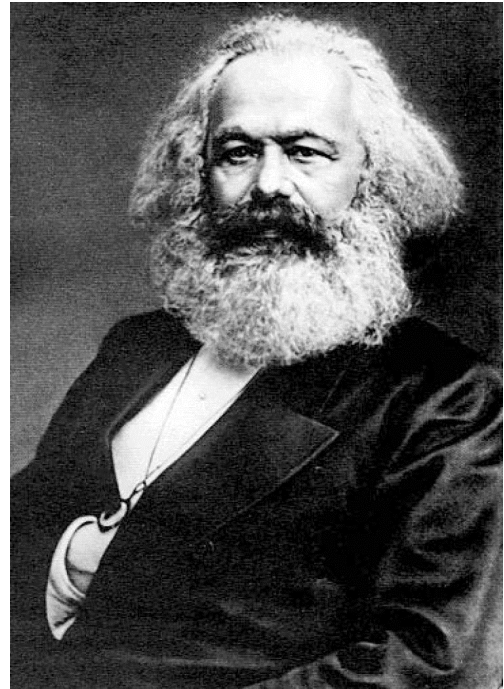
15, he is on the mark with the big things. "The bottom-up world is to be the great theme of this century," declares Mr Ridley in the closing pages of this sunny book. He is surely right. Thanks to the liberating forces of globalisation and Googlisation, innovation is no longer the preserve of technocratic elites in ivory towers. It is increasingly an open, networked and democratic endeavour.

The Economist, 2010

noot 1 Luddites: people who oppose technical or technological change

A Man of His Time

By JONATHAN FREEDLAND



- 1 The Karl Marx depicted in Jonathan Sperber's absorbing, meticulously researched biography is a man never more passionate than when attacking his own side. He was saddled with perennial money problems, constantly plotting new, world-changing ventures yet having trouble with both deadlines and personal hygiene.
- 2 Still, it comes as a shock to realize that the ultimate leftist, the father of Communism itself, fits a recognizable pattern. So inflated and elevated is the global image of Marx, whether revered as a revolutionary icon or reviled as the wellspring of Soviet totalitarianism, that it's unsettling to encounter a genuine human being, a character one might come across today. If the Marx described by Sperber were around in 2013, he would be a compulsive blogger, and picking Twitter fights.
- 3 But that's cheating. The express purpose of *Karl Marx: A Nineteenth-Century Life* is to dispel the dominant notion of a timeless Marx — less man, more ideological canon — and relocate him where he lived and belonged, in his own time, not ours. Standing firm against the avalanche of studies claiming Marx as forever "our contemporary", Sperber sets out to depict instead "a figure of the past", not "a prophet of the present".
- 4 And he succeeds in the primary task of all biography, recreating a man who leaps off the page. We see his thought develop, but glimpse also the begging letters to his mother, requesting an advance on his inheritance, along with the enduring anxiety over whether he can provide for the wife he has loved since he was a teenager. We see the trips to the pawnbrokers, the pressure to maintain bourgeois living standards, "the show of respectability", as Marx put it to his closest friend and co-conspirator, Friedrich Engels.
- 5 The picture that emerges is a rounded, humane one. Marx is committed to revolution, without being a monomaniac. He is an intensely loving father, but also suffering what would now be diagnosed as a two-year depression following the death of his 8-year-old son Edgar. He is clearly also an infuriating colleague, stewing on book projects for years, only to fail to deliver. Engels, Sperber writes, therefore spent decades repeating the same message: 20

- 6 Besides the long, devoted marriage to Jenny, there is another love story: the partnership with Engels. After the great man's death, it was Engels who waded through Marx's scrawled notes to assemble, and publish posthumously, the final two volumes of *Das Kapital*. Engels was Aaron to Marx's Moses, able to speak in public and so make up for the deficiencies of his partner, who was burdened by both a strong Rhineland accent and a lisp.
- 7 All this is fascinating enough as human drama, but it has extra value. For the act of reclaiming Marx as a man, and a man of his time, alters the way we understand his ideas.
- 8 Plenty of scholars sweated through the 20th century trying to reconcile inconsistencies across the great sweep of Marx's writing, seeking to shape a coherent Marxism out of Marx. Sperber's approach is more pragmatic. He accepts that Marx was not a body of ideas, but a human being responding to events. In this context, it's telling that Marx's prime vocation was not as an academic but as a campaigning journalist: Sperber suggests Marx's two stints at the helm of a radical paper in Cologne represented his greatest periods of professional fulfillment. Accordingly, much of what the scholars have tried to brand as Marxist philosophy was instead contemporary commentary, reactive and therefore full of contradiction.
- 9 Thus in 1848 Marx could make a speech denouncing as "nonsense" the very idea of a revolutionary dictatorship of the proletariat, even though that notion formed a core plank of Marxist doctrine. The old Communist academicians used to insist the text of that speech must have been a forgery, but Sperber believes in its authenticity. Marx delivered it to a Rhineland audience then demanding the broadest possible front against authoritarian Prussian rule. Pitting one Rhenish class against another made no sense in that place at that time, so "Marx repudiated his own writing." The book makes clear that, determined though Marx was to devise an overarching theory of political economy, he was, even in exile, forever preoccupied with German politics and fueled by a lifelong loathing of Prussian despotism. Whatever he wrote in the abstract was informed by the current and concrete.
- 10 Sperber forces us to look anew at a man whose influence lives on. And he also offers a useful template for how we might approach other great figures, especially the great thinkers of history — demystifying the words and deeds of those who too often are lazily deemed sacred. For all the books that have been written about America's founding fathers, for example, we still await the historian who will do for them what Jonathan Sperber has done for Karl Marx.

nytimes.com, 2013

Language needs to change

Sarah Churchwell

- 1 **Y**ou can feel the collective shudder among language purists: "innit", "grrl" and "thang" have been admitted into the Collins Scrabble Dictionary. Admission into any dictionary is the first step on the road to legitimation, thus raising the question of whether mispronunciation constitutes a genuine neologism. I hate to admit it, but historically speaking the answer to that question is yes.
- 2 The cynics amongst us might wonder whether the dictionary's editors made deliberately provocative choices to stir up publicity. The Americans amongst us might wonder why an American like me is using the archaic "amongst" instead of "among" like a normal person.
- 3 Language usage matters, in other words, not merely because of our need to communicate denotatively, but because of the complex, subtle array of connotative meanings conveyed by specific usages. Usage creates groups; it includes and excludes, and it hierarchizes. To wit: my use of the "-ize" suffix in "hierarchize" will brand me as a philistine¹⁾ to certain readers — a point to which I'll return.
- 4 We all know that language is mutable, that it must either evolve or wither away: Babylonian is untroubled by the intrusion of new slang, as it is untroubled by speakers. The word "slang" is itself illustrative: it was first recorded in 1756, I learn from the OED²⁾, which offers a wonderfully sniffy definition: "The special vocabulary used by any set of persons of a low or disreputable character." Language thus signals not education, but character: not what you know, but who you are. And who you are, linguistically speaking, is all about class, innit.
- 5 It is no coincidence that the word "slang" entered the language immediately after Samuel Johnson codified it for the first time in his 1755 dictionary. Johnson took a surprisingly descriptive (rather than prescriptive) stance toward English, acknowledging that change wasn't just inevitable, but normal. He also thought that an F was the same as an S, so what did he know? (This is a joke. I may be American, but I am familiar with the orthographic peculiarity that was the "long S" in the 18th century.) Standardized spelling soon followed, and the British generally chose the Norman route.
- 6 It took an American to start purging the French out of English. After the revolution (not "war of independence", thank you) the fledgling US sought to establish its independence culturally as well as politically. Moreover, the Enlightenment project of America's founders meant emphasizing literacy education; and pronunciation had already altered over the previous two centuries. In 1828 Noah Webster produced the first American dictionary, seeking to establish America's cultural distinctiveness. The much-maligned (in Britain) suffix "-ize" is not a modern outrage derived from US business-speak, but dates back to Webster, who returned it to words derived from Greek verbs ending in "-izein". He also took the French out of words ending in "-re", and the "u" out of

the suffix "-our", another French spelling. In other words, when the British mock "American" spellings, they are usually defending the French. That's what you call historical irony.

7 I was recently upbraided by an English woman for using what she called an "American barbarism" — the form "gotten", as in "I'd gotten tired of being corrected by arrogant, misinformed persons". I explained that "gotten" is a Renaissance usage found throughout Shakespeare; he uses "ungotten" too.

8 The standardisation of language may be a comparatively recent phenomenon, but fears about its corruption by foreign or degenerate "speeches" are as old as xenophobia. The argument is always framed as an effort to keep the original language from "degenerating", but language can't degenerate: it can only live or die.

9 The idea that languages are threatened by the inclusion of new words is as foolishly nativist as the idea that exogamy³⁾ threatens bloodlines. What may be threatened by admitting new words are class prerogatives based on exclusive access to standard forms — and from a democratic perspective, that's not a bad thing.

10 From an aesthetic standpoint, however, "innit" remains an abomination. That said, true language purists won't admit the authority of Scrabble's dictionary in the first place. But they should: the first recorded use of "scrabble" is from no less canonical a source than the King James Bible itself.

11 But note to the Scrabble editors: they spelled it "scrable".

The Guardian Weekly, 2011

noot 1 a philistine: someone who does not like or understand art, literature, music, etc.

noot 2 OED: Oxford English Dictionary

noot 3 exogamy: marriage outside your family or caste

Artificial meat

Hamburger junction

- 1 **A** QUARTER of a million euros is rather a lot to pay for a hamburger, but that will be the cost of the patty which Mark Post proposes to stick in a bun this October. The burger in question — not so much a quarter-pounder as a quarter-million-pounder — will be so expensive because it will be made from meat that has been grown from scratch in a laboratory.
- 2 Dr Post, who works at Eindhoven University in the Netherlands, belongs to a group of people who hope to disrupt one of mankind's oldest industries — animal husbandry. In fact, they wish not so much to disrupt it as to destroy it.
- 3 Raising animals is a resource-intensive process. About 30% of the world's ice-free land is used for it. Yet of the nutrients in the plants these animals eat, only around 15% is turned into meat. As the human population grows, and grows richer, demand for meat is increasing. Dr Post hopes to satisfy at least part of that demand by making the stuff in factories, in a way that converts about 50% of the nutrients into something people can eat.
- 4 For now, that something is not exactly fillet steak. Dr Post's cultures, grown from stem cells, are sheets 3cm long, 1.5cm wide and half a millimetre deep. To make the world's costliest hamburger 3,000 of them will be needed.
- 5 The stem cells themselves are extracted from cattle muscle and then multiplied a millionfold before they are put in Petri dishes and allowed to turn into muscle cells. When they have done so, they are encouraged to exercise and build up their strength by being given their own gym equipment (pieces of Velcro to which they can anchor themselves in order to stretch and relax spontaneously). The fatty cells of adipose tissue, needed for juiciness, are grown separately and then combined with the muscle cells before the whole thing is cooked. In theory, one cow could thus supply as many hamburgers as a million slaughtered animals can today.
- 6 Producing meat in Petri dishes is not commercially viable, but Dr Post hopes to scale things up — first by growing the cells on small spheres floating in tanks and ultimately by using scaffolds made of biodegradable polymer tubes, which would both add the third dimension needed for a



juicy steak and provide a way of delivering nutrients and oxygen to the steak's interior.

- 7 The nutrients themselves could come from conventional crops, but Dr Post also has plans to use algae, which grow faster than vascular plants, to provide the necessary amino acids, sugars and fats. The upshot would be a world with fewer stock animals. Not only would that liberate land, it would reduce greenhouse gas emissions (cattle are notorious sources of methane, which is a much more potent greenhouse gas than carbon dioxide). Moreover, you do not even have to kill a cow to obtain stem cells from it. A biopsy will do. That might mean that vegetarians would be able to enjoy meat too.

The Economist, 2012

Colonial borders hamper Africa's trade renaissance

NEARLY ONE-THIRD OF African countries celebrated their 50th anniversary of independence this year. High time, some might say, to stop blaming European powers for the political frailties and economic fragmentation associated with the continent's colonial inheritance.

However, Africa's colonial legacy continues to complicate development and frustrate the evolution of business at least in one respect: the borders carved out by Europe's colonialists. As Mo Ibrahim, the Sudanese telecoms mogul turned philanthropist, points out, sub-Saharan African countries spend large sums on maintaining embassies. Each has to furnish 48 ambassadors with 48 limousines, 48 embassy buildings and the staff to fill them — one in each country where they require representation.

Businesses operating on the continent face a similar dilemma as they seek to expand. Economic integration is the obvious antidote, and to varying degrees regional trading blocs are forging ahead with customs unions, easing working restrictions and planning common monetary policies.

But progress is still hampered by lack of follow-through, and fears remain among less developed countries that they will be dominated by the big regional powers — Nigeria in the west, Kenya in the east and South Africa in the south.

On average, only 10-12 per cent of African trade takes place among African nations. Infrastructure is still geared towards exports, as it was in

colonial times. Railways and roads often lead to marine ports rather than linking countries over land.

Even where there have been advances in harmonising tariffs and easing restrictions on the flow of people and goods, reality on the ground often trails. The cost of trucking a container from Mombasa, Kenya, to Kigali, Rwanda, 930 miles and three border crossings away, can be three times the price of shipping it from the US. Bribes at weighbridges and roadblocks add more than \$1,000 to costs.

The momentum is beginning to gather, however. Institutions such as the African Development Bank now prioritise infrastructure projects that foster regional integration. Chinese financing is helping to resurrect some of the pan-continental railway projects.



The big African banks are spreading from state to state. Telecoms companies are harmonising their operations to gain economies of scale. Trade statistics barely capture what is perhaps an even bigger force: the informal sector, which traditionally has paid less heed to borders.

William Wallis

Financial Times, 2010

Not so black and white

SIR — Your article about the rising number of black unmarried women in America illustrates society's prevailing double standard regarding race ("Down or out", October 15th). It informs us that "fewer than one in ten black women intermarries" with other races because it is their "greatest taboo". We are told that some black women "find non-black men unattractive" and that others fear the children of such marriages might not be "black enough", but that the most common reason for not intermarrying is that black women regard it "as tantamount to betraying the race". One black woman explained that if she were to marry a man from another race it would be akin to turning in her "black heart".

If *The Economist* had reported that racial intermarriage was white women's greatest taboo, that some white women find non-white men unattractive, that others fear their children would not be white enough and that it was common for them to view intermarriage as a betrayal of their race, such views would be utterly condemned. If a white woman said that she would have to turn in her white heart to marry out of her race, she would be called a racist. But isn't this double standard itself racist?

Ken Pedersen
Honolulu

economist.com, 2011

Encrypted fabric

Your clothes may soon carry a helpful secret. A new type of thread woven into patterns invisible to the naked eye could put an end to fake designer clothes — and dull outfits.

Concealed patterns visible only under polarised light are used in some nations' bank notes to deter counterfeiting. To extend the method to other valuables, Christian Müller at Chalmers University of Technology in Gothenburg, Sweden, made a semi-transparent thread from polyethylene and a polymer used in clothes dye. This thread has unique optical properties that allow only certain polarisations to pass through.

Weaving the threads together makes a fabric that looks solid purple to the eye but reveals pink and purple patterns when lit with polarised light.

Müller says the thread may be used to create unobtrusive logos on designer clothes to thwart knock-offs. He's also looking to make similar threads for use in electronically enhanced textiles that change colour with electric voltage, so you could alter your fashion with the flick of a switch.

NewScientist, 2012