



SCIENCE PAPER 3

An Engineer Looks at UFO'S

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LADIES AND GENTLEMEN, AS THE CHAIRMAN HAS JUST TOLD YOU I AM BY PROFESSION AN ENGINEER NOT A PHYSICIST. AND IT IS FROM AN ENGINEERS POINT OF VIEW THAT I WOULD LIKE TO PRESENT THIS PAPER.

AS YOU WILL ALL KNOW, IN MODERN TECHNOLOGY THERE MUST NECESSARILY BE, AND OFTEN IS, AN OVERLAP BETWEEN VARIOUS BRANCHES OF SCIENCE, AND IN ORDER TO PROCEED, I WILL HAVE TO VENTURE A LITTLE INTO THE DOMAIN OF PHYSICS, ALL BE IT IN LAY TERMS, AND HOPEFULLY WITH THE FORGIVENESS OF THE PHYSICISTS AMONG YOU.

For some time it has been obvious to most outsiders that our subject, ufology has been split into two schools of thought. There are those who would attribute the phenomena solely to the occult and those who accept the reality of the extra terrestrial hypothesis. With this in mind I feel that I must first try to cause a little mending of this rift.

The situation today is that people are undoubtedly perplexed and shift from camp to camp as available evidence effects them. This point was brought home more radically only recently when a friend phoned to ask if I would investigate a case of noises in a house. Apparently he had been contacted by a lady and she had asked for assistance on this. When my friend suggested Cramp go along, this person said, 'Good Heavens No. He's a nuts and bolts type.'

We accept the point. However, my own experience in orthodox science and the occult has tempered me to the conditions where I find it pointless to subscribe to either extreme. I will say also, if I may, that little did that lady know but although I may be a nuts and bolts type I come from a family of psychic repute, have suffered to some degree as a medium myself and caused to my own satisfaction as an engineer, as well as to that of my family, limited psychokinesis. So I do know that I am not dealing with someone who is pretending. It has happened to me, and as an engineer this is a little bit of a cross to bear.

What I should like to say before I get on to gravitation and UFOs is that the metaphysics of today is the science of tomorrow. There is no division.

There is no fundamental difference between the idea of picking up a piece of clay and from that building a house to being able to short circuit and cut out the intervening processes by building a super computer, programming it or wishing or thinking the house into being. May I elaborate.

We are inclined to accept mind as something outside matter, some force or condition we know nothing about. But a close look at the structure of matter reveals that it too is but a force or condition we know nothing about. Indeed, one is just so much a phantom as the other.

An atom is essentially illusion. A good analogy of this was given to me by a friend years ago. I have often used it and would like to do so again. It is a laymans analogy, but it helps very well. Consider in scale a Hydrogen atom with proton the size of a pinhead in the middle of the Albert Hall. The electron, invisible to this scale, whirls round the extremities of the hall in orbit. The electron has a rest mass of zero, so if it is stopped you cannot pick it up. It is NOT a chunk of matter, but a condition - energy. Protons are positive states of energy. These then represent the basic building blocks of all material, and 99.99 per cent (recurring) is empty space!

Thus matter is an illusion. Is it so unreasonable, therefore, that my brain - made of these tiny things called atoms - should take the signal from an 'idea', shuffle nerve endings in the body and start a process of action to

send out signals to activate my muscles and reach out and pick up that piece of clay? Ladies and Gentlemen, we are already on the metaphysical plane! We are not, and never have been, nuts and bolts.

We do have to talk in terms of nuts and bolts since these are the tools with which we experiment. Therefore we use this terminology. Yet we are already in the psychic field. We use but 25 per cent of our brain. When we can use 75 per cent who knows what we can do. I can do no better than quote Aime Michel who says, 'An advanced technology to us today would be indistinguishable from magic.' That just about sums it up. For example, take some of the aids used in this room today and show them to someone from 350 years ago - they would be magic!

In order to evaluate peoples' acceptance of the unusual I did an experiment some years ago in the Caxton Hall, London. I used a little gadget, the shape of which would be unfamiliar to most people. I lit it up, in a darkened room, and set it going. I then stopped it, put the lights back on and went round the audience choosing people at random to give unbiased opinions of what they had seen. As answers came in the amusement grew.

Not two people described the unusual event in identical terms! One saw a red, circular glowing light and one just a pulsating light. Another said it was going up and down and doing other funny things. The interesting thing was that when I demonstrated it again with the lights on the bewilderment and laughter increased. Singly the people had picked out one aspect of the experiment, yet collectively they told the story. Had they seen it outdoors and unexpectedly, in order to describe it they too might have been tempted to say it was something in the order of magic - on an extra plane.

Perhaps I can emphasise this one stage further. Today if you or I see a high flying jet with vapour tail, fuselage brilliantly lit by the Sun but no wings visible *because* we are programmed to one shape we expect to see wings. Invariably we eventually do, but if we were unacquainted with the shape we would be tempted to say on describing it that, 'This thing grew appendages. It was not obeying our technological rules. It changed shape!'

I am not saying that misinterpretation is the whole explanation for shape changing or dematerialisation in the UFO phenomena, but we must realise we are already on the metaphysical plane. An advanced technology does not have to be purely of the mental plane. If you are lucky, or unlucky, enough to see a ufonaut walk through the walls of a seemingly sealed craft it does not mean it was acted out on the metaphysical plane. It may be a real technological achievement.

We must get this point firmly fixed in our minds. There is no need for a division in our subject from one side to another. A good friend once said to be that probably all we are learning is mechanised metaphysics. That just about sums it up.

Having said these things, my private thoughts, perhaps I can come to the kernel of my talk this afternoon. I may surprise you by saying that from now on I would like to talk about the reality of flying saucers by not talking about them! I am going to talk from the point of view of scientists who are looking for better means of aerial travel. Forget the saucers. Trying hard not to be biased and look at the problem right at the root. Let us see where it takes us.

To begin with in space, and aeronautical flight, we are combatting the force of gravity, about which very little is known. We do this with the aid of rockets and aeroplanes. What I am going to talk about is pretty basic, but it is important that we have a clear understanding of the basis of the search for, so-called, anti-gravity.

In the case of an aeroplane we take an aerofoil shape and use Newton's laws of motion. We eject a mass of fluid out of the back of the engine, thrust the aerofoil forward and the air flow splits up over the leading edge. It trails along at the back and a certain amount of downward displacement of the air mass occurs. A depression is formed above the aerofoil and the net reaction is a lift in the vertical plane. This is the basis of aerodynamics.

With a rocket we take an exhaust chamber and put fuel into it. We then burn it and eject a mass of fluid in a similar way to the wing ejecting a mass of fluid downwards. Hence we obtain a like reaction and the rocket lifts off. The difference in the case of the aeroplane is that it is contained within the air belt at the earth's surface, the atmosphere. It is the medium by which it maintains lift. In the case of a rocket we take a little bit of the earth, the fuel, and take it out into an alien environment. Unlike the aeroplane, which is taken in some of its reaction medium (air), the rocket has to take it all with it. Thus it is one of the most inefficient means of travel man has ever invented, but it is paving the way none the less.

The tiny tip of the rocket, not the entire cone, is the capsule which is finally ejected to the moon. The remainder is fuel. Compare this to an old steam railway engine having to do a long, long journey taking two or three miles of fuel along in wagons full of coal instead of picking it up along the way. It is a pretty inefficient method.

The rocket imposes prohibitive transit times as far as interplanetary travel is concerned, apart from the sheer bulk of fuel required. Interstellar times would be untenable without hibernation. Even Einstein's time-dilation effect does not materially affect the problem nor the employing of atomic powered rockets. Further improvement of transit times would involve intolerable accelerations on the occupants. So let us start from square one and look at the phenomenon we are trying to overcome.

Gravitation. What is this mysterious force, what do we know about it? Well, in a sense it is almost certain to be a uni-directional flow of some kind. In the case of the earth there is no such condition as up or down, as you well know. North, south, east or west - wherever we are situated on the earth's surface there is always a tendency to move towards the centre, and we call this gravitation. I say it is uni-directional because we also know in the case of a very high mountain, if a nearby body is falling towards the earth's centre, then it is simultaneously being 'attracted' or accelerated towards the mountain. This is a displacement in that direction, in other words the tendency to move towards the earth's centre is deflected to one side.

This strangely suggests that gravitation is uni-directional and not inherent disposal towards the centre of a body. Perhaps I can illustrate this further. Imagine a planet on which someone experiencing the effect of gravitation in a vertical sense (to him) towards the centre of that planet. Well, out in space is another planet and there may be someone there experiencing gravitational attraction towards the centre of that planet. Remember, the first person says he is receiving an attraction there also, although the planets are far removed from each other, we must not forget that gravity obeys the inverse square law and never, never dies. Gravitation gets weaker and weaker away from the causing body but its effects are moving bodies towards our earth hundreds of millions of miles out in space. It gets weaker and weaker until it is insignificant but nevertheless it is still there. So the person receiving acceleration or force to the centre of mass of his own planet also receives a sideways acceleration towards the other planet. Gravitation is certainly universal, it is almost certainly uni-directional.

Think for a moment on some of the basic facts of matter. Consider two particles in space. Two chief conditions are imposed on them. There is the electrical attraction and be it very weak, gravitational attraction. As Professor Taylor told you, gravity is one of the weakest forces known to nature. In actual fact if we call the inherent electrical attraction between two particles one unit, the gravitational attraction is approximately one sixtillienth, one followed by thirty noughts times as weak as the inherent electrical or 'binding force' in matter. This is a surprising fact, and if you fall off a chair and hit your head on the floor you are not going to be pleased by my telling you that gravity is weak and one of the most inferior forces known to physics.

Various thinkers the world over have dreamed up ways of overcoming gravity, and years ago there was the famous Wellsian idea of cutting off the earth's gravitational field so that a spaceship could be moved at will once free from this field. It was a rather ambitious and hopeful idea and I have a little toy which demonstrates it.

The two spheres represent two planets. In the middle is a little 'spaceship' made of soft iron, which is attracted to the magnet in one of the spheres. Just to show how we can isolate the little spaceship from an external field by a process from within itself I set it working by heating it. The idea is a development of the Curie effect, discovered by Madame Curie, in which soft iron molecules cannot retain their alignment, caused by the outside magnetic field, when heat is applied. The molecules lose their alignment. Therefore the magnet has no more hold over the soft iron spaceship and it drops into the centre. The other magnet in the second planet now attracts it. So it works simply by cutting off the magnetic field, from within the system itself.

Then there is the near proximity effect. Dr. Luthwaite's machine, in principle. It is based on the fact that a powerful magnet can be created by an alternating field.

Here we have an ordinary magnet of some power. As you know it will not pick up a piece of aluminium, but we can make the piece of aluminium into a very powerful magnet by creating an alternating field close to it. This is only working at fifty cycles per second, but if we increase that we can repel the ring much higher.

As you see it is quite a powerful effect and takes a bit of force to hold it down. It is an interesting phenomena, as Dr. Laithwaite demonstrates with his machines, but it is at best a near proximity effect. Do not run away with the idea that it can be caused by the earth repelling a spaceship further and further into space. This could not happen.

I might say that I have gone through various stages of similar reasoning only to reject them. It was not until I saw levitation for myself that I began to look towards gravity. I saw levitation in my own home, where there were no questionable mediums. There was just the family, an ordinary gathering of people who wanted a bit of fun or to know the truth of these matters. It set me thinking! I was a member of the British Interplanetary Society at the time and if you are an engineer working on rockets and see a table floating in the room you are going to start asking some questions.

I started asking some questions, but soon discovered I could find little on gravity at all. Einstein got round the problem by asking us to accept the idea, and it is largely accepted by science today, that space around a body is curved. We are not supposed to ask what space is!

It occurred to me as the years went on, there were only two conditions in natural phenomena, space and matter. This is not a very profound observation, but it is a very important starting point, a beginning. How can it be, and these are questions Newton asked, that two bodies, unattached and separated by the condition we call space, have within themselves the inherent capability of moving towards each other *unless* moved by some medium between them (which he called the ether). Now in the world of science this is completely unacceptable today, but I did not want to stop there. I asked myself is it unacceptable because we cannot explain it, or is it time for us to start thinking further.

This I did and soon came to the conclusion that space and matter are in fact synonymous. The second thing I discovered was that gravitation inherently has one of the most enviable factors that rocket engineers could employ. That is the phenomena of uniform motion.

Motion in the physical world can be caused by one of two kinds of force. A progressive acceleration due to reaction or force. And gravitation.

In the case of a progressively accelerated body, the molecules are in a state of quiescence. They are inert and suffer this thing we call inertia, which is a reluctance to be moved in space of their own accord. We have to start moving masses by an ejection mass from a rocket, thrusting upwards, or the wheels of our car turning and pushing us along a roadway. Its all fundamentally the principle of reaction.

Gravity on the other hand has the unique property of accelerating matter uniformly, molecule for molecule, atom for atom. Moved by a gravitational field there is no foreseeable limit to the others of acceleration which a body could attain.

I should like to relate this, to a branch of Physics, which is not my domain, by quoting other people's work. This is the result of research from some scientists who say there is a third, predictable rate of change of mass into energy. The first well known one is the thermochemical (the coal you burn in the grate). The second is the thermonuclear. The third, predicted mainly by Burkhard Heim in Germany, is the direct conversion of mass into energy.

The following gives an idea of the efficiency comparisons. For the expenditure of one gram of Hydrogen on these three levels; thermochemical would yield .053 horse power hours. The same one gram at the thermonuclear level will yield no less than 286,000 horse power hours. On the direct conversion of mass into energy level that one gram would yield 33,500,000 horse power hours!

Here then are three main factors. First we have discovered that gravitation is exceedingly weak, the most inferior force in science. Secondly that it has the most enviable uniform acceleration capability, and thirdly Heim has predicted if we could only burn fuel on the direct conversion of mass into energy level, then gravitational waves would be generated. I cannot vouch for this because I am not a physicist. Heim did six dimensional calculus on it and his work was exceedingly difficult for most ordinary mathematicians to follow, but those who could said that there was little doubt about his reasoning.

What this means is, when we burn fuel, to create say an electric current which is passed into a coil which is passed round a piece of soft iron we call an armature which revolves, we have an electric motor. The electric motor turns wheels on a vehicle in which we sit and we say there is propulsion. What Heim says is, that by direct conversion of mass into energy we should be able to produce a motivating field acting directly and uniformly on a source in any direction we wish.

The concept that gravitation is possibly uni-directional, implies that gravity is coming up towards us every bit as it is going down. In fact, a medium or source of energy which is depleted by penetration through matter. We have the undiluted effect of gravity pushing us down and the diluted effect 'pushing' us up from beneath, the net result is a downward acceleration. The bigger the mass beneath us the greater the resistance and the less forceful are the rays permeating up through the earth. We say gravitation is more intense, being related to the denseness and size of the planet but it could be for this reason.

If this be so it means that our spaceships of the future might function something like this. Imagine a tidal wave taking a ship towards the shore. Imagine the ship trying to go out against the tide, using a propeller for this. Suppose the wave force on the ship is 'V'. If we do not turn our propeller, the force of the waves will push us back with force 'V' towards the shore. If we turn the propeller take in fluid, ejecting it out in the same direction as the tide is flowing but faster - at '2V', then in analogy to gravity we become 'weightless'. The boat will stay there and the tide will not have any more effect in pushing it towards the shore. If we now increase to '3V' the boat will start to overtake the tide.

Gravity is the same. It is a downward 'sea' of energy which is pushing the molecules of all structures towards the surface of the earth and holding them there. We might take in gravity and accelerate, and the more we accelerate it the less we 'weigh', until finally we are moved in the opposite direction, upwards!

Now I have done a good deal of work on this because it has some very important implications as far as UFOs are concerned. If we create a gravitational field around a vehicle, to move it upwards we are going to have certain problems. If you want to move upwards fast, the field must be powerful. If the field is powerful it is extensive. If I have a magnet here and you all have compasses, the power of the magnet at this distance will not effect your compass. If however, I turn the power on so it is more intense, the field is more extensive and will effect the compasses. It is similar with a gravitational field. If we turn on the power to get away quickly the field is going to be more extensive and the ground is likely to go up with us.

So the rule must be to effect swift take off, you make a slow initial take off for some distance away from the earth and then accelerate. Then if we look up the UFO files that is one of the first things we see. A witness claims to have seen a UFO take off. They say it took off slowly at first until at the height of a telephone pole or a tall tree and then it went 'woosh'. We read this again and again. On those occasions where the witness said the UFO was on the ground, they say we went out there, the dog started barking and this thing just went 'woosh' and craters are left in the ground.

I have filled an entire book with various engineering predictions which a gravity propelled vehicle might show. I suggest you work out your own predictions of the behaviour of such a vehicle but here are an obvious few!

For example, if we were to generate gravitational waves then we almost certainly must generate excess radiation some of which would be visible light. That could be our 'exhaust'. You would expect the vehicle, in some circumstances, to glow and be lit up. You would expect it not to make a noise when going through the air rapidly. For this reason a gravitational or motivating field, as with all fields, would permeate from a source, radiate and become less and less intense. You cannot imagine a square chunk of field. All fields must radiate, be they light, gravitation, magnetism or the binding forces within matter. It must be a spherical in origin.

The innermost parts of such a spaceship operated in this manner would receive an acceleration or thrust in one direction. If the extent of the field was contained within the perimeter of the craft then we could imagine a condition where the outermost molecules of the craft were not receiving much thrust at all. That means the air molecules outside the craft would be quiescent and the vehicle could literally push through the air, when going slowly, much the same as our aircraft do.

If you were near the machine you might hear a wooshing noise. Many times UFO witnesses have said this.

On the other hand, if high speed is required and power increased, the field becomes very extensive and the air molecules adjacent to the perimeter of the craft receive the same velocity and thrust in the same direction, or nearly so. That means that the radiating field and thrust, becomes less intense to a point where the air is stagnant and not moving, but the air surrounding the craft will be going along with it and ordinary aerodynamics no longer apply. It means that the vehicle is behaving much as an aircraft with an enveloped casing of air. But there is a shearing effect where molecule by molecule, the air is receiving less and less thrust. So as a convenient spin off there would not be any sound. How many times have UFO witnesses seen something big enough to see that it was not an aeroplane, going very, very fast and yet making no noise?

These are several facts of UFO activity which can be correlated to gravity field propulsion. I would ask if you are interested in doing so, that you extend this research and see how many of the attributes, all be it based on engineering reasoning, could be found in UFO reports. Then ask yourself sincerely if this can *all* be attributed to sheer coincidence.

I am not saying, look I have thought up this wonderful idea and UFOs prove it, - not one little bit. I am simply saying that inherent in nature is one big clue that suggests very strongly either we are being hoodwinked for some meaningless purpose or we are being shown a craft which is perhaps our future.

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