

THE SKEPTICAL INTELLIGENCER

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Incorporating the Skeptical Adversaria: the ASKE Newsletter

Edited by Michael Heap

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THE 16th EUROPEAN SKEPTICS CONGRESS

Though not a huge meeting by today's standards, the 16th European Skeptics Congress, co-organised by ASKE and APRU (the Anomalistic Research Unit at Goldsmiths College) was a highly successful meeting and feedback has been uniformly enthusiastic. The congress website is still operating (<http://eurosepticscon.org/>) and post-congress information will appear in due course. Some audio recordings of talks will be online soon and Klaus Schmeih has a video of his talk on parascientific codes on YouTube at https://youtu.be/jS56Pe_nfsE. Photographs of the congress may be viewed at <https://flic.kr/p/yq4rw4> and a short video prepared by Mark Williams can be watched at https://youtu.be/_o1Rx-2QkEw. A video recording of the debate on skepticism and medicine is at: <https://www.youtube.com/watch?v=A4erJFq1Ds0> and <https://youtu.be/xyiuzE5fueo>.

GUIDELINES FOR AUTHORS

The *Skeptical Intelligencer* welcomes formal and informal contributions on any subject within the ambit of the Association for Skeptical Enquiry (ASKE).

Formal articles should be aimed at the intelligent layperson, and authors should take particular care to define or explain unusual terms or concepts. Equations, statistics or other numerical and symbolic tools may be employed whenever required. Articles should be as succinct as possible, but may be of any length.

Authors of contributions to the *Skeptical Intelligencer* should take care to ensure that texts are temperate in tone and free of vituperation. They should also ensure that arguments are either supported by express evidence/arguments or identified as speculative. 'Do not pretend conclusions are certain that are not demonstrated or demonstrable.' (T.H. Huxley).

Before being accepted for publication, submitted texts will be reviewed by the Editor and any appropriate advisors. Where improvements or changes are desirable, the editorial team will work with authors and make constructive suggestions as to amendments.

Authors should submit an electronic, double-spaced copy of their article or letter.

When referring to another work, authors should:

- Cite only the surname, year, and (where appropriate) page number within the main text: e.g. '...according to Hyman (1985: p. 123), the results of this test were not convincing...' or

'...according to Bruton (1886; cited in Ross, 1996)...

- List multiple references in date order: e.g. '...a number of studies have thrown doubt on this claim (Zack, 1986; Al-Issa, 1989; Erikson, 1997)...' In the case of electronic material, give the author and the date the material was accessed on line

- Place Internet addresses URLs in angle brackets: e.g. <<http://www.nothing.org>>

A complete list of references in alphabetical order of authors' surnames should be given at the end of the article. The list should be compiled using the following conventions:

- Articles: Smith, L.J. (1990) An examination of astrology. *Astrological Journal*, 13, 132-196.
- Books: Naranjo, X. (1902) *The End of the Road*. London: University of London.
- Chapters: Griff, P. (1978) Creationism. In D. Greengage (ed.) *Pseudoscience*. Boston: Chapman Publishers.
- Electronic material: Driscoe, E. Another look at Uri Geller. <<http://www.etc.org>>. Accessed 21 April 1997.

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Finally, authors may use 'sceptic' or 'skeptic' (and their derivatives) according to their preference.

For further information contact the Editor Michael Heap at m.heap@sheffield.ac.uk.

Editor's Announcement

ASKE's *Skeptical Intelligencer* is a quarterly magazine. Paper editions are available on request (see front page). The magazine 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. Would you like to contribute a regular column in your specialty or area of interest – e.g. an 'On the Fringe' feature? Or would you like to take over one of the regular features? Please get in touch with the Editor if you wish to make a contribution to skepticism in this way.

REGULAR FEATURES

FROM THE ASKE CHAIRMAN

Michael Heap

Announcements

On this occasion the *Skeptical Intelligencer* is somewhat packed (no room for the usual inserts!) but it is good to have a range of contributors. Mark Newbrook's regular column 'Language on the Fringe' is absent just for this issue. Instead he has written a major review concerning the Phaistos Disk. His column will be back in the next issue.

The ASKE website

<http://www.aske-skeptics.org.uk>

ASKE's website has been updated and the home page includes announcements by members – e.g. promoting their website, group or projects. If you would like to take the opportunity to do this let me know.

What's wrong with Psychology?

Recently I attended a lecture at the University of Sheffield by Marcus Munafò, Professor of Biological Psychology at the University of Bristol. The lecture was entitled 'Reproducibility: What is the scale of the problem?' Professor Munafò reviewed quite a number of papers that have appeared over the last 10 years that raise anxieties about the reproducibility of scientific research, particularly that conducted on human subjects.

There is a range of factors that can influence the validity and hence the replicability of research findings. When I was studying Psychology in the late 1960s the discovery of the extent of 'the experimenter effect' in psychological experiments had caused concerns about the validity of many previously published papers. The experimenter effect is the tendency for researchers to unwittingly influence the results of their experiments in the expected or desired direction. This extends to research assistants who are aware of their supervisor's predictions

about the behaviour of their experimental subjects, namely laboratory rats.

More recently other sources of error and unreliability have been publicised. One is sheer dishonesty: the results have been deliberately distorted or even fabricated. This of course has the potential to occur in any field of science and psychologists themselves have not been immune to this egregious practice. Another is publication bias or the 'file drawer effect': positive findings are much more likely to be published in journals than negative findings (i.e. no significant result). This bias will tend to increase the presence of false positive results in the published literature. The bias is made worse by the reluctance of journal editors to publish research papers in which the null hypothesis was upheld. In fact published experimental research in psychology and social sciences tends to have more positive outcomes than in other branches of science. Small sample sizes and the overestimation of the power of the statistical analyses employed are other reasons for spurious positive outcomes. The list goes on.

Not all of this lamentable state of affairs is due to laziness, incompetence or lack of technical knowledge. A major driving factor is the pressure in academia for each person to have his or her name regularly appearing on a sufficient number of research papers. At stake are one's status, access to resources, career prospects and even livelihood, not to mention one's favourite theory that has just been called into question by someone else's research. In other words we have an industry driven by the self-interest of the suppliers over the demands of the consumer or the need to expand the knowledge base. As a result, over the

years we have seen a steady growth in the number of academic journals and academic papers (which now includes online publications) yet estimates of how many people actually read the articles and how often they are cited remain derisively low (try a Google search). The same is true of Doctoral and Masters dissertations. And as sure as night follows day there will be fabrication, cheating, corner-cutting and other malign practices, as well as the pursuit of trivial research goals that no one else finds of the slightest relevance.

Psychology, I regret to say (having been a psychologist all my working life) presents itself as a severe case of this malaise. One of the things that determines what research goals academic psychologists pursue, and how they set about it, is what is most convenient for them. Thus, research goals that can be most easily addressed by experiments on mice, rats, pigeons and university students have always proved extremely popular, as have observations (dependent variables) that are easily measured (rate of lever pressing or pecking, reaction times, scores on a test or questionnaire, etc.).

Even for the purposes of exploring more ambitious questions about human nature, the above experimental subjects and measures often prove remarkably adaptable. For example, a really ambitious research project might be the exploration of empathy in psychopaths. This would be a hot topic for scientific study and no trivial matter. Good luck to anyone researching this! It would involve a great deal of work recruiting participants, designing the study, obtaining reliable measurements, and so on.

Recently I read about a piece of research that some academic psychologists had conducted in this field (I'm not going to cite the

reference – it can be easily found on the internet). But the researchers did not use psychopaths; they use students from their university and got them to complete a questionnaire that measures psychopathic traits. The other key measurement was change in frequency of the participant's yawning when other people yawned. The results indicated a negative correlation between this and psychopathy scores.

I'm not saying that the research was a waste of time; also it would be reasonable to say that it was an investigation into the determinants of contagious yawning rather than into psychopathy. My point is that one major reason why psychologists do this kind of research is that it ticks all the boxes for convenience (and gets a paper published for the researchers) whereas more difficult but pressing research may not be given due priority. Also, experiments like this habitually spawn yet more experiments to test competing theories until the whole business has more to do with what goes on in the psychological laboratory than the real world.

The failings of modern psychology are the subject of a recent book by Tomasz Witkowski and Maciej Zatonoski entitled *Psychology Gone Wrong: The Dark Sides of Science and Therapy* (Boca Raton FL: BrownWalker Press, 2015). The authors are founding members of the Polish Skeptics Club. Dr Witkowski is a psychologist and Dr Zatonoski is a surgeon working in the UK. In their book they review the history of fraudulent research and questionable research practices; the willingness of many psychologists to embrace pseudoscientific ideas and practices (psychoanalysis, recovered memory therapy, projective testing, NLP, etc.); exaggerated claims for the efficacy of psychological interventions; and so on. In each case the authors support their thesis with abundant references.

Some readers may find the authors' style rather uncompromising and without balance (e.g. in their account of 'the Burt affair' which was discussed in the *Skeptical Adversaria*, 2012 (2); Burt does have his defenders). Also, quite a number of the

frauds that the authors describe are from disciplines other than psychology and it may be argued that the authors' complaints are characteristic of science generally (though I think there is a strong case for looking at psychology for particularly instructive examples of 'science gone wrong'). Readers will wish that the authors included an index and I would advise that when the second edition is in preparation, a good proof reader is employed (the authors should be congratulated on producing an easy-to-read book but even the most forgiving of readers will not excuse the number of errors in the text).

For professional psychologists, students and anyone who needs a working knowledge of academic and applied psychology (which includes all skeptics) this is an important book and I thoroughly recommend it.

LOGIC AND INTUITION

The Simpson paradox

In a previous issue of this column (the *Skeptical Adversaria*, Autumn 2008) I described the Simpson Paradox. I am very pleased to have had a contribution on this topic from Mike Griffiths, an Associate Lecturer at Goldsmiths College, London. Mike provides us with some more illustrations of this fascinating and important paradox.

Simpson's adventures in statistics

A recent paper in the *Journal of Statistics Education* (Witmer, 2015) presented an interesting paradox. Witmer looked at 220 legal cases (in which a defence known as Stand Your Ground was used). He found that the

conviction rate was higher for white defendants than those from ethnic minorities. However, he then split the cases up into two groups. In both groups, the conviction rate was higher for the ethnic minority defendants. If that does not seem wrong, read it over again, slowly and carefully.

How does this arise? And who is really more likely to be convicted? There is nothing wrong with Witmer's calculations. The problem arises from something called Simpson's Paradox.

Example 1: Advertising

To get us started, I will borrow an imaginary scenario from *The Register* (n.d.). (I have changed the details,

partly because I don't like some of them.) Consider an advertising agency that has found a positive correlation between a client's spend on advertising and its income; client A, figure 1. They find the same for a second client, client B, figure 2. To save any side issues, let us suppose that in both cases, they can establish causation. They are pitching to a new client; what could be better advertising than to combine both their success stories into one graph? The answer is in figure 3 which shows a negative correlation!

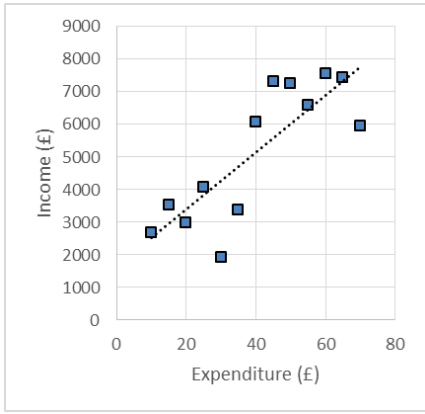


Figure 1: Firm A

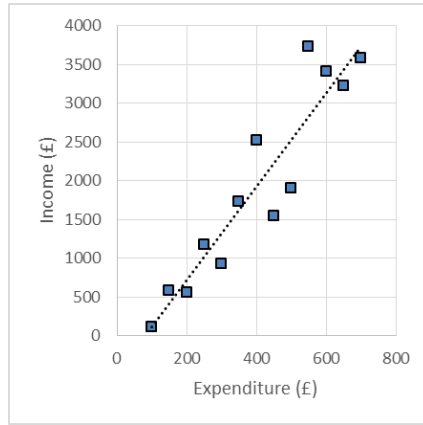


Figure 2: Firm B

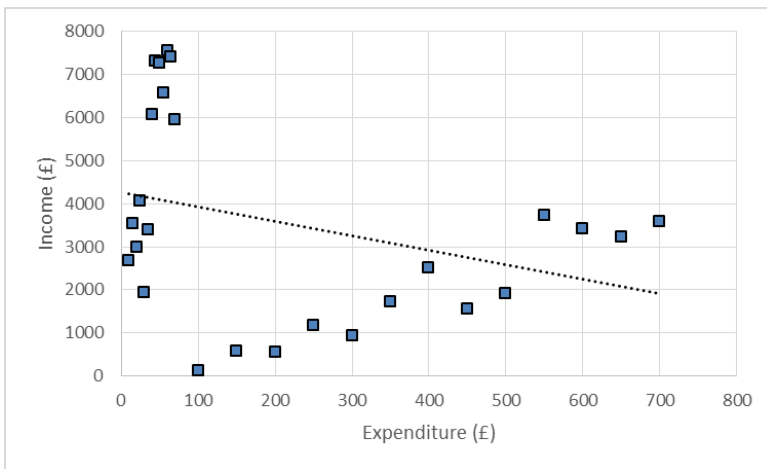


Figure 3: Combined data for firms A and B

In common sense terms, the problem is that we are comparing apples and pears. Firm B is obviously in a more difficult market, where each extra pound of spend achieves less of a result than the one firm A operates in. We don't know exactly what would happen if firm A started spending the same amounts as firm B – extrapolation is a dodgy business – but we certainly can't expect it to follow the same pattern that it does for firm B. (In statistical terminology, we have violated the assumption of independence of observations, because the data are in two separate groups.) It is a good idea to spend more money on advertising (at least, in this imaginary world and within the limits studied for each firm), but the combined graph is misleading.

Here, the problem was fairly easy to spot. The difficulty comes when the fact that there are two different groups is harder to find, as in Witner's example.

Example 2: Kidney stones

Simpson's paradox is not restricted to continuous data, like expenditure and income above. It can also occur in categorical data (data which, as the name suggests, are in categories). A widely discussed real life example (e.g.

in Wikipedia, n.d.) relates to kidney stones. The data in table 1 show two different treatments, A and B, and their success rates.

If we only looked at the totals, we would conclude that treatment B is the one to go for – the success rate is obviously higher. Or if we had all of

the information in the table, we could come to the bizarre conclusion that if we don't know the size of the stone we should go for treatment B, but if we do, we should go for treatment A. But again, we would be misled.

Table 1: Contingency table for example 2

		Treatment A	Treatment B
Small stones	Successful / total <i>Percentage</i>	81 / 87 93%	234 / 270 87%
Large stones	Successful / total <i>Percentage</i>	192 / 263 73%	55 / 80 69%
All stones	Successful / total <i>Percentage</i>	273 / 350 78%	289 / 350 83%

As Wikipedia puts it, the misleading overall result comes from a combination of two causes. Firstly, there is a big inequality in the sizes of the cells of the table: there are two

large groups in opposite corners (small stones with treatment B and large stones with treatment A) and two small groups in the other corners (small stones with treatment A and large

stones with treatment B). The overall totals are dominated by the two large groups.

Secondly, the 'lurking' or hidden variable (the size of the stones) has a

stronger influence than the ostensible variable (the choice of treatment). Treatment A is the best treatment. But in our table, the overall success rate for treatment A is unduly influenced by the results for large stones, whilst the overall success rate for treatment B is unduly influenced by the results for small stones.

Example 3: Conviction rates and ethnic minorities

Finally, we can come to Witmer’s (2015) example. The “lurking” or hidden variable he identified was race: not of the defendant, but of the victim. It turns out that (presuming the sample is representative) the “Stand your ground” defence is accepted by juries much more often when the victim

comes from an ethnic minority than when the victim is white. Not only that, but (making the same presumption) ethnic minority defendants are more likely to be convicted – despite what the total figures suggest. In all, not a happy picture for people from ethnic minorities, despite the apparent results.

Table 2: Contingency table for example 3

		Minority defendants	White defendants
Minority victims	Convicted / total <i>Percentage</i>	19 / 64 29.7%	5 / 24 20.8%
White victims	Convicted / total <i>Percentage</i>	10 / 25 40.0%	40 / 107 37.4%
All victims	Convicted / total <i>Percentage</i>	29 / 89 32.6%	45 / 131 34.4%

But finally, a word of warning: As the Wikipedia article points out, you can’t always presume that it is the disaggregated figures that are correct. It may be possible to disaggregate by some spurious variable that makes it look as if the aggregated figures are misleading when they are not. That, perhaps, is the real paradox.

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MEDICINE ON THE FRINGE

I am very pleased to have received a contribution for the Intelligencer that is very appropriate for ‘Medicine on the Fringe’. It is by Dr Colin Brewer from London.

In one of the hospitals where I learned my trade, there worked a surgeon whom the Fates had evidently earmarked for a particularly ironic death. Not content with being himself a fitness freak, he was an evangelist for the cause. His colleagues – both senior and junior – were chided about their slothful habits and droopy postures and he had one of those handshakes that make the recipient feel he is being tested for metal fatigue. Naturally, he excelled at several energetic sports. When he dropped dead in his 50s with a coronary during a game of golf, there were some wry smiles around the doctors’ mess.

The surgeon was not alone in his beliefs, or in the enthusiasm with which he propagated them. Fifty years on, we are still being urged to exercise our way to health. The current consensus seems to be that being a couch potato is bad (I suspect most people already thought that) and that moderate exercise is good for you (ditto) but there is no need to overdo it. Missionaries for a different though related philosophy tell us that all will be well if only we would stop eating sugar and/or cream, and consume a pound of organically grown rhubarb every day, liberally sprinkled with bran. It goes without saying that those

who recommend exercise are often of a rather hearty disposition themselves, and that those who recommend bran and ‘natural’ foods stuff it down their own throats by the ton. There is also a subsidiary argument based on the allegedly exemplary health and longevity of some obscure mountain tribe that subsists largely on boiled weeds.

I’m not suggesting that diet is irrelevant to health. An epidemic of obesity is visible in all reasonably prosperous societies, leading to a less visible but more serious epidemic of Type II diabetes and other diseases but that probably reflects the quantity

rather than the type of food that is eaten by most citizens of those societies. The pretensions and lies of the nutrition industry and of some of its self-appointed experts have been punctured, particularly by Ben Goldacre but one of the major limitations of research on diet and health is that the sort of people who tend to be concerned in a general way about what they eat tend also to be the sort of educated, middle-class and middle-income people whose lifestyles include several other health preserving-factors. For a variety of reasons, they are less likely to be obese than people from poorer and less educated social classes, who are also – at least in Britain and the US – much more likely to be regular smokers.

One of the most prominent apostles of the lifestyle credo was Barbara Cartland. She was famous for a number of things, including being the step-grandmother of the late Princess Diana. She was a writer of stereotyped romances, derided by the sort of snooty North London scribblers whose own misanthropic *oeuvre* sold far fewer copies than hers. She was also the self-appointed, and completely unqualified, Dietary Adviser to *The Nation* and because she was such a splendid example of a phenomenon that hasn't received as much attention as it should, I propose to name it in her honour: the Barbara Cartland Syndrome.

Cartland believed that certain foods, notably honey, and vitamins, were not merely essential to health but, if taken in generous quantities, would revitalise the tissues, prolong active life, stimulate the phagocytes and probably bring about peace in our time. She was not the first nutritional prophetess and certainly not the last. Before the discovery of vitamins gave a veneer of pseudo-science to their theories, her predecessors were urging their own favourite variations on the theme of leg of newt and eye of toad on audiences hardly more gullible than those who like to believe plausible and optimistic nonsense today.

Her theories were no crazier than many others but what distinguished her

as a food freak was that she looked such a splendid advertisement for her claims. There she was on our television screens, her age a conspicuously ill-kept secret but evidently considerable, clearly full of beans and sounding – in content if not in accent – like some empty-headed shop-assistant after two large gin and tonics. You had to be a hardened old cynic like me, with a double-blind controlled clinical trial instead of a soul, not to believe that there must have been something in what she said.

The current evidence indicates that living to a ripe old age, like most other things in medicine and life, is a matter of heredity and constitution, on the one hand, and of the environment and your habits of thought and behaviour on the other. Regardless of what you eat or how much exercise you take, the human body has its own built-in self-destruct mechanism and, while it fires off at varying times (because variability is one of the hallmarks of living things), this is the one biological function that never fails. Three score and ten are the years of man, said the psalmist, and while that has moved close to four score – mostly in the past few decades and largely thanks to modern medicine and the medically-inspired decline in smoking – the Methuselahs among us are still relatively few in number, though increasing steadily. Furthermore, many of the real oldies, the ones who will be candidates for the royal telegram if they make a century, are either not much in contact with the external world or not physically well enough to be getting much pleasure out of it. Many of them, it seems, will regard death as a release rather than an unwelcome intrusion into their enjoyment of life.

There have always been people who lived longer than the average, sometimes despite unpromising habits. For every centenarian peasant with a deeply-lined face like W.H. Auden's who attributes his long life to high thinking and plain living, a vegetarian diet and lots of exercise, there quite often seems to be another who will tell

you with a twinkle in his eye that it is because he smokes a pipe, drinks wine in preference to water and always lets his wife do any hard work (Here, he pats his fourth spouse affectionately on the rump; her three predecessors have all died in harness.)

If you already eat a balanced diet, there is still not much sound evidence that eating (as opposed to avoiding) any particular food will help you to live longer and stay younger. Non-smoking carnivores like me will die sooner, on average, than non-smoking vegetarians (though still at around 80) but this simply makes me feel, like Kingsley Amis, that no major pleasure is worth giving up for the sake of three extra years in a care home in Weston-super-Mare. The most we can say with any confidence is that we should avoid excess and obesity and be sure to eat up our greens – truths pretty universally acknowledged by most mothers and grandmothers in my childhood. There used to be great campaigns for eating bran, on the basis that impoverished Africans, who – *faute de mieux*, I suspect - eat lots of it, had a low incidence of bowel cancer. That lobby is pretty quiet these days but even the enthusiasts would have to concede that the healthiest of African peasants, whose example they urge us to follow, who pass the largest and most beautifully formed stools in the whole world and whose colons are wonderful to behold, still self-destruct no later – and in reality, a lot earlier - than the more senior citizens of Bournemouth or Palm Beach.

Barbara Cartland died in 2000 aged 98. I have known plenty of people who reached a similar age and were every bit as healthy and energetic. Their dietary habits varied, but many of them – my own mother, for example - neither liked honey very much nor took vitamin tablets or other supplements. Miss Cartland probably owed her longevity and figure mainly to fortuitous genetic circumstances that had very little to do with her eating habits, following a protected and well-nourished childhood in a prosperous family. Leaving aside her considerable

skills as a propagandist, she owed her nutritional influence partly to her appearance and partly to another factor, which is really the central feature of the Barbara Cartland Syndrome. It is simply this: dead food faddists and 'nutritional experts' tell no tales and don't appear on our television sets. The only ones we see are those whom Fate and Nature have ordained shall remain alive. Even more important, we don't see *dying* food freaks either. We don't see them suffering from boring old 'diseases of civilisation' like cancer, coronaries, and strokes, even though that is what will kill many of them. Once they become ill, they are either unwilling or unable to appear on television, even if anybody bothers to invite them. When they do eventually die, the event may well rate no more than a small paragraph on an inside page, if that. This, as we say in the trade, biases the sample.

There have certainly been such cases. In 1974, Adelle Davis, an American equivalent of Barbara Cartland, died of multiple myeloma aged precisely three score years and ten, despite having assured the world for years that nobody who drank two pints of milk a day and gobbled

vitamins like she did would ever get cancer. Intent on finding any explanation for her impending death except the obvious one, which is surely that cancer is more or less built in to our design and that a lot of people – even blameless and undeviating vegetarians - will get it if they live long enough, she blamed it on a single chest X-ray that she had had many years previously.

When they are not simply profiteering charlatans, many nutrition freaks are ideologues and ideologues know they are Right. It would be interesting to study a representative sample of them. I suspect it would show that some of them live longer and healthier lives than the average, like Miss Cartland, while others die untimely and unpleasant deaths (which, of course, they promptly attribute to some environmental pollutant), and that most die in their late seventies or eighties much like everyone else who doesn't eat or drink too much and hasn't ravaged their organs with the multiple toxins and carcinogens contained in tobacco smoke.

The Barbara Cartland Effect – known to statisticians as 'survivor bias' - is not restricted to the field of nutrition. It is just one aspect of the

tendency for positive results in clinical trials to be selectively reported and noticed compared with negative results. We see it in the numerous reports of miracle cures attributed to saints and holy relics compared with the rare reporting of failed prayers. The adoption and subsequent forcible conversion of most of Europe to Christianity is said to have happened in part because the emperor Constantine attributed his victory over Maxentius in 312 to a dream in which his army was advised to paint crosses on their shields. We hear very little from generals whose dreams and premonitions of victory were followed by defeat and disaster.

I had no personal quarrel with Miss Cartland and wished her no ill. When she died, her death proved neither her own theories nor mine. But I do hope that the next time one of her successors among the food-faddists and 'nutritionists' dies prematurely, the death will take place suddenly and spectacularly in a television studio during a live, prime-time broadcast. Perhaps those who live by TV should die by TV too. By the law of averages, which dealt so kindly with Barbara Cartland, it must surely happen one day.

REVIEWS AND COMMENTARIES

A Scientist in Wonderland: A Memoir of Searching for Truth and Finding Trouble by Edzard Ernst. Exeter: Imprint Academic, 2015. ISBN 9781845407773.

Reviewed by Richard Rawlins

In his preview of Michael Shermer's *Why People Believe Weird Things* Stephen Jay Gould advised: 'Skepticism or debunking often receives the bad rap reserved for activities - like garbage disposal - that absolutely must be done for a safe and sane life, but seem either unglamorous or unworthy of overt celebration'. Shermer himself suggests: 'Skepticism is not a position; skepticism is an approach to claims. A skeptic is one

who questions the validity of a particular claim by calling for evidence to prove or disprove it. We should not go into an investigation with the preconceived idea that the claim is going to be refuted, but rather to investigate claims to discover if they are bogus'. And yet so many people do construct weird world views, based on insubstantial whimsy and hyper-imaginative interpretation of their experiences. They need consolation,

hope and love - and honest practitioners prepared to offer solace without sycophancy.

Edzard Ernst was born in Bavaria three years after the end of World War II, the son of a doctor and an entrepreneurial mother who developed a chain of rehabilitation facilities. His parents split up when he was 4 and he and his brother and sister lived with his father for several years until returning to their mother. When he was 17 he

spent a semester attending a school in Seattle where he studied music. Acknowledging his tendency to butt heads with authority, sensitive to his own country's troubled past, but anxious to secure his future, when he returned to Germany the saxophone was put aside for the stethoscope. After a year in psychology, Ernst was able to join Munich's medical school and qualified at 30, but jobs were not easy to find. Germany's only homeopathic hospital provided an internship, and there the mix of family struggle, musical temperament, scientific bent and a desire to 'get to the truth' produced a perspicacious physician unafraid to think sceptically. At that time, many German physicians used homeopathic remedies alongside their conventional concoctions, probably well understanding the power of the placebo effects, but content that patients were consoled. In the 1970s London was still a magnet for the creative arts, and gave its traditional welcome to a jazz band drummer who was also looking for medical work in the UK. Soon Ernst had a French fiancée and a post at a psychiatric hospital to go with his percussion kit!

Continuing an academic career with a chair in Rehabilitation Medicine in Austria, and remembering his former boss's advice 'Do not forget the incredible power of placebo', placebos

became the focus of Ernst's career. The Ernsts had bought a holiday home in much loved East Anglia and when in 1992 an advertisement for a new Chair in Complementary Medicine, funded by the Maurice Laing Foundation at Exeter was spotted in *The New Scientist* (where else?) for this scientist, the die was cast. It seemed to Ernst that all the disparate strands of his career had led to this point and he jumped at the chance 'to bring the skills of a scientist to bear on an area of medicine that at that time had scarcely seen any serious research'. But research there was - not to prove 'complementary and alternative medicine' works, but to inquire as to whether it does - to any extent greater than would be achieved by placebos.

Scientists, conscientious medical professionals and even 'camists' practising 'camistry' might be expected to welcome the contributions of such an academic department, and no doubt some did. Others felt their cherished, if irrational, beliefs were being too exposed for comfort. For the comfort that is, of the life style, professional practice and recognition they sought.

No wonder Ernst's memoir has chapters titled *Mission Impossible*, *Trials and Tribulations* and *Off With His Head!* This is no dry autobiography, but a compelling

account of a seeker after truth dicing with the dark forces of un-reason and self-interest. The scourge of quackery will never be easily dismissed, but by understanding one scientist's journey and attempts to share his experiences with others, perspective is ~~maintained~~ brought to bear. Ernst's book is a testament to determination and integrity. Inveigled quite probably by persons of influence, the response of Exeter University authorities - to see the good professor from the premises - has the reader enthralled and appalled in equal measure.

This slim volume deserves a place on the bookshelf of every scientist and politician with an interest in healthcare, every medical practitioner and every camist with a conscience. All should heed Ernst's closing remarks: 'Some might criticise me here for claiming the moral high ground. But if I do so, it is for good reason. ...When science is abused, hijacked or distorted in order to serve political or ideological belief systems, ethical standards will inevitably slip. The resulting pseudoscience is a deceit perpetrated on the weak and the vulnerable. We owe it to ourselves, and to those who come after us, to stand up for the truth, no matter how much trouble this might bring'. Those who trouble to engage with Edzard Ernst's experiences will be amply rewarded.

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How UFOs Conquered the World: The History of a Modern Myth by David Clarke. Aurum Press, 2015, pp 312. ISBN: 9781781313039. £18.99 hbk.

Reviewed by Ray Ward

I heard Clarke speak about this book at a Greenwich Skeptics in the Pub meeting, so I am glad of the opportunity to review it.

Clarke says that the role he has adopted is that of a journalist reporting on one of the most pervasive myths of modern times, one that in little more than six decades has conquered the world.

He begins by stirring a personal memory: a 1977 programme, *Out of This World*, which sparked his interest

in the subject, and which I also saw, featuring two young men with headphones and dishes on metal poles, scanning for alien spacecraft. I can still hear one of them saying, in flat, nasal tones, 'I work for the London Electricity Board, and Paul is an embalmer. So we don't get an awful lot of free time.' It was so much like a Peter Cook and Dudley Moore sketch that it was hard to believe it wasn't a joke!

Clarke sums up at the end of his Introduction: 'the clues that emerged made me suspect the ultimate source of the mystery lay not inside the UFOs but with the people who saw and believed in them.'

Something similar is at work here to what I said in my reviews of programmes on Bigfoot (*The Skeptical Intelligencer*, 17(1), Spring 2014, and 18(1), Spring 2015): people who devote decades to a subject, surely long enough to establish whether or not

there is anything in it, but whose faith survives despite the failure of any concrete evidence to emerge. Clarke invokes cognitive dissonance: when people are confronted with proof they are wrong, or evidence that undermines strongly-held beliefs, they often continue to cling to their original point of view and even try to justify it more tenaciously. He quotes the social scientist Leon Festinger: when someone is presented with unequivocal and undeniable evidence that their beliefs are wrong, they 'will frequently emerge, not only unshaken, but even more convinced of the truth' of their beliefs. A related phenomenon is confirmation bias, the urge to favour only information confirming one's preconceived ideas and beliefs and discard anything that contradicts them. Ockham's razor (the simplest explanation covering the facts is probably right); the impossibility of proving a negative (there is no way of proving the USA isn't hiding dead aliens and alien spacecraft; if they deny it, they would, wouldn't they?); and 'correlation is not causation' (two things happening together, like a light in the sky and a power cut, are not necessarily connected), also make well-justified appearances.

We are soon on to the creation of 'flying saucers', with the famous sighting by private pilot Kenneth Arnold in 1947. Within weeks hundreds of reports of saucer-shaped objects were made across the nation. People presumably thought they were seeing what Arnold saw, but in fact he *hadn't* reported flying saucers! He didn't say the things he saw were saucer-shaped, only that their movement was like a saucer skipped across water. It is reckoned that 82% of 'alien abduction' accounts feature the saucer or disc shape, but why would aliens redesign the appearance of their craft to conform to a journalist's mistake? (What Arnold saw were almost certainly birds; a true formation of supersonic objects would have been seen by thousands, and would have created tremendous sonic booms.) In a later British flap the UFOs were said to

be cross-shaped and, sure enough, people saw crosses.

Another figure from the past who appeared in *Out of This World* and is mentioned by Clarke was the 8th Earl of Clancarty, former editor of *Flying Saucer Review* and prolific author of UFO books under the name of Brinsley Le Poer Trench, who initiated a debate on the subject in the House of Lords in 1979 and said some UFOs emanate from bases inside the Earth, emerging from holes at the poles. On the programme he showed a satellite photo appearing to show a huge hole at the North Pole; it was in fact simply a composite photograph with a missing section.

Many experiments have shown how poor people are at observation (even 'trained observers' like pilots, military personnel, police officers etc.). People were shown film of a road accident, then asked how fast a car was going when it passed the barn; 17% mentioned a barn in their answers, though no barn was in fact visible in the film.

As Clarke says, every time a hoax is revealed, or a UFO identified, the mystery is solved. But we forget - or choose to ignore - the lessons we have learnt; the will to believe remains strong, and we come back for more.

Lord (Peter) Hill-Norton got interested in the subject and asked questions in the House of Lords, coming to believe there was a high-level cover-up, even though when he was Chief of the Defence Staff, the highest-ranking military officer in the UK, he heard nothing about UFOs. Did he think there were things kept even from him?

From 2007 the Ministry of Defence transferred all surviving UFO records to the National Archives, where they were released to the public, and Clarke became their curator. But, as Linda Unwin of the MoD's UFO desk said, while people wrote demanding they reveal what they're hiding, if they emptied their filing cabinets in Trafalgar Square they'd still say it was a big whitewash, because unless the contents agreed with their

preconceived beliefs they'd never be satisfied. They can't release evidence they don't have, but the very absence of evidence in the files makes them claim there are even more 'Top Secret' files squirrelled away elsewhere. And, sure enough, once Clarke became involved, *he* was accused of being in on the conspiracy! As he says, 'The UFO truthers' - those who demand to know what they claim is the hidden truth - 'refuse to believe anything unless it has first been denied.' The absence of evidence itself becomes evidence - of a cover-up.

The released MoD data was said to be 'low quality', but was in fact perfectly consistent with reports regularly received by civilian UFO groups. Many MoD reports were recognisable as ones reported to such groups. If the 'best' data was being diverted to some super-secret organisation, how could both collections be so similar? Clarke says all his experience of stories about government attempts to hide scandals and secrets led him to believe it would be impossible to maintain such a grand deception for long. Governments seem hopeless at hiding anything, and if we really were being scrutinised by advanced aliens no organisation, no matter how powerful, could suppress it.

In 1993 it was reckoned that more than three million Americans had access to material classified SECRET and above, and it would be utterly impossible to keep anything known to that many people secret. None of the hundreds of thousands of documents leaked by Julian Assange and Edward Snowden mentioned UFOs. But, naturally, the 'truthers' have an explanation: the media are all in on the conspiracy!

Clarke describes something else I recall, a hoax in 1967 by apprentices at the Royal Aircraft Establishment using fibreglass saucers dropped across southern England, with mini-loudspeakers emitting a beeping noise when disturbed, and containing a smelly concoction of flour and water. The hoax was revealed when police opened one and found a well-known

brand of battery! But the episode, and the chaotic response by the authorities, was significant in that it provided absolutely no support for the idea of a huge conspiracy to hide government knowledge of aliens. Even more important, there was no attempt to stop the media running the story. If they were real alien craft there was no way their presence could have been hidden for long. And now, of course, things are far more advanced; news travels around the world in seconds and no government agency could control it. As Clarke says, governments can only successfully keep secrets known to very small numbers of people, which would be impossible with alien visits if they were real.

Alien craft are credited with astounding abilities, appearing to defy the laws of physics - yet when they reach Earth they crash with a frequency suggesting they are less reliable than our own aircraft. And, while governments disagree on many things, they have apparently agreed to keep quiet about alien visitations.

George King of the Aetherius Society, also seen on *Out of This World* with his followers on a hillside 'charging' a box with mystic 'fluence' by chanting a Sanskrit mantra, also appears in the book. He claimed to channel messages from beings elsewhere in the Solar System. The society provides a good example of how such people can always explain things away: King strongly hinted that the end of the world would come in 1999, and when it didn't they said their prayer power had saved the planet!

Such famous cases as George Adamski and Barney and Betty Hill are also described, always, of course, with convincing prosaic explanations.

As Clarke says, extraterrestrials visiting Earth would have to overcome the problem of travelling faster than light. If they did, would they then only visit us surreptitiously? But there are alternatives to the extraterrestrial hypothesis (ETH): they're from inside the Earth, the future, another time stream, a parallel universe.... The Fermi paradox (if there are other intelligent beings in the universe, some might be expected to be far more advanced than us and have developed interstellar or even intergalactic travel, so why is there no evidence of them?) appears, as does the Drake equation (which Clarke, with some justice, says incorporates 'a wild guess').

As Clarke says, while the ETH may clothe itself in science, its logic is that of the supernatural, so faulty conclusions naturally flow from it: 'the scientific method is nearly always sacrificed to wish-fulfilment'. He quotes Sir Arthur C. Clarke, who said his fondest wish was to see evidence of extraterrestrial life, but anyone sharing this wish had to contend not with scepticism but with something far worse: credulity. 'There is no hard evidence that Earth has *ever* been visited from space', he said. If such an event happened, at least three independent global radar networks would know in minutes, and if they conspired to suppress the news, there is no way the secret could be kept for long. Nor, as David Clarke says, could

the arrival of aliens be concealed from the scientific community, who are, indeed, likely to be the first to know. But of course, the 'truthers' have a response: they are so advanced they can disguise themselves from radar! So why do they, as SETI scientist Paul Davies asked, spend their time 'grubbing around in fields or meadows, chasing cows or aircraft like bored teenagers and abducting humans for Nazi-like experiments'?

My friend Chris French is mentioned several times, including the following apposite quotation: 'accepting the evidence of your own eyes can be a mistake ... even a brief exposure to the field of anomalistic psychology will reveal personal experience is often a poor guide to reality.'

This is one of the best books on the subject, and Clarke sums things up neatly: 'I had learnt that even if aliens did not exist the UFO syndrome was no less extraordinary. One of the paradoxical lessons of the phenomenon is not what it tells us about extraterrestrials but what it reveals about ourselves. Ultimately I found the only really satisfying answer to the mystery lay here on Earth with the people who see and believe in UFOs.' But: 'The one prediction I can make confidently is that UFOs will always be around in some form so long as there are humans to see and believe in them.'

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Doing Good Better: Effective Altruism and a Radical New Way to Make a Difference by William MacAskill. Guardian Books, 2015, pp 325. ISBN: 978-1-78335-049-0 £14.99 pbk.

Reviewed by Dougie Gibbard

This book is an extremely useful guide to charitable giving. It asks us to use our heads as well as our hearts when we consider to which charities we wish to donate. MacAskill refers to this as

'effective altruism'. He considers altruism to simply mean improving the lives of others. This need not mean self-sacrifice. Effectiveness means doing the most good with whatever

resources you have available. Effective altruism is trying to make the most difference you can which in turn means recognising that some ways of doing good are better than others. Whilst at

Oxford University he and Toby Ord, a postdoctoral researcher in Philosophy, investigated the cost-effectiveness of charities that fight poverty in the developing world. They discovered that the best charities are hundreds of times more effective than merely 'good' charities.

On the website of 'Giving What We Can', Toby Ord states: 'I realised that my money would do vastly more good for others than it could for me and decided to make a commitment to donating to the most effective charities I could find. Many people contacted me asking how they could do this as well, and so I set up Giving What We Can.' The site then explains that, 'Giving What We Can is the brainchild of Toby Ord, a philosopher at Balliol College, Oxford. Inspired by the ideas of ethicists Peter Singer and Thomas Pogge, Toby decided in 2009 to commit a large proportion of his income to charities that effectively alleviate poverty in the developing world. Discovering that many of his friends and colleagues were interested in making a similar pledge, he worked with fellow Oxford philosopher Will MacAskill to create an international organization of people who would donate a significant proportion of their income to cost-effective charities'. Giving What We Can was launched in November 2009. In October 2013, they launched the Giving What We Can Trust, through which members and non-members could easily donate to their recommended charities.

They share offices with '80,000 Hours' an organization founded by Will MacAskill to provide advice and research on ethical careers. Giving What We Can and 80,000 Hours are incorporated under the Centre for Effective Altruism, a registered charity in England and Wales. A TED talk on effective altruism by Peter Singer has attracted more than a million views since it first went online in 2013 (note 1). There have been several recent books published on this subject, including, *The Most Good You Can Do* by Peter Singer and *Doing Good Better*

by Will MacAskill which is reviewed here.

MacAskill's Introduction entitled 'Worms and Water Pumps' begins by considering how you can do the most good. The point is basically that the first solution to a problem is not necessarily going to be the best one and that good intentions can all too easily lead to bad outcomes. An example here explains the strange title. MacAskill suggests that we must combine the heart and the head by applying data and reason to altruistic acts. A randomised controlled trial is one solution put forward. He doesn't discuss whether the average person can do this but later we will discover that we are persuaded to let others do it for us. Two attempts to do good are explained in this section. In the second case a young MIT professor Michael Kremer tested different programmes intended to improve school attendance and test scores of young Kenyans. After several failures, a friend at the World Bank suggested he test deworming. Yes, deworming and it worked! This intriguing story might encourage you to read this book. This example partly explains the strange title of the Introduction which ends with a review of what MacAskill will be covering in the rest of the book.

Part I will comprise of five chapters, each exploring one of effective altruism's five key questions. He goes on to briefly explain the point of each question with further comments on these five questions and how in Part II these questions will be applied to specifics of how to make the necessary decisions about your charity giving. He promises to explain why each and every one of us has the power, if we so choose, to do extraordinary things. Chapter 1 titled 'You are the 1%' follows with the subtitle 'Just how much can you achieve?' After making the point that in global terms you are better off than you realise he charts global income distribution. MacAskill points out that if you earn more than \$28,000 (£18,200 – that's the typical income for working individuals in the U.S.) you

are in the richest 5% of the world's population.

Because we are relatively well off we have the opportunity to make a difference. A small amount from us can do a huge amount of good for those at the bottom. But how do you judge how much your contributions are helping others. MacAskill states that economists have sought to answer this question through a variety of methods. He states that he will deal with this in the next chapter but at this point deals with the idea of asking people about their sense of wellbeing. He illustrates this with a graph of the relationship between income and subjective wellbeing for various countries. Unfortunately this chart does not include any countries worse off than India.

Having reached Part I of the book entitled 'The Five Key Questions of Effective Altruism' we start with Chapter 2, 'Hard Trade-offs'. Key question 1 is, 'How many people benefit and by how much?' The chapter begins by raising the problems that occurred in Rwanda leading to genocide and killing on a massive scale. We are told of the experience of James Orbinski who manned a small Red Cross hospital. The casualties were on such a scale that patients were taped with 1, 2 or 3 on their foreheads; 1 meant treat now, 2 meant treat within twenty-four hours, and 3 meant irretrievable. The 3s were moved to the small hill by the roadside and left to die in as much comfort as could be mustered for them.

MacAskill suggests that on a much smaller scale we are faced with a similar reality. We must make choices of which charities we should help immediately and which we would hope to help later. This can clearly be a difficult problem, particularly as we cannot know the consequences of our actions. The author takes the Salvation Army as an example. On their website there are multiple examples of the areas where they spend their money both in terms of broad categories and more detailed examples. But it is not stated how much any of these

programmes cost. As a result you cannot know what your money might be achieving compared to investing it elsewhere.

He continues to give examples where you may be told what your money might be used for, but you will still not know the effectiveness of the charity's efforts. In some cases when comparing charities it will be evident which one provides the larger benefit. In other comparisons it will be much more difficult. MacAskill now refers to how economists researching health benefits have developed a metric called the quality-adjusted life-year or QALY in order to help make decisions about how to prioritise among different health programmes. QALY combines two health benefits; one is to help extend a person's life span and the other to improve the quality of their life. QALYs are of course not perfect measures of health benefits but can certainly be useful. MacAskill admits he talks a lot about QALYs because he considers that many easy-to-measure ways of doing good involve including global health; he gives examples.

Chapter 3 asks the question, 'Is this the most effective thing you can do?' It begins by quoting examples of a sceptical approach to international aid which he admits was his initial attitude. He later realised that he had been thinking about development incorrectly and suggests there is good reason to think that, on average, international aid spending has been incredibly beneficial. He quotes examples and explains the importance of focusing on the best charitable programmes. The book continues to follow a similar pattern of making a point by quoting examples. A sceptic may well question whether this is a fair approach. These are after all his examples.

In Chapter 4 MacAskill explains why, in his opinion, the law of diminishing returns means that, in general, it makes less sense to donate to disaster relief rather than the best charities that fight poverty. He regularly returns to referring to how one's efforts to give through earning money and being smart about where

you give, can do a tremendous amount to help others. You can save hundreds of lives.

Chapter 5 is titled, 'The Best Person who ever lived is an unknown Ukrainian man.' Another three stories here; the one concerning the Ukrainian man refers to the campaign to eradicate smallpox. I have used the word 'stories' because that's the way the issues are explained. However, I have to confess that at this stage I am getting impatient with the book just throwing many different kinds of examples at the reader. Further examples follow in Chapter 6 where one considers the ambition of a second year student of Philosophy, Politics and Economics, to enter Parliament in her effort to do good. At his 80,000 Hours organisation they carry out some rough calculations to see whether entering politics could plausibly be competitive with earning money to give. I must say that what follows depressed me in as much as the variables made the whole exercise a waste of time and resources. Of course, this is only my opinion. Their conclusion is that, 'Laura's expected impact of entering politics is as great as £8 million donated to the most effective causes.'

Part II of the book now considers effective altruism. It begins in Chapter 7 where the author weighs up which of three charities might be the best one to which you should donate. Taking each charity in turn he questions what can it do, what is its estimated cost effectiveness, and finally what is the robustness of the evidence. He also considers how well implemented is the charity and what is the room for funding? Having come to the conclusion that 'Books for Africa' is the least effective of the three, it is dropped from further consideration. There is no definite decision between the other two but he goes on to introduce further charities. At the end of the chapter there is a table of characteristics of seven top charities. It is a confusing table which still leaves you having to decide, for example, whether very good robustness of evidence but poor cost effectiveness is

better or worse than very good cost effectiveness but poor robustness of evidence.

We now move on to Chapter 8, the moral case for sweatshop goods: how can consumers make the most difference? This chapter looks at ethical consumerism through the lens of effective altruism. MacAskill tries to determine whether it's an effective way of doing good. He begins by considering sweatshops and points out that there are organisations devoted to ending the use of sweatshop labour. He suggests that these groups assume that if people refuse to buy goods from sweatshops, these factories will go out of business and their employees will find better employment elsewhere. This is not true apparently. At the end of this chapter he makes the point that people are often more concerned about feeling good rather than actually doing good.

Chapter 9 is titled, 'Don't follow your passion' with the strap-line, 'Which carers make the most difference?' This is the longest chapter in the book and in view of the subject matter perhaps this is as it should be. Once more there are details of life stories, the first considering a young man who 'knew he wanted a career that would both be personally satisfying and would make a big difference.'

Chapter 10 is titled, 'Poverty VS Climate Change ... Which cause should you focus on?' MacAskill has been focusing mainly on global poverty but acknowledges that, 'you might reasonably think that the very best way of helping others isn't to fight global poverty, or that the best way of fighting global poverty is through activities the benefit of which are more difficult to quantify than those of the charities I've mentioned'. He states that he isn't going to definitely answer the question of what cause is the most important to focus on but he will introduce a framework for thinking about the question. This leads to the conclusion of Part II and the end of chapter headings.

We have come to the ‘Conclusion: becoming an effective altruist.’ And ‘What should you do right now?’ The author suggests that if you feel empowered by what you have read, by far the most important thing for you to do is ensure that this feeling does not dissipate over the coming weeks or months. He suggests that you establish a habit of regular giving; write down how you are going to incorporate effective altruism into your life; join the Effective Altruism community and

finally tell others about effective altruism.

The ‘Acknowledgements’ are followed by 47 pages of notes listed in order of page numbers, some of which are short references and others which expand on particular issues. This is followed by a list of selected sources and resources, and finally by the index.

There is no denying that this book is a very comprehensive analysis of effective altruism. You may consider the case to be overstated but it is fascinating nevertheless. A British

reader might well appreciate more localised charities and fewer references to MacAskill’s own organisations. Would I recommend it? Not to the casual reader, but if you do want to investigate charitable giving in detail, then you should include this book in your research.

Note

1. http://www.ted.com/talks/peter_singer_the_why_and_how_of_effective_altruism?language=en

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Robert Lewis and the Phaistos Disk

Mark Newbrook

Introduction

Robert Lewis proposes (<http://www.phaistosdisk.com/>) a new interpretation of the text(s) on the Phaistos Disk as ideographic (‘ideogrammatic’) in character and as to be read primarily as Ugaritic, an ancient West Semitic language centred in what is now Syria. In respect of the content, he proclaims by way of summary: ‘The Phaistos Disk is a royal genealogy on the recto side and a mythical flood narrative on the verso side, with a war story thrown in for good measure.’



The Phaistos Disk

The two sides of the Disk appear as shown here

The Phaistos Disk is a flat disk of baked clay, sixteen centimetres in diameter; it was presented to the learned world in 1908 by French and Italian archaeologists excavating the Minoan palace complex at Phaistos in South-Central Crete (built about 1700 BCE). It is inscribed on each side with a text generally held to run from right to left (anti-clockwise), spiralling in from the rim to the centre (though

some, such as Lewis himself, read it in other ways). There are some 240 character-tokens in all, representing 45 distinct types, some pictorial and some apparently abstract; they are divided into 61 groups by broken radial lines. Very remarkably given the early date, the signs were impressed into the clay when it was soft by means of a set of cut punches or stamps. Neither the Disk itself nor the characters resemble any other items yet discovered in the Aegean (including the undeciphered Linear A), and both the intended use of the artefact and the interpretation of the text remain mysterious. Many (mostly unqualified) authors have advanced and continue to advance ‘decipherments’ and ‘translations’ of the Disk, sometimes in non-linguistic terms (calendars etc.) but more usually finding novel writing systems – and often languages or locales favoured by themselves for extraneous reasons. None of these proposals presents an overall reading which has persuaded professional scholars; and naturally they all contradict each other. Some scholars consider that the text is too short to be deciphered; others regard the Disk as a modern forgery. Those professional scholars who regard the Disk as genuine have generally come to the view that the characters are very probably syllabic in nature (each represents a syllable, as in Linear B or

Japanese kana), because of the number of distinct character-types, the type-token ratio, etc.; as will be noted, Lewis disagrees.

I became aware of Lewis’ proposal when Lewis commented on my review of Roberta Rio’s books on the Disk on the Skeptical Humanities web-site (<http://skepticalhumanities.com/>). To Lewis’ knowledge and mine, this present text represents the first academic comment on the proposal.

Lewis is very confident indeed that his interpretation is correct, and uses excessively forthright wording in presenting it (bald quasi-factual statements; in correspondence, he disingenuously asks ‘What [else] are we to do?’) – even though he knows that no such claim regarding the Disk has earned the acceptance of the relevant scholarly communities and must also be aware that many other ‘decipherers’ are just as confident that their readings are correct as he himself is about his own. This attitude is not uncommon in the genre, but naturally it discourages professional scholars from engaging in direct dialogue with the authors in question. Lewis actually presents part of his exposition as a ‘tutorial’ and has defended this usage in correspondence; but he has not demonstrated the authority needed if he is to be justified in claiming this status for his statements.

Some of Lewis' usage is unusual/obscure, notably his phrase *no representation in the world*; it is thus conceivable that I have misinterpreted his intentions at some points in his text.

Lewis argues in places for his own (complex) view concerning the ductus (reading-order) of the text (see above), and in what follows I am assuming (without necessarily being persuaded) that he is (or at least might be) correct here. Unless the general issues discussed below are resolved, there is little to be gained by considering this aspect of his case.

Although it is not completely clear why/how Lewis decided on Ugaritic as the language of the Disk text (see below), the idea that Ugaritic might be in question is not implausible in principle. Ugarit was a regional power a little later in the 2nd Millennium BCE, and is known to have had contact with Egypt and with places in Cyprus; it might well have had contact with Crete as well. Indeed, the 'maverick' scholar Cyrus Gordon 'deciphered' the (still officially undeciphered) Cretan Linear A syllabic script as representing Ugaritic or a closely-related West Semitic language (although only his own followers ever accepted this proposal). In either case, it might be asked why Ugaritic should be found written in an otherwise unknown script; but in fact the well-known Ugaritic abjad (consonantal alphabet) is not attested before the 14th Century BCE. Of course, none of this shows that the Disk text should actually be read as Ugaritic. See further below.

A linguist will raise the following three main objections to Lewis' proposal:

A: Ideograms and specific languages

There is a clear tension between the two main general aspects of the proposal: (i) that the characters are ideograms, and (ii) that the text is in a specific language and therefore displays the characteristic word order and more generally the grammar of that language. Ideograms (as Lewis acknowledges in correspondence) are non-linguistic and thus language-

neutral (a familiar example involves the stylised female and male symbols on public toilets). They express word-length meanings assumed to be shared between different cultures – not words themselves, which are naturally language-specific and have phonological and grammatical features involving the structures of the languages in question (continuing the example, words such as the English plural nouns *gentlemen* and *ladies*; if language-specific signs are used instead of ideograms, specific words must be chosen from a range of relevant synonyms or near-synonyms, for instance *gentlemen* rather than *men*, *male* etc.). Because ideograms are not part of any language (unless they are unpronounced determinatives; see below), they are seldom combined into sequences of any length; this would quickly bring into play questions of grammar, most obviously word order but often also grammatical particles, inflectional affixes, etc. In any such sequence in which individual characters represent words (or morphemes) rather than phonemes or syllables (as for example in Chinese script) and in which grammar is involved, these characters are to be described as logograms rather than ideograms. (At one time, the term *ideogram* was indeed sometimes used in this context, but this usage is misleading and is now dated, to say the least, in the academic domain.)

Lewis appears to be aware of the distinction between ideograms and logograms (though see below), and it is thus surprising that he nevertheless simultaneously asserts both (i) and (ii). When he became aware in general terms of my objection to this, he responded: 'every speaker and writer's language has an identifiable word order, even though, in the case of ideogrammatic systems, said word order will of necessity be unconscious, but discernible, nevertheless'. But such features of language are hardly experienced consciously by the linguistically-untutored anyway, regardless of the writing system in use; and, more seriously, this does not

address the point that even in the rare cases where sequences of ideograms do occur they are not in any particular language and cannot manifest features of grammar. If such sequences are in fact used in this way on a given occasion, and especially if they come to be regularly so used and to manifest grammatical features, the characters will necessarily be reinterpreted as logograms (as may have happened during the pre-history of written language). This is true even if (perhaps especially if) the 'ideograms' in question really do form a 'comprehensible narrative' in an 'intelligible' word order, as Lewis asserts is the case here.

At the very least, Lewis' terminology is tendentiously confused and inconsistent, and his proposal is at least to that extent incoherent. And it is not normally possible, as he suggests it is, to read a sequence of characters (ideograms, as he calls them; logograms, as a linguist will insist they really are) representing a sentence (etc.) in a specific language as if the characters were language-neutral and can thus be understood and read off in any language. This can occur only in exceptional cases where a) the words of the languages in question are mostly very closely equivalent and b) the word order and other principal aspects of the grammar are also very largely the same. And this can be the case only where the languages in question are very closely related. The best example is that of Chinese, which is in many ways a family of closely associated languages rather than one language; written Chinese works well across the entire family, despite the major phonological differences between the various *fangyan* ('dialects') and their word-forms. But even here there are problems: word orders sometimes differ between *fangyan*, and some non-Mandarin Chinese (notably Cantonese) has words and grammatical items lacking in Mandarin, for which extra characters have sometimes had to be invented where such varieties need to be written.

However: if two or more languages have more radically divergent word orders and grammatical structures, an extended text written with ideograms (or indeed with logograms, if the vocabularies of the languages display sufficient degrees of close equivalence to permit this), and sequenced in accordance with the word order and the grammar generally of one of those languages, will not be readily read by those accustomed to another of the languages in question. Such readers would need to reconstrue and reorder the text as they processed it. Although this is easier in (slow) reading than in listening to speech (for obvious reasons), it is still a difficult task for anyone other than a veritable pandit. Lewis says: ‘so the good news is that you, the reader, can read this disk in your own language’; but here he hugely exaggerates the facility with which a reader (especially a non-linguist) might accomplish such a task, and thus the degree to which this approach to written language might be found useful.

By way of summary: if the Disk text is indeed in Ugaritic (or in any other specific language), the characters (whatever they may be) are not ideograms, and (*pace* Lewis) the text cannot readily be understood (in any specific terms), or read off, in any other language unless that language is very closely related to Ugaritic (or whatever language is intended to be represented).²

One might (perhaps cynically) suggest that Lewis talks in terms of ideograms by way of an excuse for not providing detailed information about the forms which he identifies as represented in the text (see also below). If he described the characters in other terms, he would be relating them explicitly to Ugaritic (or other language-specific) words/morphemes, and his failure to provide linguistic details would then appear more suspect. (Lewis admits that he himself does not read Ugaritic.) On the other hand, even logograms, though clearly language-specific and linguistic in nature, need not and mostly do not

show phonology (though see Note 1 on the fact that they can sometimes do this). But they do represent particular, language-specific vocabulary items, and also any grammatical features which are obligatorily encoded in the language in question; and both of these features require identification and explication. Even if Lewis had no actual intention of ‘side-stepping’ such issues, the very fact that he decided to regard the characters as ideograms must surely have reduced, at least in his own mind, the force of what would otherwise appear as a serious obligation incumbent upon a would-be decipherer (unless it is claimed that the text is not to be read in any language at all; see below).²

B: The evidence of word order

The Ugaritic language was not itself discovered by archaeologists until 1928-29. As Lewis notes, it displays V[erb]-S[ubject]-O[bject] and SOV word order.

Lewis states: ‘The third link [in his ‘proof’ that his decipherment is correct; see below on the other two links] is the Ugaritic word order, which order cannot happen randomly, but must and will show itself, like a fingerprint, if its author is Ugaritic. As it happens, this word order could not have been known in 1908 when the disk was discovered, [and] a full twenty-one years before the Ugaritic language was re-discovered in 1929. This unique circumstance proves that the disk is a genuine historical artifact and not a hoax.’ Obviously, Lewis has come to this last, general conclusion because he believes that the evidence rehearsed demonstrates, more specifically, that the text is genuinely written in Ugaritic (unknown in 1908).

Lewis is assuming here that even if his analysis of the text as ‘ideogrammatic’ is correct it will still display the characteristic word order of the writer’s dominant language. As noted above, if an extended text of this kind displays the characteristic word order(s) and other grammatical patterns of a specific language a linguist will seek to reinterpret its signs as logograms. But the most important

point here is that Lewis regards the word orders which he ‘finds’ in the text as crucial evidence that the language is Ugaritic.

The strength of this conclusion depends upon the distinctiveness of the word orders ‘found’ in the text (or rather ascribed to the text) by Lewis. But the two word orders found in acknowledged Ugaritic texts are far from distinctive. Clausal word order is a ‘typological’ parameter of language structure which inevitably displays only a small range of possible values, in this case six possible orderings of the S, V and O functional clause-elements. Of these six orders, SOV is the most common among the languages of the world (or rather among those – a majority – which actually possess grammatical Subjects and Objects), and VSO is the third most common (SVO, as in English, is second). Highly-inflected languages in particular may manifest more than one common word order, but again most typically two of these three particular orders, or all three. Thus, many languages manifest very similar patterns to that ‘found’ by Lewis in the Disk text. Only by identifying much more specific parallelisms would one be able to adduce relatedness between such a text and a body of data in a specific language.

In order to argue that a text interpreted as manifesting examples of these two word orders must therefore represent a given language in which they both occur, one would thus need to show not merely that (a) the text in question and (b) known texts in the language in question appeared to display these two particular word orders, but, for example, that the specific distribution of word orders across genres, sentence-types, etc. in the text could be matched (or at least corresponded at a statistically significant level) with the word orders typical in similar environments in the language identified as found in the text (if any is found). Lewis does not attempt this in the material I have seen. John Huehnergard (*An Introduction to Ugaritic*, Peabody (MA), 2012, p. 82)

indicates that VSO word order is more common in Ugaritic poetic works than in prose, but that SOV still occurs in poetry and is the dominant order in prose. Although such statistical patterns are not uncommon in languages, this statement as formulated appears somewhat too imprecise to form the basis of any strong argument in support of Lewis' claim regarding what is on any interpretation a rather short text which could display only a few tokens of any given grammatical construction (on Lewis' interpretation there are sixteen SVO sequences and nine VSO – hardly a corpus). In any event, it is Lewis' business to have investigated this matter. If he can show that he has done so, I will be happy to pursue it further myself. (Another key reference would appear to be 'Ugaritic word order and sentence structure in KR' by Gerald H. Wilson, in *Journal of Semitic Studies* 27 Vol.1, Spring 1982, which I have not so far accessed.)

Failing such further analysis, there would appear to be no worthwhile grounds for Lewis' confidence that such word order features (ascribed by him to the Disk text) indicate that Ugaritic is present here. And in that case (unless there is other evidence that Ugaritic is present) the fact that Ugaritic came to be known only after the discovery of the Disk is irrelevant.

The same objection would apply, even more strongly, to any attempt to identify a mysterious text as Ugaritic (or Semitic) on the basis of possessed-possessor or noun-adjective word order. Each of these two typological parameters has, obviously, only two possible values.

C: The identification of specific meanings

As noted, it is not completely clear why/how Lewis decided on Ugaritic as the language of the Disk text. More seriously, he does not (as far as I can see) make clear how exactly he arrived at his interpretation of specific 'words' and constructions; and he does not adequately justify his identifications of 'words' and their meanings, either

singly or in combination as phrases and clauses.

Now some earlier 'decipherers' of the Disk have also presented their interpretations without detailed argument or without any specific arguments at all; see for instance the interpretations offered by Jean-Louis Pagé (*Atlantis' Messages/Messages de l'Atlantide*, Laval (QC), 2002) and Roberta Rio (*New Light on Phaistos Disc*, Bloomington (IN), 2011, *Mysterious Ritual Enclosed in the Phaistos Disc and the Kernos Stone*, Bloomington (IN), 2012). But these writers have been taken to task for this, and with good reason. (Admittedly, neither Pagé nor Rio identifies a specific language as present, which Lewis does; but Lewis himself – at least in part because of his determination to regard the script as ideographic – provides no specific details of his Ugaritic reading.) Given the large number of languages which a specific undeciphered linguistic text might represent (even if we limit ourselves to those which might be deemed historically plausible in context; note also the possibility that the language of the text is altogether unknown to modern scholars, or that the text is non-linguistic in character – as is apparently implied by both Pagé and Rio) and the effectively infinite range of specific messages which the text might convey, the principal onus is clearly upon the proposer of an interpretation of such a text to justify it – not on a professional critic to refute it. (Professionals might or might not choose to undertake this task; they are much more likely to feel called upon to do so where the 'decipherment' in question is defended in detail. See further below.)

In contrast, the decipherers of the syllabic Linear B script, the talented amateur Michael Ventris and the professional philologist John Chadwick, presented most of their reasoning (involving the Linear B data itself and other evidence) very explicitly by way of a weighty preamble to their actual decipherment – and have still been criticised in some

circles for not having been explicit enough (some 'gaps' remain, mainly as a result of Ventris' sudden death shortly after initial publication). In addition, the language of the Linear B texts as deciphered not only matched known Greek forms specifically in respect of both phonology and grammar but also confirmed earlier predictions, unknown to Ventris, as to the forms of archaic Greek.

Lewis does seek to justify his interpretations 'after the fact', by comparing them with what is known of Ugaritic. But, as noted, he does this only implicitly and in general terms, without providing linguistic detail. In such an exercise there is a major risk of special pleading. As I noted above with respect to the general issue of word order, many languages and aspects of languages in addition to those which are allegedly present are likely to share characteristics ascribed without argumentation to a mysterious text. In fact, it does not appear unreasonable to suggest that Lewis' presentation and apparently his discovery method itself might be ordered 'the wrong way round', starting from his main 'conclusions' and treating them essentially as facts rather than hypotheses to be tested against data and logic.

As far as I can see, Lewis' interpretation of the text is not impossible (although the terminological/conceptual issues discussed under A above definitely require resolution); but each time he identifies the meaning (etc.) of a character a reasonable response would be 'How do you know?' There is certainly no evidence actually presented which would justify one in accepting Lewis' reading over other 'decipherments' (or the consensus 'null hypothesis' that the script is probably syllabic but that the text has not been deciphered - and possibly cannot be deciphered, because it is too short). For some scholars, this omission would furnish adequate reason for declining to engage with Lewis' material. (I do not know whether or not Lewis realises this.)

In addition, Lewis' lack of focus upon the specifics of Ugaritic, at either end of his account of the discovery process, could again be interpreted (perhaps cynically) as part of a strategy for the 'convenient' avoidance of engagement with linguistic details.

Specifically, Lewis states: 'The first link [in his 'proof' that his decipherment is correct] [is] the glossary [his list of the meanings which he ascribes to specific characters] and rules of grammar, wherein all the signs must and do function as the glossary etc. say they will in every instance.' But what he then does is simply announce his interpretation of the script and the text, first in general terms (as a set of 'rules') and then more specifically.

At the outset, Lewis states that of the 45 signs ('ideograms') one (the 'flower') is a determinative³ and another (the 'walking man') is 'both ideogram and determinative' (this last comment would be damagingly ambiguous without the supporting context, and overall the conceptualising as expressed in Lewis' wording at this point is unacceptably loose, but his intention appears clear enough); the other 43 are simply ideograms. Lewis goes on to say that 'each ideogram can have no more than one category of [the] meaning with the exception of the ideogram for "leather", "hide" and "ox hide", which can also mean "great," and the tick mark at the beginning of any sentence, which may act either as a pronoun, or the definite article [his conventions].⁴ ... The determinatives must serve the same function, every time one finds them on the disk.' (This last is commonly the case cross-linguistically, and thus this particular claim is not unreasonable, although of course it has not been demonstrated in this instance.) Lewis goes on to claim that the 'flower' converts verbs into adverbs and nouns into adjectives, while the 'walking man' (as determinative) converts verbs into other verbs and nouns into other nouns. No independent evidence is given for these general or specific claims.

These claims regarding determinatives, especially the claim regarding the 'flower', are problematic. Firstly, determinatives are not known to have marked grammatical distinctions such as noun-adjective, in any script (see Note 3); if Lewis is correct here, either this is a novel ('derivational') function for a determinative (and Lewis should have acknowledged this explicitly), or the term *determinative* is being misused. Secondly: linguistic items (however expressed in writing) which do mark grammatical distinctions are normally present as morphemes in both speech and writing (one such is the English adverb-formative pronounced /-li(:)/ in most accents and spelled *-ly*); they are most unlikely to be written with unpronounced characters. (In languages such as English some such formatives have 'zero allomorphs', as in *fast*, which may be an adjective or the derived adverb; but in such cases these formatives are not shown in writing precisely because they are not present in the pronunciation of the particular words in question. The special case of written French, in which there are many 'silent letters', is more complex.) Thirdly: morphemes (however expressed and however written) which convert verbs to adverbs, specifically, are (predictably) cross-linguistically rather rare; interpretations involving such morphemes are thus not especially plausible unless there is strong positive evidence. And so forth.⁵

Lewis also asserts that the Disk characters can be linked in pairs to generate new meanings. This claim is not at all implausible but, again, is not supported.

The rest of Lewis' explication of the Disk text consists of a running decipherment without proper justification for the specific claims made, followed later by a summary table. There is some commentary and argumentation involving culture-specific institutions and thought patterns, but this is indecisive to say the least and cannot be used to support the idea that Lewis' decipherment is

actually correct as opposed to merely 'not impossible'. Lewis does not provide readers with the phonological forms or any other identifying lexical features of specific Ugaritic words. In particular, he displays no knowledge of the specifics of Ugaritic grammar and offers no suggestions as to how the features of Ugaritic grammar are shown in the Disk text. Again, it is perhaps 'convenient' that he interprets the Disk characters as ideograms. Without serious knowledge of the discipline, one might perhaps imagine that an extended ideographic text of this kind, if such were possible, could convey complex meanings without expressing grammatical or lexical information.⁶

Summary

What Lewis needs to do but has not done is to show that his identifications are anything more than 'guesswork', and that his 'decipherment' of the text as 'ideogrammatic' and (nevertheless) as Ugaritic is preferable to other 'decipherments' or to the consensus 'null hypothesis'.

Lewis might conceivably be right in thinking that the Phaistos Disk text might make sense as Ugaritic; but he has in no wise given us adequate reason to accept his 'decipherment'. The onus lies squarely upon him to address the errors and the conceptual confusion found in his account, and to provide much stronger justification for his claims regarding the text. Until he does this, he will not be taken seriously by scholars, especially by those who are not themselves active skeptics.

Notes

1. In response to my objections, Lewis revised his text to include discussion of the contrast between his 'ideogrammatic' solution and the common scholarly view that the characters are syllabic (see above). He states that it has been argued (by whom?) that 'one would need a cumbersome number of ideograms to serve a language', adding that he agrees and continuing by posing the question of where a corpus representing the language present might be found, or else all the missing

symbols (Lewis says ‘stamps’ but I suspect that he means to refer to the symbols – although some of the stamps themselves might in principle have survived). In fact, linguists would deny that a ‘cumbersome’ number of ideograms would be needed, since logographic systems involving characters each representing a word- or morpheme-level meaning are well-known (Chinese script is the best known) and since logographic scripts will tend to have even more characters than systems of ideograms, given that the languages in question (like any language) will inevitably have synonyms each requiring a separate character, and also grammatical morphemes, which ideographic systems lack and which are often (for instance in Chinese script) written with their own dedicated characters.

Lewis suggests that this issue of missing data could also be raised in the case of syllabaries (‘more properly’, indeed; I do not understand this comment if it applies to symbol-types *per se*, since syllabaries have much smaller inventories of characters than logographies). But in fact there is no issue at all here. The most obvious explanation for the absence of any larger corpus of data in the Phaistos Disk system (syllabic, logographic or other) is simply that all the other documents written in this system are lost – which is perfectly plausible. In fact, there is no certainty that the Disk was produced in Crete at all; it may, for instance, have accompanied tribute or trade goods from Ugarit itself (if it really is in Ugaritic; note that no demonstrably Ugaritic texts are actually known from Crete) or from some other faraway place, perhaps from a culture which is itself unknown to modern scholarship or largely so. In that event, one would not necessarily expect to find further samples of the script in Crete. Nothing definite can be reliably deduced from the uniqueness of the Disk. And in any event this (non-)issue is irrelevant to my objections to the identification of the characters as ideograms, which are not based on the general consensus that

they are probably syllabic but instead are grounded in the problems involving linguistic versus non-linguistic form and function which I have outlined above.

In further correspondence, involving his understanding of the contrast between ideograms and logograms, Lewis confounds his analysis further by twice identifying specific ideograms as standing for ‘words’, thus contradicting his immediately preceding (accurate) formulation of the distinction. This may merely involve loose writing in a text not intended for publication, but it is not encouraging.

Lewis goes on to remark that sometimes an ideogram might be a pictogram (representing a concrete, ‘photographable’ entity such as a house). This is true; but it is also true, especially in terms of ultimate origin but sometimes also at later dates, for many logograms; and in fact the pictographic-abstract contrast cuts across the ideographic-logographic contrast and is thus irrelevant here. (Some syllabic characters are derived from pictographic logograms and retain pictorial elements; the pictorial characters on the Disk are probably of this nature.) Logograms, as Lewis also notes, do sometimes contain elements (for example Chinese ‘radicals’) which provide information as to the phonology of the word in question; but this too is irrelevant here and in no way impugns my objections to his proposal.

2. Another conceptual problem arises where Lewis says: ‘I can’t help but stand in awe at the grammarian who devised this tightly integrated system of communication’. The grammar of the Disk text, if indeed it is a genuinely linguistic text, is almost certainly that of a pre-existing (spoken) language. Devising an effective writing system is a praiseworthy feat, but the person responsible for same is not a grammarian (unless (s)he also had to analyse the grammar of the spoken language first as part of the process of script-invention – but we cannot know this, neither can we even know that the script itself had not developed

gradually in earlier times through multiple hands).

3. Determinatives were ideograms (sometimes of exotic linguistic origin) which marked categories of words in some ancient logographic scripts, by way of disambiguation. *Pace* Lewis, they did not mark grammatical distinctions. In all cases where evidence is available, determinatives were not themselves pronounced in reading (Lewis accepts this).

4. Lewis adds: ‘These tick marks, by the way, don’t really belong on the disk. They were carved into the clay after firing, perhaps many years after and were not put in as an afterthought. The language of the authors of the disk had no use for the definite article, despite the fact that the language of its vandal, or editor if you prefer, clearly needed it. And honestly, who accidentally and repeatedly leaves the definite article out of their sentences?’ It is difficult to see how Lewis can possibly be confident of all this, and he does not explain how he reached these conclusions. Furthermore, his comments here raise further issues which he does not address.

5. Elsewhere Lewis makes other strange statements about grammar, for example where he parses a word said to mean ‘two’ as a noun.

6. Lewis also states: ‘The second [link in his ‘proof’ that his decipherment is correct] is the narrative, which is not only clear, but exhibits decidedly Semitic qualities in both cut and plot device.’ Obviously, he is assuming here that he has already arrived at a version of the narrative of the text, whose accuracy could be tested against what is known of Ugaritic or Semitic culture (see above on his commentary). But this is another aspect of the case where it is difficult to be confident. In particular, Lewis presents no evidence for his claim that the range of possible narratives in any text of this date is very small and is known. It should also be remembered that the slightly later Linear B tablets, also from Crete, do not contain genuine narratives of any kind; most of them represent inventories and such.

ANNOUNCEMENTS

THE EUROPEAN SCENE

ASKE is a member of the European Council for Skeptical Organisations. It has an Internet Forum on which you can read comments on sceptical issues from contributors and post your own. To access this, log on to the ECSO website (below).

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/>

Via the website you can access articles, news, and commentary on a range of topics of interest to sceptics.

The 16th European Skeptics Congress

See announcement on the front cover.

<http://euroscepticscon.org/>

The 17th European Skeptics Congress

This is planned for the summer of 2017 and provisional arrangements are that it will be hosted by the Czech and Polish Skeptics and take place at Wroclow.

OF INTEREST

SCEPTICISM, SCIENCE AND RATIONALITY (GENERAL)

Sense About Science and Ask for Evidence

Be sure to keep visiting the Sense About Science website at:

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

...and Ask for Evidence at:

<http://askforevidence.org/index>

From Max Goldman:

‘Our Ask for Evidence campaign has been working with young people to help them develop the skills they need to critically assess claims online and prevent the spread of unquestioned information.

‘I’m delighted to say that today we’re launching a lesson plan and resources to give 13-16 year olds the opportunity to explore if what they see, read, and hear is true, using evidence as the gold standard to evaluate claims. It’s free to download at TES:

<https://www.tes.com/teaching-resource/-ask-for-evidence-lesson-plan-11106634>

‘Could you share this email with schools, science teachers, or parents? Please email Victoria with any queries (vmurphy@senseaboutscience.org) and let us know how you use it.’

Good Thinking Society

Make sure that you are on the Newsletter email list of the Good Thinking Society by signing up at:

<http://goodthinkingsociety.us11.list-manage1.com/subscribe?u=1bf89c6f4a53022db2659f074&id=82f6c41d44>

Fact Check Central

This is a fabulous site for analysis of the truth and reliability of claims that make a big splash in the press and Parliament (e.g. Are you really more likely to die if you are admitted to hospital at the weekend? Can use of smartphones to diagnose depression? Are human hands less evolved than those of chimpanzees? (*Are you making some of this up?* – Ed.)

<http://factcheckcentral.org/>

Greater Manchester Skeptics Society

Here’s a cautionary tale for all skeptics groups:

‘Earlier this month Meetup deleted the account of the person paying for our Meetup page, because his email address was invalid. (We know this because he eventually found the email telling him so — go figure.) We were a little slow to fix said mess, so naturally they responded by selling our URL, membership, mailing list, testimonials and event history to the first person who asked for it. That person

immediately deleted all inactive members and all members who dissented from her self-imposed rule, which left precious few. She also sent 825 words of utter lunacy to the survivors, rebranded the group, and set about promoting dodgy nutritional claims and anti-vaccine videos.’

Read more at:

<http://www.gmss.uk/posts/meetup-2/>

and

http://www.theregister.co.uk/2015/08/28/manchester_skeptics_digital_coup/

Data Science and Statistics

View a panel discussion on this by the Royal Statistical Society.

https://www.youtube.com/watch?v=C1zMUjHOLr4&list=PLoW4ID1Kk_jxbSb2_V4UcGhjKMrciHOk7&index=1

MEDICINE (GENERAL)

The Nightingale Collaboration

Please visit the Nightingale Collaboration website for information on latest activities. If you do not already do so, why not sign up for free delivery of their electronic newsletter?

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

The Prism Podcast

Simon Singh and Edzard Ernst interviewed together at:

<http://www.prismpodcast.com/49-singh-ernst/>

Another review of Edzard Ernst's latest book

Chris French reviews *A Scientist in Wonderland* for the *Skeptical Inquirer* at:

http://www.csicop.org/si/show/truth_trouble_and_research_exposing_alt_med

Drug trials

It has been announced that 'investors in pharmaceutical companies who together represent over €3.5 trillion in investment assets support AllTrials. This means that the 25 biggest pharma companies worldwide are going to hear from their major shareholders that they expect the companies to set out plans to register their trials and report results'. See:

<http://blogs.wsj.com/pharmalot/2015/07/22/funds-join-campaign-to-pressure-pharma-to-disclose-trial-data/>

and

<http://www.alltrials.net/news/pharma-company-investors-call-for-clinical-trials-transparency/>

Homeopathy

(Successful) contestant for leadership of the Labour Party is a supporter of homeopathy:

<http://www.independent.co.uk/news/uk/politics/jeremy-corbyn-signed-parliamentary-motion-in-support-of-homeopathy-in-2010-10393413.html>

Meanwhile: 'A grandmother has lost her legal battle to force a health board to provide controversial alternative medicines on the NHS. Honor Watt, 73, sued Lothian Health Board in Edinburgh's Court of Session after the authority stopped providing homeopathic treatments to patients. The board decided in June 2013 that the money spent on giving people the substances would be better spent on conventional medicines.... Ms Watt suffers from arthritis and received homeopathic medicine for her debilitating condition.'

<http://news.stv.tv/east-central/1327620-honor-watt-loses-legal-bid-to-force-lothian-health-board-to-do-homeopathy/>

See also (by subscription):

<http://www.bmj.com/content/351/bmj.h4797>

Acupuncture

Edzard Ernst: 'In my view, this piece of acupuncture 'research' constitutes scientific misconduct'

<http://edzardernst.com/2015/08/in-my-view-this-piece-of-acupuncture-research-constitutes-scientific-misconduct/>

Osteopathy

General Osteopathic Council warns registrants against unsubstantiated advertising claims.

<http://goodthinkingsociety.org/general-osteopathic-council-warns-its-registrants-against-unsubstantiated-advertising-claims/>

Naturopathy

Britt Marie Hermes is a Masters of Science student in Medical Life Sciences at the University of Kiel. She formerly trained as a naturopath but now she tells us: 'I've concluded that naturopathic medicine is not what I was led to believe. It is a system of indoctrination based on discredited ideas about health and medicine, full of anti-science rhetoric and ineffective and sometimes dangerous practices'. Visit her website at:

<http://www.naturopathicdiaries.com/about-me-2/>

Health foods

Why you should forget 'nutraceuticals' and focus on a healthy diet instead

'Probiotic burritos and collagen beers are just two of the more unlikely 'miracle foods' to emerge in recent years. The food industry says nutraceuticals are the key to transforming our health – but the truth is far murkier.'

<https://twitter.com/guardianscience/status/638331208150061061?t=1&cn=ZmxleGlibGVfcmVjcw%3D%3D&sig=8f12fa689bdb430a48608c5d66266daeab506769&al=1&refsrc=email&iid=97699f63ee2940febafd1dba381b2f66&autoactions=1441035341&uid=379185574&nid=244+40>

Junk food science

'How to protect yourself from junk food science: A guide for reasonable consumers' by John Tozzi at:

<http://www.bloomberg.com/news/articles/2015-08-10/how-to-protect-yourself-from-junk-food-science>

Anti-vaccination

From the blog of Anthony Cox, Senior Lecturer in Clinical Pharmacy at the University of Birmingham: 'Last week, I discovered that two UK homeopathic pharmacies (Helios and Ainsworths) were selling anti-vaccination books.'

<http://anthonycox.org/?p=2918>

Screening

'Misconceptions about how screening works, its limitations and possible harms are still being perpetuated by media stories and high profile cases.' Sense About Science has released a new edition of their guide Making Sense of Screening to address the unrealistic expectations of what screening can deliver.

<http://www.senseaboutscience.org/pages/making-sense-of-screening.html>

PSYCHOLOGY AND PSYCHIATRY

Replicability of the results of psychological research

A study has revealed serious problems in the replicability and therefore the validity of psychological research.

<http://www.sciencemag.org/content/349/6251/aac4716.full>

see also

<http://www.theguardian.com/science/2015/aug/27/study-delivers-bleak-verdict-on-validity-of-psychology-experiment-results>

'Satanic abuse'

See Chris French's article on the Carol Felstead 'satanic abuse' in *The Conversation*:

<https://theconversation.com/the-legacy-of-implanted-satanic-abuse-memories-is-still-causing-damage-today-43755>

Memory

Barrister Harry Potter asks whether we can believe the evidence of our own eyes on Radio 4's 'A History of Ideas'.

<http://www.bbc.co.uk/programmes/b0640mxk>

False memory

Radio 4 broadcast an excellent programme about false memories on

22.7.15 featuring, amongst others, Elizabeth Loftus, Kimberley Wade, Giuliana Mazzoni, and Chris French. You can listen to this on:

<http://www.bbc.co.uk/programmes/b062kx4x>

The September 2015 newsletter of the British False Memory Society is now available online and contains a special feature on the 2015 AGM. The Legal Forum highlights a number of recent landmark rulings in the High Court. The Society had recently introduced a student membership (see page 8 of the newsletter).

http://bfms.org.uk/files/6214/3981/7849/NEWSLETTER_Sept_2015.pdf

False confessions

‘Sture Bergwall was one of the world’s worst psychopaths, convicted of eight murders. But then an investigator discovered he had made it all up.’

<http://www.telegraph.co.uk/film/the-confessions-of-thomas-quick/sture-bergwall-serial-killer/>

Trauma and epigenetics

Can the effects of Holocaust trauma: be epigenetically inherited? The media recently reported that a scientific investigation has found that this was indeed possible (see below). But Jerry Coyne thinks this is another case of bad science reporting:

‘The authors are pretty careful in their statements, but do say this in the abstract:

This is the first demonstration of transmission of pre-conception parental trauma to child associated with epigenetic changes in both generations, providing a potential insight into how severe psychological trauma can have intergenerational effects.

‘Others have not been so careful, particularly science journalists, who either don’t read the paper or lack the expertise to evaluate it. Check out, for instance, this Guardian piece (below) about the Yehuda et al. paper. Its author, Helen Thompson, seems completely unaware of the many problems with the study, and presents no caveats. It’s an example of bad science reporting. There’s another

uncritical piece at Scientific American (see below)’.

<http://www.theguardian.com/science/2015/aug/21/study-of-holocaust-survivors-finds-trauma-passed-on-to-childrens-genes>

<http://www.scientificamerican.com/article/descendants-of-holocaust-survivors-have-altered-stress-hormones/>

Reference: Yehuda, R. et al (in press) Holocaust exposure induced intergenerational effects on FKBP5 methylation’, *Biological Psychiatry*. Accessible at:

GREEN ISSUES

Climate change

Investors have written to corporate members of influential EU trade lobby groups accused of undermining action on climate change.

http://www.theguardian.com/sustainable-business/2015/sep/10/bp-edf-proctor-gamble-face-pressure-over-climate-change-lobbying?CMP=tw_t_a-science_b-gdnscience

From Cornelius de Jager:

‘In a recent press release (August 7, 2015) the Int. Astronomical Union gives information on the recent revision of the international sunspot numbers. By comparing the thus obtained gradient of the annual sunspot numbers with that of the average terrestrial ground temperature it is concluded that significant positive deviations of the temperature gradient started already during the 18th century, thus strengthening the claims about anthropogenic effect on the earth’s temperature.

‘My comment is that the solar dynamo has two components, the equatorial and the polar one. Both contribute to the Earth’s climate, the first for 66% the other for 34% (De Jager et al. 2010). It is to be regretted that the authors that stand on the basis of the press release only considered the equatorial component, neglecting the polar one. That may give rise to doubting their conclusion.

‘In a recent paper (De Jager and Nieuwenhuijzen 2013) the two, bidecadally smoothed components are

taken into account (agreed: with the previously accepted sunspot numbers). It is found there that significant non-solar deviations from the solar component start only early in the 20th century – see Fig. 4 in that paper.

‘It would be interesting to repeat this research with the new data.’

C. de Jager, S. Duhau, B. van Geel, 2010. Quantifying and specifying the solar influence on terrestrial surface temperature. *J. Atm. Sol. Terr. Phys.* **72**, 926

C. de Jager, H. Nieuwenhuijzen, 2013. Terrestrial ground temperature variations in relation to solar magnetic variability, including the present Schwabe cycle. *Natural Science*, **5**, (10), 1112.

<http://dx.doi.org/10.4236/ns.2013.510136>

Genetically modified crops

From Sense About Science:

‘Today, 28 research organisations have written an open letter to the Scottish Minister for Rural Affairs Mr Richard Lochhead urgently requesting a meeting to discuss the Scottish Government’s plan to ban the cultivation of genetically modified crops. Signatories on the open letter include the Royal Society of Edinburgh, The Roslin Institute, and the European Academies Science Advisory Council.’

http://www.senseaboutscience.org/data/files/GM/Letter_to_Mr_Lochhead_17_Aug_2015.pdf

<http://www.bbc.co.uk/news/uk-scotland-scotland-politics-33959450>

‘The Scottish Government’s decision has been made regardless of current or future scientific evidence about the benefits of particular GM applications. It consigns Scotland to ageing agricultural practices, risks constraining Scotland’s contribution to research and leaves Scotland without access to agricultural innovations that are making farming more sustainable elsewhere in the world.

‘It is vital that the research community meet with Mr Lochhead and prevent this decision becoming entrenched. Can you help by emailing Mr Lochhead and asking him to meet

with researchers to address their concerns?

<http://www.scottish.parliament.uk/msp/currentmsps/Richard-Lochhead-MSP.aspx>

POLITICS AND PUBLIC POLICY

Effective altruism

‘Effective Altruism is a growing social movement that combines both the heart and the head: compassion guided by data and reason. It’s about dedicating a significant part of one’s life to improving the world and rigorously asking the question, “Of all the possible ways to make a difference, how can I make the greatest difference?”’

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

Benefit claimants

‘How DWP has confused everyone by releasing the right data for the wrong question on benefits deaths.’

<https://storify.com/bengoldacre/how-dwp-has-confused-everyone-by-releasing-the-right>

RELIGION

The Bible

‘What Your Preacher Didn’t Tell You presents some basic facts about Bible history in a straightforward manner so that uninitiated readers can discern certain fundamental truths – that the Bible contains myths, historical distortions, and conflicting messages.’

<http://www.no-gods.com/>

MISCELLANEOUS UNUSUAL CLAIMS

Psychics and the police

Are the police really being urged not to ignore advice from psychics even though they don’t have psychic ability? E.g. see:

<http://www.theguardian.com/commentisfree/2015/sep/01/psychics-police-investigation-peter-sutcliffe>

Not really. The College of Policing recently brought out a consultation document about ‘Missing Persons’. See:

<https://www.app.college.police.uk/consultation/missing-persons-consultation/>

There is a paragraph on psychics as follows:

‘High-profile missing person investigations nearly always attract the interest of psychics and others, such as witches and clairvoyants, stating that they possess extrasensory perception. Any information received from psychics should be evaluated in the context of the case, and should never become a distraction to the overall investigation and search strategy unless it can be verified. These contacts usually come from well-intentioned people, but the motive of the individual should always be ascertained, especially where financial gain is included. The person’s methods should be asked for, including the circumstances in which they received the information and any accredited successes.’ See:

<https://www.app.college.police.uk/consultation/missing-persons-consultation/investigation-consultation/#psychics>

To allay any fears that the police actually take psychics seriously, a spokesman appeared on YouTube to stress that there is no evidence that psychics possess any special ability in assisting missing persons investigations and the reference to ‘any accredited successes’ will very likely be removed from the final document. See:

<https://www.youtube.com/watch?v=5NgRC7QUyys&feature=youtu.be>

The Official Houdini Séance

‘Take part in - and support - The Official Houdini Séance 2015: a day of science, history, escapes, and magic ... on Halloween!’

https://www.facebook.com/skeptics.eu/posts/10153559270848665?comment_id=10153575500308665&offset=0&total_comments=1

‘Haunted Talk’ podcasts

‘These podcasts will cover the paranormal, dark and weird history, road side attractions or anything else we find interesting and fascinating and are eager to share with you.’ Here Chris French speak on the subject of ‘On being a professional skeptic’

<http://hauntedwalk.com/podcasts/>

<http://www.sciencedirect.com/science/article/pii/S0006322315006526>

Rainwater or tap water for your plants?

Which? recently did a test to see whether there is any difference between watering plants with rainwater or tap water. The results were marginally in favour of tap water. The experts believe this was because the tap water was less acidic. However they also felt that ‘the results weren’t different enough to offset the environmental benefits of using rainwater, given the upfront need to clean tap water’. There were ‘20 samples of plants – including fuchsias and pelargoniums grown in the same Best Buy peat-based compost’. ‘With a pH of 4.49 ... the rainwater compost was too acidic even for gardenias’. (*Which?* August 2015)

Magic

Watch two magicians’ faked upstaging of a Sky News broadcast (amazing!).

<http://www.shortlist.com/entertainment/tv/watch-two-magicians-upstage-a-sky-news-broadcast>

Palm reading

Michael Marshall of the Good Thinking Society pays an undercover visit to a palm reader:

<http://us11.campaign-archive2.com/?u=1bf89c6f4a53022db2659f074&id=2ca29bb775&e=107bf613a2>

Ever tried debating Deepak Chopra?

Account of this experience by Adam Rutherford of ‘Little Atoms’.

<http://littleatoms.com/science/ever-tried-debating-deepak-chopra>

FREEDOM

Libel Reform

KEEP LIBEL LAWS OUT OF SCIENCE

Steve Paris & Angel Garden vs Andy Lewis & Melanie Byng

See information on the judgement in this libel case at:

<http://www.quackometer.net/blog/2015/07/libel-case-paris-garden.html>

UPCOMING EVENTS

THE ANOMALISTIC PSYCHOLOGY RESEARCH UNIT AT GOLDSMITH'S COLLEGE LONDON

<http://www.goldsmiths.ac.uk/apru/speakers.php>
<http://www.skeptic.org.uk/events/goldsmiths>

Seminars are held on Tuesdays at 6:10 p.m. in Room LGO1 in the Professor Stuart Hall Building (formerly the New Academic Building), Goldsmiths College, University of London, New Cross, London SE14 6NW. Talks are open to staff, students and members of the public. Attendance is free and there is no need to book.

You are strongly recommended to register (at no cost) with the APRU's 'Psychology of the Paranormal' email

list to ensure that you are informed of any changes to the programme. Visit:

<http://www.gold.ac.uk/apru/email-network/>
<http://www.twitter.com/ChrisCFrench>
or
<http://feeds.feedburner.com/apru>

SKEPTICS IN THE PUB

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

<http://www.skeptic.org.uk/pub/>
<https://twitter.com/SITP?refsrc=email>

CONWAY HALL LECTURES LONDON

25 Red Lion Square, London
WC1R 4RL

The upcoming programme features a number of events of great interest to skeptics. For details visit:

<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/>

SENATE HOUSE LIBRARY

'Voices in the Dark'

'Senate House Library has arguably the most comprehensive collection on the paranormal in the UK. To honour these holdings, this season of events aims to explore the séance, which is central to the public understanding and cultural presence of the supernatural.' See:

<http://senatehouselibrary.ac.uk/visiting-the-library/events/voices-in-the-dark/>

THE ASSOCIATION FOR SKEPTICAL ENQUIRY (ASKE)

- ASKE is committed to the application of rational, objective and scientific methods to the investigation and understanding of ideas, claims, and practices, especially those of an extraordinary and paranormal nature.
- ASKE is committed to challenging the uncritical promotion of beliefs and claims which are unsupported or contradicted by existing objective and scientific knowledge.
- ASKE opposes the misinterpretation and misrepresentation of science for purposes which deceive the public.
- ASKE supports the objective evaluation of all medical or psychological techniques offered to the public and opposes the uncritical promotion of techniques which are unsupported or contradicted by existing scientific knowledge.
- ASKE supports all efforts to promote the public awareness of the rational and scientific understanding of extraordinary and paranormal claims.
- ASKE is committed to a rational understanding of the reasons and motives which underlie the promotion and acceptance of irrational and paranormal claims and beliefs.
- ASKE accepts the rights of individuals to choose for themselves their beliefs about the world.

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>>