
Skeptical Adversaria

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FROM THE ASKE CHAIRMAN

Michael Heap

The absurdities of life provide rich material indeed for the student of human psychology. There is scarcely a limit to the degree to which people – you and I and everyone else - may be persuaded to behave and think in ways that are illogical, meaningless and bizarre while believing the opposite to be the case.

There are no boundaries, other than those imposed by the human condition, to the range of ideas and beliefs that people are willing to accept and the variety of behaviours they are willing to engage in under persuasion from others, even when neither coercion nor any immediate profit, such as financial reward, is involved. The intelligence of the participants is hardly an issue.

There are two arenas of human activity in which these observations are peculiarly apposite, namely religion and healing. The capacity of both enterprises to generate such a rich diversity of nonsensical and non-productive human activity is astonishing. Two events appeared in the news recently that serve to remind us of this.

As I write, the General Synod of the Church of England is engaged in a protracted and passionate debate about whether women should be ordained as bishops. All protagonists in this debate share a belief that the universe was created by a uniquely divine being – God – who, amongst all of the matters with which he concerns himself, the sexual identity of Anglican bishops on Planet Earth is of particular import and he has conveyed his wishes on this matter through a book – the Holy Bible.

I sometimes wonder if these preposterous, self-indulgent, self-importantly silly people ever ponder on the utter irrelevance of their little drama to the day-to-day realities of the rest of humankind, terrestrial and beyond. Do they ever remind themselves that the Earth is an unimaginably small speck of material in an unfathomably expansive universe? To be sure, it is inhabited by around 6 billion people but, in the throes of their blathering and posturing, do they at any time pause to think that the vast majority of human beings have not the remotest interest in, or indeed knowledge of, what they have to say or do and what decision they will eventually arrive at?

Warning: during this narrative there comes a point when the reader is put at risk of falling to the ground in convulsions.

The second news item combines both religious faith and healing, so we can be sure we are in for an extra-sized dollop of human silliness. First, though, I must issue a warning. During this narrative there comes a point when the reader is put at risk of falling to the ground in convulsions. Accordingly I shall provide

a warning to you of its imminence so that you may take a tight grip on your chair.

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I read this story in the July 4th issue of the *Times* and it was headlined 'Spiritualist world splits over failure to expel charismatic healer who raped his patients'. Pause, if you will, to admire this wonderful headline. It is so replete with meaning and profound truths about human nature as to constitute a short story in itself. I am tempted here merely

to state, 'Reader, I rest my case' and leave it at that. But bear with me a little further.

In 2006 Mr Mervyn Wright, renowned in several countries as a charismatic healer, was appointed President of the International Spiritualist Federation, a post first held by Sir Arthur Conan Doyle. Mr Wright, now 62 and a former lorry driver from Hornchurch in Essex, claims to offer healing through the spirit of a 1,000-year-old Chinese medicine man and a 300-year-old Native American called Cherokee. On his website he proclaims, 'A wonderful Chinese doctor from the spirit world, Dr Lu, treats patients through me. He can take over my subconscious and nervous system which enables me to become Dr Lu's personality.'

Mr Wright was especially popular with his female patients and specialised in 'naked (Chi) energy massages'. His former wife, Maria Ottersson, who is president of a spiritualist group in

Karlstad, Sweden, explained, 'Women find him very attractive. He is a very charming man and very charismatic'.

Months after his election by the international federation he was charged with sexual assaults against seven patients, the youngest of them a 14-year-old girl, while he gave them massages. The offences took place at various centres in Sweden. He selected his victims for their 'special energies' and told them to remove their clothing to facilitate contact with the spirit world.

Those victims who did threaten to complain were warned by Mr Wright that they would be punished by contracting fatal illnesses from the spirit world.

He was eventually jailed for 5 years for indecently assaulting and raping girls and young women between 2003 and 2006. However, the International

Federation decided to inform him only last month (June 2008) that he faces expulsion, after a vote by members. A leading woman spiritualist said: 'It was a very emotive debate. His followers are totally besotted. Most of them are women and many of them are in love with him. They are genuinely convinced that he could not do anything wrong.'

Those victims who did threaten to complain were warned by Mr Wright that they would be punished by contracting fatal illnesses from the spirit world. Indeed, his wife, Ms Ottersson, had suspicions about his activities during their marriage: 'I noticed he had an interest in young, pretty girls and he seemed to spend more time in trances and giving them massages'. However [Warning: please would you now take a tight hold of your chair] he used his connections with the spirit world to convince her that she was wrong. 'When I complained he would put himself into a trance and have the spirit world talk to me. I now know it was just him talking.'

LOGIC AND INTUITION

Many of the puzzles that have appeared in this column have concerned probability (which has a great deal to do with the application of logic) and a few more of these are to come. The main puzzle in this issue gives readers a break from probability.

More on coin tossing

In the last issue of the Newsletter I left you with the following question about probability. If you keep tossing a coin, does the probability of your having tossed an equal number of heads and tails increase or decrease with each toss?

The answer to this is on page 12.

Which sentence is true?

This puzzle is an interesting variation on a classical theme. You are to say whether the following sentences are true or false in each case.

1. Their is two mistakes in this sentence.
2. Their is three mistakes in this sentence.

3. Their is four mistakes in this sentence.

See page 12 for the answer.

Call for Contributions

If you have attended a conference or presentation, watched a programme, or read an article or book that would be of interest to readers, why not write a review of this, however brief, for the *Sceptical Adversaria* or the *Skeptical Intelligencer*? Or would you like to take over one of the regular features in the *Adversaria*?

ONE OF US

Quite a number of the journalists who have previously (probably unknown to themselves) received the accolade of being ‘one of us’ are writers for the *Times* newspaper. Part of the reason for this is that we happen to read the *Times* in our household. It is however a newspaper that is more likely than many others to feature articles that appeal to ASKE members.

Step onto the platform Mr Daniel Finkelstein! Mr Finkelstein penned a commendably sensible article in the July 9th issue of the *Times* entitled ‘Justice can’t be done in secret. And here’s why’. His subheading provides the answer: ‘We will always try to twist the evidence to fit our theories. Especially when we are wrong’.

On April 19, 1989, a young woman jogger in Central Park was attacked, brutally beaten and raped. She almost died and had no memory of the attack. As Mr Finkelstein reminds us, ‘The case of the Central Park Jogger became a symbol of a city out of control....New York police rounded up a gang of young African-Americans who quickly confessed. Apparently they liked to attack strangers, regarding their frenzied assaults as a form of entertainment. Wilding, they called it, and the word became famous’.

Ten years after they were sentenced someone else, named Mattias Reyes, who was in prison for another rape, confessed to the offence. In fact, ‘The wilding story was nonsense. The confessions were coerced, as the young men had claimed for years’.

This adamant refusal to accept that one has been wrong in the face overwhelming evidence that one has is very typical.

Mattias’s guilt was established beyond doubt by DNA testing. The wrongly convicted teenagers had left no DNA and their confessions were inconsistent with each other and with the facts of the case. The District Attorney concluded that the convictions must be overturned.

‘Yet’, Mr Finkelstein informs us, ‘the prosecution lawyer in the original

case refused to accept this. She was furious. She stridently opposed the finding of the DA. So did the New York Police Department. They convened a panel that concluded that the police had done nothing wrong and that, even if Reyes was guilty, he may not have acted alone. They concluded, lamely, that the teens must have started the assault with Reyes taking his opportunity later’. The wrongly convicted men were eventually freed.

Mr Finkelstein reminds us that this adamant refusal to accept that one has been wrong in the face overwhelming evidence that one has is very typical. He invokes the social psychological concept of cognitive dissonance to account for why in such circumstances we refuse to accept what is clearly true. ‘This is the tension that arises when a person holds two attitudes that are psychologically inconsistent. And it is tension that is hard to live with, tension that simply has to be resolved....You believe that you are a good person, say, yet you know you have done a bad thing. There is dissonance. You resolve it by deciding that the bad thing was not that bad. The worse your behaviour, the harder you will try to twist it around in your head until you can reconcile it with your view of yourself’. He refers us to a ‘brilliant’ new book by Carol Tavris and Elliot Aronson - *Mistakes were made (but not by me): Why we justify foolish beliefs, bad decisions, and hurtful acts* (New York: Harcourt, 2007).

Cognitive dissonance is one of those psychological concepts that provide great service to sceptics in understanding why people (including sceptics and scientists, by the way) sometimes think and behave in a manner that contradicts all the available evidence. It has been around for over 50 years now and I recall studying the

theory and research back in the late 60s (but have not kept abreast of developments since). As Mr Finkelstein states, ‘Cognitive dissonance explains a great deal’. Indeed, at the time of my studies its critics were complaining that it was being used to explain far too much. Related to this it seemed that, whatever the outcome, any experiment designed to demonstrate it could always be interpreted in support.

Cognitive dissonance theory predicts that where there is a contradiction between one’s behaviour and one’s beliefs, one will interpret the behaviour or revise the beliefs in a way that reduces their incongruence, thus easing the associated psychological discomfort. One experiment I recall that neatly demonstrated this required student participants to argue on behalf of the political party –Republican or Democrat – that they did *not* support. Half the participants were amply paid for their efforts whereas the other half received a pittance. At the end of the experiment the attitudes of the poorly paid group towards the political party for which they had campaigned had become less negative than those of the well-paid group. The explanation offered was that the poorly paid group experienced more cognitive dissonance than the well-paid group, who could justify their behaviour from the financial rewards alone.

‘It is commonly thought that we have theories and that they are tested by the facts. The opposite is true.’

I’m not sure that it is useful to invoke cognitive dissonance theory to explain our denial strategies when we are faced with public evidence that we have made a major blunder that has

inconvenienced or hurt other blameless people. Nevertheless we can all agree with Mr Finkelstein when he says, 'It is commonly thought that we have theories and that they are tested by the facts. The opposite is true. We have theories and then we strive mightily to

fit the facts into them, ignoring those that don't quite work or reinterpreting them if we have to. The more we have at stake emotionally, the more pressing this task becomes.'

Note from the Editor: Readers are

invited to send extracts from newspapers, magazines, etc. in which the writer gives a readable sceptical critique of a topic of interest to members of ASKE or, conversely, in which the person hasn't a clue what he or she is talking about.

SKEPTICS' CORNER

'Thoughts on epistemology' by Max Blumberg

ASKE member Max Blumberg offered this contribution to the Newsletter arising from an email exchange he had with a religiously-minded colleague concerning epistemology.

From Max

I am interested in epistemology and how we 'know' anything. I think deep down, like Pythagoras, I am a quantitative determinist. That is, it is in theory possible to assign a number to everything in the universe (including by the way, every molecule of every neuron in our brain). These numbers can then be used to create models that predict what will happen next in the universe, what any one person will do next, what any organisation will do next, and so on. There are a few difficulties with this approach, one being that the universe is so large that it might take billions of years to assign numbers to everything. Certainly quantitative 'science' has not even managed to assign numbers to one trillion trillion trillionth of what is out there.

A key objection to this reductionist approach includes claims that there is a 'ghost' in the machine which cannot be quantified. This is usually 'God' in whatever shape or form. There is not much scientific evidence for this, but people claim faith-based experiences and of course these cannot be disproved (or proved).

Alternative paths for explaining the universe and phenomena in it (organisations, people, etc) include the use of less precise, but more detailed qualitative methods. Unfortunately, fans of this approach are as bad as we quants

and seek to use ***only*** these methods because they believe quantitative methods are too limited (because they couldn't predict the 80s crash or the credit crunch). The right answer is of course to use both approaches together. But then someone must decide how much resource to invest in one approach versus the other. So the haggling goes on (you want to be at a psychology conference pub – I've seen punch-ups).

**I am a quantitative determinist.
That is, it is in theory possible
to assign a number to
everything in the universe.**

Even more interesting is the epistemological possibility that one could explain even more phenomena by adding additional approaches to the quantitative/qualitative stable. These include the 'ghost in the machine' (e.g. God). But we're nowhere close to harnessing this concept in a predictable way and so it doesn't appear in mainstream scholarly literature. (And where it does appear in theological theory, the 'faith' concept allows them to draw pretty much any conclusion they want e.g. it didn't work out as our theory predicted because God moves in mysterious ways; My way is not your way; and so on).

If you haven't already done so, you might enjoy readings on the Philosophy of Science and also on Epistemology in general.

Cheers

Max

PS: Many scientific quantitative models are of the form:

$$y = f(x_1, x_2, \dots, x_n) + e$$

where

y is the phenomenon to be explained (profit or some other organisational outcome; the behaviour a rat will exhibit next; which horse will win; and so on);

x_1, x_2 etc. are the factors thought to impact y. Clearly many were left out in the 80s and in the credit crunch. And there are too many in the universe to include anyway; and

f is the model (function) that links the x s and y.

But the most interesting philosophically perhaps is e. This is the error between what our model predicted from the x s (y) and what we actually saw (let's call it z).

$$\text{So } e = y - z.$$

Clearly e was ***huge*** in the credit crunch and the amount explained by the model was much less than what was not explained by the model. In other words, e was large. e could be reduced by adding more x s (if we knew which to add and we had the resources to add and measure them). Unless God plays a hand, in which case no amount of modelling would help (mysterious ways).

(As a comparison, my own PhD model explained 56% of a couple's relationship satisfaction using only 2 x s: their personalities and their conflict behaviours – and personality was negligible! 56% is considered huge. So my e was 44% which in modern psychology is considered good. One possibility is that my measurement of

satisfaction, personality and conflict was rubbish and biased towards giving me a successful model).

But my main point is that at least quantitative scientists include 'e' in their models, an acknowledgement that there is stuff we just can't yet explain. Even investment bank models would have had this 'e', but the analysts for marketing purposes tend not to advertise it if it is high. This could be one reason, for example, we have unexpected credit crunches.

Similarly, even mainstream psychometric practitioners and consultancies may tend not to publish the error in their

models when claiming to have predicted or remedied some situation. Of course, the act of trying to create models is the important thing, rather than relying on pure guesswork. But statisticians always demand to know 'e' when claims are made (and also statistical probability of the model being flukishly correct – the so-called Type 1 error that first year stats students hate so much). An article I read last night says science would get further by being more tolerant of Type 1 errors (because it encourages people to try innovative approaches) and less tolerant of Type 2 errors (the probability of rejecting a model when it is correct).

That is:

Type 1 model error: Accepting a model when it is in fact wrong (actually, science is more subtle: it is really 'Not rejecting a model when it is incorrect' because scientists never fully accept a model because of 'e' – important point)

Type 2 model error: Rejecting a model when it is in fact correct.

So notice the emphasis of science on 'rejection'. There is no mechanism for accepting any model. At best, we say that 'So far, we can find no fault'. This applies to psychotherapy models, organisational models, human capital models, etc.

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'Leaps of Faith' by Alan Sausse, Edd Edmondson, Martin Poulter and Niall Taylor

The following is a very interesting discussion from ASKE.net recently, provoked by a posting by Alan Sausse, entitled 'Leaps of faith'.

From Alan Sausse

I found myself thinking about 'leaps of faith' this week. I'm a sceptic, not only in the specific sense that any ASKE member might be, but in the more general, philosophical sense - i.e. like David Hume I think that in most, if not all, areas, there is no certainty: doubt always remains.

It seems fairly clear that a good understanding of mathematics, physics, evolution, etc. can provide some very useful explanations of the world around us. Nevertheless, doubt always remains.

Having said that, I am always inclined to take a scientific, physicalistic point of view. It seems fairly clear that a good understanding of mathematics, physics, evolution, etc. can provide some very useful explanations of the world around us.

Nevertheless, doubt always remains. Take evolution, for example. Darwin's

ideas of natural selection, survival of the fittest (most well-adapted), etc. seem to me to be simple, elegant and powerful - and to provide a pretty good explanation for how the living world has become what it is. Not only that of course, but there's a huge volume of evidence: carbon-dated fossil records, observations of natural selection in action (e.g. moths changing colour over tens of years in response to increased pollution), and so on.

However, I wouldn't claim that this *proves* that evolutionary theory is accurate, that we're evolved from apes, etc. Instead I'd say that it's *very strongly supportive* of that theory and that although there must always be doubt - e.g. (seemingly) flippant arguments that all of these fossils were placed deliberately by God in order to trick us and to test the true believers - the leap of faith involved here seems very small to me.

Conversely, the leap of faith involved in believing that God carefully placed all those dinosaur bones in rock strata, and made sure that the carbon-dating results showed that they were millions of years old - in order to test our faith by making it seem very unlikely that the earth is only 6,000 years old, that dinosaurs walked the

earth with Adam and Eve, etc. seems enormous to me. And this seemed fairly convincing logic, superficially.

How are 'leaps of faith' to be measured? There are no units of measurement here, no scale, nothing - just ideas and feelings.

However, on reflection, there seem to be a couple of possible objections. Firstly, it relies on prior beliefs so tends to be circular. Because I started out with a view that God's existence is highly unlikely, the idea that (a) he exists and (b) evidence of evolution is his way of testing our faith seems laughable. However, someone with an existing faith in God might find it much less of a stretch and, perhaps, more likely to be true than all of that dangerous Darwinian nonsense (man is descended from the apes? But that's ridiculous!). So the same evidence could, conceivably, be used to strengthen (or, at least, not to weaken) the beliefs of both believers and non-believers.

Secondly, how are 'leaps of faith' to be measured? There are no units of measurement here, no scale, nothing - just ideas and feelings (or perhaps I, as a

physicalist, should talk only of chemical reactions and electrical impulses in the brain...). Can I justify taking position (a) rather than position (b) simply because the leap of faith involved in believing (a) *seems* smaller? Is that really a convincing argument?

Grateful for any comments.

From Edd Edmondson

1. The explanation we have (evolution) (*for 'how the living world has become what it is'*) is more tightly predictive. There are more ways to falsify evolution than there are to falsify some hypothesis of the world being created by God. God could have created any possible world, so any possible world fits the God hypothesis. This makes evolution the better scientific theory even if neither theory is falsified by the evidence we have.

If you see something that doesn't fit with your earlier evidence you've good reason to investigate it more carefully.

I don't see 'leaps of faith' coming into it, although the whole business of valuing predictive theories is tied to Occam's Razor of valuing the simplest, and through that perhaps, to what you mean by a leap of faith.

2. Being a good little Bayesian, I'd say that use of prior beliefs can perhaps lead to circular arguments, but it's still a useful thing to do. It's most problematic when the prior beliefs are not founded upon some prior evidence. If you see something that doesn't fit with your earlier evidence you've good reason to investigate it more carefully. If it seems to strengthen both sides of an argument, I'd suggest one side or another has been misinterpreting the earlier evidence they had, and that therefore it's not a problem inherent to using prior beliefs, but one inherent to a particular prior belief.

3. It's possible to put ideas like rewarding theories for their predictiveness, Occam's Razor, 'extraordinary claims require extraordinary evidence' and so on into

statistics and get some numbers assigned to them. It's much more practical when you have mathematical models to do this with (which doesn't lend itself quite so well to some of these questions). They're maybe not perfect - they don't always encompass all we might like - they only reward predictiveness in the sense of restricting the number and range of inputs we might like and might not select based on some innate simplicity to the theory for example, but it's not an area where we're completely unable to take a mathematical approach.

From Martin Poulter

(*Re: '.....perhaps I, as a physicalist, should talk only of chemical reactions and electrical impulses in the brain...'*) Physicalism doesn't entail eliminativism. In other words, just because your ideas and feelings supervene on electro-chemical activity in your body, it doesn't follow that you don't have ideas or feelings. My computer is made of bits of plastic, metal and semiconductor connected in a certain way. It would be wrong to infer from that that I don't really have a computer, just a lot of components.

From Alan Sausse

Fair point. A few months ago I read an interesting (but rather impenetrable) paper by Noam Chomsky that touched on this issue. Metaphysical monism vs methodological dualism.....in other words, although ideas can be thought of correctly as electrical activity or chemical reactions, this hasn't (yet) been a very useful method for understanding them. So in other words it is usually more useful to say, 'I am a human with ideas and feelings' as opposed to 'I am a vessel where certain chemical reactions and electrical impulses take place', even if in the physical sense, the latter is also true.

I suppose Occam's Razor can be brought to bear here - although again, I'm not aware of any 'proof' of its applicability - in which case, are we any further forward?!

Thanks.

From Niall Taylor

Coming at this from a mundane scientific point of view and ignoring leaps of faith as a post-modernist, all-points-of-view-are-equally-valid, clap-trap philosophical distraction (no offence!) the thumping great difference between creationism and evolution is that early evolutionists discovered fossils, strata, species divergence and adaptation and so forth (all from different scientific disciplines) and as the evidence accumulated built a theory to account for it, despite this theory flying in the face of the prevailing religious view. Creationism on the other hand looks at the biblical accounts of creation (both of them) and then, from this 'initial conclusion(s)', interprets existing evidence in order to arrive at it/them.

When you manipulate evidence to get the answer you want you will always get the answer you want whatever evidence you have.

Creationism is the absolute opposite of evolutionary theory in that it doesn't modify the theory to fit fresh evidence; rather it interprets that fresh evidence in a way that will give the answer (the initial conclusion) required. Creationism as it is propounded is a purely Christian belief and even within the Christian bible there are two accounts of creation while at the same time the Pope says evolution is ok and doesn't contradict the word of God. What does the Q'uran say about it, the Torah, etc.; why aren't the dreamtime creation myths of Australian aborigines given equal airtime? Answer: because you cannot prove any of it. When you manipulate evidence to get the answer you want you will always get the answer you want whatever evidence you have. Creationists rely on *post hoc* justification, not proof.

The reason I came to my current sceptical viewpoint was the simplicity of it, the 'unclouding' of an arcane world

view where some stuff was scientific and testable but there was this other 'weird' stuff which obeyed different rules, was mysterious and couldn't be tested (just because someone said so - that couldn't be tested either). Argue creationist philosophy, argue the rationalist stance if you like, but don't argue that the two are equally valid.

Uri Geller on the other hand 'just knows' that there are aliens on the planet Hoova with whom he communes (most profitably) on a regular basis.

From Alan Sausse

I suppose my argument is not that creationism and evolution are equally valid theories. Instinctively I strongly believe that evolution is the way to go and that creationism has nothing to offer other than a few nice fairy stories.

Maybe I've approached this from the wrong angle - dunno. The key questions for me are something like 'can the size of 'leaps of faith' be measured in any sensible way, and can different 'leaps' be compared?' However, on reflection, that sounds ill-defined (since I haven't really explained what I might mean by a leap of faith) and rather unscientific.

From Niall Taylor

I can't see what instinct has got to do with a sceptical view on evolutionary theory and creationism I'm afraid. 'instinct' or 'gut feeling' is precisely the problem with all things alternative whether it's faith issues, psychic claims, a belief in alternative medicine or whatever. I too 'strongly believe evolution is the way to go' but because of the evidence, not because of an instinct or a leap of faith. Either there is evidence to support a stance or there isn't; if there isn't then we can have a speculative debate or write a science fiction story and this would be interesting and fulfilling as long as no one starts to mistake belief or wishful thinking for certainty.

For instance, I like to believe that there may be alien forms of life on other

planets and it may be that there are but in the absence of evidence the subject is just an interesting fantasy. Uri Geller on the other hand 'just knows' that there are aliens on the planet Hoova with whom he communes (most profitably) on a regular basis. Perhaps this explains why I get twitchy when the word 'instinct' is applied to science. The implication then is that science is just another belief system which its followers believe for subjective or dogmatic reasons and is no more deserving of respect than any other belief system, with scientists reduced to the role of acolytes. This is an extremely important point: the bogus, post-modernist 'belief system' argument is a fundamental weapon in the alternative armoury coming up time and again across the whole spectrum of the anti-science debate.

As for how to measure leaps of faith might I suggest the following:

Table of units of leaps of faith:	SI equivalent
10 hunches=1 Russellgrant=1 decahunch	
10 Russellgrants=1 Acorah=1 kilohunch	
10 Acorahs = 1 Cayse = 10 kilohunches	
10 Cayses = 1 Pope = 1 megahunch	

All these parameters are reduced considerably when exposed to any form of Dawkin's radiation.

From Alan Sausse

Perhaps I haven't explained myself clearly. My strong belief in natural selection and evolution is, like yours, based on evidence - huge amounts of it. The 'leap of faith' relates only to the 'final assumption', which is that the evidence can be trusted, and that God or some evil demon (à la Descartes) just didn't plant it there to trick us. I don't think it's possible to *prove* that this is the case, so faith still has some small part to play.

I am a supporter of science nevertheless. I've always been curious about the workings of the universe and I've generally found scientific explanations to be fascinating and, more to the point, intellectually satisfactory. I don't take the post-modern view that it's just one of a number of equally viable

belief systems, all jockeying for position in the marketplace of ideas, since what marks it out is the scientific method - collecting evidence, formulating hypotheses, testing them, repeating them, and modifying them as new evidence emerges. This approach is of course completely alien (no pun intended) to people like Uri Geller.

There are lots of theories out there about the origin of the universe, but they all (unless I'm mistaken) contain an element of speculation.

But (and I don't want to sound like a new-age type here) science does not have all the answers. It's a work in progress, and there are still many things not fully understood. At school I learned about Newton's laws and I was able to perform experiments to test them. I left school pretty convinced of their accuracy, mostly because my experiments had all provided what seemed like good supporting evidence. Later on, however, I learned all about relativity and quantum physics and, in so doing, learned that the predictions made by Newtonian mechanics start to break down when working with very high speeds or with very small distances. It would seem a bit harsh to describe Newtonian mechanics as 'wrong'! since with the speeds and distances that you and I deal with on a day-to-day basis they perform very well indeed and are extremely useful. Perhaps it would be more accurate to describe it as 'the best explanation that was available, until a better one came along'.

Many mysteries remain - how was the universe formed, how does gravity work (forces applying at a distance - what a strange idea...!), what is the true nature of matter, is time travel possible? etc. Scientists are of course devoted to trying to unravel these puzzles, but they haven't managed it yet and it's possible that they never will. There are lots of theories out there about the origin of the universe, but they all (unless I'm

mistaken) contain an element of speculation. A typical religious explanation would be something like 'It's all part of God's mysterious work, and it's not for us to understand', but of course I find that highly unsatisfactory. But the current scientific understanding is also unsatisfactory, albeit to a much, much lesser extent. I suppose my original 'leap of faith' question could be re-expressed as 'How can we measure and compare our levels of dissatisfaction?'

Does that clarify things?

When you start talking about a 'leap of faith' or knowing something 'instinctively' then you are moving away from evidence.

From Niall Taylor

OK, well, maybe it is just semantics but to persist with the original example, my position on evolution/creationism is that on the balance of probability evolution is the correct explanation for the existence of life on the planet today. The God explanation has too many impossibilities, not least, as a previous poster said, that it is completely unfalsifiable. For every argument against Divine intervention all a believer has to say is that God made it so, whether it's fossils, strata, light from stars being positioned exactly 6,000 light years from Earth to fool us and so forth. But it is the balance of probabilities that is important, absolute proof would be most unlikely.

When you start talking about a 'leap of faith' or knowing something

'instinctively' then you are moving away from evidence. A truly sceptical stance is one that is sceptical about everything, Darwinism included, and depends on the evidence. Once you've done a leap of faith though, you are beyond evidence and into belief and as I said before I don't 'believe' in evolution, I just think it's the only realistic show in town but I would be prepared to revise that opinion if convincing evidence to the contrary came along.

Now I don't think you actually meant that your acceptance of evolution relied on faith and I apologise if this all sounds like semantic hair-splitting but the use of language is so important in this sort of debate and it's almost always the alternative types who are slickest at manipulating it to their advantage.

Regarding the Newton thing, again this comes up so often in arguments with alternative types - the hide-bound sceptic, mired in a Newtonian mind set - pure straw man nonsense. Newton's laws still work as well as they ever did, including before Newton invented them! They were never intended to describe anything other than macro-level interactions - which is to say pretty much every interaction of any relevance to the real world. With the discovery of sub-atomic particles quantum theory has arisen to attempt to explain interactions at that level. You can no more apply quantum rules at the macro level than you can expect quarks to behave in a way predictable by Newton's laws. Quantum physics isn't a better explanation of the world than Newton's laws, it hasn't superseded Newton, it just describes a completely different area of

existence than Newton did. Try describing a football being kicked in quantum terms - meaningless! Try explaining homoeopathy in quantum terms - also meaningless! But the whole quantum thing gives plenty of opportunity for nice, comforting technobabble to impress credible 'believers' who aren't prepared to put the work in and check the claims.

Just because something hasn't yet been explained doesn't mean it is unexplainable or needs to be explained in mystic terms.

Science doesn't have all the answers - so what? Just because something hasn't yet been explained doesn't mean it is unexplainable or needs to be explained in mystic terms.

Having argued the toss with many a New-Ager I feel strongly that the use of this sort of language is playing into the hands of alternative types and simply enforces their ideas that science is just another belief system and quantum physics is only just starting to catch up with ancient enlightened spirituality which these smug types have known about (instinctively, of course) all along.

I'm not keen on these little quotey sign-offs that people (particularly alt-medders for some reason) use so much these days but if I had a personal motto it would be 'Keep it simple'

LANGUAGE ON THE FRINGE

Mark Newbrook

Mark Newbrook is currently a research associate affiliated with Sheffield University. His main areas of research interest are dialectology, controversies in historical linguistics, and sceptical linguistics generally.

Central Asian Navajo?

The 'epigraphist' writer Cyclone Covey, like the whole American epigraphist movement centred on the late Barry Fell, endorses various extreme diffusionist linguistic claims relating to alleged pre-Columbian transatlantic or transpacific voyages. Some of them involve alleged incidents demonstrating the mutual intelligibility of surprising pairs of languages.

Itinerant Breton onion-sellers are sometimes said to be able to follow Welsh conversation. ... This story appears to be an (early) 'urban myth'.

Fringe works report many such incidents – Irish Gaelic understood by Mexican Amerindians, Latvian by Tatars, Welsh by speakers of Mandan in the American Mid-West, etc, etc – but actual evidence is never forthcoming (what a surprise!). Even for languages as close as Breton and Welsh, the accounts are anecdotal only and are clearly apocryphal. Itinerant Breton onion-sellers are sometimes said to be able to follow Welsh conversation. But, despite their fairly recent common origin, Breton – which is directly descended from early Cornish – and Welsh are not now mutually intelligible apart from the odd phrase, partly because of French influence on the Breton sound system. This story appears to be an (early) 'urban myth'.

Covey's leading case involves early-mid 20th Century Navajo (South-Western USA) and Uighur (Turkistan). He believes (with Ethel Stewart and others) that some (non-Inuit) Amerindian groups such as the Navajo actually left Central Asia only in the last

1,000-3,000 years. The Navajo migrated in medieval times, fleeing the Mongols. Their language is therefore still close to the Uighur spoken by those who remained in Asia. Well, the grammars and vocabularies of Navajo and Uighur, as normally described, are, naturally, not close at all; so how can this be? I suggested he arrange a test (Navajo speaks in Navajo, Uighur in Uighur; how much do they understand?). Oh no, he thinks it is up to the linguistics establishment to do that – and in any case a negative result would not persuade him, because of (alleged) recent linguistic divergence (convenient!).

In fact, only someone trapped in early 19th Century methodology – as most of the epigraphists are – would accept **any** (non-prehistoric) linguistic links between Navajo and Uighur, let alone mutual comprehension. And for shared linguistic origins, Covey uses the usual impossibly loose criteria. For instance he believes in links (of some kind; he is unclear) between Lakota (Sioux) and Greek, because both sometimes use Object-Verb-Subject word order. But so do many languages. And his own Greek example does not even have this order, anyway! Stewart's linguistics is even weaker.

Basques, Algonquins, Melungeons and the Portuguese!

Another Fellian epigraphist is Paula Sten, who also argues that 'comparative analysis' shows that 'man has had two phonetically recognizable written words from 40,000 BC' [sic!] and had more not long after, and that there are links between Basque (a very interesting 'isolated' language with no known relatives) and Algonquin (Amerindian).

Sten is quoted on a Melungeon website devoted to the affairs of this

Appalachian community which appears to be partly Portuguese in origin (though this has been disputed). The editor seems to have believed that Basque is spoken in Portugal (no) or at least was (maybe, long ago). Other pieces on this website present extreme views on the status of the Portuguese (e.g. one suggests that the Portuguese population is so distinct genetically that issues arise in the context of organ transplants).

Most people in Portugal believe (against international opinion) that the world was extensively explored by Portuguese navigators before 1492 but that this was kept secret.

Indeed, Portuguese nationalism looms large in many discussions of the early settlement of the Americas. Most people in Portugal believe (against international opinion) that the world was extensively explored by Portuguese navigators before 1492 but that this was kept secret. Indeed, this 'Portuguese Policy of Secrecy' is taught as fact in Portuguese schools. And one of the most one-sided papers in the diffusionist literature is a 1992 piece re-analysing Columbus himself as Portuguese. Portugal punched well above its weight in early modern times and pride in its history is wholly legitimate; but it is all too easy to be seduced into over-glorifying one's own ethnicity (whatever that is) and thus talking nonsense.

Jesus The Man?

In her revisionist books on early Christianity, notably *Jesus The Man*, Barbara Thiering claims that a number of New Testament Greek place-names refer in different places to different

locations. In each case, one location is as normally understood, the other is associated with the Qumran complex developed by the Essene sect and now famous for the Dead Sea Scrolls. At times Thiering simply asserts the truth of this view, but she does mount various

arguments – none of which has convinced the scholarly mainstream. One of them is in part linguistic: the NT text displays both singular and plural forms of the name *Jerusalem*, and Thiering claims that the former refers to the real Jerusalem, the latter to the ‘new

Jerusalem’ at Qumran. But in fact the name appears in **three** forms, two singular and one plural; and it is not at all clear that Thiering is right about what they signify. (Of course, Thiering is by no means on her own in reinterpreting aspects of the language of the NT.)

THE EUROPEAN SCENE

ASKE is a member of the European Council for Skeptical Organisations. The centre of administration of ECSO is the German sceptical organisation GWUP (Gesellschaft zur wissenschaftlichen Untersuchung von Parawissenschaften).

Armadeo Sarma of GWUP is Chairman of ECSO and there is an international board of representatives from other European sceptical organisations.

ECSO now 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: <<http://forum.ecso.org/>>.

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/>>.

However the new website is also now up and running: <new.ecso.org> (user name, skeptiker; password, joom1a).

14th European Skeptics Congress, 2009

The European Congress is a biannual event. The next one will be hosted by the Hungarian Skeptic Society and will take place in Budapest in September

2009. The ECSO website will have updates on this but why not visit the Hungarian Skeptic Society website, which is very informative and is in English?

<<http://www.szkeptikustarsasag.hu/en/index.php>>

ECSO Symposium 2008

For details of this event see ‘Of Interest’ below.

OF INTEREST

ECSO Symposium 2008

This is a bi-annual event and the host this year is the French sceptical organisation Observatoire Zététique. The event will be held at Grenoble from September 20-21, 2008. For further information and registration log on to the ECSO website.

Program

Sat, Sept 20th, 2008

14.00 Registration

14.30 Michael Heap, UK

Hypnosis – A scientific appraisal

15.15 Willem Betz, Belgium

Is alternative medicine really a soft medicine?

16.15 Nicolas Vivant, France

Testing paranormal claims scientifically: Two examples

17.15 ECSO Board Meeting

19.30 Dinner

Sun, Sept 21st, 2008

09.30 Francesco Grassi, Italy

Crop circles and UFOs: Myths and ‘scientific’ legends

10.15 Johan Braeckman, Belgium

Darwin in the classroom. How to deal with creationist sceptics in secondary schools

11.15 Gabor Hrasko, Hungary

Skepticism in Hungary

Play by Emma Louise Rhodes

Emma-Louise Rhodes has written a new play called ‘Crackshot’. It’s about hypnotism, mind reading and the media and will open at the Hen & Chickens Theatre, 109, St. Pauls Rd, London, N1

2NA (Tel: 020 7704 2001) on Tuesday, August 5 at 7:30pm and run until Saturday, August 16.

As many of you will already know, Emma-Louise has written several articles on the paranormal (including for the UK Skeptic) and has given a talk at Skeptics in the Pub. Her website is at <http://www.emmalouiserhodes.com/>

PTSD

ASKE member Brian Robinson draws our attention to the following paper from the British Medical Journal:

‘The invention of post-traumatic stress disorder and the social usefulness of a psychiatric category’ by Derek Summerfield, Senior Lecturer, Institute of Psychiatry, London.

<<http://bmj.bmjournals.com/cgi/content/full/322/7278/95?ck=nck>>

‘(T)he story of post-traumatic stress disorder is a telling example of the role of society and politics in the process of invention rather than discovery....’

(Actually, I [MH] don’t think I agree with Dr Summerfield –any comments?)

For other papers of interest visit Brian’s website at at:

<http://musicweaver.users.btopenworld.com/index.htm#bmj_radicalmuslimdrs>

or:

<<http://tinyurl.com/6z3ejk>>.

Homoeopathy

Vigorous debate about homoeopathy going on right now on the Times Higher Education website:

<<http://www.timeshighereducation.co.uk/story.asp?storycode=402505>>.

Programme of seminars at the Anomalistic Psychology Research Unit, Goldsmith’s College London

The next series of lectures has yet to be arranged. Seminars are held on Tuesdays at 4:10 pm in Room 309, Richard Hoggart Building, Goldsmiths, University of London, New Cross, London SE14 6NW. All talks are open to staff, students and members of the public. Attendance is free and there is no need to book in advance. For further information, visit

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

or contact Sally Marlow, email: <ps604sm@gold.ac.uk>.

Skeptics in the Pub, London

Skeptics in the Pub (London) usually meets on the third Tuesday of every month starting at 7pm at The Penderel’s Oak, Holborn. A £2 donation is requested to cover the guest speaker’s travelling expenses and sundries. Non-sceptics are welcome. Turn up at any time during the evening. The room is open from about 5.30pm.

The next series of lectures has yet to be arranged. If you have any ideas on who you would like to speak at SitP, please drop us a line and we’ll see what we can do.

Also, please feel free to forward this message to anyone you feel would be interested in coming along, or just turning up for a drink and banter with our friendly and intelligent crowd. They can subscribe to these mailings by either going to the Skeptics in the Pub website: <<http://www.skeptic.org.uk/pub/>> or emailing <pub@skeptic.org.uk> with ‘Subscribe’ in the subject header.

Incidentally, to access the SitP Forum, where regulars exchange views and ideas about the talks (and scepticism generally) go to:

<<http://skeptic.org.uk/forums/viewtopic.php?p=1979#1979>>.

Skeptics in the Pub, Leicester

Meetings are held at The Rutland & Derby Arms, 23 Millstone Lane, Leicester, LE1 5JN.

Pub Tel: 0116 262 3299

Website:

<http://leicester.skepticsinthepub.org/>

Email:

<leicesterskeptics@googlemail.com>

Facebook:

<<http://www.facebook.com/group.php?gid=12736582903>>

The following presentations will begin at 7.30 pm:

19 Aug: Chris French

The Psychology of anomalous experiences

16 Sept: Nick Pope

The Real X-Files

21 Oct: Emma-Louise Rhodes

A Sceptical Look at Spiritualism

18 Nov: David Allen Green

The Skeptic in the Courtroom

16 Dec: Michael Heap

Authenticity and its Influence on Behaviour, Attitudes and Beliefs

20 Jan: Daniela Rudloff

Mental ‘Shortcuts’: Necessary Evil?

Society for Psychical Research Lecture Series

Venue: Lecture Hall of the Kensington Central Library, Campden Hill Road, London, W8 7RX.

Time: 6.35pm

Cost: Members and Associates: Free; Non-Members: £5; Students, Over 60s or Unwaged: £2.

Tea, coffee and biscuits will be available at £1 per person.

Details of the forthcoming programme, maps, etc. available at:

<<http://www.spr.ac.uk/expcms/index.php?section=4>>.

This year’s Annual SPR Conference will be held jointly with the Parapsychological Association at West Downs Centre, University of Winchester from 14th August (accommodation available from Wed 13th) to lunchtime on 17th August.

From the James Randi Educational Foundation

‘The James Randi Educational Foundation Million-Dollar Challenge will be discontinued 24 months from this coming March 6th, and those prize funds will then be available to generally add to our flexibility. This move will free us to do many more projects, which will be announced at that time.’

<<http://www.randi.org/joom/content/view/144/1/#i4>>.

International Conference on The Phaistos Disk

31 October – 1 November 2008 at the Society of Antiquaries of London, Burlington House, Piccadilly.

The Phaistos Disk is one of the great treasures in the Archaeological Museum in Herakleion, Crete. It is also one of the most famous unsolved mysteries in the field of archaeology. Innumerable attempts have been made to decipher the 16cm disk and its 45 different symbols, including scholarly discussions of its relationship to other ancient scripts such as Greek, Anatolian, Semitic, and even Indian, Chinese, and Polynesian. Attributions have linked it to deities in Greek mythology, the Hittites and Philistines, and Osiris and Isis in Egypt. It has been interpreted as an adventure narrative, a poetic verse, a magical curse, a board game, and even musical notes for a stringed instrument. Pseudo-archaeologists have claimed that it is a message from extraterrestrials and even a portal or ‘stargate’ with which a wormhole can be created to enable one to achieve teleportation to cosmic

distances. However, the authenticity of this enigmatic object is now in doubt as new light is cast upon its origin, 'discovery', and symbols. At the conference those proponents of its authenticity will have the opportunity to

present their latest findings and to challenge the claims of its being just a clever forgery created specifically to boost the reputation of its discoverer.

Conference website:

<www.minervamagazine.com>

E-mail:

<phaistosdiskconference@minervamagazine.com>

Fax: (44) 20 7491 1595

LOGIC AND INTUITION

The answers are as follows

More on coin tossing

Many people may intuitively feel that since, *in the long run*, things tend to even out as expected, the more you toss the coin the more the 50-50 break of heads and tails is likely to be realised. But remember: probability is all to do with logic.

Clearly we can only consider those cases in which there is an even number of tosses: for an odd number the chances of equal heads and tails is zero.

For 2 tosses there are $2 \times 2 (= 4)$ possible sequences of heads and tails as follows:

HT
HH
TH
TT

So, an even split is most likely to occur on 50% of tosses.

For 4 tosses, there are $4 \times 4 (= 16)$ possible sequences of heads and tails as follows:

HTHT HTHH HTTH HTTT
HHHT HHHH HHTH HHTT
THTT THHH THTH THTT
TTHT TTHH TTTH TTTT

(I have taken each combination of the 4 combinations for two tosses.)

There are therefore 6 even splits of heads and tails out of a possible 16 outcomes, or 37.5%. compared with 50% for two tosses.

And so it goes on with an increasing number of tosses. The number of ways of getting an odd split increases faster than the number of ways of getting an even split.

So, the answer is you are *less* likely to toss an equal number of heads and tails as the number of tosses increases.

(For the mathematically minded – i.e. people who know a lot more about mathematics than I do, and probably already know about this – the chance of an equal number of heads and tails on an even number of tosses is approximated by Stirling's formula [Stirling, 1730],

namely $1/\sqrt{n\pi}$, where n is half the number of tosses.)

Which sentence is true?

Sentence 1 is true – there *are* two mistakes: 'Their' should be 'There' and 'is' should be 'are'.

What about sentence 2? There are the same two mistakes, as above, so it is false in stating there are three mistakes. But if it *is* false, that makes three mistakes. So it is true! But if it is true that there are three mistakes then we are back to only two mistakes, so the sentence is false! And so on and on. So sentence 2 can be neither true nor false.

Sentence 3 is false: there are the two mistakes, as in sentence 1, plus a third mistake, namely the reference to there being four mistakes.

About ASKE

ASKE is a society for 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 newsletter and we have an annual magazine, the *Skeptical Intelligencer*.

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

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