

THE SKEPTICAL INTELLIGENCER

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Incorporating the Skeptical Adversaria: the ASKE Newsletter

Edited by Michael Heap

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FROM THE ASKE CHAIR

Michael Heap

The need to be seen to be doing something

In June 2017 the UK Ministry of Justice published an evaluation of the Core Sex Offender Treatment Programme (SOTP) in England and Wales. The core SOTP is a CBT (cognitive behaviour therapy) intervention designed by HM Prison and Probation Service (HMPPS) for prisoners who have committed sexual offences. It was accredited for use in prisons in 1992 (note 1). The conclusions of this cautious and balanced report were that offenders participating in the programme were no less likely to be reconvicted for a sexual offence (average post-release period 8.2 years) than a matched untreated group and there was some indication that they were *more likely* to be so.

Prior to the report, intermittent evaluations of the programme published in the UK and North America had presented a mixed picture. This was very likely due to the difficulties inherent in matching treated and untreated groups, as well as the problems of ‘deniers’ (convicted persons who maintain their innocence) and drop-outs, which are almost inevitable in inmates undertaking the programme.

In view of the findings, in March 2017 the Ministry of Justice announced the replacement of existing SOTP programmes with two new programmes, Kaizen (for high risk, high need, high priority offenders) and Horizon (for medium risk offenders). These programmes incorporate the targeting of areas of concern that were not addressed in the original programmes.

Given the history of our prison service and the way offenders have been dealt with by the criminal justice system in the past, surely we can only applaud the fact that in more recent times there have been serious efforts,

grounded in a rational understanding of offending behaviour, to rehabilitate convicted criminals and dissuade them from their errant ways. But caution is always in order. A while back, Matt Ridley in his *Times* column (9.10.17) devoted his attention to something called ‘virtue signalling’, which is when we make some sort of statement or gesture intended to display us in a good light but otherwise having no beneficial effect on the world. He quoted the economist Milton Friedman: ‘One of the great mistakes is to judge policies and programmes by their intentions rather than their results’. For example, well-meaning politicians may gain approval by supporting or enacting a policy that has the clear *intention* of helping poor people improve their lives even though in practice it has no such *effect* and may even be counter-productive. Obviously one remedy for this is adopting, when possible, evidence-based policies; yet like the rest of us, politicians seem disinclined to learn from the past.

Too often it is intention rather than effect that dictates decisions and practices.

The SOTP evaluation arrived just in time for its inclusion in a readable paperback by Dr Robert A. Forde entitled *Bad Psychology: How Forensic Psychology Left Science Behind*. The author is a veteran UK forensic psychologist who in 2014 completed a PhD on parole board decision-making for prisoners serving life sentences (note 2). In his book he bemoans what he sees as the readiness of forensic psychologists to apply methods and practices, particularly in the fields of treatment and risk assessment, that either have no convincing evidence base or have been discredited by what evidence there is.

My own experience likewise tells me that too often it is intention rather than effect that dictates decisions and practices.

Here’s one example. I was once asked to write an independent psychologist’s report on ‘Tom’, an inmate serving a life sentence, in preparation for a parole board hearing at which his transfer to an open prison was being considered. His move was opposed by two members of the prison staff who believed that he should remain in jail and undergo a Healthy Relationships Programme. This was based on CBT principles and would be ‘delivered’, as we now say, in a series of classes with other prisoners. Tom had been incarcerated for 12 years and had undertaken numerous CBT courses with various titles, to the point where he was complaining that he had long been able to put into practice the useful things that he had learned, and subsequent courses were mainly repetitions of things he had already been taught. Indeed I rather feared that he knew more about CBT than I did. I and another member of the parole board questioned whether, notwithstanding the efforts of the teachers on this course, it made any sense to keep Tom in a closed prison for another 18 months if the sole purpose was for him to learn how to enjoy close friendships and intimate relationships. It seemed rather like teaching someone how to swim without their being immersed in water. Surely it would be more sensible for him to experience making acquaintances and friends in the natural way, something that being in an open prison would afford him the opportunity to do? Moreover, no evidence was available at that time on the efficacy of the course.

Maybe some of this criticism and that targeted at the core SOTP is unfair. If we are to insist that offender treatments *are* evidence-based then we

first have to run the programmes in order to gather the evidence (though in the case of Tom it was unacceptable that, now being eligible for open conditions, and even his release, this was delayed by his having to undertake an untested treatment). However, we have good grounds for being somewhat skeptical about these kinds of courses. Surely there are limits to what can be

achieved by efforts intended to change a person's well-ingrained attitudes and behaviour by verbal instruction in a classroom setting, particularly within the restrictive and toxic environment of a prison? And are there not limits to the extent that any changes that *are* achieved can endure when the inmate returns to life on the outside?

By all means let those entrusted with this task do their best to find out what, if anything, is possible. But maybe there will come a point when it will make more sense for the resources to be reallocated to a different kind of approach.

Notes

1. At <http://tinyurl.com/y9yh5geh>
2. At <http://theses.bham.ac.uk/5476/>



LOGIC AND INTUITION

Don't, as I was, be put off by the idea that you have to be an expert in advanced mathematics to solve this wonderful little puzzle. I showed it to a friend and he quickly came up with a solution that requires some basic knowledge of algebra plus everyday

reasoning ability. If you have completely forgotten your algebra, there's a hint for you below. Avoid looking at this if you don't any help.

At a meeting of Sheffield Skeptics in the Pub in February this year entitled 'Nerdy Life Maths', Katie Steckles

informed us of this: square any prime number equal to or greater than 5, deduct 1 and your answer will always be divisible by 24. Can you prove this?

Answer on page 20.

Hint for puzzle

Recall your algebra lessons at school. How do you factorise $p^2 - 1$?



THE EUROPEAN SCENE

European Council for Skeptics Organisations

There are quite a number of countries with national skeptical organisations, many of which are affiliated to ECSO. Contact details for ECSO are:

Address: Arheilger Weg 11, 64380 Roßdorf, Germany

Tel.: +49 6154/695021

Fax: +49 6154/695022

Website: <http://www.ecso.org/> (which has an email contact facility)

Facebook:

<https://www.facebook.com/skeptics.eu/>

ECSO now has a new Twitter handle, @SkepticsEurope.

The ECSO website now has comprehensive calendar of skeptical events taking place across Europe.

The 18th European Skeptics Congress

This will take place in 2019 in Ghent and will be hosted by the Belgian and Dutch skeptical societies.

The ESP - European Skeptics Podcast



Building a bridge for skeptics

<http://theesp.eu/>

Interviews with active skeptics are now around 115 in number.

From Sense About Science EU

'Should citizens trust scientists more? Or should scientists stop being so paranoid about citizens?'

<http://tinyurl.com/y779oxy3>

GWUP Homeopathic Challenge

GWUP, the German branch of the international skeptic movement, invites all proponents and representatives of homeopathy to verify their position by

performing the following test, which would in case of success invalidate the skeptic's position. GWUP is even offering a price:

The first to prove that the starting material of homeopathic preparations in high potency can be identified and to provide a description of the appropriate method will be rewarded with the price-money of €50,000 (fifty thousand Euro).

Procedure

- The applicant names three remedies in high potency which he believes best to be able to distinguish.
- A sworn-in notary following a randomisation list compiles a set of twelve coded but otherwise identical bottles, each of which will contain one of the three remedies.
- The applicant is to identify the contents of each bottle, that is,

name the starting material ('mother tincture'). Any method will be acceptable, even if it does not have any scientific basis.

- If at least the content of eleven of the twelve bottles is properly named and a description of how this was achieved is available, then the first part of the trial is successfully done.
- In a second round with a new set of bottles the applicant again has to identify at least the content of eleven of the twelve bottles using the described method.
- In case of success the price will be paid out to the applicant. If the applicant cannot solve the problem, he will cover the cost of the procurement of the samples including shipping and the notary.

The protocol and conditions may be checked out on the website of GWUP, together with an application form.

Applications will be possible till April 30, 2020.

<https://www.gwup.org/challenge-home>

The #ProVaxChallenge

'As many of you know, the lack of vaccinating is becoming a serious issue (again, not only) in Europe. That is why the Czech Skeptics Club Sisyfos has created the #ProVaxChallenge.

'Let's lead by example and practically show that vaccines are safe, apart from sharing scientific data and statistics. Let's show that we are not afraid of vaccines, we do get vaccinated, and vaccines don't harm us!

'Help us, in 2018, raise awareness of the number of adults and children, who are protected by vaccines.'

<http://tinyurl.com/yev5dlgh>

Initiative on Climate Change, GMOs, etc.

From Amardeo Sarma of GWUP, the German skeptics group:

'In Germany, we plan to create a network including several skeptics, starting around climate and energy, but later adding GMOs and regular medical topics (like vaccines) to it. The first meeting is tentatively planned for Sunday, 18th August in Frankfurt. The main focus is to move from the current (failed) philosophy towards 100% renewables to targeting 100% low-carbon energy (nuclear, hydro, solar, wind, new generation of biofuels not competing with food, CCS, and research towards other non-fossil alternatives). This initiative will be – as any skeptic should expect – 100% science based of course.'

If you are interested in participating in this initiative get in touch with Amardeo at sarma@gwup.org. Please also pass this news on to anyone you think may wish to be involved.



MEDICINE ON THE FRINGE

Richard Rawlins

A critical evaluation of complementary medicine: A sceptical surgeon's perspective.

The easiest thing of all is to deceive oneself; for we believe whatever we want to believe." Demosthenes: 384 - 322 BC

The surgical personality differs from non-surgeons. In the most recent Annals of the Royal College of Surgeons, Matthew Whitaker¹ shows that 'Surgeons score statistically significantly above non-surgeons for agreeableness, conscientiousness, neuroticism and openness. These findings, on the whole, fit with the public perception of the surgical personality: that surgeons are intellectually curious, highly disciplined, organised and assertive. The elevated levels of neuroticism – the tendency to exhibit negative emotions such as anger, anxiety, depression and vulnerability – might

not immediately resonate with the popular conception of a surgeon but they do reinforce previous research, which has shown that surgeons are more prone to burnout and mental illnesses such as depression and anxiety.'

Importantly, when surgical methods are shown to have little or no beneficial results, surgeons do change and move on. Ligation of the internal mammary artery for relief of chest pain has been abandoned.² Stenting of coronary arteries is currently subject to close critical analysis.³ Metal on metal hip prostheses are being re-considered. Doctors are constantly studying how to better evaluate and appraise published clinical research papers, and better understand the strengths and weaknesses of different study designs.⁴

Trust in surgeons' clinical decision-making is vital because the consequences might be grave. Risks

have to be taken, but they must be fully appreciated, minimised, and explained to the patient, who must give fully informed consent. The decision is more important than the incision. Such an approach is very different from that employed by enthusiasts for Complementary and Alternative Medicine (CAM) – which I prefer to style as 'camistry', practised by 'camists' on 'camees'.

But there is an elephant in the consulting room, and although many well-meaning folk want to tip-toe around it, a surgeon's eye for precision invites more analytical consideration. The elephant's name is Belief. Belief is a strange concept – it gives solace to many, misleads many, and irritates many who are uncomfortable dealing with approaches that have no foundation in logic. And it is difficult to determine whether such beliefs are sincerely held by practitioners; are

manifestations of cognitive bias and the Dunning-Kruger effect; or are expressed for malign purposes - such as healthcare fraud.⁵ For their full expression, such beliefs require faith - 'based on a spiritual conviction rather than proof.' (Oxford Dictionaries). When dealing with faith, common courtesy requires tip-toeing around this issue. Professional integrity demands a more critical approach.

Wikipedia advises that belief is the state of mind in which a person thinks something to be the case without there being empirical evidence to prove that something is the case with factual certainty. Jonathan Leicester suggests that belief has the purpose of guiding action rather than indicating truth.⁶ And surgeons are very much at the action end of the practitioner spectrum - our very title, from *chiron*, a hand, reflecting our position as but humble manual workers.

'Mainstream medicine' is not homogeneous - there are a wide variety of methods and techniques for the relief of ailments and pathological processes. All health care practitioners, most particularly doctors, have striven down the ages to improve the care offered and have constantly sought alternatives to their current practice. As and when those alternatives have withstood critical examination, those alternatives have been adopted in the corpus of mainstream medicine. Methods and philosophies outside the new norm remain 'alternative', and become anachronistic.

In time, the title 'alternative' was not deemed to be of sufficient help to the vaunted commercial ambitions of camistry's promoters, and 'alternative' morphed into 'complementary' - suggesting they 'may be used alongside regular treatment'. They may indeed be used, but to what effect?

More recently, 'integrated' or 'integrative' has become the camist marketer's favourite pitch. Dr Michael Dixon, of the College of Medicine and Integrated Health, has argued that: 'Belief and mindset play an enormous part in healing - science needs to take account of this. Patients'

symptoms are frequently metaphors and effective treatment can often be symbolic and culturally dependent.' Agreed, but he then goes on to ask: 'Might it not be wiser to direct NHS resources according to pragmatic trials of cost effectiveness and safety rather than a limited interpretation of science that excludes the effect of the mind?'⁷

When the term 'evidence-based' was first introduced by David Eddy in 1987, it raised hackles amongst surgeons who objected to being told what to do.

That is a false dichotomy and a logical fallacy. 'Science' is very engaged with the mind and its workings, but proponents of 'integrated health' as currently marketed and promoted want to see camistry integrated with rational evidence based medicine - and as David Gorski has pointed out, mixing cow pie with apple pie only makes apple pie worse. Science, and patients, can only be harmed by attempts at 'integration'.⁸

Camistry endorses, encourages, emotes and enthuses within a mindset which is largely inimical to modern scientific understanding. A mindset which is imbued with logical fallacies, mired in whims and fancies and lacks sound rational constructs. Treatments are proposed which are anachronistic, antithetical to reason, and ineffective. There may be benefits - type I effects due to the care, consolation and solace of the consultation. These are worthy and valuable achievements, but camists routinely fail to recognise that their treatments stimulate placebo responses and do not have any substantial type II effects on any pathological process.

Most surgeons dismiss camistry as not being worth their time and trouble. Camists with whom I have had discussions are perfectly pleasant, and no doubt their charisma is capable of eliciting beneficial placebo responses from their clients, but they invariably fail to distinguish between the effects of their empathic client/ practitioner

relationship and the effects of the methods they employ: the pins, pillules, pummelling and preternatural powers. Therapies which have no plausible, reproducible effects.

Some camists come close to acknowledging they are using fake remedies and treatments, but they simply cannot let go of the psychological crutches used to induce the placebo responses. It is nearly three hundred years since Franz Anton Mesmer gave up his tubs of iron filings, and over a hundred years since hypnotists abandoned using a swinging watch. Many Chinese healthcare practitioners gave up their traditional methods during the 20th century, and embraced modern developments initiated in the West. Mao Zedong stated clearly 'I do not use Traditional Chinese Medicine'.⁹ Modern mainstream medicine is not 'Western' - there is only one form of 'medicine' - that which operates within limited, but progressive, scientific parameters. Who would wish it otherwise?

It must be recognised that camists and their acolytes may not always be motivated by a genuine desire to help patients. They may simply want to sell a book, conference, product or professional service - and find the cloak of respectability afforded by association with mainstream medicine is a boost to their marketing, and fraud. But how are we to judge? When a claim of 'evidence-based' is made, by any practitioner, we should demand to see the evidence, examine it critically, and be alert to the psychology.

When the term 'evidence-based' was first introduced by David Eddy in 1987, it raised hackles amongst surgeons who objected to being told what to do.¹⁰ Nevertheless, most surgeons did come round, and our techniques and procedures are now subjected to the closest scrutiny. Not so camistry. For the camist, 'It seems to me...'; 'Patients like it and want it...'; 'Trials cannot be applied to individualised treatments...'; are adequate enough excuses for camists to continue with their pseudo-medicine, repackaged as 'evidence-based'.

Camistry works. The concern, care, condolence and validation of patient preferences offered by camists generate dopamine and other neurotransmitters akin to those released during sexual experiences – which most people find pleasurable. So, chiropractors recommend regular attention for ‘maintenance’; homeopaths advise remedies for every emotional imbalance; acupuncturists encourage quite needless needling.

To some extent, placebo effects apply to mainstream doctors’ practices - but doctors are constrained by the ethic of being honest and having integrity about what they are doing – and that does require at least some evidence that the actual therapeutic process has a recognisable effect on pathology. A warm feeling from TLC is not good enough. Camists must come into the consulting room from the cold, embrace the future, abandon their present implausible techniques and concentrate on their counselling

skills - they will be welcome. Park the elephant outside, embrace the ancient symbol of health - Aesculapius’ snake, but discard the snake-oil. Please.

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Richard Rawlins MBA FRCS is an orthopaedic surgeon, an Apothecary, a member of The Magic Circle, and author of ‘Real Secrets of Alternative Medicine’.



LANGUAGE ON THE FRINGE

Mark Newbrook

The writing on the Cascajal Block: an unresolved enigma

The Cascajal Block is a tablet-sized serpentinite slab found by chance near Veracruz in Mexico in the late 1990s; it displays an undeciphered text which if genuine represents the earliest known writing in the Americas. Surrounding artefacts are taken as establishing the date of the Block as c 900 BCE (but see below). The discovery site lies in the ancient Olmec heartland, and associations with the Olmec have naturally been pursued. Initial publication was in *Science* in 2006.

Olmec script itself has not been authoritatively deciphered; it is the subject of much speculation, some of it ‘fringe’ in character (the Afrocentrist Clyde Winters ‘deciphers’ it in terms of the African Vai writing system; Michael Xu proposes links with the

Shang Chinese script; etc.). Another mysterious inscription from another Olmec site (San Andrés) shows characters superficially resembling Mayan glyphs; but the Cascajal Block itself displays 62 altogether unfamiliar symbol-tokens, some of which are effectively identical and presumably represent the same repeated linguistic item (phoneme, syllable, word, etc.; the text is too short to allow firm conclusions about the script-type). Most unusually for the region, the symbols apparently run in horizontal rather than vertical rows, but the rows are uneven in length and there is no appearance of an organised text. All this leads to ongoing suspicion in some academic circles as to the authenticity and significance of the Block.

The most serious **non**-linguistic doubts regarding the authenticity of the object and text involve the uniqueness of the artefact itself, and the fact that it

was removed by its non-expert finders from its archaeological context, with consequent loss of crucial information. However, some major scholars are convinced that it is a genuine, exciting discovery, and this view has ‘filtered down’ to the well-informed lay public; for instance, the writer and hip-hop artist Akala referred to the Block in the same breath as the Rosetta Stone in his 2018 documentary about his personal journey in honour of Homer. Readers wishing to pursue the matter of the Block further might start at https://en.wikipedia.org/wiki/Cascajal_Block.

Edenics

The Jewish creationist writer Isaac Mozeson claims that virtually all the words of all languages derive from ‘Edenic’, which is basically early Hebrew with some (Proto-)Semitic roots not attested in Hebrew itself.

(Hebrew is a member of the Semitic language ‘family’.) As is very common in such cases, the main problem with Mozeson’s proposal involves his adoption of the usual long-outdated impressionistic methods of comparative linguistics – which is less venial in his case than for some other such authors, since he has clearly read quite widely in the subject and in places attempts or purports to invoke mainstream methods.

Mozeson also makes a range of more specific errors regarding linguistic matters. For example, he misinterprets the well-known principle known as ‘Grimm’s Law’ (which describes a specific historical change within Germanic and was discovered in C19) as a much more general statement about phonetic similarities, and thus wrongly equates it with a very basic-level principle discovered by the medieval Jewish scholar Rashi, for whom he thus claims precedence. He also appears to believe in the literal reality of a sudden neuro-linguistic event at the Tower of Babel, perhaps rather similar to the species-wide psychological shift proposed by Julian Jaynes but this time orchestrated by God; the specifically linguistic ‘evidence’ for this, in particular, is altogether unconvincing.

I critiqued Mozeson’s 2000 book *The Word: The Dictionary that Reveals the Hebrew Source of English* on these and other such grounds (see for instance the relevant section of Chapter 1 of my 2013 book *Strange Linguistics*), but he has failed to engage with these critiques. In fact, his references to mainstream scholarship have always been dismissive. He seems to believe that mainstream linguists actually know that his non-standard views are in fact correct but refuse to acknowledge this (out of bias), and indeed that professional linguists feel ‘threatened’ by these alternative ideas. In fact, the alternative theories propounded by writers such as Mozeson, if they come to the attention of professional linguists, appear so weakly supported and so implausible that they appear scarcely to warrant

detailed examination by linguists who are not active skeptics, and they certainly do not inspire apprehension. Indeed, few linguists have ever even heard of Mozeson or similar authors.

*The Jewish creationist writer
Isaac Mozeson claims that
virtually all the words of all
languages derive from ‘Edenic’.*

More of Mozeson’s ideas can be found in his 2011 book *The Origin of Speeches: Intelligent Design in Language*, of which I have just become aware. At the beginning of this book Mozeson summarises the history of views about the source of language, oddly combining the Garden of Eden story with brief references to Noam Chomsky (whose claims about the ‘hard-wiring for language’ of the human brain he identifies as proven) and to the respectable but undemonstrated (and in fact irrelevant) view that all (known) human languages had one common ancestor - and introducing the first group of what becomes a large set of new impressionistic equations of word-forms (here, from English and Hebrew) on the very first page of his preface, accusing mainstream linguists of Eurocentrism for not accepting such equations. Mozeson goes on to assert that the diversification out of the common ancestor language (Edenic, in his formulation) to yield the present multi-lingual situation was not ‘chaotic’ as linguists (supposedly) maintain but systematic, which in his view indicates that an act of ‘intelligent design’ was involved. This is a ludicrous position to adopt, given the much **more** chaotic nature of most of his **own** linguistic equations, which are presented as if systematic but in fact involve large numbers of arbitrary correspondences (sometimes between the phonemes of Hebrew/Edenic words and words in contemporary or earlier languages considered out of their philological context) and otherwise unmotivated phonological shifts. And

once again, despite Mozeson’s evident reading in the discipline, there are gross errors regarding mainstream views, such as the implicit claim that the Germanic words for ‘father’ (including the English word) are taken to have Latin origins. Furthermore, the ‘authorities’ who are cited as endorsing his work are all on the ‘fringe’ or at best ‘mavericks’ – or are proficient in other disciplines, not in linguistics itself.

Of course, the main motivation for Mozeson’s analysis is his need to integrate historical linguistics into his Jewish-creationist account of the world. In this respect he resembles many other such writers – each of whom seeks to establish **their** sacred language as the *Ursprache*/Proto-World. Unfortunately, such notions can help to foster irrational forms of religion-based nationalism and the like. Jewish (and Christian) people who do not themselves know linguistics should be discouraged from taking Mozeson seriously. (But his greater-than-usual knowledge of basic linguistics unfortunately gives an unwarranted air of authority to his material.)

How we’d talk if the English had WON in 1066

This is the title of a 2009/2011 book by David Cowley, which forms part of a tradition going back at least as far as the Dorset folk-poet William Barnes (1801-86). Barnes is perhaps best known for writing the words to the beautiful and much-recorded song ‘Linden Lea’ (which somewhat romantically celebrates the rural life as contrasted with C19 industrialisation); the music was composed by Ralph Vaughan Williams. Although Barnes was himself proficient in Greek, Latin and several modern European languages (as well as in Dorset dialect and Standard English), he was an advocate of ‘Pure English’, constructed **without** Greek, Latin and other foreign elements so that it might be better used and understood by its ordinary speakers. Another Pure English enthusiast was the composer Percy Grainger, who is honoured at a most

unusual museum in his native Melbourne.

A number of works of fiction have explored the different forms which English might attain in the future or might have attained if things had gone differently. Russell Hoban invented a remote-future variety of English, in which his 1980 novel *Riddley Walker* was composed. (Compare David Robson's 'What Will We Speak?', a 2012 paper in *New Scientist* about possible future **languages**.) In 1989 the science-fiction writer Poul Anderson published a spoof scientific piece called 'Uncleftish Beholding' in an invented language with English grammar and largely Germanic-derived vocabulary; the purpose was to illustrate what English might have become without the heavy influence of Greek and Latin on its vocabulary. And more recently we find Cowley – himself, again, multilingual – actually promoting a similar version of the language, this time forsaking the loans from the Norman French brought over by the Conqueror – **and** (something which does **not** follow from this) the more intellectual loans from the Latin of medieval European scholarship (reminiscent here of the similarly purist approach adopted in the German-speaking world).

As with Anderson and with most non-linguists discussing language, Cowley's focus is very largely upon vocabulary (and more marginally upon morphology) rather than upon syntax (sentence-grammar) – but in any case the influence of French upon English grammar has been minor (and many of the serious grammatical changes which distinguish Middle English from Old English were already well advanced in 1066, at least in the South-East Midlands varieties from which later standard usage is derived). The grammar of a sample text presented on pp 8-9 of Cowley's book is very largely conventional-modern.

The main 'Barnesian' element in this book (which is not salient in the work of Anderson) is the 'prescriptivist' notion that it would have been 'better' if English had

avoided the French/Latin elements and that maybe the relevant changes should be reversed. Now eschewing Latin forms (mainly learned words at that stage) would not have been especially harmful, given that scholars (mostly monks at first) would still have learned Latin itself for their biblical studies and international academic contacts. But as far as French is concerned there seems (to a linguist) no **compelling** justification for Cowley's preference for what was lost from actual usage as against what was gained. English would of course have remained closer to Norse and to German/Dutch. But, as things were, educated medieval English speakers moved more easily in France, especially in the Norman lands there, and to a degree in the more remote Romance-speaking areas, for having more French-derived words in their speech and writing (and typically some knowledge of French itself). The existence of French vocabulary also provided stylistic and other variation along the lines of *swine-pork*, *kingly-royal*, *big-grand*, etc., enriching the language. And as the European diaspora developed after 1500 the English, already accustomed to 'foreign' lexis, became adept at borrowing exotic words into the increasingly huge and versatile vocabulary of the language. (But one can certainly appreciate Cowley's worries about the extensive 'invasion' of other languages by English vocabulary in modern times, and especially about the actual disappearance of many languages.)

A number of works of fiction have explored the different forms which English might attain in the future or might have attained if things had gone differently.

In addition, it would obviously be impossible to 'reverse-engineer' for everyday usage these extensive changes which began almost 1,000 years ago. Despite his words, I find it

difficult to believe that Cowley really thinks that this might reasonably be attempted.

All this is **not** to say that Cowley's proposal is not interesting. And the book has been praised by David Crystal, one of the great popularisers of linguistics in the UK over the last few decades and a man never loth to endorse the work of intelligent outsiders coming into the discipline.

More on free speech, etc.: some riders on my previous Language on the Fringe

In my previous Language on the Fringe (*Skeptical Intelligencer*, Spring 2018) I commented on some recent cases where the need to avoid giving offence, especially to members of certain groups, has apparently been regarded as decisive. Indeed, there is a tendency (overtly expressed in some postmodernist literature) to assume that members of hitherto oppressed groups are always truthful when making accusations of bad behaviour ('Women don't lie about rape', etc.), and that anyone who disputes their statements is being 'disrespectful' or worse. It will have been noted that in recent incidents of this kind organisations and individuals have hurried to dissociate themselves from those who have been accused but have not admitted guilt or (so far) been brought to trial, apparently treating them as guilty unless proven innocent in a reversal of the established canon. Some who have not been quick enough in doing this have been lambasted, and some of these have then made hasty apologies. See for example the case discussed at <http://tinyurl.com/y8brgp3p>. And yet there clearly **are** cases where people lie in making such accusations. Furthermore, there is a huge literature, some of it overtly skeptical in tone, on false memories of abuse, some of them generated by over-zealous therapists.

In this context: the US Skeptics' online newsletter for 14/2/18 carries a review of the new book *The Rise of Victimhood Culture* by sociologists Bradley Campbell and Jason Manning,

which focuses especially on campus life.

In my previous Language on the Fringe I also commented on my exchange in *Investigator Magazine* with Jerry Bergman, an American scientist who is also a traditionally-minded Christian and a young-earth creationist – and thus an evolution-denier. Despite our serious differences in respect of fact and theory, Bergman and I agreed that free speech must be protected against pressures such as those mentioned above, especially in universities. I conclude my comments here.

As far as evolution, specifically, is concerned: it will be clear to those who move in the skeptical world that almost all mainstream biologists, geologists and other scientists are genuinely persuaded that the evidence for evolution is very strong, and that there is currently no rival scientifically respectable theory of the development of life on Earth. (If they are in fact mistaken on these fronts, contrary to all appearances, they are honestly mistaken, not mendacious as some creationists suggest.) They seek to exclude from science classes the anti-evolutionist positions with which they have been confronted because they consider that these positions are not even rival scientific theories with weaker evidential support than evolution but are in fact not scientific theories at all (because, for example, they make no testable predictions). (I am leaving out of consideration here any overtly religious elements in these anti-evolutionist positions. In so far as these positions **are** religious in character, scientists will surely have no objection to their being taught in religion classes, as long as they are not presented there as scientifically-

grounded.) They would hold that those who want to see anti-evolutionist theories taught as alternatives in science classes, or even taught **instead** of evolution (as is now beginning to happen in Turkey, where conservative Islam is on the rise), should furnish genuinely strong scientific evidence and argumentation.

Those who want to see anti-evolutionist theories taught as alternatives in science classes, or even taught instead of evolution ... should furnish genuinely strong scientific evidence and argumentation.

If this occurs, or if novel scientifically respectable anti-evolutionist theories are developed, scientists should obviously include such theories in their curricula as alternatives to evolution. If they fail to do so, or if their view that existing anti-evolutionist theories are non-scientific is shown to be mistaken (maybe through bias), they will be at fault. And they are certainly at fault if they **exclude on principle** any expression of disagreement with evolutionary ideas, as if evolutionary theory had a special, unchallengeable status, or indeed if they identify any other specific theory or principle as immune from criticism – as some suggest occurs in connection with the theory of anthropogenic global warming or with the Nazi Holocaust (the truth of which cannot in fact be legally denied in some countries). ‘Good skeptics’ will fight against any such tendency. But in a science class the onus must be upon those who reject a theory which is generally considered to be very well

established to provide sound, persuasive **scientific** (or philosophical) objections to it – not merely contrary opinion, especially if grounded in religious doctrine or interpretations thereof. And it is generally agreed that no such objections have yet been advanced.

And in connection with the reported tendency of students (encouraged by some university administrators) to blame all their shortcomings on their teachers: a graduate has lost his bid to sue Oxford over his 2:1 degree. He claimed that it was only because of the university’s academic and organisational failures that he did not get a First, and that this cost him entry to a top US law college. But the court was not convinced. See <http://tinyurl.com/y9c634h4> (‘Faiz Siddiqui sought £1m in damages from the university because of “inadequate” teaching’).

Vertical writing – in English!

I was ordering curries at a local take-away and noticed that the new employee serving me wrote down each line of my order vertically (downwards), then turned the paper through 90 degrees to yield perfectly legible horizontal text! He told me that he had always written that way, in his native Bengali and then in English. If he tried to write horizontally the line quickly began sloping down to the right! Amazing!

Mark Newbrook took an MA and a PhD in linguistics at Reading University and spent many years as a lecturer and researcher in Singapore, Hong Kong and Australia; he has authored many articles/reviews and several books, including the first-ever general skeptical survey work on fringe linguistics (2013).

REVIEWS AND COMMENTARIES



More Harm than Good? The Moral Maze of Complementary and Alternative Medicine by Edzard Ernst (Author) & Kevin Smith (Contributor). London: Springer, 2018, pp 252, ISBN 978-3319699400.

Another critique of alternative medicine from the pen of Edzard Ernst, this time focusing on ethical issues.

Reviewed by Peter Lucey

More Harm than Good (MHTG) is Prof Ernst's new book, written with Kevin Smith (and statistical help from Prof David Colquhoun). I was delighted that it was up for review, as I had read and admired Prof Ernst's *A Scientist in Wonderland: A Memoir of Searching for Truth and Finding Trouble*, and respect Prof Ernst for his efforts, so, when no-one else volunteered, I jumped at the chance to review this. I am a layman skeptic, with no medical qualifications, and am not of course technically competent to judge or criticise the science.

MHTG is a marvellous book: a technical and comprehensive account of the ethical issues surrounding Complementary and Alternative Medicine (CAM), using the same ethical framework that is – or should be – used for proper, proven medicine. I use the term “comprehensive” in its widest form: I found the introductory chapter on general medical ethics particularly useful – anyone who has formally studied medicine or philosophy may already understand the concepts, but I benefited from the discussion of various ethical principles (consequential, non-consequential, principlism and virtue ethics). A strength of MHTG is that it builds on base principles; readers with expertise can skip the basics but they are there if needed. Likewise a statistics graduate would know all about p-values, but my prior experience of p-values and statistics was from Dr Goldacre's *Bad Science* where he simply mentions the standard p-value significance of 0.05. This is properly explored in MHTG and I was interested to have an in-depth account of the math and issues

behind this statistical tool, and some drawbacks of the standard value.

Without a proper ethical and scientific base, it is impossible to have true informed consent to a course of treatment.

The preface sets the tone for what follows. ‘In all areas of healthcare—and CAM is no exception—consumers are entitled to expect certain basic ethical precepts to be satisfied.’ The first chapter, ‘Clinical Competence’ defines the overarching principles, to avoid patients being harmed by

- Unsafe therapies
- Failing to benefit from the best therapies available
- Promotion of a general belief in ‘alternatives’ in preference to proven forms of medicine

It can never be enough to act in good faith; there is a moral imperative on those practicing or recommending any form of healthcare to ensure that their knowledge is accurate and up-to-date: sincere belief does not free someone from the ethical consequences of not examining that belief, or when acting upon it.

Subsequent chapters cover Research Fundamentals, Reality of CAM Research, Education, Informed Consent, Truth, and Exploitation. Each topic systematically and comprehensively judges CAM against ethical principles, with sources and links to the data and examples. You will not be surprised to see CAM failing regularly, and the ethical failures of those whose remedies are consistently proven not to work are clearly exposed, together with

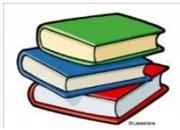
the faulty reasoning, poor data, lack of controls and other faults that allow the useless therapies to thrive

There is some repetition - for example those familiar with proper testing will be familiar with the Research chapters - but nothing is omitted in what is an excellent reference source.

The chapter on ‘Truth’ made me reflect on the long battle medicine has had against wishful thinking and superstition. ‘A statement is true when it corresponds with the way the world really is. ... As scientists, we insist on empirical evidence, from observations and experiments, as the basis of scientific truth.’ Well, we do now, although the scientific revolution in medicine is of course very recent – mid 19th century? However CAM has not even attempted to take Truth on board, primarily because Truthful and ethical methods would expose the inefficacy of CAM itself.

It is rightly stressed that, whatever the CAM belief, there are major ethical and health issues involved when patients seek advice from non-qualified therapists. That is, whatever CAM therapy is proposed the therapist will have no medical diagnostic skill and may well ignore serious medical issues. (A Reiki healer will wave her/his hands and channel your life energy. Which is fine if your headache is a hangover, but if you have a developing a brain tumour...) And without a proper ethical and scientific base, it is impossible to have true informed consent to a course of treatment. And without proper informed consent treatment is unethical.

As ASKE members well know, when remedies are tested under proper ethical and scientific framework, and proved to be efficacious, they are accepted as valid and useful. The fog of belief and wishful thinking that surrounds CAM blurs any such ethical vision, and this is emphatically discussed and dismissed in MHTG.



**The Memory Code:
Unlocking the Secrets of the
Lives of the Ancients and the
Power of the Human Mind**

Lynne Kelly

Atlantic Books (London), 2017
(after Australian publication in
2016)

pp xviii + 318

Lynne Kelly is an Australian academic and skeptic, with impressively wide-ranging expertise. She is best known in the skeptical world for her 2004 book *The Skeptic's Guide to the Paranormal* (which seeks to cover a great deal of ground in its 261 pages and thus inevitably omits much that would be highly relevant – e.g., from a linguistic perspective, the significance of alphabetical orders in the context of numerology – but which is nevertheless of great interest and use). Kelly's own main specifically skeptical interests include, saliently, 'mediumship', cold-reading and stage magic.

In this present book, Kelly proclaims her discovery (if so it be) that a powerful memory technique used in the ancient world 'can unlock the secrets of the Neolithic stone circles of Britain and Europe, the ancient Pueblo buildings in New Mexico and other prehistoric stone monuments across the world'; it can still be used today, to train the memory.

Clearing the ground: it appears that at least some members of many ancient pre-literate peoples ('elders', 'bards', etc.) had 'encyclopaedic' memories;

So I would heartily recommend MHTG, especially for 'second-level' students. 'Entry-level' skeptics could perhaps start with *Bad Science*, or Dr Robert Parks's *Voodoo Science!*

My thanks to the authors for their efforts: MHTG is a valuable addition to any skeptical bookshelf, as a readable guide to CAM and ethical

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MARK'S BOOKSHELF

Mark Newbrook

they could readily name all the tokens of all the entity-types in their environment (stars, etc.), compose and rehearse lengthy texts without prompts, etc. This ability became much less common with the development of literacy. In the 1920s and 30s, Milman Parry argued that the formulaic structures of the two long pre-classical Greek epic poems attributed to Homer – especially the earlier, the *Iliad* – were the product of such a culture, which receded as the Greeks became literate again in the mid-M1 BCE (the epics were then written down, and the texts stabilised, with local and personal variations largely vanishing). Parry found modern parallels in the then-surviving oral culture of rural Bosnia.

It appears that at least some members of many ancient pre-literate peoples ('elders', 'bards', etc.) had 'encyclopaedic' memories.

Kelly does not refer to Parry, perhaps because her explanation for such phenomena would not hold up well in the case of pre-classical Greece (whose history is relatively well-documented) and/or because 'high' literature or indeed language *per se* is not her focus. But she does provide very many other examples of the effects she adduces, including the reconstructed history of Stonehenge and the other Salisbury Plain artefacts (discussed at length) and (predictably)

principles and also as an excellent reference tool. MHTG would also make an excellent online resource. It includes a comprehensive index and a glossary of the major CAM therapies.

many examples involving Australian Aboriginal culture; indeed, she uses Aboriginal 'song lines' (which map the ancestral 'dreaming' myths of the various tribes across their lands) as a starting point for her book.

Kelly's interpretation of these examples is that – in contrast with written language, which is linear and involves only vision – non-literate cultures encode the information which they need to preserve and communicate in assemblies of multiple, readily remembered structures involving landscape, metaphors, myths, rituals, genealogies, objects, etc. Some of these systems may have been maintained in later times by the members of secret mystery societies (some of these are of course **known** to have existed), who avoided writing and used only speech (among themselves) where language was needed, leaving little direct evidence of their activities and ideas. And they survive more fully in communities where literacy (in the background language, at any rate) is still absent or at least less prevalent. For example, many Aboriginal people apparently still associate specific memories or myths with specific physical locations, the sight or thought of which triggers the accurate and complete recollection of the required material.

For these and other reasons, Kelly is a staunch scholarly advocate of respect for the (quasi-)scientific thought of ancient and contemporary 'tribal' peoples often hitherto deemed

'superstitious' and the like. But her theory does raise the question of whether the relevant knowledge was typically widespread in the community in each of the ancient societies in question (and the societies thus egalitarian, as is often claimed by their postmodernist/'New-Age' supporters'), or largely confined to a ruling elite of 'elders', 'initiates', etc. Or did the latter pattern arise mainly **later**, in mystery societies and such, under pressure from the superseding systems? It is certainly a feature of many post-colonisation (and earlier?) Aboriginal communities, where each body of culturally important 'knowledge' has been reserved for members of certain groups ('women's business', etc.).

Precisely because the earlier peoples involved in such cases were themselves illiterate, there are few if any reliable records of their thought. Kelly's proposal is, therefore, to a considerable degree speculative in so far as it relates to the remote past (as are most theories about the mental life of such societies; one thinks of South America, where there was no true writing in pre-colonial times). (The main ancient sources adduced for theories of this kind are discussions by **literate** Greek and Roman language-users of the methods to be used in memorising lengthy passages for the specific context of political and forensic oratory where written texts were not used; the *Rhetorica ad Herennium* once attributed to Cicero exemplifies this. Some such authors also refer specifically to the vast memory capacity of illiterate peoples – in Gaul, etc. – whom they had encountered.) Those previous reviewers who have dissented from the generally strong approval which the book has encountered have done so mainly because of the very fact that so much is speculative – and because of Kelly's at times very overt confidence that she is right, which puts off some readers who expect more caution in such contexts. (But Kelly is by no means as dogmatic as are 'fringe'

authors proposing their sweeping theories about the ancient world.)

There is certainly little evidence in earlier reviews of Kelly's book of the traditional idea that non-literate cultures are simply 'backward'.

There is certainly little evidence in earlier reviews of Kelly's book of the traditional idea that non-literate cultures are simply 'backward' – a notion which some reviewers and, obviously, Kelly herself are concerned to rebut. And some of the positive reviews of the book involve the 'trendy' postmodernist view that written language, like the C17-18 European 'Enlightenment' and many earlier features of developed societies, was a step in the wrong direction. 'Establishments' in literate societies from ancient times onwards have allegedly fostered misleadingly narrowly-based views of the universe in order to control thought and action. This is a view that Kelly herself appears to endorse in part. For example, she suggests that the public versions of cultural myths are often simplified so as to leave out key secret information. More generally, she holds that the eventual movement away from (supposedly egalitarian) memory-based cultures typically involved shifts in the sociology of power and the development of elites with their own agendas where the role of memory was almost deliberately downplayed or circumscribed (in some cases this may also involve a shift from stone-based to metal-based technology).

It might be asked, however, why literacy was ever embraced as it was (repeatedly, in unconnected cultures) if these pre-existing non-literary methods of organising and retaining knowledge (used alongside oral language) were so powerful. Kelly has little to say about writing, but (late in the book) she explains the huge success of the essentially illiterate Inka civilisation in terms of 'song lines' (similar to those

conceptualised in Australia), which were not (no longer?) known in the Central American civilisations (Mayan, Aztec etc.) which did become literate. In this context, she notes that writing systems encourage shared interpretations of entities and situations, whereas 'memory devices' such as those she proposes permit of much greater amounts of variety in interpretation. She is mistaken here in speaking of written language in terms of 'symbols for **sounds**'; most non-alphabetic writing systems, such as Chinese characters, do **not** encode sounds but entire words (which in the case of Chinese are expressed with various, often very different sequences of sounds in different 'dialects'). In general terms, Kelly appears to understand less about language than about some other topics; see above on her earlier book. But this error does not itself impugn her main point here.

Civilisations which become literate thus sacrifice, Kelly holds, a considerable degree of conceptual variety. Maybe their members unconsciously judge that this sacrifice is justified in terms of greater efficiency in interpersonal communication. Or maybe the dominant elites mentioned above, with their own agendas, were often involved in the shift to literacy. It might be argued here that **alphabetic** writing appears to have arisen only once, which would suggest that initially it was not necessarily seen as a good idea across the world. But we are here concerned with writing of **all** kinds, which, as noted, has, as it seems, arisen independently in various places.

Whatever explanation might be proposed for the rise of literacy – and whatever the seriousness of the issues regarding the evidence for her claims more generally – Kelly has certainly offered a challenging and in large part quite persuasive account of human understanding of the universe as encoded and applied by non-literate peoples. The book merits close reading by all who have an interest in such matters.

Skeptical readers, specifically, will find several of the cases discussed of interest to them, notably that of the Nazca Lines and that of the transplanted sweet-potato and other evidence of pre-modern trans-Pacific contact.

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Fantasyland: How America Went Haywire: A 500-Year History

Kurt Andersen

Embury Press (London), 2016

pp xi + 463

On p 323 of this hard-hitting, fascinating book, Kurt Andersen quotes Karl Rove, a senior advisor to George W. Bush, as stating (in 2004) that ideas emerging from ‘judicious study of discernible reality’ are no longer important, and that in C21 ‘we [the US administration] create our own reality’. Recent comments by Donald Trump and his staff make it clear that fourteen years on this view remains popular in the relevant circles. However: as Daniel Patrick Moynihan is quoted as saying on p v of this same book, one is **not** in fact entitled to ‘one’s own facts’. The truth may be disputed; it may be complex and many-sided; it may be treated selectively or expressed differently by those on different ‘sides’ of an issue. But, as has been urged persuasively by scholars over the centuries – especially since the C17-18 ‘Enlightenment’ out of which grew the ‘modernist’ approach to learning – it is there in the real world to be unearthed, whether or not it upsets some parties, refutes their cherished opinions or even threatens their status. This, of course, is something which skeptical thinkers have emphasised over the last few decades in opposing a) fringe ideas and b) self-indulgent postmodernist tendentiousness and relativism (see below on this latter) – and this book performs its share of the work to be done on both these fronts. But nowadays the skeptical enterprise increasingly involves, in addition, opposition to government figures uttering blatant falsehoods and making quasi-authoritative pronouncements going well beyond their (typically

limited) technical expertise. See especially Chapter 40 of this present book for some of the more damaging current follies along these lines.

Kurt Andersen is a best-selling American author, and also a radio pundit and podcaster; though not an active skeptic *per se*, he has taken it upon himself to address this issue in this book. And, as his title makes clear, he has extended the scope of his enquiry back to the very origins of American thought. The material covered thus extends well before the period normally surveyed by skeptics *qua* skeptics, and even when discussing C20/21 ideas Andersen’s self-chosen remit is wider than that of, say CSI or ASKE; but this **adds** to the significance of his book and certainly does not detract from its interest to a specifically skeptical readership.

Ideas emerging from ‘judicious study of discernible reality’ are no longer important, and that in C21 ‘we [the US administration] create our own reality’.

As has been noted, the USA is rather different in some relevant respects from other ‘western’ countries, notably in that in recent times Christianity has been much more important in public life in the USA than in the rest of ‘the West’ and belief in creationist interpretations of *Genesis* and other ‘fundamentalist’ theological positions remains strong; there is thus a much higher-profile opposition between conservative Christian believers, on the one hand, and ‘materialist’ scientists, philosophers and skeptics, on the other, than there is elsewhere. Because Andersen’s focus is (not unusually for American authors, but openly) squarely on American matters, some specific observations about recent decades might thus strike some non-American readers as unfamiliar.

The treatment is essentially chronological, and within each period-specific ‘part’ there are chapters (46 in

all) dealing with particular skeins of irrational thinking. Andersen covers a very wide range of topics; as one reviewer puts it, ‘from the Salem witch hunts to Scientology’. Inevitably one finds omissions, but to keep the size of the book within reason **some** selection was obviously necessary. It is not possible in this context to comment on all of Andersen’s material. But some specific sections do seem to call for mention (not necessarily critical in character). For example, in Chapter 35 Andersen draws attention to the tendentious and obviously unjustified postmodernist view, exemplified here by Jodi Dean, that – despite Dean’s endorsement in the same breath of the apparently incompatible relativist notion that ‘every perspective has its legitimate claim to truth’ – the beliefs of ‘the oppressed’ must be considered ‘**epistemologically** superior’ (my emphasis). This self-contradictory (or at least inconsistent and thoroughly obscure) position has not been critiqued as much as it appears to deserve – though see remarks made by Alan Sokal and Jean Bricmont in their 1997 book *Fashionable Nonsense* to the effect that **both** of these stances are embarrassingly and patently absurd, and indeed my own earlier observations in various fora. Andersen himself might perhaps have made more of this striking and alarming philosophical issue. And in Chapter 37 Andersen seems too ready to accept the (unexplained) medical efficacy of techniques such as acupuncture and hypnosis (this is reminiscent of the frequent but unjustified ‘admission’ that dowsing works and that the only issue is **how**). Careful perusal of the entire text will identify many more such passages.

Andersen had more ‘normal’ teenage experiences than ‘nerds’ like me do, and he inserts comments on his personal as well as his intellectual development to good effect (and much to my own interest, given that he and I are of similar age).

Most earlier reviewers have strongly approved of the book (maybe most of those whom it attacks have not

seen it?). Mild criticisms: more space might usefully have been allotted to the important point that if some phenomena accepted in paranormalist or religious thought (for instance, miracles, special creation) really do occur it might still be difficult (to say the least) for mainstream science to acknowledge this – simply because of the apparently overwhelming problems with experimentation, with the perceived need for the **decisive** exclusion of non-paranormal explanations (at least in terms of Ockham's Razor, etc.) or even with the formulation of genuinely testable hypotheses. In addition, it might have been helpful to distinguish more sharply at times between the justified right to believe and proclaim highly implausible things, on the one hand,

and the unjustified expectation of believers that such views will be respected and taken seriously, on the other. At the 2000 World Skeptics Convention in Sydney, the late Paul Kurtz made this distinction very well in combining skeptical rebuttal of the claims of Falun Gong advocates with sharp criticism of the unfair denigration and suppression of the group by Chinese authorities (which had just been endorsed by the delegation from the admittedly state-controlled Chinese Skeptics).

Andersen does perhaps too readily read intellectual and quasi-intellectual history in terms of groups (which inevitably have indeterminate boundaries) rather than individuals. But he generally appears consummately fair in discussing the

ideas of thinkers and groups with whom he largely agrees on the one hand and disagrees on the other, and where necessary he makes a clean breast of his own opinions.

There are a few small errors in the book; for example, the young John Wesley's near-fatal brush with a building fire occurred in his native Lincolnshire, not in London. And there is a tendency to introduce characters without naming them (a rhetorical device) but then to delay naming them for too long, disconcerting the reader (in a few cases I cannot find **any** later place in the text where someone is finally identified by name). But these issues are obviously minor in context. The book can be very strongly recommended.



CONTRIBUTED ARTICLES

PARANORMAL TEST RESULTS IN THE CZECH REPUBLIC AND GERMANY

Martin Bloch

Martin Bloch is a lecturer in the Department of Computer Science at the University of Prague and a committee member of Sisyfos, the Czech Skeptic Club (jmbloudil@seznam.cz).

Skeptic organizations are calling on people with alleged paranormal abilities to prove them in scientifically controlled tests. Some tests are difficult to implement, for example, when they are distant in time or space or if it is too difficult to obtain props. But, a number of 'information type' tests can be relatively easy to design and implement. Such tests have been carried out by the German skeptic organization Gesellschaft zur wissenschaftlichen Untersuchung von Parawissenschaften (GWUP) since 2014 and by the Czech Sisyfos since 2013. These tests have a certain low probability that the tested person can pass the test by chance, meaning without the claimed ability. Sisyfos

requires a probability of $\leq 1:1000$ or difficulty $\mathbf{D} > 1000$ for the first phase of the test. GWUP requires $\mathbf{D} > 10\,000$.

Specific tests can be very varied, but they are adjusted with maximal respect to the tested person, who is also co-author of the test proposal. The test is subject to prior legal contract. The test is double-blinded and is conducted by a committee established by the contract. The tested person can appoint his or her own witnesses on the committee. Table 1 (page 15) shows the types of tests of the performed experiments.

\mathbf{N} , \mathbf{K} , \mathbf{L} are previously agreed whole numbers that determine the condition of difficulty \mathbf{D} at least.

The test takes place in \mathbf{K} number of trials, in which the tested person determines the hidden object (or a particular state of the object) from \mathbf{N} number of possible choices. Depending on the contract, the tested person may know or may not know what the objects or their state might be. The object may be a living organism, including a person. The tested person's response in each trial must be unambiguous. If the sum of correct answers, \mathbf{A} , reaches the limit \mathbf{L} , i.e. $\mathbf{A} > \mathbf{L}$, the tested person has passed the test and he or she will be awarded a diploma and a financial prize.

The results of different types of test cannot be mutually compared. For example, which one is better, Mr.

Bradley with $N=2$, $K=30$, $L=25$, $A=19$ or Mr. Hein with $N=12$, $K = 15$, $L = 6$, $A = 2$?

This problem is solved by Sisyfos metrics based on so-called information **deficit** (measured in bits) - that is the extent of information that the tested person did not obtain from unknown sensors or esoteric sources.

The **debacle** is easily calculated from the information **deficit**; it tells how many times the tested person had to improve to succeed in the test. This approach enables one to create a results table comparing all tested persons sorted by their **deficit** and **debacle** – see Table 2 (page 15). Thus, Mr. Bradley is better than Mr. Hein.

Using a rating similar to sports qualifications gives a rough fitness estimation of the tested graduate: 3. 2. 1. ... to ULTRA league depending on the difficulty $D = 1,000$, $10,000$, $100,000$... to one billion.

Each test type is associated with a median M , which represents the average value of the results of random responses. Those tested persons who do not exceed the median, i.e. $A \leq M$, would do better if they were throwing a coin or a dice.

Table 2 shows only the results of 36 tested persons who have exceeded the median. However, none of them

reached the agreed limit L , not even when calculating the deficit to the lowest 3rd league (the 4th and 5th league is here just for fun).

Five actual cases for illustration

Mr. S. Bradley (Sisyfos) claimed that he could distinguish flowers from stones hidden in boxes. The contract was as follows: For content of the box - either/ or $-N = 2$; the number of boxes is $K = 30$; the limit was set at $L = 25$, meaning that the rate of error is 20%. He replied correctly 19 times ($A = 19$), which was not enough even for 5th league, although he exceeded the median M (15.5).

Mr. M. Hein (Sisyfos) said that he knew what number the hand of a distant hidden clock was pointing to. The contract was: $N = 12$; number of attempts $K = 15$; limit $L = 6$. The times on the clock were set randomly. He answered correctly twice ($A = 2$) at $M = 1.62$.

Mr. G. Gabrisch (GWUP) was trying to determine which one of ten wires was carrying an electric current: $N = 10$, $K = 13$, limit $L = 7$. Correctly answered $A = 4$, enough for the 5th league at $M = 1.67$.

Mr. Groger (GWUP), according to S. Soehnle (in Skeptiker 4/2014 tasted so-called 'energized water' with his tongue: $N = 2$, $K = 50$, $L = 40$ with M

$= 25.50$. He is the only tested person to repeat the test. He first reached $A = 34$ (4th league), but only $A = 22$ the second time (under the median). The average was $A = 28$, which is above median, but it is not good enough even for the 5th league. In first test there was a suspicion that an assistant prepared the glasses without gloves and left odorous stains on their surface. Therefore the test was repeated using gloves and clear glasses.

Mr. B. Textor (GWUP) is a dowser and the highest scoring person in our collection. He negotiated the test as follows: $N = 2$, $K = 50$, $L = 40$ with $M = 25.50$. He reached $A = 36$, becoming the front man of the 4th league. Congratulations! Unfortunately he did so with a **deficit** of 6.77 and a **debacle** of 109 because the difficulty of the GWUP ID = GW2 (see Table 1) is set as $D = 83\ 813$ the more demanding 2nd league test. If Mr. Textor had negotiated an easier Sisyfos test (ID = PV1) and had improved his performance by 30%, he would have entered the 3rd league, won the diploma and 10,000 CZK (ca. 400 EUR) in phase 1 and could have undergone a more demanding test in phase 2.

The survey of evaluation of paranormal experiments

ref.: Martin Bloch, jmloudil@seznam.cz

Evaluation method

Many tests of ESP (extra sensory perception), CV (clairvoyance), etc. can be characterized by three numbers **N**, **K** and **L**, where **N** is the number of choices, **K** is the number of attempts, and **L** is the limit of success.

N and **K** determine the probability distribution and the function **R(i)** - for more details see \rightarrow
The rounded whole number **D** = 1/R(L) specifies the difficulty of the test.

The number **M** is the median of the distribution given by function **R**.

The number of correct answers of the test is marked **A**.

Let's assume that the tested person must draw information from unknown sources for his/ her decision-making (these may be esoteric, such as heaven, hell, morphic field, spirits, UFOs, etc.).

If he/ she did not succeed in the test, i.e. **A** < **L**, he/ she obviously drew information poorly, suffering information deficit, which is measured in bits.

This **deficit** is calculated from the difference of the logarithms of **R(L)** and **R(A)** probability values.

Thus we can determine how far the unsuccessful tested person is from of the paranormal ability.

Information **deficit** is a logarithmic measure but the broader public would better understand the linear measure called '**debacle**', which determines how many times the tested person would have to improve his/ her performance to succeed in the test.

Computational details

Whole numbers **N** > 1, **K** > 0, 0 <= **L** <= **K**, 0 <= **A** <= **K** and 0 <= **i** <= **K**.

Probability of binomial distribution is given by $p_i = \text{comb}(K, i) (N-1)^{K-i} / N^K$

Function **R(i)** is calculated as follows:

$$R(0) = 1$$

$$R(i) = p_i + p_{i+1} + \dots + p_K \quad 1 \leq i \leq K.$$

Number **M** is the mean of function **R**,

$$\text{thus } R(M) = 0.5 \text{ and } -\log_2 R(M) = 1.$$

If **A** < **L** then the tested person failed and suffered from information

$$\text{deficit} = (-\log_2 R(L)) - (-\log_2 R(A)) > 0$$

and

$$\text{debacle} = 2^{\text{deficit}} > 1.$$

Otherwise he/ she succeeded.

Deficit recalculation for a given league:

$$\text{deficit} = (-\log_2 R(D_{\text{league}})) - (-\log_2 R(A)) > 0$$

Table 1 Test types

ID type of experiment	N no. of choices	K no. of trials	L limit for success	D difficulty	M median	no. of tested persons = under + over A <= M A > M
.DE GWUP 20704 – 2017 57 = 31 + 26 SUBTOTAL						
GW2	2	50	40	83815	25.50	17 = 8 + 9 B. Textor
GW10	10	13	7	10072	1.67	36 = 21 + 15 B. Krockner. G. Gabrisch
GW5 ball	5	420	122	64268	84.40	1 = 0 + 1
GW10 c-ball	10	300	52-55	14980	30.37	2 = 1 + 1
GW illness	2	38	34	3312061	19.50	1 = 1 + 0
GW3 hom-pat	3	12	11	21258	4.45	Homeopathy - not yet performed
.CZ PV - Sisyfos 2013 – 2017 phase 1 9 = 6 + 3 SUBTOTAL						
PV1	2	30	25	6155	15.50	5 = 3 + 2 S. Bradley, J. Pišoja, ...
PV2	3	20	15	5975	7.11	2 = 2 + 0 D. Klimová, P. Vojtěch
PV2a	3	20	14	1137	7.11	1 = 1 + 0 I. Grundová
PV3	6	14	8	1455	2.72	Not yet performed
PV4	12	15	6	1157	1.62	1 = 0 + 1 M. Hein
.CZ ZV – Zadna Veda 2016						
ZV	6	72	23	932	12.39	11 = 4 + 7 ThC.
Results: 41 under M and all under L, i.e. nobody passed						77 = 41 + 36 TOTAL

Table 2 Results of 36 tested persons (A > M)

A	Group ID size	DEFICIT:				DEBACLE:				league qualified tested persons
		contract	3.	2.	1.	contract	3.	2.	1.	
36	1 GW2	6.77	0.38	3.70	7.02	109	1.3	13	130	4 B. Textor
34	1 GW2?	9.33	2.94	6.26	9.58	643	8	77	767	4 Groger1 discard
32	1 GW2	11.41	5.02	8.34	11.66	2720	32	325	3245	5 ?
4	1 GW10	8.43	5.09	8.42	11.74	344	34	342	3416	5 G. Gabrisch
99	1 GW5 ball	12.70	5.34	8.66	11.98	6649	40	405	4048	5 ?
18	1 ZV ThC	5.43	5.53	8.85	12.17	43	46	462	4621	5 ThC.
19	1 PV1 Bradley	9.27	6.65	9.97	13.29	617	100	1002	10024	S. Bradley
30	1 GW2	13.05	6.66	9.98	13.31	8492	101	1013	10132	
3	4 GW10	10.40	7.06	10.39	13.71	1348	134	1339	13388	
36	1 GW10 c-ball	11.09	7.18	10.51	13.83	2177	145	1453	14534	
18	1 PV1 Pišoja	10.12	7.50	10.82	14.14	1113	181	1808	18080	J. Pišoja
15	3 ZV student	7.62	7.72	11.04	14.36	96	211	2106	21065	
28	3 GW2	14.30	7.91	11.23	14.55	20112	240	2399	23994	
14	1 ZV boy2	8.17	8.27	11.59	14.91	287	308	3081	30810	
27	1 GW2	14.78	8.39	11.71	15.04	28155	336	3359	33591	
2	1 PV4 Hein	8.70	8.49	11.81	15.13	416	359	3592	35916	M. Hein
2	10 GW10	11.90	8.56	11.89	15.21	3814	379	3787	37866	
13	2 ZV mother	8.63	8.73	12.05	15.37	395	424	4237	42372	
26	1 GW2	15.18	8.79	12.12	15.44	37203	444	4439	44386	
<i>recalculated sorted</i>										

Leagues

The test difficulty **D** is hard to set exactly by the triple (**N**, **K**, **L**). For rough comparability and comprehensibility of the tests, the qualification leagues are set out as follows:

D _{league}	league	random	victory	probab.
10	5th	1/10	'very funny'	
100	4th	1/100	'funny'	
1 000	3rd	1/1000	Sisyfos phase 1	
10 000	2nd	1/10000	Sisyfos phase 2	
100 000	1st	1/100000		
10 ⁶	EXTRA	James Randi rate		
10 ⁷	SUPER	Sisyfos two phases		
10 ⁸	HYPER	GWUP two phases		
10 ⁹	ULTRA	GWUP two phases		

So far, nobody has reached the **deficit** = 0 with contract difficulty in easier 3rd league. Only 4 tested qualified in 5th league. Only 2 tested qualified in 4th league.

Prizes for victors

GWUP offers a one-time sum of **10 000 EUR**. A person tested must pass a test of phase 1 but also a stricter test of phase 2. E.g.: (2,60,46) or (10,18,10) with **D**₂ = 47 350 or 488 998. Total **D** = **D**₁ x **D**₂ = 3 968 883 950 or 4 922 228 785 - i.e. **ULTRA** league. **GW3** hom-pat offers **50 000 EUR** requiring only **D** = 21258 x 21258 = 451 902 564 - for two equal phases - i.e. fits in **HYPER** league.

PV - Sisyfos offers a sum of **10 000 CZK** (about **400 EUR**) for each victor of phase 1 where **D**₁ >= 1 000, i.e. 3rd league. The entry fee is 2 000 CZK (74 EUR). The one-time exclusive prize for phase 2 is **3 333 333 CZK** (about **123456 EUR**) where **D**₂ >= 10 000, but total **D** = **D**₁ x **D**₂ >= 10⁷.

References

In German:
Soenhle, S.: Die Psi-Tests der GWUP 2004-2014, Skeptiker 4/2014, pp. 183-8
Wolf, R.: Statistische Hintergründe, Skeptiker 4/2014, p. 187
Huesgen, I.: Die Psi-Tests der GWUP 2015, Skeptiker 3/2015, pp. 124-7
Huesgen, I.: Die Psi-Tests der GWUP 2016, Skeptiker 3/2016, pp. 125-8
Huesgen, I.: Die Psi-Tests der GWUP 2016, Skeptiker 3/2016, pp. 125-131
Mahner, M.: Ergebnisse der GWUP-Psi-Tests 2016, Skeptiker 3/2016, p. 128
In Czech:
Zpravodaj Sisyfos 4/2015 pp. 13-15, 15-16

ANNOUNCEMENTS

OF INTEREST

SKEPTICISM, SCIENCE AND RATIONALITY (GENERAL)

Sense About Science

Keep visiting the Sense About Science website for new developments:

<http://www.senseaboutevidence.org/>

Good Thinking

Make sure that you are on the Good Thinking's Newsletter email list:

<http://goodthinkingsociety.org/>

Website of interest

'The House of Commons Library is an independent research and information service. We give politically impartial briefing to MPs of all parties and their staff. Our experts publish research and analysis on topical issues and legislation, which you can read on this site.'

<https://commonslibrary.parliament.uk/>

MEDICINE

The Nightingale Collaboration

Keep visiting the Nightingale Collaboration website. If you do not already do so, why not sign up for free delivery of their electronic newsletter?

<http://www.nightingale-collaboration.org/>

Pharmaceutical industry

'In 2018, drug company payments to doctors are still hidden.'

<http://tinyurl.com/yajccdv2>

Acupuncture

In a randomized clinical trial of 824 women undergoing IVF, the rate of live births was 18.3% among women who received acupuncture vs 17.8% among women who received a sham acupuncture control, a nonsignificant difference.

<http://tinyurl.com/y6vssv2l>

Breast screening

'A letter to The Times signed by 15 HealthWatch experts and supporters sparked a deluge of media coverage

when it urged women offered catch-up after missed breast screening invitations to "look this gift horse in the mouth". HealthWatch chair, Susan Bewley, professor of women's health at King's College London, penned the letter on learning the news that an estimated 450,000 women aged 68-70 had not been invited to routine NHS mammography screenings because of an IT failure dating back to 2009. Jeremy Hunt, the health secretary, had claimed that between 135 and 270 women might have had their lives shortened as a result. These figures, based on statistical modelling, were disputed by many in the medical and statistical community.'

<http://tinyurl.com/yaajzeok>

Websites of interest

'Richard Lehman reviews the latest research in the top medical journals.'

<http://tinyurl.com/y9xdypa9>

Detox and diets

'Meet the chef who's debunking detox, diets and wellness.'

<http://tinyurl.com/yafgwcycd>

And: 'Almost 40% of peer-reviewed dietary research turns out to be wrong. Here's why.'

<http://tinyurl.com/ya8dw53c>

Cancer quackery

A worrying number of people believe in fake causes of cancer.

<http://tinyurl.com/ydd4n3qh>

and

<http://tinyurl.com/yd2rc8cp>

and

<http://tinyurl.com/y88y9uhq>

Six tips to spot cancer 'fake news'. At:

<http://tinyurl.com/yd5uzn9h>

And: Errol Denton, 52, was handed a criminal behaviour order (CBO) at Blackfriars Crown Court on 20.4.18 after being convicted by National Trading Standards of breaching consumer laws and food laws. At:

<http://tinyurl.com/yc6dwqhp>

Forensic genetics

'We leave traces of our genetic material everywhere, even on things we've never touched. That got Lukis Anderson charged with a brutal crime he didn't commit.'

<http://tinyurl.com/ybf97k32>

Vaccination

'Young people considering gap years and holidays in Europe are being warned to check they have received an MMR jab following outbreaks of measles on the continent. ... Public Health England (PHE) issued the warning to young people who may have missed out on the jab during the MMR scare which began in 1998 when doctor Andrew Wakefield published a paper in The Lancet suggesting a link to autism.'

<http://tinyurl.com/y8eclcnp>

Meanwhile: 'A spreading fear of pet vaccines' side effects has prompted the British Veterinary Association to issue a startling statement this week: Dogs cannot develop autism.' At:

<http://tinyurl.com/y9bx6w63>

Also: 'We are proposing 20 concrete actions to strengthen cooperation in the fight against diseases that can be prevented by vaccines.' EU Commissioner and former medical doctor Vytenis Andriukaitis answers your questions (video). At:

<http://tinyurl.com/yb5dbyj7>

And: 'Was SIDS discovered only after we began vaccinating kids?'

<http://tinyurl.com/ya7ejgkt>

Medical research

From Transparimed:

'In response to an FOI request, HRA are currently in the process of reviewing their position on releasing data about clinical trials that failed to register in the UK. HRA will soon decide whether to disclose the details on trials that breached registration obligations or not - setting an important precedent for clinical trial

transparency in the UK. If there's any channels through which HW or HW members can influence the ongoing process and decision-making at the HRA, please try to do so. Also, if you know of any journos or campaigners interested in this issue, please pass this on.

'The full FOI response is online':

<http://tinyurl.com/yamly5pf>

And: 'Some of the world's largest research funders and NGOs today agreed to adopt the WHO's strong standards on clinical trial transparency. This means all clinical trials they fund or support will be registered and the results reported.'

<http://tinyurl.com/y87bktfp>

Homeopathy

The British Homeopathic Association have lost their legal case against NHS England, with the judge dismissing all four parts of their case. The BHA had sought to overturn NHS England's announcement in November 2017 of new guidance which advises GP's not to prescribe homeopathic remedies.

<http://tinyurl.com/y8kkwsfo>

A study of the prescribing of homeopathy in primary care has concluded: 'Even infrequent homeopathy prescribing is strongly associated with poor performance on a range of prescribing quality measures, but not with overall patient recommendation or quality outcomes framework score.' At:

<http://tinyurl.com/ycmh9f9>

And: A Cochran Review of 'Homeopathic medicinal products for preventing and treating acute respiratory tract infections in children' has concluded: 'Pooling of two prevention and two treatment studies did not show any benefit of homeopathic medicinal products compared to placebo on recurrence of ARTI or cure rates in children. We found no evidence to support the efficacy of homeopathic medicinal products for ARTIs in children. Adverse events were poorly reported, so conclusions about safety could not be drawn'. At:

<http://tinyurl.com/y8sav3yz>

And: Homeopathy is quackery plain and simple, whatever the royal family says. At:

<http://tinyurl.com/yd8c6g93>

Also: Naturopath claims to treat aggression in children with diluted dog rabies saliva. At:

<http://tinyurl.com/yd2dowjs>

see also:

<http://tinyurl.com/y7tll66y>

And: More than 120 homeopaths trying to 'cure' autism in UK: At:

<http://tinyurl.com/y9yvw2pb>

Skin care

'The world of skincare is not a place for the faint-hearted. It is such a dizzying mix of advice and recommendations, advertising and 'science' that any wander through this world leaves you feeling like you are not doing enough for your health or appearance. Informed advice at:

<http://tinyurl.com/y7nkunl7>

Proton therapy

Tweeted by Andy Lewis: 'As Professor Karol Sikora and @woodfordfunds pour huge sums into setting up private Proton Cancer Therapy Centres around the UK, the similar US centres are struggling due to the poor evidence base. Relying on public money.' Read report in the Washington Post at:

<http://tinyurl.com/yaovwmdv>

Cannabis oil

'The case for cannabis oil must be based on science, not emotion.'

<http://tinyurl.com/ya6nrq9e>

Charcoal

'Charcoal products -- from croissants to capsules -- are everywhere. Even high street coffee chains have taken to selling charcoal "shots". Some vendors of these products claim that activated charcoal can boost your energy, brighten your skin and reduce wind and bloating. The main claim, though, is that these products can detoxify your body Although consuming activated charcoal may seem like a harmless health trend, there are several reasons you should avoid these products.'

<http://tinyurl.com/y8yft6ow>

Young blood and other elixirs

'The Guardian's science editor on elixirs of life, questions of ethics, and meeting some extraordinary minds.'

<http://tinyurl.com/yb57tvwx>

PSYCHOLOGY AND PSYCHIATRY

Neuro-myths

'Sports coaches are always on the look-out for new ideas to improve their players' performance and it's understandable that insights from psychology and neuroscience hold particular appeal. However, as with other applied fields, it's not easy to translate neuroscience findings into useful sports interventions. There are also a lot of charlatans who use the mystique of the brain to sell quack sports products and programmes. Without specialist neuroscience training, coaches might struggle to distinguish genuine brain insights from neuro-based flimflam.' Summary of published research at:

<http://tinyurl.com/yey352yb>

Anomalistic psychology

Introductory talk by Chris French.

<http://tinyurl.com/y8k8p95c>

Facilitated communication

'The University of Northern Iowa promotes facilitated communication quackery.'

<http://tinyurl.com/y7to69dr>

POLITICS AND PUBLIC POLICY

Evidence-based policy

'Transparency about the evidence used during policy development is a first and necessary step towards improving that use, allowing for assessments of the quality of the evidence and the merits of policies.'

<http://tinyurl.com/yamly5pf>

Evidence Week

Read all about this event, which took place from June 25 to 28, at:

<http://tinyurl.com/y8epz7et>

RELIGION AND EDUCATION

Faith schools in England

'The Government, breaking a manifesto commitment, has announced that it will keep the 50% cap on religious selection by new religious free schools in England, in a move welcomed by Humanists UK, which has led the campaign against efforts to lift it. The Government's announcement comes after 20 months of steady campaigning from Humanists UK for it to retain the 50% cap. It means that all new and existing religious free schools must continue to keep at least half of

its places open to all children, irrespective of their religious or non-religious back-grounds.'

<http://tinyurl.com/ybstkgcf>

Rudolf Steiner schools

'A flagship Steiner school is to close amid fears over child safety, after it emerged that parents who tried to raise the alarm about safeguarding lapses had been sent gagging letters. The Rudolf Steiner School Kings Langley (RSSKL) has told parents that it will shut down at the end of this term, following a string of damning Ofsted reports.'

<http://tinyurl.com/y7u9z18m>

MISCELLANEOUS UNUSUAL CLAIMS

Flat Earth

'Believe it or not, some people still think the world is flat, and that we are all victims of a giant conspiracy. Alex Moshakis heads to Birmingham to meet Britain's Flat Earthers.'

<http://tinyurl.com/yctc8w3j>

EM drive spaceship

'Impossible' EM drive doesn't seem to work after all.'

<http://tinyurl.com/yacvkzg8>

UPCOMING EVENTS

ECOSO

The ECOSO website has a calendar of events of skeptical interest taking place all over Europe, including the UK. See 'The European Scene', earlier

THE ANOMALISTIC PSYCHOLOGY RESEARCH UNIT AT GOLDSMITH'S COLLEGE LONDON

Chris French has organised an exciting programme of seminars for this academic year. Visit:

<http://www.gold.ac.uk/apru/speakers/>

Also of interest (and open to the public) is the programme of seminars organised by Goldsmiths Psychology Department which can be found at:

<http://www.gold.ac.uk/psychology/dept-seminar-series/>

SKEPTICS IN THE PUB

Choose the venue you are looking for to access the upcoming events.

<http://tinyurl.com/lwohd4x>

18TH EUROPEAN SKEPTICS CONGRESS

See 'European Scene' earlier.

CONWAY HALL LECTURES LONDON

25 Red Lion Square, London
WC1R 4RL

<http://conwayhall.org.uk/talks-lectures>

CENTRE FOR INQUIRY UK

For details of upcoming events:

<http://centreforinquiry.org.uk/>

LONDON FORTEAN SOCIETY

For details of meetings:

<http://forteanlondon.blogspot.co.uk/>

COUNCIL OF EX-MUSLIMS OF BRITAIN

For details of meetings:

<http://tinyurl.com/y8s6od5r>

SCIENCE EVENTS IN LONDON

Eventbrite lists a series of scientific meetings in London (some free, some not-so-free). At:

<http://tinyurl.com/m8374q9>

'Funzing' organises evening talks at social venues in London, some being of interest to skeptics. See:

<http://uk.funzing.com/>

Editor's Announcement

ASKE's *Skeptical Intelligencer* is widely circulated electronically to skeptical groups and individuals across the globe. Formal and informal articles of interest to skeptics are welcome from people of all disciplines and backgrounds. Details about house style are available from the Editor. We also welcome writers who would like to contribute a regular column - e.g. an 'On the Fringe' feature or take over one of the regular features.

LOGIC AND INTUITION: ANSWER

Let p be any prime number ≥ 5 .

Proof

$$p^2 - 1 = (p + 1)(p - 1)$$

Any prime number ≥ 5 is not divisible by 2.

Therefore, both $(p + 1)$ and $(p - 1)$ must be divisible by 2.

Now, alternate even numbers are divisible by 4 (e.g. 4, 8, 12, etc.).

Therefore either $(p + 1)$ or $(p - 1)$, but not both, is divisible by 4.

Therefore $(p + 1)(p - 1)$ must be divisible by $2 \times 4 = 8$.

Any prime number ≥ 5 is not divisible by 3.

Therefore, either $(p + 1)$ or $(p - 1)$, but not both, must be divisible by 3.

Therefore $(p + 1)(p - 1)$ must be divisible by $2 \times 4 \times 3 = 24$.

Well done if you solved this – but only if you are *not* a trained mathematician!

Supplementary puzzle

Here's another puzzle based on similar reasoning to the above. Prove that the when you square an odd number and add 1, the result is never divisible by 4.

About ASKE

Founded in 1997, ASKE is an association of people from all walks of life who wish to promote rational thinking and enquiry, particularly concerning unusual phenomena, and who are opposed to the proliferation and misuse of irrational and unscientific ideas and practices. This is our quarterly magazine and newsletter. To find out more, visit our website (address below).

If you share our ideas and concerns why not join ASKE for just £10 a year? You can subscribe on our website, write to us at the address below, or email:

m.heap@sheffield.ac.uk

email: aske1@talktalk.net;
website: <<http://www.aske-skeptics.org.uk>>