# GOD STARES YOU IN THE EYE

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**Introduction**

An atheist, the dictionary tells us, is a man who does not believe that God exists, but I suspect that atheists usually fall into one of two classes ... either they are not convinced that there is a God (which makes them agnostic, not atheist), or they are manifesting in a curious, indirect way a belief in God's goodness, but, as they cannot reconcile that goodness with human tragedies, they conclude that there cannot be a God. In a true sense, belief in God's goodness has, for these people, eclipsed belief in his reality. It is not, however, this second category to whom this pamphlet is mainly directed; they must find help elsewhere to see that God and grief can co-exist. It is meant rather for the agnostic, the man who does not know.

There are countless highly-intelligent agnostics, as there are countless agnostics of little education and intelligence; it is, however, the intelligent ones who get into print, and the result is that the Word 'agnostic' carries for some a quite unmerited air of intellectual distinction. It is well to remember here, then, that there is no intellectual distinction attached to agnosticism as such:. In plain fact, 'agnostic' and 'ignoramus' are no more than the Greek and Latin words for the same thing. They both mean a person who does not know, who is ignorant of something, though 'agnostic' has the added drawback of implying ignorance as to one of the fundamental truths of existence: that a Creator exists.

**Your Witness**

But is there any evidence that God exists? Any proof? That question leads us to the argument from design. On June 17, 1967, this very question of God's existence was debated in the television programme Your Witness (BBC 1), and an important admission was made by Professor A. J. Ayer of Oxford, who argued against belief in God. The argument from design, he said, was the strongest argument for God's existence, and he conceded teleological processes in the universe (evidence of creative planning), though he said that he could see no over-all design. That is, he could not refuse to admit the evidence of area planning all around us, but, as the master design escaped him, he rejected the evidence! The evidence was made to take second place to the incredible assumption that the overall design of the whole universe must be apparent to us . . . but let us look at the argument from design of which he spoke with respect.

**The Watch**

It is the line of reasoning which holds that, just as the ingenious mechanism of a watch convinces us that there must have been a watchmaker, so the 'engineering' of the universe compels belief in a Master-designer. In its 'watch form,' the argument is linked in Britain with the name of Archdeacon William Paley who popularized it in The Evidences of Christianity (1794). It was used in countless manuals, e.g. in Turton's The Truth of Christianity which referred to 'the well-known watch argument of Paley,' but its real author was Voltaire. 'If a clock proves the existence of a clock-maker,' Voltaire said, 'and the world does not prove the existence of a supreme architect, I consent to be called . . . a fool.' It was the same Voltaire who, faced with the suggestion that there was no intelligent pattern in the universe, cried out: 'Sceptical as I am, I declare such to be evident madness.' Here he was making the reasonable leap (at which Professor Ayer baulked) from design visible under every nose to a general plan. In this he was at one with David Hume who wrote in his Natural History of Religion: 'The whole frame of nature bespeaks an intelligent Author; and no rational inquirer can, after serious reflection, suspend his belief for a moment with regard to the primary principles of genuine Theism.'

**Shaw and Darwin**

I have mentioned Professor Ayer's tribute since many people had assumed the 'watch argument' to be worthless, discredited. A 'climate of opinion' had risen. 'Surely science has disposed of that argument?' people would say, and,

when pressed, they would ask blankly, ‘Well, hasn’t it?’ or they would murmur something vague about Darwin. George Bernard Shaw, in his introduction to Back to Methusaleh, wrote of the wistful way in which many last century eyed atheism . . . . ‘But atheism did not account for Paley’s watch. Atheism accounted for nothing; and it was the business of science to account for everything that was plainly accountable . . . if only some genius, whilst admitting Paley’s facts, could knock the brains out of Paley by the discovery of a method whereby watches could happen without watchmakers, that genius was assured of such a welcome from the thought of his day as no natural philosopher had ever enjoyed before.’

‘The time being ripe, the genius appeared; and his name was Charles Darwin.’

Darwin himself wrote: ‘the old argument from design in Nature as given by Paley, which formerly seemed so conclusive, fails, now that the law of Natural Selection has been discovered.’ And countless people agreed, failing to detect the sleight-of-hand. ‘Only Samuel Butler,’ Shaw wrote, ‘on whom Darwin had acted homeopathically, reacted against him furiously . . . declaring with penetrating accuracy that Darwin had “banished mind from the universe” ... Nobody would listen to him....’ ‘Paley was buried fathoms deep with his watch, now fully accounted for without any divine artificer at all.’

**Natural Selection**

That was last century. But the watch has been dug up and .has found to be still ticking healthily. The doctrine of Natural Selection, with its axioms of the survival of the fittest and the gradual accumulation of favourable variations, has been recognized as giving an explanation of the survival of some species but of the arrival of none. Alfred Noyes wrote, in The Unknown God: ‘The attention of the man who reads The Origin of Species is absorbed by masterly and perfectly accurate descriptions of the possible ways in which birds or insects acquired their protective colouring, through the “survival of the fittest.” He forgets to notice that “natural selection” cannot begin to work until you already have a range from which the selection is to be made. . . . Well might Darwin, in The Descent of Man, write those words which both his enemies and his friends have forgotten to read : “This grand sequence of events the mind refuses to accept as the result of blind chance. The understanding revolts from such a conclusion.” ‘

Unfortunately it was not only Darwin’s enemies and friends who forgot to read those words. Darwin forgot at times too, as his judgment on Paley’s argument has shown. Shaw commented: ‘We completely overlooked the difference between the modification of species by adaptation to their environment and the appearance of new species... . We took a perverse pleasure in arguing, without the least suspicion that we were reducing ourselves to absurdity, that all the books in the British Museum library might have been written word for word as they stand on the shelves if no human being had ever been conscious, just as the trees stand in the forest doing wonderful things with-out consciousness.’ In other words, Natural Selection describes development to a limited extent, but explains nothing; which is why a young physicist, in the Your Witness programme, said emphatically, ‘Science gives only descriptions, not explanations.’

Darwin’s theory of natural selection had soon run into serious trouble and not only from theologians but also from scientists, since, as G. K. Chesterton wrote in The Catholic Church and Conversion, speaking of evolutionary theory in its rawest form, ‘If evolution destroys anything, it does not destroy religion but rationalism,’ which echoes Samuel Butler’s cry about banishing mind from the universe. The Church, Chesterton said, ‘knows there are many other evolutionary theories besides the Darwinian theory, and that the latter is quite likely to be eliminated by later science. It does not, in the conventional phrase, accept the conclusions of science, for the simple reason that science has not concluded.’ Indeed, science had not, and Sir James Gray, Professor Emeritus of Zoology at Cambridge, reviewing a book on natural selection in 1954, foretold rightly that there might be some heart-searching, and there certainly would be much discussion, when the centenary of The Origin of Species came round.

Neo-Darwinianism, we are now told by scientists, is guilty of an essential ‘triviality.’ ‘It does not and cannot .. . explain the really important events of evolution.’ ‘A living organism,’ wrote John Davy in The Observer for February 8, 1970, ‘can function because a coherent pattern is imposed on the parts of which it consists—the organs are subservient to

the organism, the tissues serve the organs, the cells serve the tissues, proteins and other substances serve the cells.' But who traced the pattern and imposed it? 'This,' Davy commented, 'recalls a very old argument which was used to demonstrate the need for a Divine Designer. You can investigate the cogwheels of a watch in inexhaustive detail, and produce learned theses on the metallurgy of mainsprings, without explaining the most important feature of a watch, which is that its parts are assembled in a coherent pattern which allows the wearer to tell the time. . . . The ultimate source of a watch's organisation is the mind of its designer. The biologists' problem . . . is to find a "designer", or a hierarchy of "designers" in the cell, the liver, the organism (there is no desire to introduce a supernatural Designer . . .).' Once again, the biologists are trying to solve a problem by moving it one back. Even if they locate some sort of control-centre in this or that area of the body, the problem is still to be resolved: who located it and traced the total design? 'There is no desire to introduce a supernatural Designer . . .' is gently said. The design, all admit, is intelligent . . . then so must be the designer. Is 'no desire' a euphemism for 'blind refusal'?

Atheism, then, accounts for nothing: Natural Selection accounts for some variations and survivals, but we have still the overwhelming evidence of design in the universe to account for – and it is so vast and so intricate that it could no more have happened by chance than, as Shaw suggested, the miles of books in the British Museum could have written themselves.

**Design for Living**

The progress of science, far from discrediting Paley's watch, reveals more and more of the incredible complexity and brilliance of the designs all around us. Around us? Inside us! In October of 1957, Mr T. E. Goldup, addressing the Institution of Electrical Engineers of London, of which society he was president, pointed out some of the complexity of design. Within our heads, he said, we have a brain consisting of some 10,000 million cells – about 13 times the world electronic industry's production of valves in 1956. 'Among its countless other functions, our brain includes the equivalent of a compatible black-and-white and colour television system, a sound recording and reproducing system, and an ability to recognize complex patterns which outstrip any practical mechanical or electronic equipment.'

'If it were possible to construct a machine able to perform the same functions as the human brain, it would have to be largely electronic; if we brought together all the necessary component parts and could then in some miraculous way solve the vast problem of connecting them together, we should still be faced with the fact that even with the most reliable modern components, several hundreds would be faulty at any given moment.'

Can a man accept that a watch could come into existence without a watchmaker, or a television set without an electronic engineer? Then what conclusion are we driven to when we look at the vastly more brilliant designs for which no human being traced the blueprint? It is almost sixty years since J. Bell Pettigrew published his monumental work Design in Nature and it is still of interest today. Writing, for example, of the Intelligence of Bees (Vol. 2, p. 919), he deals with the bees' 'knowledge' of the principles of solid geometry as shown in their building of that multi-hexagon, the honeycomb: 'It is a curious mathematical problem at which precise angle the three planes which compose the bottom of a cell ought to meet, in order to make the greatest possible saving, or the least expense of material and labour. This is one of the problems which belongs to the higher parts of mathematics. The ingenious Maclaurin has determined precisely the angle required, and he found, by the most exact mensuration the subject would admit, that it is the very angle in which the three planes at the bottom of the cell of (the double) honeycomb do actually meet.'

**The Mathematician?**

Yet no one imagines that the bee performs mathematical calculations. The solution to the mathematical problems had to be built-in, together with the eye, the wing and the sting . . . just as a man must design, build and 'feed' a computer before it can do its tricks.

The mention of mathematics calls to mind a nonsensical statement which Dr John Robinson, then Bishop of Woolwich, made in 'Our Image of God must Go' (The Observer, March 17, 1963). 'Professor Bondi,' he said,

'commenting in the B.B.C. television programme, The Cosmologists, on Sir James Jeans's assertion that "God is a great mathematician," stated quite correctly that what he should have said is that "Mathematics is God." Reality, in other words, can finally be reduced to mathematical formulae.' But 'Mathematics is God' is meaningless, since mathematics is a system of reasoning, not a person. Nor is it exact to speak of God as a great mathematician since the word has for us the _connotation of one who, with pencil and paper, has to work laboriously to discover truth. It would be truer to say that God, in his construction of the universe, manifested the knowledge which we can only reach, in part, by mathematical reasoning. Every-where he has illustrated his ideas!

Alfred Noyes once wrote, 'under the scrutiny of the more philosophical science of our own day, "matter" itself is dissolving into the realm of ideas, and . . . ideas appertain to a Mind.' This is the mind which instilled the principles of solid geometry into the bee; which installed the radar set of the bat, emitting and decoding two hundred squeaks a second as it closes on its prey, squeaks which last less than a thousandth of a second. (Those who have read Leonard Dubkin's The White Lady will know how efficient that radar is, for he tells of a bat which flew repeatedly through the blades of an electric fan which was running at 800 revolutions per minute — allowing the fan to have three blades, then, in effect, forty blades slice past any given point each second!) So we come back to Voltaire who stated in his Philosophical Dictionary that 'Either the stars themselves are great geometricians, or the eternal Geometer has arranged them.' He suggested, too, that we should prove the existence of God by opening our eyes. That is exactly what I propose to do in the second part of this pamphlet. God, we shall see, stares us in the eye.

**The Organ of Sight . . . And the Organizer**

The Encyclopaedia Britannica states bluntly: 'In all vertebrates, including man, the eye is built according to the plan of a camera.' Bravely said – the eye is built according to a plan! This is a far-cry from the language of Natural Selection and it brings to mind what Professor W. Macneile Dixon wrote in The Human Situation after pushing aside 'the term evolution as but a mask for our ignorance. "Take the eye alone,' he wrote. 'The germ (cell) contains the ability, among other odds and ends, to produce a retinal surface sensitive to light, which can distinguish between vibrations of 450 million millions a second, which give the sensation red, and 750 million millions a second, which give the sensation of violet.'

'How did it come about that the eye responds exactly to a certain series of wave lengths among an immense series, picks out these waves from a multitude of others? ... if you can satisfy yourself that these accomplishments, these endless varieties of behaviour to meet unforeseen contingencies arose out of haphazard collections of atoms in a white-hot gas, at a temperature of a million degrees, out of an incandescent maelstrom of darting electric flashes, if you are satisfied that any evolution theory can on this basis, juggling with genes, account for life and mind, I quit the field in your favour. . . . For my part I am struck dumb.'

He went on: 'If you propose to account for the eye, for example, the need for it, its value must be considered. To suppose it an accidental variation is sheer absurdity. For it appeared not in one line of evolution alone. As Bergson pointed out, the cuttlefish and the vertebrates, creatures not related to each other, both developed eyes on their own account in wholly different ways, and from different parts of the organism. Each was its own architect: each had the same end in view, but they took different routes to that end. Some fish provided themselves with a bi-focal arrangement, for sight not only in water, but in air. The eye of the bird is adapted both to near and far vision. The butterfly's eye contains five thousand lenses and fifty thousand nerves. These various eyes were means to certain definite ends, the very obvious end in each case that the creature might have the advantage of vision, and that advantage of a kind specially suited to its own way of life. Except by reference to the purpose or use of these eyes you can say nothing sensible or intelligible about them.... There are in the optic nerve half a million fibres, and some millions of cells in the retina. They work in concert.' Perhaps the eye should be to us a source of deeper wonder than the stars.'

It was considerations of this kind which made Bernard Shaw cry out, 'When a man tells you that you are a product of Circumstantial Selection solely . . . you can only tell him out of the depths of your inner conviction that he is a fool and a

liar.'

The Designer stares you, then, in the eye, and perhaps stares at you unnervingly. Darwin confessed that there was a time when the thought of the eye made him cold all over. Shutting his eyes adjusted the thermostat! But that is too easy; we have to look at God, in the eye.

**Lenses**

The eye, the Encyclopaedia Britannica, declared, is built according to the plan of a camera. The reader may find the comparison between camera and eye made in the Encyclopaedia or elsewhere. He will learn of the lens, of the eye's choroid (equivalent to the black, non-reflecting paint inside the camera), of the iris, and so on. Here we may take these facts as common knowledge. What we are concerned with is to throw light on the less well-known complexities which cry for belief in a Designer.

We have a lens at the front of each eye, and we have seen that an insect has a bank of thousands of lenses in its eye. Easily accepted . . . until we open (say) Arthur Cox's A System of Optical Design, expecting to find plates and drawings, only to find to our dismay that we are faced with page after page of complicated mathematics. In the editorial of The Amateur Photographer for August 16, 1961, we read this: 'The electronic computer comes into the picture (of lens design) because of the enormous number of calculations entering into the design of a lens. ... In working out one well-known lens, a team of 25 full-time mathematicians, with everything short of an electronic computer to help them, had to work continuously for eight months.'

I have read, too, that when the designer of the Cooke lens (H. D. Taylor) had completed his work, he papered all the walls of his office, from floor to ceiling, with the pages of calculations that he had had to make. He would not have taken kindly to the idea of a lens as a 'random variation' ! The eye? . . . Darwin spoke of the 'living optical instrument' which is 'as superior to one of glass, as the works of the creator are to those of man.'

**Sensitivity**

And now some remarks about the sensitivity of the eye to light, and the receptor system which makes it so sensitive. If you buy a camera which has an expensive 'fast' lens, with apertures ranging from f/1.4, its widest, down to f/22, its smallest, you can boast of an instrument which has an exposure range, in varying light, of 250:1. The range of films will extend this adaptability about eight times, and thus your camera will cope with a range of 2000:1, leaving aside the wonders which modern developers can work. The two lenses, however, with which you arrived complete at birth, have a range of 10,000,000,000:1, which can handle anything from high noon in Texas down to match-light in the coal-cellar in December. You have deep reason to be grateful — as has the bee when it looks through the thousands of its hexagonal lenses at the hexagons which it has constructed so brilliantly in its honeycomb.

**The Retina**

In the camera, the lens focusses the picture on to the film which is light-sensitive. In the eye, the part of the film is played by the retina, the innermost lining of the eye, which is only a fraction of a millimetre thick and yet so complicated that S. L. Polyak was able to devote 448 pages of text to it in his work The Retina. As an article by John Davy in The Observer colour supplement (December 7, 1969) noted: 'Far from being a passive photographic plate, the retina is a very respectable little brain on its own account.' It is, indeed, so complex that a perusal of Hugh Dayson's The Physiology of the Eye reveals that this fantastic tissue is composed of anything up to 150 million rods and about 7 million cones, and these are so minute that the light-microscope shows the rod to be only a two-millionth part of a metre thick. 'The anatomy of the eye,' Davy wrote in the article quoted, 'makes the most complex camera look foolishly primitive' — and yet what ingenuity has gone into the planning of the Contarex or Hasselblad!

The rods and cones are the light-receptors which send the photo-electric signals up the half-million fibres of the optic nerve to the brain, which has then to interpret the upside-down picture, see it in colour and perspective. The cones are

much less sensitive to light than are the rods, but they have the distinction of being colour-sensitive whereas the rods can deal only in black-and-white. Thus the cones are used in brighter light conditions, leaving the rods to do all the work when the light fails. That is why, as dusk falls, your colour vision packs in. Red is the first casualty, with green following on its heels, and then blue — which explains why, as you walk along a country lane at dusk, the Midland Red bus will seem to you to have been dyed grey, in spite of the fact that the hedges still remain green.

**System Within System**

It is obvious from this, then, that the power of the,eye to adjust to changing light conditions is not just a matter of the iris of the eye widening or narrowing (as does the iris diaphragm in a camera) though the iris will play its part. (Watch the cat as it comes out of the coal-cellar into bright light and you will see the rapid contraction of the pupil as it adjusts.) The machinery of the eye is far more complex, as if one had a camera which automatically switched from one type of film to another as the light fluctuated. Hugh Dayson speaks not only of the rod and cone mechanisms in the retina – a fraction of a millimetre thick and they detect ten layers in it! – but in fact of five distinct mechanisms to be found in the cones. Leaving aside such complexity-within-complexity of delicate design, we may mention that the cones are thickest round the fovea, the centre pit in the retina (about 1 mm. across) and appear under a powerful microscope as a mosaic of hexagons. G. L. Johnson in Photography in Colours mentions that throughout the retina we have a yellow colour-filter built in, and is convinced that this serves exactly the same purpose as the cameraman's yellow filter, bringing out white clouds against blue skies. As there are no blood-vessels at the fovea where they would detract from the most acute perception, the Designer has compensated by installing there the macula or 'yellow spot.' Perhaps you have never heard before of the fovea with its cluster of cones without rods (cones which are unsuited to failing light), but you have always acted as if you knew. In poor light, you have not looked at print straight on, but have relegated the fovea and its 'cones by unconsciously looking at the book sideways.

**Conclusion**

God stares us, then, in the eye. It is a miracle of delicate and intricate design, so 'complete' that, if a speck of dirt invades its territory, it automatically waters to wash away the dirt, and manufactures lysozyme, a disinfectant, in the water to counteract infection. As design speaks of de-signer, every eye is in a true sense the eye of God; his image is on every retina, and we see all things through the eyes of God. And it is the eye of reason, not faith or superstition, which sees this. But step back now from this study of the eye, which is, after all, only one tiny part of the human organism, and remember that every section of the body — ear, brain, heart, etc. — is equally eloquent of planning. All these are organs, parts which work in concert for the purposes of the Whole Man, and intricate organs spell organization and organization demands an Organizer. Apart from this, design after design surrounds you, not only in the world of animals and plants but even in the realm of what we used to think was inert matter. Now we know that even a grain of sand is charged and harnessed, with its own solar system of neutrons anddlectrons and its own important balance of power. Our child-hood catechism said, 'God is everywhere.' 'Everywhere, everywhere!' echoes science, finding in all material things the mark of the Designer as one finds the mason's mark on the stones of an old cathedral.

Near the end of the 17th century, a brooch of gold and enamel, some two inches long, with a carved boar's snout, was dug up at Athelney. It is preserved now in the Ashmolean museum in Oxford, and it bears the inscription 'Aelfred mec hect gewyrcan' ('Alfred had me made'). Yes, it was made for Alfred who broke the Danes in the 9th century and it glories in its designer. There is no such inscription on you, or your eye. And yet, as we have seen, it is there for all to read ... 'God made me.' You are his masterpiece, and, like all masterpieces, precious to the Mind or Heart that conceived it. At some time in your life, you may have strayed into a woodcarver's shop (in the Tyrol, perhaps?) and come upon a piece of perfection that you felt you had to buy, only to be told firmly, 'That is not for sale.' His masterpiece - he could not bear to part with it! Nor will God part with you, if you will have him.

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