

## The Real Romance in the Stars

by Professor Richard Dawkins, New College, Oxford

Astrology is neither harmless nor fun, and we should see it as an enemy of truth, says Richard Dawkins, author of 'The Selfish Gene'. Why, he asks, do so many of us indulge in these pre-Copernican dabblings which are nothing short of wicked fraud?

We should take astrology seriously. No, I don't mean we should believe in it. I am talking about fighting it seriously instead of humouring it as a piece of harmless fun. Frivolous tolerance, probably the dominant stance towards astrology among educated people who don't actually believe in it, ran right through a recent article in the Independent on Sunday by Justine Picardie, "Spinning after Patric's Star". As the headline writer put it, "Astrology has never been so popular, or such big business. But when the late, great (sic) Patric Walker (Libra) died, it wasn't just his billion readers – or his income – that attracted his aspirant successors; it was his reputation as the Henry James of horoscope writers, as the man who'd made the trade respectable."

Hardly respectable, but surely something must be going on when even the Independent on Sunday can devote two pages plus a double picture spread to the question of who would inherit the mantle of a dead charlatan. Picardie's attitude to these well-heeled quacks ranges from affection (the Queen Mother's favourite astrologer is "roly poly") to something perilously near respect (Patric Walker is described without irony as "eminent") Respect might indeed be prompted by the wealth of these glitzy con-artists, which is lovingly dwelt upon (Chauffeurs whisk them in white stretch limos to fashionable restaurants where head waiters fawn over them).

The popular scientist David Belamy, who ought to know better and probably does, contributed to Patric Walker's astrology page in Radio Times, writing that he has the "Capricorn caution" over certain things, but mostly he puts his head down and charges like a real goat. Such shallow light-heartedness sets a mood in which questioning astrology's validity is made to seem pedantic Gradgrindery. To ask whether the astrologers themselves believe in it also comes over as a bit long-faced, on the killjoy side. On Picardie's evidence, some are foolish enough to believe anything (One of them met Patric Walker "just before Mercury went retrograde" and immediately recognised him "from a past life"). The roly-poly one sounds a bit more fly and may understand exactly what he's doing, but it is hard to penetrate his high-camp posturing. Mystic Meg by all accounts could be the best of the bunch, an old fashioned crystal-ball toter, showing up the pretensions of the others, which is presumably why they try to

disown her.

The serious newspapers seem to be embarking on a self-conscious flirtation with astrology. Until recently they had nothing to do with such tabloid stuff. Then the Sunday Times succumbed and introduced its own astrology column, presumably with the excuse that it was just a bit of a giggle. The others haven't yet stooped so low, but some are acknowledging the pressure in more subtle ways. For the article by Justine Picardie the ostensible excuse was a story about financial success and succession. The same writer, incidentally, has followed it with an article on angels, again humorously open-minded ("There's this thing called going down in spirit"), teetering on the brink of outright respect for the lucrative profession of "angelologist" – one of them is an "eminent". Sorbonne professor of "philosophy" (which turns out to mean the usual "cultural studies" metatwaddle). There's this thing called being so open-minded your brains drop out.

This year-end the Guardian commissioned various individuals to look ahead to the future. Tucked away among some real scientists, historians and philosophers is none other than our roly-poly friend, the "First astrologer to play Nostradamus on TV". Here are his expert views: "On 12 January, Uranus moves into Aquarius and it's the dawning of a new age. It will be altruistic, humanitarian, brotherhood of man. I'm really looking forward to this. The energy (he obviously doesn't understand what this technical term means) will last until November 2008 because Uranus will be eight years in Aquarius and Pluto 13 years in Sagittarius. Thank God I'm Aquarius". And lots more in the same vein, which the Guardian considered fit to print. The Princess of Wales, herself an enthusiast for astrology as one might expect, has "got her Moon in Aquarius" and so has Tony Blair. "Could he do for the country what Di has done for the monarchy?" I have a better question. Why does a decent newspaper hand out free publicity to this phoney? Just a giggle, again? Or is the Guardian bending over backwards not to be elitist?

On a moonless night when the only clouds to be seen are the Magellanic Clouds of the Milky Way, go out to a place far from street light pollution, lie on the grass and gaze out at the stars.<sup>1</sup> What are you seeing? Superficially you notice constellations, but a constellation is of no more significance than a patch of curiously shaped damp on the bathroom ceiling. Note, accordingly, how little it means to say something like "Uranus moves into Aquarius". Aquarius is a miscellaneous set of stars all at different distances from us, which have no connection with each other except that they constitute a (meaningless) pattern when seen from a certain (not particularly special) place in the galaxy (here). A constellation is not an entity at all, not the kind of thing that Uranus, or anything else, can sensibly be said to "move

into".

The shape of a constellation, moreover, is ephemeral. A million years ago our Homo erectus ancestors gazed out nightly (no light pollution then, unless it came from that species' brilliant innovation, the camp fire) at a set of very different constellations. A million years hence, our descendants will see yet other shapes in the sky, and their astrologer (if our species has not grown up and sent them packing long since) will be fabricating their oracles on the basis of a different zodiac.

A far more rapid astronomical shift is the precession of the equinoxes.<sup>2</sup> My birthday (26 March) is listed in the papers as Aries but this is the sun sign which somebody with my birthday would have had when Ptolemy codified all that stuff. Because of the precessional shift of approximately one whole zodiacal sign over the AD era, my sun sign is in fact (if you can call it a fact) Pisces. If astrologers were doing something that had any connection with reality, this presumably ought to make a difference. Since they aren't, it doesn't. Scorpio could go retrograde up Uranus and it wouldn't make any difference.

Actually, of course, only planets can "go retrograde", and even then it is an illusion. As they, and we, orbit the sun, planets will on occasion appear to reverse their direction from our point of view. But these occasions have no significance. From a third planet they would be seen to "go retrograde" at different times. Planets do not really "wander", and certainly not remotely near any constellation, which are the distant backdrops of our viewpoint. Even if "going retrograde" or "moving into Aquarius" were real phenomena, some thing that planets actually do, what influence could they possibly have on human events? A planet is so far away that its gravitational pull on a new-born baby would be swamped by the pull of the doctor's paunch.<sup>3</sup>

No, we can forget planets going retrograde, and we can forget constellations except as a convenient way of finding our way around. What else are we seeing when we gaze up at the night sky? One thing we are seeing is history. When you look at the great galaxy in Andromeda you are seeing it as it was 2.3 million years ago and Australopithecus stalked the African savannah. You are looking back in time. Shift your gaze a few degrees to the nearest bright star in the constellation of Andromeda and you are seeing Mirach, but much more recently, as it was when Wall Street crashed. The sun, when you see it, is only eight minutes ago. But look through a large telescope at the sombrero Galaxy and you are seeing a trillion suns as they were when your tailed ancestors peered shyly through the canopy and India collided with Asia to raise the Himalayas. A collision on a larger scale, between two galaxies in Stephan's Quintet, is shown to us at a time when on

Earth dinosaurs were dawning and the trilobites fresh dead.

Name any year in history and there will be a star up there whose light gives you a glimpse of something happening that very year. Whatever the year of your birth, somewhere up in the night sky you could find your birth star (or stars, for the number is proportional to the third power of your age). Its light enables you to look back and see a thermonuclear glow that heralds your birth. A pleasing conceit, but that is all. Your birth star will not deign to tell anything about your personality, your future or your sexual compatibilities. The stars have larger agendas, in which the preoccupation's of human pettiness do not figure.

Your birth star, of course, is yours for only this year. Next year you must look to another shell of stars, one light year more distant. Think of this expanding bubble as a radius of good news, the news of you birth, broadcast steadily outwards. In the Einsteinian universe in which most physicists now think we live, nothing can in principle travel faster than light. So, if you are 50 years old, you have a personal news sphere of 50 light years radius. Within that sphere it is in principle possible (obviously not in practice) for news of your existence to have permeated. Outside that sphere you might as well not exist – in an Einsteinian sense you do not exist. Older people have larger existence spheres than younger people, but nobody's existence sphere extends to more than a tiny fraction of the universe. The birth of Jesus may seem an ancient and momentous event to us. But the news of it is actually so recent that, even in the most theoretically ideal circumstances, it could in principle have been proclaimed to less than one 200-million-millionth of the stars in the universe. Many, if not most, of the stars out there will be orbited by planets. The numbers are so vast that probably some of them have life forms, some have evolved intelligence and technology. Yet the distance and times that separate us are so great that thousands of life forms could independently evolve and go extinct without it being possible for any to know of the existence of any other. The real universe has mystery enough to need no help from obscurantist hucksters.

Scientific truth is too beautiful to be sacrificed for the sake of light entertainment or money. Astrology is an aesthetic affront. It cheapens astronomy, like using Beethoven for commercial jingles. By existing law neither Beethoven nor nature can sue, but perhaps existing law could be changed. If the methods of Astrologers were really shown to be valid it would be a fact of signal importance for science. Under such circumstances astrology should be taken seriously indeed. But if – as all indications agree – there is not a smidgen of validity in any of the things that astrologers so profitably do, this, too, should be taken seriously and not indulgently trivialised. We should learn to see the debauching of

science for profit as a crime.

I must make the usual defence against a charge of scientific arrogance. How do I know that there is no truth in astrology? Well, of course I don't know. I can't prove that there is nothing in horoscopes, any more than I can prove that there is nothing in the (rather more plausible) theory that chewing gum causes mad cow disease. There just isn't any evidence in favour (of either theory), and no reason why we should expect there to be evidence. It isn't as though it would be difficult to find evidence for astrology, if there were any to be had. It wouldn't take anything like that blissful cartoon in which a newsreader announces: "In a major breakthrough for the science of astrology, all people born under Scorpio were yesterday run over by egg lorries."<sup>4</sup> A statistical tendency, however slight, for people's personalities to be predictable from their birthdays, over and above the expected difference between winter and summer babies, would be a promising start.

For us to take a hypothesis seriously, it should ideally be supported by at least a little bit of evidence. If this is too much to ask, there should be some suggestion of a reason why it might be worth bothering to look for evidence. Graphology, as a means of reading personalities, is not supported by evidence either, but here the possibility that it might work is not hopelessly implausible a priori. The brain is the seat of the personality and the brain controls handwriting, so it is not in principle unlikely that style of handwriting might betray personality. It seems almost a pity that no good evidence has been forthcoming. But astrology has nothing going for it at all, neither evidence nor any inkling of a rationale which might prompt us to look for evidence. Astrology not only demeans astronomy, shrivelling and cheapening the universe with its pre Copernican dabblings. It is also an insult to the science of psychology and the richness of human personality. I am talking about the facile and potentially damaging way in which astrologers divide humans into 12 categories. Scorpions are cheerful, outgoing types, Leos with their methodical personalities go well with Libra's (or whatever it is). My wife, Lalla Ward, recalls an occasion when a more than usually brainless hanger-on approached the director of the film they were working on with a "Gee, Mr Preminger, what sign are you?" and received the immortal rebuff, "I am a do-not-disturb sign." We love an opportunity to pigeonhole each other but we should resist the temptation. Are you an introvert or an extrovert? Does your body shape betray an endomorphic, a mesomorphic or an ectomorphic personality? "The ectomorph is much more of an introvert and more shrewd and calculating".

Personality is a real phenomenon and psychologists (real, scientific psychologists, not Freudians or Jungians) have had some

success in developing mathematical models to handle many dimensions of personality variation. The initially large number of dimensions can be mathematically collapsed into fewer dimensions with measurable, and for some purposes conscionable, loss in predictive power. These fewer derived dimensions sometimes correspond to the dimensions that we intuitively think we recognise – aggressiveness, obstinacy, affectionateness and so on. Summarising an individual's personality as a point in multidimensional space is a serviceable approximation whose limitations can be measured and are known. It is a far cry from any mutually exclusive categorisation, certainly far from the preposterous fiction of astrology's 12 dumpbins. It is based upon genuinely relevant data about people themselves, not their birthdays. The psychologist's multidimensional scaling can be useful in deciding whether a person is suited to a particular career, or a couple to each other. The astrologer's 12 pigeonholes are, if nothing worse, a costly and irrelevant distraction. Lonely hearts advertisers frequently insert astrological references alongside relevant information such as musical tastes or sporting interests, and may even insist that the partner they are looking for must be, for instance, Taurus. Think of what this means. The whole point of advertising in such columns is to increase the catchment area for meeting sexual partners (and indeed the circle provided by the workplace and by friends of friends is meagre and needs enriching). It is nothing short of ludicrous then to go out of your way to divide the available number of potential partners by twelve. Lonely people, whose life might be transformed by a longed for compatible friendship, are deliberately encouraged, by their reading of astrological quacks in the newspapers, wantonly and pointlessly to throw away 11/12ths of the available population. This is not just silly, it is damaging, and the quacks concerned deserve our censure as strongly as their deluded victims deserve our pity.

There are some stupid people out there, and they should be pitied not exploited. On a famous occasion a few years ago a newspaper hack, who had drawn the short straw and been told to make up the day's astrological advice, relieved his boredom by writing under one star sign the following portentous lines: "All the sorrows of yesteryear are as nothing compared to what will befall you today." He was fired after the switchboard was jammed with panic-stricken readers, pathetic testimony to the simple trust people can place in astrology.

The American conjuror James Randi recounts in his book *Flim Flam* how as a young man he briefly got the astrology job on a Montreal newspaper, making up the horoscopes under the name Zo-ran. His method was to cut out the forecasts from old astrology magazines, shuffle them in a hat, distribute them at random among the 12 zodiacal signs and print the results. This was very successful of course (because all astrology works on the "Barnum principle" of

saying things so vague and general that all readers think it applies to them.) He describes how he overheard in a cafe a pair of office workers eagerly scanning Zo-ran's column in the paper. "They squealed with delight on seeing their future so well laid out, and in response to my query said that Zo-ran had been 'right smack on' last week. I did not identify myself as Zo-ran... Reaction in the mail to the column had been quite interesting, too, and sufficient for me to decide that many people will accept and rationalise almost any pronouncement made by someone they believe to be an authority with mystic powers. At this point, Zo-ran hung up his scissors, put away the paste pot, and went out of business.""

My case is that Randi was morally right to hang up his scissors, that serious newspapers should never give named astrologers the oxygen of publicity, that astrology is neither harmless nor fun, and that we should fight it seriously as an enemy of truth. We have a Trade Descriptions Act which protects us from manufacturers making false claims for their products. The law has not so far been invoked in defence of simple, scientific truth. Why not? Astrologers provide as good a test case as could be desired. They make claims to forecast the future, and they take payment for this, as well as for professional advice to individuals on important decisions. A pharmaceuticals manufacturer who marketed a birth-control pill that had not the slightest demonstrable effect upon fertility would be prosecuted under the Trade Descriptions Act, and sued by trusting customers who found themselves pregnant. If astrologers cannot be sued by individuals misadvised, say, into taking disastrous business decisions, why at least are they not prosecuted for false representation under the Trade Descriptions Act and driven out of business? Why, actually, are professional astrologers not jailed for fraud?

## Notes

1. This is carrying poetic licence too far in a Northern Hemisphere paper. The Magellanic Clouds are visible only in the Southern Hemisphere! R.D.
2. Many astrologers are aware of precession but, instead of updating their methods, they prefer the lazy escape of 'tropical astrology' in which one uses zodiacal constellations as labels for the patch of sky where they would have appeared years ago. R.D.
3. The physics here is more complicated than can be spelled out in a general article. Two influences could theoretically be involved, direct gravitational attraction and tidal effects. In terms of direct gravitational attractions (which obey Newton's Inverse Square Law), an average doctor would be outweighed by all but the most distant members of the solar system. Tidal effects are another matter and they are far more important. They amount to distortions

of the earth's gravitational field and obey an inverse cube law, instead of the usual inverse square law. The doctor's body would have greater tidal effects on a new-born baby than any heavenly body (see I.W.Kelly, J.Rotton & R.Culver, 1985, The Skeptical Inquirer, Vol. 10, No.2, pp 129-143. R.D.

4. I am aware that this is a joke against 'naive sun sign' astrology which is shunned by other astrologers. It is, of course, sun sign astrology's well-heeled practitioners in newspapers and on television that I am attacking as exploitative charlatans. If there is good evidence (i.e. better than the often quoted but non-robust Gauquelin attempt) that some other kinds of astrology work, well and good. I have to say that I'd be extremely surprised. R.D.