

Bijlage VWO
2013

tijdvak 1

Engels

Tekstboekje

Curse of giftedness

From Merrilyn Watson

- 1 As an educator and a parent of gifted children, I thought your interview with Joan Freeman about the dangers of labelling children as gifted was unhelpful (9 October, p30). Although its main focus was on non-gifted children who have been wrongly labelled as gifted, often by their dysfunctional parents, the overall effect was to feed the stigma already attached to gifted children and their families.
- 2 Most parents of gifted children do not fit the stereotype of pushy tyrants. Indeed, a report called *The Education of Gifted and Talented Children* by the Australian Senate's Employment, Workplace Relations, Small Business and Education committee states that parents are more accurate at diagnosing their child's special needs than teachers are. Even so, they still tend to underestimate their child's ability rather than overestimate it.
- 3 Despite this, in many Australian schools giftedness is still strongly stigmatised by teachers and teachers' unions. Parents who believe their child is gifted have to be prepared to fight the system to get their child the support they need.
- 4 Freeman's assertion that "if you label a child as gifted when they are not ... the child has the most terrible burden" is no doubt true. But so is the reverse: a gifted child left to struggle without having their special learning needs recognised and addressed suffers too.
- 5 Freeman also suggests that gifted children may end up isolated among much older classmates. Yet what children need are "mind peers" rather than age peers. Just like children with learning difficulties, gifted children can have trouble fitting in and often do better in special learning environments. Gradeskipping can benefit them both socially and intellectually.
Nightcliff, Northern Territory, Australia

New Scientist, 2010

EMAIL FROM AMERICA

Mark Harris
IN SEATTLE - NEW TECH CITY

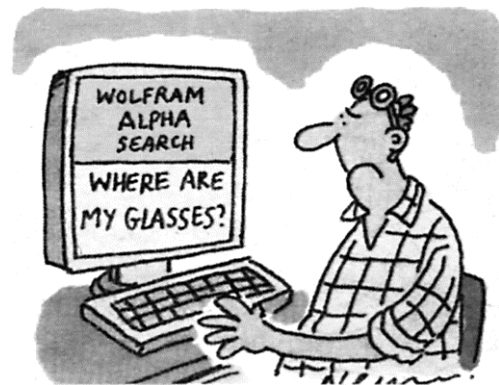
Is the climate change website you're visiting funded by an oil company? And can you trust the Wikipedia page for a politician you're interested in? Search engines that prioritise popularity over accuracy hardly help, giving you millions of websites to choose from and no idea of which you can trust.

A new type of search engine, launching this week, could change all that. WolframAlpha (www.wolframalpha.com) is the web's first "computational knowledge engine" and is the brainchild of Stephen Wolfram, a British computer scientist now based in Illinois. Unlike Google or Yahoo!, WolframAlpha holds only factual data – more than 10 trillion pieces of information – sourced from thousands of official websites, libraries and academic journals, and checked by experts.

In America it has created speculation that it could redefine how we use the web. This isn't just because it uses only trustworthy sources, but because it knows how each piece of information in its databases is related to every other piece. This allows users to ask it questions in plain English and get

the results as graphs, tables and 3-D diagrams. Type in "30 miles per gallon", for instance, and WolframAlpha will convert it into kilometres per litre and contrast it with the fuel consumption of an average car. You can compare the GDP, currency or mortality rates of different countries, or find out how much healthier a banana is than a hamburger.

It's particularly strong on science, plotting solar eclipses on globes, unravelling DNA sequences or simply solving mathematical equations. Of course, WolframAlpha does not know everything. Where searches on Google can return millions of results, a search on WolframAlpha during a demo run often gave none at all, when its databases lacked the information or the site didn't understand the question.



Americans have grown used to surfing the web, picking and choosing from thousands of links to unreliable sites. Whether they're now ready to dive deeper in search of substantial information remains to be seen.

The Sunday Times, 2009

Upsides of being down

- 1 **D**iscuss the positive aspects of mental disorder, and the British public seems to feel threatened. When actor Stephen Fry gave an account of his bipolar disorder, he was accused of “normalising” what was a “severe mental illness”, that he had the luxury of shunning treatment due to his privilege and wealth. These sorts of criticisms missed the point: his wealth was earned largely because of his so-called disorder. The years when he was contributing to hit TV shows such as *A Bit of Fry and Laurie* and *Black Adder* were largely fuelled by protracted periods of elevated mood – in the form of mild mania, or “hypomania”.
- 2 4, straightforward depression (unipolar depression) has no elated, productive, hypomanic side and, as a consequence, very few people have written about the positive aspects of the condition. The focus has been on the acute symptoms of what can be an incapacitating illness, while forgetting that depression has meaning, and that there is a life after recovery.
- 3 The assumption that depression is a disease has been reinforced and perpetuated by biologists, psychiatrists and pharmaceutical companies, all of whom have a vested interest – consciously or unconsciously – in the clinical perspective. This might be an appropriate model for the more severe “melancholic” forms of depression that psychiatrists tend to see, but not for the majority of cases of depression. Most depression resolves itself without a single medical consultation.
- 4 Although technological advances in antidepressant treatments have undoubtedly been responsible for the alleviation of much suffering, strict adherence to the medical (disease) model is preventing a more complete understanding of why we as a species are so susceptible to depression, with at least 20% of men and 25% of women experiencing the condition in their lifetimes. The disease model may also be engendering a sense of powerlessness in those with depression or ex-sufferers. What so commonly goes along with this perspective is the implication that the condition is due to some unusual constitutional weakness. The only solution, 7, is chemical.
- 5 It is complete nonsense to talk of depression being unusual when it is plainly common. The search for a “depression gene” has foundered because the genetic underpinnings are spread across the population, like the genes determining height. Most of us probably have a moderate susceptibility to the condition under certain stressful circumstances. 8, we see GPs overprescribing antidepressants,

and the World Health Organisation talks of increasing access to “treatment” to deal with the global epidemic in depression-related disability – predicted to be second only to heart disease as the most important cause of disability. All of this ignores the “ultimate” cause of depression.

6 My recent review of theories and personal observations suggests that depression might serve some useful functions. The truth is that short-term pain can lead to longer-term gain. A recently published follow-up study of depression in Holland – the Netherlands Mental Health Survey and Incidence Study (Nemesis) – used a sample of 165 people with a major depressive episode, and provides some preliminary scientific evidence to suggest that depression may indeed be helpful. Researchers who were looking for evidence to suggest that depression leaves people chronically disabled were surprised to discover the opposite.

7 The population they followed from before illness to the period after recovery showed that people seemed to cope better with life’s trials after depression than they were doing before its onset. In the group as a whole, averaged ratings of vitality, psychological health, social and leisure activities, occupational performance and general health all significantly improved upon recovery from depression, compared to functioning prior to the depression. A minority of individuals got worse

after a depressive episode, mostly in the realms of general health, vitality, and physical functioning. However, much to the researchers’ surprise, severity of depression and availability of treatment were not significant predictors of this decline. It was more to do with additional problems such as social isolation, having a physical illness, or drug or alcohol addiction.

8 Depression may bring about a “rebirth” because it removes self-delusion. There is some evidence from scientific studies to show that depressed people are rather more realistic in their thinking than “healthy” individuals – the phenomenon of “depressive realism”. It prompted the scientific journalist Kyla Dunn to write: “One cognitive symptom of depression might be the loss of self-enhancing biases that normally protect healthy people against assaults to confidence in their abilities. In many instances, depressives may simply be judging themselves and the world much more accurately than non-depressed people, and finding it not a pretty place.”

9 With recovery, and with the lifting of mood, a new kind of truth could emerge. It would be devoid of blind optimism: a more humble assessment of the depressed person’s own capability, containing a more balanced picture of his or her perceived strengths and limitations.

*Adapted from Paul Keedwell in
The Guardian, 2008*

Carbon capture

From Peter Fry

The optimism in your article on carbon capture is unwarranted (25 September, p48).

This fledgling process is unlikely to be developed on a large enough scale in the time available to help us avert global warming. Its real function is to distract us from investing in alternative power sources and thus helps to keep the fossil fuel industry in business. Carbon capture is for the coal lobby what filter cigarettes were for the tobacco industry – 11.
Sydney, New South Wales, Australia

New Scientist, 2010

The 21st-century land grab

DEBORA MACKENZIE

- 1 Until the mid-20th century, many European countries grew rich on the resources of their colonies. Now, countries including China, Kuwait and Sweden are snapping up vast tracts of agricultural land in poorer nations, especially in Africa, to grow biofuels and food for themselves.
- 2 The land grabs have sparked accusations of neocolonialism and fears that the practice could worsen poverty. Yet some organisations think this could be a chance for poor countries to trade land and labour for the technology and investment vital for developing their own food and energy production.
- 3 As population growth and dwindling oil supplies make farmland the 14 that oilfields are now, the hunger for land looks set to increase. China has 20 per cent of the world's people and only 9 per cent of the farmland, and that is dwindling. According to a detailed analysis by the NGO Grain, Chinese companies and the government have since 2007 leased or purchased 2 million hectares of foreign farmland.
- 4 Financial firms have been quick to get in on the act too, and are moving their money from food to the land that produces it. The British hedge fund manager Dexion Capital, for instance, plans to invest \$270 million in 1.2 million hectares in Australia, Russia and South America.
- 5 The question is whether incoming technology and investment can be harnessed to increase food production for the poorer countries themselves. Although the global financial crisis has halted the rise in food prices, this week International Food Policy Research Institute (IFPRI) warned that the slowdown will also cut investment in farming, which will raise food prices by up to 27 per cent by 2020.
- 6 All foreign deals so far pledge to turn "unused" or "underutilised" land into farmland to yield food. This might sound good on paper, but the reality is not so clear-cut.
- 7 First, is the land really unused? Many analysts agree that most land that can be farmed is already in use, but some disagree. "Indeed Africa has lots", says Peter Hartmann, head of the non-profit International Institute for Tropical Agriculture in Ibadan, Nigeria. He says for every hectare of African farmland there are around 2.5 hectares of "equivalent rainfed arable land" unused for want of technology or capital. 17 seemingly unoccupied land is probably used for at least part of the year by someone, says Michael Taylor of the International Land Coalition (ILC), which groups 65 agencies, from local farm groups to the World Bank, concerned with land access.

Nomadic herders, rarely a priority for governments, are being dispossessed by bioethanol developments in Kenya, he says, and they also depend on the “unused” land that Madagascar offered Daewoo. Ethiopia’s communal lands, such as grazing areas, are being leased to private investors, says anthropologist Marco Bassi of the University of Oxford. “This will destroy shifting cultivators and pastoralists.”

8 In many cases, land is used by such people because its soil or water is unsuitable for intensive cultivation. The danger, then, is that foreign leaseholders might extract what they can from these areas, then leave once soil and water resources have been exhausted.

9 Some people see upsides, though. “I could imagine such land use benefiting people,” says Hartmann. Foreign investors build roads, storage and port facilities that local farmers can also use to sell crops – a bottleneck in much of African agriculture.

10 “Such investments are not to be generally condemned,” says von Braun, head of the IFPRI in Washington DC. Leaseholders might press for better tax situations for farmers, while host countries could insist on local hiring. Some investors are even offering schools and healthcare facilities, although in the past such promises have notoriously not been kept.

11 The best option would be for foreign firms to contract local small farmers to grow crops for them, says Paul Mathieu of the FAO. “Investors could say, if you use this seed and follow our advice we promise to buy the crop. That could be a win-win situation.” German company Flora Eco Power produces biodiesel in Ethiopia in this way.

12 “These deals could provide more security and predictability for poor farmers than just selling crops on open markets,” agrees Duncan Green of Oxfam.

13 However, existing arrangements of this kind are generally “between partners with vastly unequal power”, says Green, and they offer few guarantees for locals. Hartmann and von Braun say **19** is needed, and that it must include provisions for local producers, property rights, sustainable management and transparent rules. The FAO is now trying to write such guidelines, says Mathieu.

14 They will be no good if no one uses them, though, and so far there is little sign that investors are keen to work with locals. Many Chinese projects, for example, bring in farmers from China. If the foreign-owned farms simply take the crops and run, offering nothing to local people, it could be a recipe – as Europe’s colonialists discovered – for trouble. ●

New Scientist, 2008

Comment&Debate

Ice-cream? Watch out for sharks

Gary Younge

1 **E**H Carr argued in his landmark essay, *The Historian and His Facts*, almost 50 years ago:

“The facts speak only when the historian calls on them. It is he who decides to which facts to give the floor, and in what order or context ... It is the historian who has decided for his own reasons that Caesar’s crossing of that petty stream, the Rubicon, is a fact of history, whereas the crossing of the Rubicon by millions of other people before or since interests nobody at all.”

2 When it comes to media coverage of immigration in Britain the facts that are given the floor, the context in which they are interpreted and the conclusions that then emerge make rational debate, let alone effective policy making, nigh impossible. The problem is not that the facts are selective, but that they are selected poorly and with the specific intent of creating panic, fostering resentment and stoking xenophobia.

3 And it works. A Mori poll in 2002 revealed that more than a third of Britons believed there were too many

immigrants. It’s not difficult to see why. The public’s mean estimation of the proportion of immigrants in Britain was 23%; the actual figure was around 4%. If you walked around thinking everything was six times larger than it actually was you would find most things scary.

4 So it was last week when the Office for National Statistics released its most recent employment figures. The statistics showed a net increase of 188,000 people in work between April and June compared to January and March. Of those, the number of UK-born people employed rose by 41,000 (a 0.2% rise) while those born outside the UK went up by 145,000 (a 3.9% rise). Compared with the same period in 2009 the figures showed an overall 101,000 increase in employment. Over this period, the number of UK-born people with jobs fell by 15,000 (-0.1%) while the number for those born outside the UK went up by 114,000 (3.1%).

5 Such are the facts. In a paper released on Monday called *Immigration and Employment*, the Institute for Public Policy Research (IPPR) produced an analysis of the coverage. On their front page the Express announced “Foreigners get 77% of new jobs in Britain as too many of us live on benefits.” Page two of the Mail declared: “Foreign workers surge by 114,000 ... but the number of Britons with jobs falls.” Meanwhile the Telegraph stated: “Record four out of five jobs going to foreigners between May and June.” Each then went on to imply whatever

new “British jobs” were created had been taken by foreigners.

6 Reasonable people may debate whether the language in these articles is inflammatory, but no one can deny that they are all in some way inaccurate. In their desperation to define the “other”, all three papers mistake nationality for place of birth. To be born outside the UK does not make you foreign.

7 Given all made the same mistake, this was no mere semantic mix-up – it reflects a mind-set. Nor is the distinction a matter of pedantry. An error in the language presages an error in the facts. The Office for National Statistics figures actually show a tiny rise in the employment of Britons of 4,000 between this year and last and a more sizable jump in the employment of foreigners of 97,000 (4.2%).

8 Nonetheless the broad trend these papers describe is accurate. The lion’s share of the rise in employment over the last year can be accounted for by the increase in non-British citizens finding work. The trouble is, this does not tell us an awful lot about “new” jobs or how immigrants are faring in the job market compared with Britons.

9 As Sarah Mulley, a senior fellow at the IPPR, points out in her paper, since most migration is economic, people are less likely to come and more likely to leave if jobs are scarce – making unemployment among

migrants less likely. Also, migrants are less likely to be settled and therefore can go where jobs are plentiful.

10 But it is a leap of (bad) faith to conclude from those statistics that British employment is stalling because immigrant employment is going up. The fact is, anecdotal evidence aside, there simply is no proof that immigrants cause unemployment. “The best available UK micro-economic evidence on the effects of migration on employment,” concluded an earlier IPPR report which was in line with research in other OECD countries, “finds either no effect at all, or very small negative effects.”

11 Shark attacks and ice-cream sales both rise in the summer. But that doesn’t mean ice-cream attracts sharks or people react to fear about shark attacks by eating more ice-cream. Unemployment is important and people’s anxieties about immigration should be addressed. But their prejudices needn’t be pandered to and can’t be confronted on the basis of wanton misinterpretations. Stopping immigration as a means of fighting unemployment makes about as much sense as banning ice-cream sales in a bid to reduce shark attacks. And it will do as much good too.

The Guardian Weekly, 2010

iHuman

From Krista Nelson

1 So Google will soon be returning search results before you have finished typing the query, based on what is most likely, and the Yahoo search engine wants to take your sex and age into account (18 September, p19). Your previous online behaviour, including social networking, might even be used to 29 search results.

2 The idea of a computer deciding what information to show me based on my demographic fills me with horror. Such a method is only useful if you fit the social expectations built up by the search engine's database. If you are unclassifiable or are looking for something odd, profile-matching will not help. A solution is to let the search engine build up a better picture of you, but I don't feel comfortable sharing all my personal

details in the hope that it will provide a better answer.

3 Search engines are what change the internet from a pile of computer components into an incredible resource. People rarely have the patience to go through more than the first few hits, so the way pages are ranked is extremely important in deciding what information people have access to.

4 We are being forced into one of a few easy-to-label groups for the convenience of computers, and if your needs don't fit in with the majority then you miss out.

5 I am not a label, I am a human being. I don't want a search engine to do my thinking for me, any more than I would want an encyclopedia to do it. Computers are still only tools and are much less intelligent than most people give them credit for.
Rokeby, Tasmania, Australia

New Scientist, 2010

Eyes for art

From Valerio Cugia

- 1 As a painter, I was interested to read Jessica Griggs's article on optical tricks used by artists (18 September, p34). However, I was surprised to learn that a study of 90,000 people in the UK found that they preferred impressionist paintings over some other forms of art.
- 2 The explanation reported in the article – that the ambiguity of the images allows the amygdala, the part of the brain that links sensory information to emotions, to interpret the pictures in a more personal way – may only be part of the story. The preference could also be a product of contemporary cultural tastes.
- 3 When the impressionists first showed their paintings, most Parisians found them absolutely

horrible, as their taste was formed by other images and different values and subject matter. They, like the 90,000 UK subjects, had an amygdala region of the brain. 32 the effect on that area is the sole cause of people's appreciation of impressionist art, they too should have responded enthusiastically to those paintings, but they did not.

- 4 For my own part, although I find Renaissance painting magnificent, it is culturally and visually so distant that I feel closer to Monet and fellow painters than to Raphael or Dürer. In the same way, people living in the 1500s would probably have preferred their artists to the impressionists we love so much today.

Groningen, The Netherlands

New Scientist, 2010

Britain's universities and foreign students

Hustling spires

1 **E**MO OF FRIESLAND was Oxford's first recorded foreign student, and since 1190 they have kept pouring in. Both sides have benefited: Britain's universities, economy and culture have been enriched, and foreign scholars have been privileged to mix with the best. In recent years foreigners' higher fees have helped to keep increasingly hard-pressed institutions solvent.



2 Now, as rich-world students become more adventurous, and prosperous emerging countries produce would-be undergraduates faster than good university places, the market in international higher education is booming. The number of students enrolled outside their home country has roughly trebled since 1980. Britain is a world leader in this market, second only to America.

3 But the business is changing. In addition to the traditional Anglophone competitors for foreign students, many continental European places now teach in English. Countries that once 34

international education now provide it: Singapore is well on its way to becoming a regional hub.

Universities (including British ones) are setting up campuses across borders. In short, students have more choice than ever. They are less likely to tolerate being fee fodder to subsidise Britons' education just

because a brochure boasts an ancient-looking crest.

4 To flourish, British universities and their political masters must make a host of small changes and one huge one. The former require action from the universities. There is remarkably little differentiation now: Oxbridge colleges and former polytechnics all seem to have the same blurbs. Too many universities think their job is done after the last exam. In fact, forging strong alumni networks overseas is good for recruitment, good for ex-students and good for their alma maters' bank balances.

5 A geographic bias must be corrected too. China has been the big story, its students flooding Western campuses. Britain targeted that market well. But as that one-child country ages, India is the place to go for. Britain is belatedly trying to fix a change to the visa regime that angered many Indian students in particular by appearing to lump them in with subcontinental terrorists. There is talk of British universities teaming up with Indian ones, but more could be done.

6 The huge change is psychological: stop thinking of foreign students as mugs to be overcharged to subsidise poor Britons. That has never worked in any business and it is not going to work in this one. Concentrating on making British universities as good as possible above all means allowing them to charge domestic students

something close to the real cost of their education. This is fair: the average value of an education to the recipient exceeds the direct estimates of the fees involved. It also creates a virtuous circle. Better-funded universities can hire more good

professors and build more modern laboratories. Britons will get a better education, and it will attract more foreign students too – who can help pay for more.

The Economist, 2010

From a presentation by Paul Hunt, Special Rapporteur for the United Nations, given to the General Assembly, in New York

- 1 The skills drain phenomenon in health care is experienced differently in different countries. Some 30-50 per cent of health graduates leave South Africa for the US or UK each year. In 1999, Ghana lost more nurses than it trained. During the 1990s, two-thirds of Jamaica's nurses left the country permanently.
- 2 Migration of this sort is like a haemorrhage on a health system, making it more difficult for developing countries of origin to deliver the right to health to those within their jurisdiction. It imposes substantial economic and social costs on developing countries, while saving developed countries significant training costs. The economic name for this process is a "subsidy". The subsidy is perverse because it flows from poor to rich countries.
- 3 The skills drain may have some positive effects, including for developing countries. In some cases, for example, migrants' remittances make a major contribution to the economies of countries of origin. But even when this occurs, it does not mean that the remitted funds are invested in those countries' health systems.
- 4 It is disingenuous for developed countries to provide overseas development assistance, debt relief and so on for developing countries, while simultaneously hiring health professionals who have been trained at the expense of, and are desperately needed in, developing countries of origin. What is the point of giving with one hand and taking with the other?
- 5 In today's world, there is a shocking inequality in levels of health care and protection. In rich countries, life expectancy approaches 80 years; in some of the poorest it is below 40 years. In Sweden, the death rate of children under five years is 0.3 per cent; in Sierra Leone it is 28 per cent. A woman in sub-Saharan Africa faces a 1 in 16 risk of dying during pregnancy or childbirth, as compared to a 1 in almost 3,000 risk in the developed world.
- 6 The skills drain deepens this global health inequality. Policies are needed to tackle the skills drain in a systematic and coordinated way.

The Independent, 2005

A no-brainer

“THE food and financial crises have refocused the world on how we deal with nearly 1 billion people who go to bed hungry.” So spoke Tadataka Yamada, head of global health at the Gates Foundation, a charity. But his listeners, a gathering of nutrition wonks in Bangkok earlier this month, did not focus on the hungry, in the usual sense of people whose intake of calories is low. Instead they tackled a problem that is far larger, but possibly simpler.

Perhaps a third of the world’s people suffer from a lack of micronutrients, substances that help bodies and brains to grow and resist disease. Micronutrients include vitamins and minerals like folic acid, iron, vitamin D and iodine (which, for example, affects the thyroid, intelligence and the action of genes).

The case for enriching staples such as flour or salt with micronutrients is compelling, says David Dodson of Project Healthy Children, an American charity. Adding iron to food costs less than ten cents a head per year, and the economic return (in productivity) might be 36 times as much; adding folic acid to diets costs four or five cents per head per year, with a payback of perhaps 120-fold.

So why, for example, is all salt not iodised? Partly, for lack of expertise in poor countries. But shamefully, the problem also reflects disarray among donors and squabbles among pundits.

The time is now ripe to correct this, says Meera Shekar of the World Bank. At next year’s G20 meeting in Canada, expect news of a big, co-ordinated global campaign, like the one against malaria.

The Economist, 2009