

PURBUTT

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The legal and financial affairs of the Society are managed by a Board of Trustees in accordance with the laws of the State of New Jersey. These officers are five in number: a President elected for five years, and four founding members — two Vice-Presidents, a Treasurer, and a Secretary. The names of the present incumbents of these and all other offices are listed in each issue of the Society's quarterly journal PURSUIT.

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- (3) an Executive Secretary who acts as coordinator;
- (4) a Director of Research in Basic Science;
- (5) a Director of Industrial and Technological Relations;
- (6) a Public Relations officer, who also handles press relations;
- (7) a Liaison Officer for governmental and other official relations;
- (8) a Consultant on Scientific and Technical Publications;
- (9) a Supervisor of Regional Representatives.

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The Society publishes a quarterly journal entitled PURSUIT. This is both a diary of current events and a commentary and critique of reports on these. It also distributes a quarterly newsletter on Society affairs to members in categories (1), (2), (3), and (4) above. The Society further issues Occasional Papers on certain projects, and special reports in limited quantity on the request of Sponsors or Contributing Members. (Subscription to PURSUIT is \$5 per annum, including postage.)

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PURSUIT

JOURNAL OF THE SOCIETY FOR THE INVESTIGATION OF THE UNEXPLAINED

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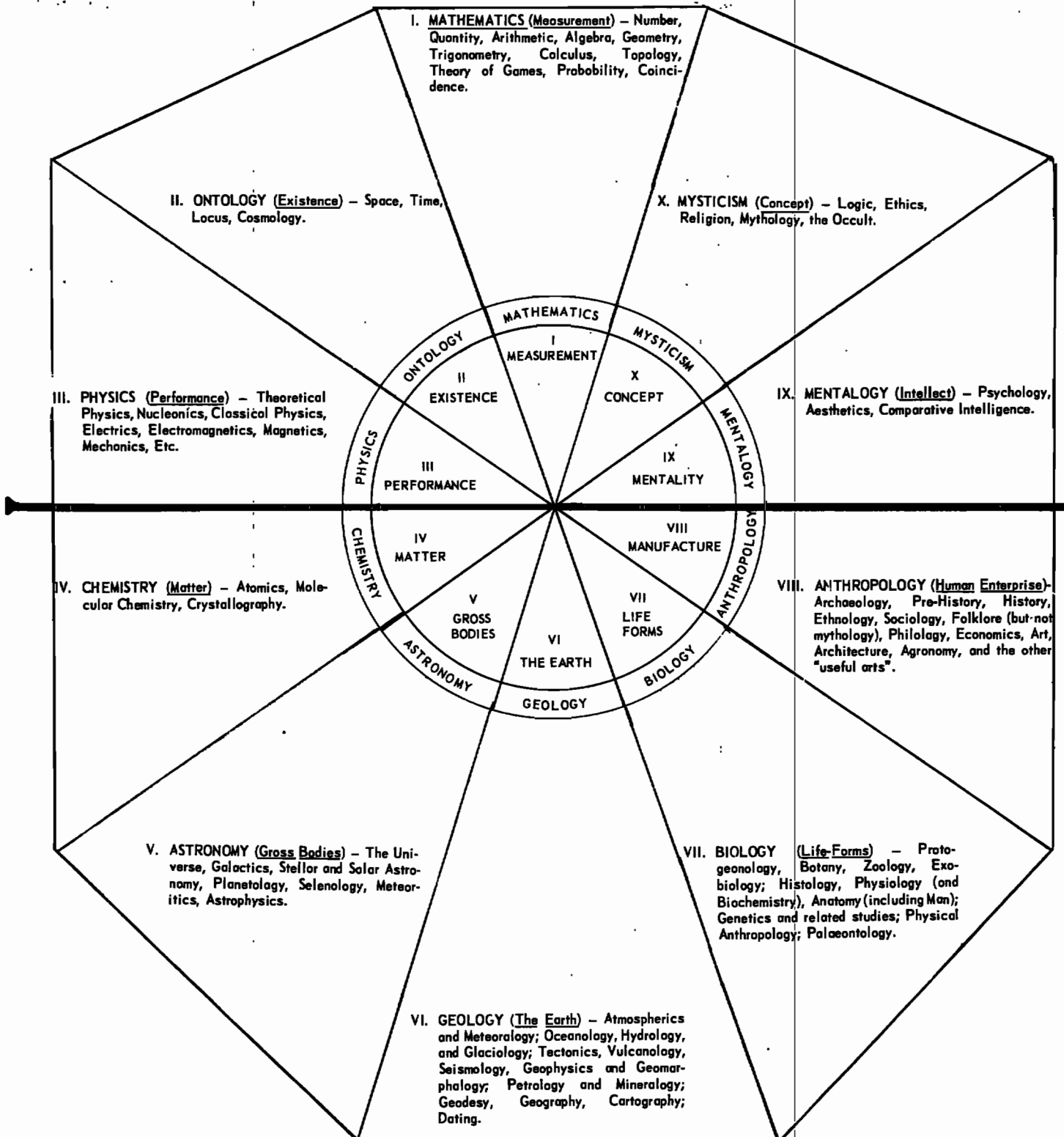
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THE INTANGIBLES



EDITORIAL

INSTANT EVERYTHING, PLUS.

In a book reviewed in this issue — Chariots of the Gods? by Erich von Daniken (see p. 24) — there is an interesting paragraph. This reads in toto: less the last two sentences of panegyrics: - "Today science reaches many of its goals with seven-league boots. It took 112 years for photography to develop to the stage of a clear picture. The telephone was ready for use in 56 years and only 35 years of scientific research were needed to develop radio to the point of perfect reception. But the perfecting of radar took only 15 years. The stages of epoch-making discoveries and developments are getting shorter and shorter; black and white television was on view after 12 years' research and the construction of the first atom bomb took a mere 6 years. These are a few examples from 50 years of technical progress..."

This presents a rather eerie prospect, especially if we do a little intrapolating as well as extrapolating. First, let us go back a piece. It apparently took several million years to produce a human being; it took these creatures at least a million years to institute an industry — i.e. the regular creation of wood, bone, horn, and stone tools. Then, several hundred thousand more years were needed before these creatures stumbled across metals, metallurgy, and true industry. That appears to have been some ten thousand years ago, but humans then struggled along with copper, gold, silver, tin and bronze for a long time before they got to iron, and it was only 200 years ago that the basis of modern technology — i.e. steel — was developed. If you put this lot on a graph below von Daniken's examples you will note the fact that such major developments form an almost perfect geometrical progression. So let us turn the coin and do a little extrapolating.

You can keep dividing forever and still never get to zero but, considered time-wise, by the time you get this graph uncoiled to the point where it appears to go straight up — i.e. the Einsteinian speed of light — you will have virtually instant discovery. What a forteen must then needs ask is what happens next? Does enquiry and development come to a stop, or do we break the time barrier and start developing things before they are developed; or alternatively, develop things before they have been planned or conceived? There being no such thing as the present, are we confined within certain limits, or can we jump this theoretical barrier and predict? Could this be an opening wedge into the whole field of prediction and precognition?

The greatest confrontation coming up today is between two parties of pragmatists; not between pragmatists and mystics. This dialogue will absorb an increasing amount of time and thought on the part of all pragmatists and especially scientists because concrete (i.e. tangible) recordable and reproducible proof of a number of intangibles is now turning up. The best example of this may be found in Walter McGraw's book The World of the Paranormal. Now, comes another book, previewed in this issue, by two extremely intelligent young ladies who describe that which was demonstrated to them in this field during an extended trip through Russia, Bulgaria, Roumania, and Czechoslovakia, at the invitation of scientific organizations working on such things. Their report concerns utterly pragmatic matters.

The essential point that everybody has to appreciate is that by the use of new physical machinery, electronic and otherwise, we are now beginning to be able to obtain proof of at least some of the mental and other non-tangible processes that manifestly control not only life as we know it but the entire universe and existence itself. In fact, we are taking the "E" out of "ESP" and replacing it with the much more realistic "S" for "super" (or supra, if you will). In other words, there is nothing spiritual, mystical, or even occult (meaning literally 'hidden') about the amazing actions and reactions of man and other animals and plants. The list of man's senses passed the 25 mark long ago and every day more are being added although we don't know yet what physical parts of our body constitute the mechanism of their operation. The sensory proclivities, and both for sending as well as receiving, of other animals are positively overwhelming in their multiplicity. Take for instance the fact that almost a dozen "sense organs" have been found (as physical structures) on the one-but-bottom segment of the antenna of one small fly; and we don't know what any of them are for!

Another essential point to bear in mind is one for the technologists. This is that the electromagnetic is not the only energy band in our cosmos. How many others there may be remains to be discovered but there is definitely one of immense capability upon which what we call mental waves operate. Pointedly, moreover, nothing that we know of in the EM band has so far been demonstrated to interfere with this (let us call it) 'mental band'. Nor can we detect the M-Band through the EM-Band. And just because there now appears to be some evidence of a "G" (for gravity) Band, for goodness sakes, let us not jump to the conclusion that thought runs on gravity.

Ivan T. Sanderson.

I. MATHEMATICS

TRISECTING THE ANGLE

It has always been our intention to plough through all the old mathematical saws, oddities, enigmas, paradoxes, and suchlike but we had no idea just how wild this pursuit would become. In our last issue we had a little clean fun with numbers; time before, we got a lucid explanation of the old one about 'squaring the circle' which, after all these years, turned out not be that at all but, quite differently, how to convert the area of any given circle into that of a square, or other rectangular periphery, of precisely equal area. Now comes the next one.

This is equally venerable: to wit, can you trisect an angle? This one was launched at us by Member No. 328, in a neat letter covering a monumental battery of mathematical formulae, geometrical diagrams, and algebraic calculations. We did not have the heart to send this one on to our advisor in this department — Martin Kruskal — after the aggravation that our previous pleas must have caused him; so we sent it to two other mathematicians, accompanied by mild bleats. We expected polite blasts in return, but to our amazement, both replied that the damned

'theory', or whatever you want to call it, works and that furthermore it is theoretically precise. However, both pulled an old saw themselves in that they said our honourable member (No. 328) was not abiding by the rules. We have obtained assurances from said professional mathematicians that they did not wish in any way to imply by this that said member was 'cheating'; and both assured us that his mental exercise — and also his geometric analysis — conformed to the strictest logic but that his methods fell without accepted mathematical principles or laws.

We must admit that we don't quite get this. Does it mean that our logic is not mathematically precise or that mathematical principles are not logical? In fact, so puzzled are we that we are going to "take the angle by its horns" as it were, and toss the whole thing to the long-suffering Dr. Kruskal. Meantime, any who are interested might like to write directly to No. 328, care of us. We do not have massive copying facilities so the best we can offer is to put you in touch with him and let you take it from there. Not only the problem itself, but the responses to it laid out above, are unexplained indeed.

Hair-raising Semantics

There is a very simple matter that has proved to be absolutely deadly; and this in all aspects of our modern life, from economics to nuclear physics and the space program. This is purely semantic, but it just does not seem to be appreciated even by many scientists; and especially those who learned English and studied in the British sphere, as opposed to the American. This is the matter of the word "Billion".

In the United States, this word connotes a thousand million, or 1,000,000,000. In the rest of the world it means a million-millions, or 1,000,000,000,000. The whole world fortunately agrees that a Million is 1,000,000; but a Milliard is equivalent to a U.S. Billion in France, the U.K. and the British sphere, and in Germany.

An increasing number of technical works and even popular books written in other countries, either in English, or translated into English (not American), are now being issued in their original text and disseminated in this country. We have recently run into some classic misstatements in both popular and scientific journals resulting from this semantic muddle and lack of appreciation of it. In fact, physicists, and particularly American ones, check your figures. Don't forget you are only 16.5% of the world's technologists.

II. ONTOLOGY

DID THEY COME HOME IN REVERSE?

Wouldn't you know it? In our last issue we mentioned, perhaps somewhat too casually, that this fraternity and especially the cosmologists had been considerably piano for some time. So, of course, the whole basic argument over existence and its origin immediately bursts forth in almost overwhelming vigour. The problem is antimatter.

This outburst was beautifully laid out for us ordinary mortals by Dietrick E. Thomsen in an article entitled "The Universe's Missing Antimatter" in the 13th December, 1969 issue of Science News. One should not be flip about anything so serious and fundamental but we have to admit to a number of chuckles derived from it.

The basic issue is that while cosmologists deal

with the grossest aspects of matter and energy, particle physicists are trying to cope with the smallest. The consensus of scientific and philosophical thinking as of now is that the fundamental principles of both should be alike. However, the physicists insist — and offer acceptable proof to boot — that every particle must have an anti-particle in its ultra-tiny cosmos. The cosmologists, on the other hand, have not found any valid (to them) cause to include anti-matter in the formulae by which they endeavour to describe our universe and its beginning. Thomsen goes on: — "The cosmologists' dilemma is that observation seems to be knocking down theories designed to include an even balance of matter and antimatter; instead, it backs the so-called big bang theory, which has no such balance. But if they try to put matter-antimatter symmetry into the big bang

as particle physics would require, they wind up with instant theoretical destruction of the universe at the beginning, before creation even had a chance." This would seem to be a pretty dreary thought. One might opine that the big bang theory is manifestly nonsense on purely ontological if not on what are called scientific grounds. If everything began with such an atrocious phenomenon, what, might we ask, was going on before? Was it, as the Judaeo-Christian Bible says, that there was then nothing but an Universal Spirit (the Whole of the Buddhists) or God; and incidentally, if so, whose God? Furthermore, did that Entity also start with a big bang?

So The Almighty decided to pop off a universe? Fine; but how many others did he create before ours; and how many others since? And if He did, where are they? And, for that matter, where is "He", in time and/or space? The whole exercise is, of course, ridiculous. Either we exist or we don't. But this is a problem for the ontologists, not cosmologists.

How much more reasonable might it, not be to suggest that matter of all sizes, from infra-quarks to universes, is and always has been, and always will be continuously created? In the infinity of our universe (alone) all this "missing antimatter" may be some place quite else, and either in space or, let us not forget, in time. The time factor in the creation of particles and anti-particles is, in fact, as this excellent article points out, a very vital integer in what we must call the "creation formula". Perhaps when new matter — i.e. a combo of energies — is created, matter shoots off at one time angle and anti-matter at another, just as busted particles do in

a cloud-chamber. If this is what happens when we deliberately break up what we call matter, may it not also apply when natural forces create it? To every action there is an equal and opposite reaction; etc.

Thomsen goes on, when discussing Dirac's exposition of basic matter-energy propagation that:—"If a proton and an antiproton come together they will annihilate. That is, they both vanish, and the ultimate result is a burst of energy in the form of gamma rays. Conversely, a properly energetic gamma ray sometimes creates a particle and its antiparticle. But creation comes only in pairs, never one side or the other alone. If in these miniscule acts of creation in the laboratory, the matter-antimatter balance is always held, physicists reason, then why not in the gigantic act of creation that made the universe?"

Anybody interested in these fundamental matters who wishes to read a simple and straightforward exposition of them should obtain sight of this fine article. Nonetheless, after reading it for the Nth time, we could not rid ourselves of a memory — namely, a couple of stanzas from a recording by that truly great comedian Johnny Standley, entitled "It's In The Book". After reading the line from the classical nursery rhyme "Little Bo Peep" that went: "And they will come home, wagging their tails behind them", Standley remarked: "Did we think they'd wag them in front? Of course, they might have come home in reverse. They could have done that; I really don't know." It is really strange what an extraordinary insight true humourists sometimes have into the deeper recesses of reality. Could it be that anti-protons come home in reverse?

III. PHYSICS

THOSE DAMNED QUARKS AGAIN

Nobody knows what a Quark is, or even if any exist, but they have been employed for some years now as a sort of "x" symbol in the formulae of basic nucleonic physics. The damned things ought to be there if our current formulae are to pan out; and they could be there, either as ultimate or near-ultimate particles. But nobody has pinned one down yet. Recently, an Australian scientist, Dr. Brian McCusker, stated that he thought he had found them during the course of the analysis of cosmic rays. Then the fun began.

Quite a number of physicists have been searching for these subatomic particles in all kinds of places on the spectral band, and two of these scientists also specifically in the range of cosmic rays. However, cosmic rays range over an enormous band of the EM spectrum; and just because nobody has found any within the limits between which they have been searching, other searchers got a bit tough with poor Dr. McCusker. The ins-and-outs of this matter are, of course, quite incomprehensible to us ordinary folk, but the bare bones of the dialogue were splendidly

put by Science News in their December issue; and this is comprehensible if one just bears in mind the following.

Think of all the known "wavelengths" as being laid out along a straight line, from the shortest known, to the longest known. Then write below this the known frequencies of these, and you will see a simple and perfectly straightforward progression. The (secondary) Cosmic Rays lie to the extreme right end of this band — though, of course there is an infinity beyond that end. They form quite a spread, as is displayed in the cut on p. 6, which of course is quite incomprehensible to all but specialists. Nonetheless we reproduce this so that said specialists may appreciate the significance of a paragraph in a report on all this in Science News.

This reads:—"Drs. Adair and Kasha have also been looking for quarks in cosmic rays and have not seen any. They have been looking at a lower energy, 100,000 billion electron volts (GeV) rather than Dr. McCusker's 3 million GeV, so they calculated the possible ways Quarks could be made in cosmic rays to see if they should have seen some in their energy range. From the flux of quarks that Dr. McCusker

Instead of freezing at 0°C. it freezes at 40° below zero, and then solidifies into a glasslike state rather than the crystalline* state of ordinary ice. [When it comes to the question of "boiling" we hit a very strange paradox which has not been explained per se, and which nobody seems to be able to "explain". Simon Dresner in his article in Popular Science states: "Whether Polywater has a real boiling point is not known. It seems to be stable up to about 650° C., at which point the molecules vibrate with enough energy to shake themselves apart, and the polywater decomposes into ordinary water."

This is all perfectly splendid (though we don't like the word 'about' as italicized above), but it opens up a much greater mystery. Ordinary water "boils" — i.e. starts to vaporize — at 100° C. Now, if polywater does not do so until a minimum temperature of 650° C., what happens to the resultant "ordinary water"? It should be super-duper-heated water vapor, or what we call "steam", and you know what that's like. Does polywater, in fact, when it reaches its boiling point, whatever that may be, blow up? If not, how does the resultant ordinary water behave — it not being water but a super-heated gas? You can't have it both ways, and we would like to hear just what does happen. As to its freezing at minus 40° — which incidentally is the equivalent amount of absence of heat on both the Centigrade and the ridiculous Fahrenheit scales — we would like to have an answer to another question that does not seem even to have been postulated. What of latent heat? I.T.S.] But perhaps the most important characteristic of

* So-called "ordinary" ice (as a term) means nothing. The most normal types of ice found in nature, moreover, are not crystalline but, rather, amorphous, just like glass. Dozens of forms of ice are known, one once described by Dr. D. Porter of Oxford, as being "red hot" due to confinement under extreme pressure! Snow crystals are ice, and they are crystalline. So also is that extraordinary form of ground-ice found on the Arctic tundras known as "cigar ice" which is composed of closely packed, upright spindles but which themselves are not crystalline. Ice from a refrigerator is not in a crystalline state as anybody can see when it is shattered. However, it does not break with what is called a conchoidal fracture as do glasses of all kinds.

polywater is that the chemical bond holding it together is much greater than the bond between the molecules of ordinary water. If this bond is sufficiently strong it may help bond clays together, for example; it may help make the earth we walk on more stable; it may be helping to 'glue' living organisms — holding them together. In actual fact, polywater has not yet been found in nature but the search for it and the attempt to understand its mysterious properties has begun. So far polywater has been produced in minute quantities in laboratories by condensing ordinary water vapor in capillary tubes the diameter of a human hair. After about 18 hours the polywater is condensed in the tubes into a long array of identical molecules. No one knows how this happens and science is just beginning to theorize on its meaning for all living creatures."

This is all perfectly splendid but it leads us into much more mysterious contemplations, outside the field of chemistry. You will note in Curt Fuller's piece, and in the others quoted if you can find them, constant reference to the possible existence of this form of water in nature, and the hint that it might have something to do with the extraordinary and the often quite unexplained mechanical bonding of clays.

Now we're into the field of geology, and to be thoroughly facetious: "Polly, old bird, just where is the water?" If this 'polywater' does exist in nature, and particularly in clay which is characterized by extremely fine capillary tubules, might it not explain the uncanny and totally incomprehensible business of ponds and lakes that never freeze? (For a discussion on this, we refer you to page 12 under the general heading of VI. Geology.)

* * * * *

Incidentally, don't ever try to calculate anything in nature on the Fahrenheit scale. It has no 'base' and is entirely arbitrary. If you want to find out what people are talking about who use it, apply the following formulae: To convert Fahrenheit to Centigrade: —

(a) Above 32° F. (i.e. Freezing, or 0° C.)

$$\left[\frac{\text{Number of Degrees F, Minus 32. times 5}}{\text{divided by 9}} \right]$$

(b) Below 32° F. Ditto, but PLUS 32.

To convert Centigrade to Fahrenheit....Who wants to?

V. ASTRONOMY

A LOOK AT THE PAST

Another notch has been hitched in the pursuit of the Quasars — or quasi-stellar radio sources. No full agreement has yet been reached on either their origin or their true nature. About a hundred are now known and all lie billions of light-years distant, which means that they were in existence before our solar

system came to be. In fact, they may have ceased to exist or changed into something quite else billions of years ago. Thus, in "looking" at them, we are observing the earliest cosmic events of which we have evidence.

They are very strange items in that they are almost unbelievable power-houses, estimated to be some ten million times the size of our sun, and which emit

light and radio waves in amounts between that given out by very large stars and certain compact galaxies. The latter, although equally distant and also emitting tremendous energies are, however, enveloped in gaseous envelopes that often form spiral arms like many ordinary galaxies.

The "notch" was hitched by Dr. J. Beverly Oke of Caltech, who has suggested that these objects form an evolutionary chain, quasars being the most primitive and the oldest. This brings us back to the fundamental debate among the cosmologists; namely the steady-state versus the big-bang that we discussed above. The really pertinent question in all this is: Do we in fact have a true and reliable method of measuring inter-stellar and inter-galactic distances? This expertise is founded on two precepts; the speed of photons (light) as a fixed standard, and the so-called Doppler Effect (and note this designation 'effect') as a method of measuring distance.

Both these standards work. However, there is no known or even conceivable reason why other sub-particles — quarks, for that matter — could not move faster than photons; and not even the good Lord seems prepared to say what other forms of radiant or radiating energies on bands other than the electromagnetic may not exist. Second, the Doppler "Effect", while workable, provided you work a priori and backwards by begging the question, or otherwise using it as a factor in proving it, runs into the following.

Space-physicists have now demonstrated and concluded that there is actually an awful lot of what we call 'matter' in space. Admittedly this is mighty tenuous as we think of the density of matter. However, if there is only one atom in a cubic centimeter, or in a hundred, or a thousand, or in ten thousand cubic centimeters of space, you will find that by the time you (or a photon) have travelled through a billion light-years (i.e. $186,000 \times 60 \times 60 \times 24 \times 365 \times 1$ -billion miles) you will have encountered a mass billions of times denser than lead. What, we ask, do the poor little photons do by way of getting through this atomic soup?

Do they swerve around all these billions of billions of atoms on their way — according to Einsteinian laws — or do they bang into them. It is known that, if a photon does so bang into the nucleus of an atom, it vanishes; but another one comes out the other side. (Whether this is the same one or not is not yet decided.) However, might not this banging, passing through, and/or giving birth, cause a miniscule slow-down that would show up as a shift to the red end of the EM spectrum; and, the more bangings, the more to that end? If so, we would have our good old Doppler Effect, and would it not increase with distance? Of course; but it would still be an effect, not a valid basis for measurement of distance, either spatially or timewise, since Matter density in space is already known to vary greatly from place to place.

Then again, even if this effect does genuinely disclose distance it need by no means indicate

motion (away from) the point of observation. It could be simply distance away from. This would mean that the universe is not expanding but completely static, and one would not need either the creation of new matter or this ridiculous big bang to maintain it. There is no reason why matter, and globs of matter, cannot evolve in situ. They don't need to go flying apart while they do so; and they could well go through both an ontogenous and a phylogenetic evolution in situ just like other life forms, ending in what we call 'death', during which turn-over point, not one iota of matter or any other energy is lost. In other words; round and round we might go cosmically, just as we do terrestrially.

RINGING ROCKS

There was an initial gefluffle over the matter of the seismic resonance observed on the landing of the unwanted lunar-landing device named Intrepid which was thrown down after it had delivered the two moon-walkers to the Apollo 12 module for return to earth. This controversy is still going on.

It was very well recorded by William Rice in an article in the N. Y. News, datelined Houston, Texas, the 21st November last. This read: "Scientists at the Manned Spacecraft Center here played the guessing-game today, trying to imagine 'what on moon' could have caused the long seismic reverberations after the impact of the lunar landing ship Intrepid. They had been stunned by reports that the impact set up shock waves recorded for 30 minutes on the seismometers placed on the lunar surface by astronauts Pete Conrad and Alan Bean. And they were further dumbfounded today when examination of data showed that the shocks actually lasted 55 minutes. A similar impact on earth would have registered on seismometers for only a minute or two. Asked what theories were being advanced about the seismic event, Dr. Gene Shoemaker, geologist of the California Institute of Technology, replied: 'The truth is that there is no theory. The best seismic experts are not about to suggest an answer right now.'"

Well: the following may appear considerably presumptuous but it might as well be said. This Society has for three years now been working quietly away on the "Ringing Rocks" of this planet — starting with the examination of several "fields" of these amazing rocks in northeastern Pennsylvania. We have learned a lot about them but, while some possibilities have come to light with some concrete evidence on which to found them, no full explanations have so far been forthcoming. Meantime, we have been informed of similar strange bare rock-fields with various percentages of rocks, small and large, that ring, all over our Southwest, in India, Indonesia, various points in Europe, in northern Canada, and in South America.

As a result, when the above report was issued, two of our members, both physicists and one with the needed knowledge of petrology, wrote to the Manned

Spacecraft Center, offering our findings on this matter. These communications were referred to Dr. William Hartmann of the Lunar and Planetary Laboratory of the University of Arizona who is the principal consultant to NASA on this matter. He replied that, while the whole thing sounded most extremely interesting, his department was so swamped with work that they could not undertake any other investigations, however relevant they might be. This, we contend is a pity, because the answer to this lunar rock resonance might be lying right here under our noses. There is, as we have said more than once before, something damned funny about these rock-fields on which nothing grows and upon which nothing but a few spiders live — a fact that has been on record for two hundred years in the Pennsylvania area — and in which various percentages of the rocks 'ring' while all similar-appearing rocks, made of the same stuff according to geologists and lying all over the surrounding countryside, don't ring. These "fields" look like spatters of stony meteorites from space; and more especially as they are all aligned.

Why, oh why, don't these hard-worked scientists just stop spending money, time, effort, and anguish for a couple of days and look into this matter, instead of sitting around propounding theories that they admit they do not think are valid? For instance, let's take the rest of William Rice's splendid report. This goes as follows: —

"(Dr. Shoemaker) did however outline a number of directions in which the scientists were looking.... They include: (1) The Moon, like a bell, is made up of a substance which has a high Q. The Q level is a measure of the number of times a body will reverberate when you hit it. It would be quite difficult to explain why the moon would have this quality, he said. (2) The moon has some kind of wave guide or layer, similar to the thermal layering in oceans, which channeled the shockwave and kept the seismic energy going. (3) The moon is unstable and filled with faults so that 'when you hit it, it just collapses.' It would be hard to explain, however, why collapses did not occur during bombardments of meteorites which the moon has undergone. (4) 'The properties of the structure of the moon are much different from what we expected; there may be something totally unimagined involved.' "

Might we not save a little taxpayers' money and find out why some of our rocks ring before spending millions more for legitimate speculation on those of the moon? Theories are great fun and absolutely necessary but there's nothing like doing a bit of measuring and weighing if you want to get at the facts.

MORE ON MARS

One thing we can say for the Mars probes: they have at least woken up our chauvinistic, earth-bound, anthropocentric and egomaniacal thinkers to get

with reality. First came the 'absence' of the bloody "canals" or canali; next, the craters as per the Moon; then, the ski-slopes in place of a thin scum of CO₂ rime at the poles; and now this: — Popular Science, November, 1969.

"The Mariner photos showed large areas of the red planet to have a much-cratered surface strikingly like that of the moon. The computers have clarified some previously undecipherable closeups taken by Mariner 6. These pictures reveal, in the bright region west of the Sinus Meridiani, a totally unexpected Marscape of confused terrain that is like nothing man has seen on Earth, the Moon, or Mars before. For hundreds of thousands of square miles, precipitous hills and valleys are jumbled together without pattern. And to add to the mystery, this puzzling region is some two degrees warmer than the surrounding area, whereas it should, logically speaking, be cooler."

Why, might we ask, should the surface features and structures of other planets in our system, or of other gross bodies elsewhere, come as such a surprise or shock to us? Are we so hopelessly terra-centric or earthbound that we cannot even conceive of environmental and telluric — or should we say lithospheric — conditions being different elsewhere to those on and about our planet today and during its past history? We do not know for sure yet what the surface conditions of Mercury, Venus, Jupiter, Saturn, Uranus, or Pluto are, but all that we have so far assumed is that none of them is a "Water Planet". We now know that Mars and our sister-planet, which we call the Moon, are definitely not. Ergo, as of now, our planet is unique in at least one respect. For a very long time it must have hovered between 0° and 100° Centigrade, otherwise life as we know it would have either all been frozen or boiled.

Nevertheless, this temperature stability predisposes various instabilities, simply because of the presence on the surface of our planet of a hydrosphere (i.e. water), sandwiched between the solid surface and an atmosphere. This brings on dynamic forces such as evaporation, precipitation, erosion, and so forth, so that the whole thing is in a constant state of adjustment and readjustment — as long as its temperature does not slip out of this tiny range. Let us not forget that ultimate 'cold' is Minus 273°C. (approx.) but that stellar temperatures up to millions of degrees are known, so that a range of a mere hundred degrees is strictly nothing. In the absence of a hydrosphere (or any kind of liquid envelope), and more so without an atmosphere, a gross body such as a planet could be utterly passive for billions of years. Just nothing would happen on it apart from its being hit by meteorites or other rogue bodies. Is this not just what our preliminary observations of both our Moon and Mars seem to show?

Nonetheless, such gross bodies as Mars are there, and they must have had an origin. This need not, by any means, have been the same as ours, even if it was created at the same time. Due to a different

distance from our star (the Sun), and possibly all kinds of other factors, it may never have had a liquisphere, or even an atmosphere; yet, its surface must have taken up some shape. Our mountains, hills, valleys, and gorges appear to have been formed by erosion due to precipitation and crustal movements. Those on Mars appear to have been caused by quite other agencies and activities. And why could not internal thermal factors have created them over four million years? Radioactive material is not evenly distributed under the surface layers of our planet, so why should it be under that of any other? Ever watched a potato heated from the center outwards? It is most interesting, and sometimes results in a monumental explosion.

WHAT MOON?

We have always been taught that the object we call the moon is a satellite of this planet. However, astronomers specializing in planetology and selenology long ago pointed out that for many reasons the moon should be looked upon as a sister planet of ours forming a binary system, and mostly because of the masses of the Earth and the Moon, and the distance between them. This results in the center of gravity between the two lying inside the earth. The Moon does not revolve, of itself, but presents the same face to us all the time because it may be likened to one of the stones on a bolas and thus attached to a gravitic cord anchored in the earth.

Educated to think of the Moon as being a satellite, the average citizen has taken for granted that it is our only one. Not so said Dr. John Bagby, of the Hughes Aircraft Company, in an article in the perfectly acceptable publication Icarus (Vol. 10). Recent telescopic and photographic observations suggest that the earth possesses at least ten natural satellites or "moonlets". Further, it appears that before 1955 a much larger satellite was circling the earth, a satellite that broke up late in that year."

A report on this in the 1st of May, 1969 issue of the New Scientist, went on to say: "Even though it is quite possible for the earth to capture small natural satellites, their existence has never been generally accepted. But Bagby has collected direct and indirect evidence which shows that several large natural satellites are orbiting the Earth in similar orbits. They have diameters of 100 feet or so. By gathering together data on a few suspected observations of natural satellites, some putative orbits for these objects were calculated. A thorough search made last year using a camera with a large field of view revealed two satellites on the predicted orbits. A surprising result emerges if some of these orbits are projected back in time: they all converge to the same place on 18 December 1955, which indicates that they are the debris of a larger satellite which broke up on that day. Indirect evidence for small terrestrial satellites is very convincing, because they alter the orbits of artificial satellites quite drastically on close encounter. Some of this evidence is shown in the diagram, where the sudden jump in the orbital parameters of Explorer 26, occurring in December 1965, was caused by an interaction with the natural satellite IIC. Natural satellites can account for over 150 similar anomalies in artificial satellite orbits."

In several respects this is the most astonishing report we received last year and primarily because of the wide range of implications it suggests: jumps in orbiting artificial satellites; sudden jumps in the Mars probes; UFOs reported by astronauts; anomalies of several other kinds; and most of all this 'breakup' of one in 1955. What caused this last? Had it been circling into the earth or what; and, if so, why did it not burn up? Talk about 'cliff-hangers'. Could your story, Dr. Bagby, please be continued in your next? And what about exploring or capturing one of these potentially useful objects?

VI. GEOLOGY

Geologists seem to have gone a bit balmy. After decades of pomposity, jeering at no less than that old iconoclast Cuvier, laughing at Wegener, and mocking anybody and everybody else who ever so much as mentioned that the earth's crust might shift or break up and drift around, all of them are now scrambling to climb aboard the proverbial 'band waggon'. First, Wegener's hypothesis that the continents have drifted apart, which had been for so long so heartily condemned, became the main theme song of these latterday scientific saints, just as if it was their discovery — see now endless articles in scientific journals and in their handmaidens like the Scientific American. Then, all of a sudden, Hibben's perfectly logical conclusions about the only possible causes of the inhumation of millions of animals in

the muck of Siberia and Alaska, which had likewise been ridiculed, became the 'thing'. Now Hapgood's hypothesis of a total, overall shift of the crust from time to time due to the liquifaction of the asthenosphere, which is the next layer down below the crust of our earth, has become almost orthodox. So the boys have finally started to take thought upon all this and try to make some sense out of it. An example:-

AN ORIGINAL LAND-MASS

Dr. Patrick Hurley of M.I.T. has been pondering the possibility of a single, original crustal (land) mass, which he calls Laurasia, and which he opines must have cracked and then come unstuck so that its various bits drifted about to form the present conti-

nents. His theory is summed up in Science News (Vol. 96, p. 478) as follows:

(Dr. Hurley) "has taken the available geochronological data and plotted zones of similarly aged tectonic and igneous activity on maps showing the northern hemisphere continents in their estimated pre-drift positions. The configuration of age provinces, he now reports, definitely suggests a concentric arrangement of the zones, with the oldest material at the center and youngest material at the periphery. This, he concludes, supports the hypothesis that Laurasia was formed by a continental accretion, or coalescence, process in which an ancient nucleus of crust was surrounded by progressively newer crust being continually generated by the mantle and shoved by an inward-moving sea floor toward the nucleus. The work, he notes, supports the concept of Laurasia as a continuing and developing land mass up until the time, several hundred million years ago, when the process was reversed. The supercontinents then broke apart and the great drift episode now in progress began. There apparently was no large-scale breakup of Laurasia prior to that, he says."

This theory is, of course, shot full with inconsistencies. First, how come, regardless of whether this planet was formed of a cooling mass getting ever cooler or an aggregation and conglomeration of material at absolute cold which subsequently heated up due to internal radioactivity and heat rays trapped from solar radiation, did we get only a partial crust? Second, if we did, why didn't the earth fly apart due to imbalance? True, our planet is very slightly pear-shaped and it does seem to want to get as near to being a vast tetrahedron as possible without flying apart but, unless this original super-continent was very precisely centered on one of the poles of the axis of spin of the earth (the mechanical one, that is), it would have done just this.

Let us therefore consider the possibilities. If there wasn't enough light stuff to form a complete crust in the first place, or there was so little that such a crust would be too thin to hold together (like too little oil floating on the surface of a pan of hot water) it might form a scum only about a third of the area of the then surface of the planet. But then, assuming that said planet was spinning, how could such a crust get up around a pole? If it was floating about on the next below denser layer, why would it not obey the laws of mechanics and settle in a belt around the equator? Be it noted that the "push" of the surface layers of a sphere that is spinning is from the poles towards the equator, so that any such scum that formed such a belt at its equator would meet almost every conceivable opposition in getting to either or both poles.

Coming next to Dr. Hurley's theory that such a single primary continent once existed — whether it was centered on a pole or not — and that it accreted as do films of oil on hot water, what actually could cause it then to crack and virtually fly apart? Ob-

viously centrifugal (i.e. 'flying away from the center') force, but unfortunately for this theory it's the heavier material that goes to the outside periphery in a centrifuge! Does Dr. Hurley then mean that the denser materials in his primal continent, being in the center, flew apart first and thus pushed out half a dozen great rafts, or segments more or less triangular in shape, with their 'heavy' portions at their original apices?

This does make sense since all seven present continents (and these are not precisely what we call continents today) are more or less triangular and do appear to have the oldest and densest portions at one apex or another. Moreover, once set adrift, these continental masses would naturally be drawn to the equator and would have the hell of a hard time getting over it (and don't forget that the circumference of the earth is 26 miles longer at the equator than it is longitudinally) or beyond it. Be it noted that all continents, apart from the sister ones of Antarctica, are above or depend from the equator. The Antarctic rafts could have broken off two of the others and wandered south to balance the rest; and this is just what certain studies by such as Sir Edward Bullard, as laid out in an article in the Scientific American of the September issue of 1969, would seem to indicate. In fact, are we really getting somewhere at last?

THE GREAT SAHARAN LAKES

This is not unexplained, or so it seems, but it is the first time we have seen a solid statement on a subject that has been bandied about for half a century. This is frankly swiped from that most excellent bimonthly, entitled The ETM Log, issued by Explorers Trademart, Ltd., P. O. Box 1630, Annapolis, MD 21204, from their Autumn, 1969 issue, Vol. III, No. 4, p. 71, and reads:-

"It's hard to believe but true. An American oil company recently turned the Sahara Desert into a wet sandbox. Working in Libya, the company found a huge Ice Age reservoir hundreds of feet beneath the dunes which is said to hold as much water as the contents of the Great Lakes. The water apparently seeped underground during the last years of the Ice Age when the Sahara received heavy rainfall. The supply cannot be replenished, but the water there will be used to make the Libyan Desert a spot of green in the great Sahara. Alfalfa crops are said to be thriving quite well on the water provided by this newly discovered source."

The last so-called "iceage" wasn't because there are always two ice-ages going on on this planet at all times. When, however, the crust of the earth slipped the last time it brought new parts of it up under the axial poles and northern Europe became glaciated and southern Europe a tundra, while the Mediterranean and North Africa underwent what is called a Pluvial Period — i.e. one of excessive rain-

fall. As a result, what is today the Sahara Desert belt flowered and appears to have been a center of primitive palaeolithic civilization. There were giants there in those days — in the form of elephants, hippos, rhinos, and a lot of other large animals as displayed in the endless rock paintings and petroglyphs scattered all over the area. The Sahara consists of a number of enormous basins formed in geosynclines, and from the above report, it appears that these retained a lot of the rainwater that fell during this pluvial period that lasted at least ten thousand years.

That this water is now estimated to equal the volume of the North American Great Lakes, and this for only one of these geosynclinal basins, ought to be a very encouraging thought. If we can pump this water aloft and plant the arid deserts above, we will according to certain other new thoughts (which have also been lying around for many years) bring on enhanced rainfall due to the evaporation of heat, oxygen, and carbon dioxide by the plant cover. Thus the combined effects would be cumulative. But we wonder just what the overall results might be. The damndest things can happen when you start fiddling with nature on a mega-scale.

LONDON WEATHER — FINISH

Just as we suggested in our last issue, this oncoming of (about 180 years ago), and disappearance of (since 1957), so-called fog, now known to us as smog or schmogg, in London, England, appears to have been due primarily to the introduction of the use of soft coal for domestic heating and commercial use with the development of what has come to be called the industrial age. If you want to see the difference between the decades prior to 1957 and today, try to get the 15th December issue of U. S. News & World Report, and turn to page 77. The two pixs reproduced thereupon are manifestly souped-up but they do display the difference. This agreeable result is stated categorically to be due to an ordinance banning such burning of soft coal.

This is perfectly splendid but UPI reported that the last "pea-souper" was in 1965. Be that as it may, a certain mystery remains. We believe that this is purely semantic. The publication we quoted in our last issue stated that "fogs" had been unknown before 1665. The trouble is with the word "fog". This is not the same as "mist". The latter term should be

confined to a perfectly natural phenomenon having nothing to do with air pollution, or even with the percentage of particles suspended in the lower atmosphere around which water vapour can condense. Thus, when you are barreling along a super-highway in the outlands, and descend a piece, and run into an atmospheric density which reduces your vision to virtually nil, don't call it a "fog"; call it what it is, namely a mist, and slow down.

Most of us, having been brought up on the other side, have tended to take a rather facetious view of all this — admittedly most legitimate — uproar about schmogg. Angelenos should have had to live in London in the teens, twenties, thirties, and forties; then they would appreciate their inrolling mists from the Pacific which shove their air-pollution back against the mountains to the east. We tremble for them should they ever get stuck in a real London pea-souper; as black as midnight at midday; and with a pinkish tinge under the street lights, and an acrid stench that floored even young ladies. We thought nothing of it, apart from inconvenience and, we must suppose, died like flies in wintertime, though nobody appears to have recorded the fact.

POLYPONDS

Reverting to the item under the major heading of Chemistry on page 6, which went into the matter of "Polywater", we herewith proceed to the equally mysterious, and possibly related, matter of what we call, for lack of any other devised title, Polyponds. Let it be clearly understood, however, that this could just as well and probably better be called "Polylakes". It is really extremely odd, and somewhat aggravating, because nobody seems ever to have done anything about the matter.

We have dozens of cases of this strange phenomenon, and dozens more alleged. Let us consider three; and let us ask simply if there might be a possibility that the bottoms of these lakes might be composed of clay or some other deposit that, when compacted, is riddled with hair-fine capillary tubules which could provide the physical set-up for the natural formation of polywater. These three examples are very widely separated in both space and size. Let us take first a modest example.

This is a large pond alongside a main highway on Long Island, New York. (We apologize for not being able to give proper references to this location here

Swiped from the ETM Log

"Not long ago the editors of the Farmer-Stockman printed a picture of a deserted farm house in a desolate, windswept field, then offered a prize for the best 100-word essay on the disastrous effects of land erosion. A bright Indian lad from Oklahoma bagged the trophy with this graphic description: 'Picture show white man crazy. Cut down trees. Make too big teepee. Plow hill. Water wash. Wind blow soil. Grass gone. Door gone. Squaw gone. Whole place gone to hell. No pig. No corn. No pony. Indian no plow land. Keep grass. Buffalo eat grass. Indian eat buffalo. Hide make plenty big teepee. Make moccasin. All time Indian eat. No work. No hitch-hike. No ask relief. No build dam. No give damn. White man heap crazy.' "

and now, but we investigated the matter over twenty years ago and we cannot lay our hands on the appropriate documents. However, the full facts are in some newspaper morgues in the New York City area and we are making search). As of circa 1950, it was reported in the press that this pond had never been known to freeze even in the coldest winters — and the year 1948 was cold indeed on Long Island — while many other ponds in the immediate area did so, and to a very grim extent. We visited this pond and, sure enough, not only was it unfrozen while its surround was under a foot of snow and ice, but there were frogs jumping in and out of it.

There were no visible or known influents or effluents to or from this pond; there were no nearby houses, nor any industry. More curiously, the surface water appeared to be, by thermometer, just a fraction below freezing point while the water immediately under the ice of adjacent ponds was a few degrees above that point. Ponds freeze from the top down. Figure this one out. We were shown this pond by a hydrological engineer because we were doing a series on water on the Island for a newspaper syndicate. Having never, of course, ever conceived of polywater, we enquired whether the water in this pond might have a different dissolved mineral content. Our guide stated that it had been tested but that no difference had been detected.

Our second example is Lake Seton, near Lillooet, in British Columbia. The best on-the-spot description of this was by the well-known B.C. columnist Alan Jay, who wrote of his first visit: "I caught my first glimpse of Seton Lake a few hours earlier while flying into Lillooet from 100-Mile House in a private plane. I immediately noticed that the water of the lake, unlike any other stretch of water in the area, was a brilliant green. I asked Paul the reason for

this and he said the probable explanation was either a form of minute animal life in the water or some kind of secretion from the mountains around the lake. 'But the color never changes and the lake never freezes,' he said, adding softly, 'It is a most peculiar lake.' "

The third example we offer is that wholly incredible area in Antarctica known as the Bunger Oasis. This, along with two other smaller areas in other locations, is composed of a number of meandering lakes between islands of bare rock and with ice-free shores, set right in the middle of the endless sea of upland ice. These lakes are also either vivid green or blue, and many of them remain completely ice free. Some are freshwater, and others saline with either the exact mineral equivalents of sea water, or with a much higher concentration of some elements such as chlorine. Various explanations of this phenomenon have been put forward, notably by the Russians, but this is another story. All make sense but none has yet been fully accepted. The basic fact remains that some areas — and one of them of over 800 sq. kilometers — remain unfrozen in the midst of a whole continent of ice with a mean annual temperature below freezing, and whereupon lows of more than -185°F . have been recorded.

The behaviour of these ponds and lakes is not explained. But, in bringing this up, we do not mean to imply that polywater is the explanation. However, if this should be a natural product and, as has been suggested, "the original basic form" of that substance, and if it does not freeze until 40 degrees below, might not a percentage of it above a certain point in the waters of such ponds and lakes prevent all its liquid content from freezing at what we consider the normal temperature for doing so? It took us a long time to discover heavy water.

Father of the Year Award:

"To the Municipal Swimming Pool in Sydney, Australia. After swimming in the pool, a fifteen-year-old girl began having pregnancy symptoms, although a doctor testified that she was a virgin and that the symptoms were 'false'. Nine months later she gave birth to a baby boy. The courts decided that she had been impregnated by male sperm in the water."

VII. BIOLOGY

NOW IT'S NINE NOSTRILS!

What on earth has happened to the august Wall Street Journal? In almost every issue they solemnly propound at least one item of profound fortean significance, and usually on the front page, left column. On either the 11th of October, or the 10th of November, according to which way you record dates (1) — anyhow, of their Vol. CLXXIV, No. 92 — they ran an interesting piece by Peter R. Kann, entitled "Vietnam Journey". This was pretty straightforward stuff, but about halfway in, staff-writer Kann solemnly states:-

"The trip (made by him from Saigon to Can Tho

across the Mekong Delta, then northwest to Tre Ton and Chau Doc, and back to Saigon) offer(ed) glimpses of recent progress and of perennial problems, of new threats like North Vietnamese battalions and of more esoteric dangers like a nine-nostriled water-monster allegedly loose in the Mekong River." After which, the writer goes straight on to more military talk.

Nine nostrils is a new one to us. One or three horns on the snout we have been told of, but we don't know of any animal living or fossil that has or had more than five horns, as in certain giraffes. Bernard Heuvelmans in his book In the Wake of the Sea Serpent records a number of reports from the

Gulf of Siam of some kind of vast, armour-plated something with spikes all along its sides, but this has a small hornless head. We must suppose that there is no reason why an animal should not have nine instead of one or two blow-holes but it's funny that we don't know of any. If the locals mean horns, the thing becomes somewhat more feasible but would some zoologist please tell us of any animal, vertebrate or even invertebrate, that has such. And why nine? We pass.

(1) We Americans (of the central slice of the continent of North America that is) still suffer from a complex, amounting almost to a trauma, that began with the Revolution — which everybody else, incidentally, calls our War of Independence. This was, and still is, to do everything different from the Europeans. For instance, almost every item of men's clothing has a different name on either side of the Atlantic; pants are trousers, vest are waistcoats while undershirts are vests, hose are socks, socks are stockings, jackets are coats, topcoats are overcoats, and on and on. But probably the most deadly mix-up — and which caused the death of several thousand troops in WW. II. on one occasion — is our assinine insistence on taking two items out of the normal progression for measuring time and reversing them. There are 60 seconds in a minute, 60 minutes in an hour, 24 hours in a day, 28-31 days in a month, and twelve months in a year. Thus naturally 11/10/69 means the eleventh day of the tenth month. So then we must needs write it 10/11/69. This came so hard on the military trying to get essential supplies to their beleaguered forces that they finally had to get with the rest of the world and adopt the sensible practice of writing 10/Nov/69 and so forth. The rest of us would be well advised, and especially in the distributing businesses, to do likewise.

NOT SO FRAZZLED NERVES

We can not offer any valid reason why this one gets us, but it does. Any person having taken so-called biology in a school knows or has been told that there are gaps (called synapses) between nerve



endings or tips. The electrical currents that carry 'messages' along nerves have to jump these and said jumps can be controlled by what is called the volition of the whole animal. There are billions of synapses in a human brain. However, we have, I think, all developed a mental picture of a nerve tip as being just that — a tip. Now comes this astonishing photograph of said tips.

Do these 'endings' bring anything to your mind? Well; baby mushrooms maybe, but have you any other idea? Several of our members had and this was most unexpected. One and all, and all separately, said something like "But they look like those crazy patterns on early Chimu and other South American pottery". Naturally, we buzzed this off to Barney Nashold who was the first to suggest that such (to us) balmy designs might be EM circuitry — see PURSUIT, Vol. 2, No. 4, p. 75. Then the engineers working on Barney's findings pointed out that these sort of terminals are used in the design of some very special artificial synapses. All animals are basically electrical by function. Do we have a threeway meeting here of nature and ancient and modern technology? It's worth a second thought.

MORE AFRICAN NEODINOSAURS

Hard as we may try to explain this business away, it keeps cropping up, and from all manner of widely separated and separate sources. If you want to know the background, try to get hold of a book entitled More "Things", Pyramid Books, 1969, and read the first chapter. To sum it up, let us state that, for a century now, all manner of people have been saying that they have encountered large reptilian (dinosaurian) type animals in out of the way parts of Africa, and particularly in swamps in the forested equatorial belt. But then comes this from the arid south of that continent.

The Sunday Express, London, England, 7th Dec., 1969, by John Monks, Salisbury. "A fantastic mystery has developed over a set of cave paintings found in the Gorozomzi Hills, 25 miles from Salisbury. For the paintings include a brontosaurus — the 67 ft., 30-ton lizard-like creature scientists believed became extinct millions of years before man appeared on earth. Yet the bushmen who did the paintings ruled (sic) Rhodesia from only 1500 B.C. until a couple of hundred years ago. And experts agree that the bushman always painted from life. This belief is borne out by other Gorozomzi Hills cave paintings — accurate representations of the elephant, hippo, buck, and giraffe. The mysterious pictures were found by Mr. Bevan Parkes, who owns the land the caves are on. The brontosaurus, a member of the dinosaur family,* can be seen clearly on the rock, its long

*This is popular jargon, of course. Brontosaurus, and related small-headed, long-necked, and long-tailed reptilians, belong to a group known as the Ornithischians.

neck reaching out of a picture of a swamp. Experts are planning to climb into the cave with special photographic equipment. Rhodesian museum authorities refuse to believe that the brontosaurus lived in Rhodesia in recent times. For all the fossilized remains they have examined have been millions of years old. Adding to the puzzle of the rock paintings found by Mr. Parkes is a drawing of a dancing bear. As far as scientists know bears have never lived in Africa."

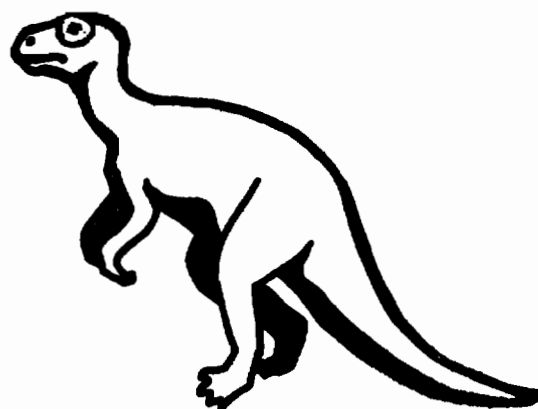
This is a fascinating story in itself and especially in view of its source, but it makes one point of particular interest, to wit: "Experts agree that the Bushmen always painted from life". This is just exactly what we have been trying to get over for twenty years.

All kinds of incredible drawings, petroglyphs, statuettes, bas-reliefs and so on, have kept turning up for years, showing animals that looked incredible both to the average citizen and also to scientists caught in the net of orthodoxy regarding what is and what isn't, and what was and could be. Such animal depictions have thus been written off, simply as "mythical" or "religious" fantasies or symbols. However, almost if not all of these mysterious depictions appear to have been the work of master (albeit primitive, in our eyes) craftsmen who at the same time depicted all the rest of their local fauna intimately and in such exactitude that even a lousy zoological taxonomist can put a specific name on each. If ancient artists in South and North America, Eurasia, Africa, and even Australia could achieve such perfection, why should all of them suddenly go quite balmy and model imaginery creatures which, as it turns out, are complete and perfect reconstructions of animals we think have been long extinct, and the outside shape and form of which we have only recently arrived at by very tedious and precise scientific and technological considerations and skills? Let us give you a specific example.

AN IGUANODON FROM DAHOMEY

A few years ago, one of our founding members (No. 117), Emanuel ("Manny") Staub, who is a leading jeweler and jewel designer, and who was entrusted with copying some of the priceless gold and jewel collections of some of our great museums, was asked by the University Museum of the University of Pennsylvania, to prepare copies of a large collection of small gold artefacts from West Africa. These were little weights used by native (to the country) dealers who bought 'raw' gold from native collectors, melted the material down, and cast it in molds — special and unique to each of them. Each dealer has for centuries adopted, or has had assigned to him and/or his family, a specific mold. Most of these are of animals; each resulting cast being of precise weight; and all having exactly the same weight, and by any scale. These little figurines are the dealer's trade-

mark and they are recognized by everybody, and all the way to other continents. The precision of workmanship of these molds is so great that any zoologist can spot each of the animals depicted at a glance and put a specific name on most of them — and even down to one kind of lizard as opposed to another. Dealers in gold in what used to be an illiterate country had to be precise. Their reputations depended upon it; and also their very lives, lest there be so much as a smidgen of doubt by sellers, buyers, authority or anybody else. So then Manny turned up this one:-



This exquisite little thing had been lying in the museum collection for many years and Manny Staub sort of "brought it to light"; the only resultant reaction might be summarized as: "Well, those stupid natives have vivid imaginations and believe in all kinds of ghosts and zombies and things"; and the very few who had ever been to West Africa or knew anything about its most ancient culture, implied simply that Africans have a lot of "gods". Yet all the other statuettes, or whatever you want to call them, were vividly accurate representations of known animals of that country.

OK! So this is a lousy effort by some benighted "native" to represent some kind of lizard. Well; will somebody then please make so bold as to tell us just which West African lizard. There are Agamid lizards in Centroamerica that stand up on their hind legs, raise their tails in the air with an upward curve, and go careening through the bush and even over water, so fast do they go. They are very common and called colloquially "basilisks". There are, of course, agamid lizards in West Africa and notably the brilliantly multicolored Agama agama but neither they nor any of their local relatives so stand up to run. So what is this creation?

May we make so bold as to suggest that it is a Dahomeyan representation of their "M'Bemba" (a variant of a name found all across equatorial Africa for an enormous swamp-dwelling reptilian); rendered precisely to scale; in its natural pose, when on dry land; and displaying its typical characters? Would you kindly take a look at the depiction of a reconstruction of an Iguanodon (Fig. 2 above) and tell us honestly if you do not think that it looks more like Fig. 1 than any lizard or photograph of any African lizard that you might have ever seen? And we should add that the sort of twisted spiral of the neck of this little African artefact is a well-known convention indicating wrinkles; while the tail (when viewed from above) forms a sort of fan. This is another convention, indicating movement from left to right and, what is more, said movements are clearly so indicated on the "fan" at the back of this little figurine by a series of grooves, forming a herring-bone pattern from the base of the tail.

Sorry: but it is our opinion that some West African artist saw alive, or had fresh second-hand knowledge of, some form of very large vegetarian, Ornithischian, (dinosaurian) reptile. If he didn't, how come he so long ago produced a model so very closely alike unto the best our scientists, technologists, and technicians have come up with only recently, working from complete fossilized skeletons and already mounted in poses that the articulation of their limbs indicate were natural?

"HE HAVE HEAD FOR TRUNK"

Continuing this African business, we present herewith, and in toto, a transcript of a recent account of one of these creatures, (this time called "MOKE' Nè"), given to us by a scientist who is probably the only animal collector today with full scientific training; the degrees (ex Europe) to back this up; who was for many years Director of one of the greatest zoos in the world, and who is now director of a private research center. He is a leading ethologist, and is our member No. 176. Here is his report:-

"In 1959, along the rather swampy western tributary of the Ouémé River in Dahomey, locally called N'gode or N'gobe (N'gore?) my carriers, who had unhesitatingly braved two previous swamps with me,

threatened to "M'abandonner toute de suite" if I persisted in proceeding thru another swamp which looked quite safe to me. Since we had not gone too far from a village, I decided to return to it for palaver and/or to get a crew of local carriers, since I suspected that we might be heading into another tribal area of people unfriendly to the tribe of my carriers (Ouassé). Upon our return to the village, we were greeted as if we had returned from the dead; all my "boys" were offered food, pombe, and girls, and I was invited to the Chief's hut and finally had to help his "boys" catch the only cow the village owned (a dwarfed Frisian) which was then ceremoniously killed and prepared while we drank the fresh blood (or rather, competed with thick layers of suicidal flying insects for it). The chief had worked once on a Firestone rubber plantation in Liberia, and he spoke a delightful pidgin English. Here is his tale:-

" 'For de middle of dis big land-water (swamp) dere be water-water big too much; an' for dis water-water (lake) live plenty water-elephant. Dis water-elephant no be brother for land-elephant. (1) He be much big past land-elephant. He no have trunk for head, but head for trunk. (2) Trunk come from body, and on end is head small-small past land-elephant. (3) Front feet is like pirogue paddles, flat, and him make swim fast. Back feet I never see nohow, but have, mebbe? But tail too long and big like body, near body. (4) Behind, tail much like koboko (whip). He no chop'em people but chop'em grass an' small-small tree; but no like'em people. Come out for water one time and roll'em people for ground, an' make (look) like blanket; then take'em for water, but no chop'em."

"Not being overly credulous I first suspected that his description, accompanied by his illustrative gestures, might fit a sea-cow-like critter, so I drew a Dugong and a Manatee from memory. Luckily he could 'see picture' (a rare ability as you know) and said at once: 'De body she be much like so, but de head is for neck much too long — mebbe long past two men (5)— and de mouth she not like de mouth for hippo but like de mouth for goanna (the Liberian-American pidgin term 'goanna-iguana' is used indiscriminately for any large monitor-like lizard)."

So here we go again. We are not suggesting anything; just querying. Can all these scientists, local citizens, professional game wardens, animal collectors, artists, certified gold dealers, naturalists, and just plain travellers, all be talking through their you-know-whats? And if so, how come they all have substantially the same stories to tell and such identical descriptions? If two pairs of animals as large as Fisher Martens can turn up in one year not 80 miles from New York City, when they had been thought to have been totally extinct throughout the whole mid-Eastern Seaboard for sixty years, how in the hell can

anybody deny the possibility of fifty-foot creatures in thousand-square-mile swamps that man never traverses and often won't even enter in a continent the size of Africa? It beats us.

*For those not acquainted with the West African form of pidgin-English, we offer some interpretations.

- (1) This means definitely that this so-called "water-elephant" is not an elephant at all but something quite different. The use of the word "elephant" means simply some very large animal, gray in color.
- (2) This is just about as explicit as one can be in any language, and means that, while elephants have a trunk depending from their heads, this creature has a head at the end of what looks like a trunk. (Take a look at a reconstruction of a Brontosaurus).
- (3) This means, by the African inversion of superlatives, that the head of this beast is very-very small compared to that of an elephant and in proportion to its body size.
- (4) This is a neat way of saying that it has a very long tail, but that this gets progressively thicker towards the body and finally flows into it at about the circumference of the animal's haunches. Again, see Brontosaurus and other reptiles; and then compare with the little "whisp" at an elephant's rear end.
- (5) This is another inversion, in that the Chief meant that the neck of the "water-elephant" was very long: not that the neck as shown in the drawing was too long. In fact, what he said was that: "Him neck be short too-much dere (i.e. in the drawing). Neck for water-elephant-beef be long too-much." Thus this cuts out manatees, dugongs, and any other Sirenians all of which have virtually no necks at all.

AT LAST SOME COMMON SENSE

What has been called the mystery of the mammoths has been with us for almost two centuries. The damned things are lying about by the millions all across Siberia and Alaska as is manifested by the fact that the average number of their tusks exported via Yakutsk alone averaged 400 per annum over the

period 1890 to 1910. Since scientific investigation of this matter got going, all manner of ridiculous theories were put forward to explain how they got preserved. These were mostly founded on the completely erroneous belief that they were preserved in ice. Not one single one, nor any of the other billions of animals of other species found so preserved in the far north, has ever been found in ice: all are stuffed into "muck" or frozen soil in the permafrost belt. None of these theories held up on purely logical grounds. Now, however, one that does make some sense has come to light.

Daniel Cohen (No. 419), previously editor of Science Digest, writes in an article published by that excellent magazine in their January, 1970 issue that:-

"Russian scientists who have studied the sites at which mammoth carcasses have been found have concluded that preservation could take place only in what they call baidzharakh terrain. This is an area over which ice has lain for centuries. The top of the ice gets covered by a thin layer of soil and tundra vegetation. During warmer times streams would cut their way deeply into the baidzharakh fossil ice. When the weather got colder the surface of these channels would freeze over into an apparently solid crust. A heavy-footed mammoth trudging across such terrain would plunge right through the crust into the deep channel below. There was no escape from this ice pit and the mammoth would soon perish there. The temperature at the bottom of the ice pit would be low enough to keep the carcass from rotting away. Gradually, soil from the surface would filter down over the frozen body, encasing it entirely in permafrost — that part of the ground which never thaws."

Hurrah! This does indeed make sense, but it would at first appear to leave an essential fact unexplained. Let us pursue this.

The first question any intelligent person asks is: If these animals were initially preserved in near zero water until the fall deep freeze, why did not

Notes on Alcohol

From the National Observer, 3 Nov., 1969: "There will be no bear hunting in Massachusetts this season; many of the black bears are reported too drunk to make them fair game for sportsmen. According to James M. Shepard, director of the state Fisheries and Game Division, the bears apparently have been devouring wild apples, and during the animals' nap time after the feast, the juices ferment in their stomachs producing the befuddling effect. 'We have a few bears in this state, and it wouldn't be very sporting to shoot them in this condition anyway', said Mr. Shepard. So he invoked his emergency powers and banned hunting."

From the Wall Street Journal, 5 Nov., 1969: "Tiny Worm Relies on Alcohol. The tiny nematode, a worm less than a hair wide and found in every square foot of soil, manufactures alcohol in times of stress... After making the alcohol, the nematode goes into a state of suspended animation that can last a year or more, then wakes up and consumes the alcohol, perhaps achieving long life in the process, researchers calculate."

Yucatecan Stew?

Our favorite headline, from the Boston Sunday Globe, in their section on travel, 28 December 1969: "CHICK-EN ITZA — A PLACE TO WANDER AND WONDER".

their interiors decompose due to bacterial action?

The interior of large corpses, and especially of those that are insulated by a layer of fat under the skin, like whales and mammoths, actually get so hot due to just this bacterial action that they literally cook! We witnessed this when dissecting a fifty-foot Sperm Whale on a beach in northern South America, almost exactly on the equator. This whale had manifestly been dead for months; and we knew it had been

beached for weeks. It stank to the Van Allen Belt, and the pools of oil seeping from its blubber actually boiled in the midday tropical sun but, when we got down into its vast interior, the flesh was tender, medium-rare, and absolutely fresh! Thus, we may at last have got the true explanation of these wondrous preservations; and once again nature would seem to have pulled not just one but two fast ones on us. How about deep-freezing in order to cook!

VIII. ANTHROPOLOGY

GIANT SKELETONS ON LUNDY ISLAND

An exasperating little item comes from the National Geographic Society via the Washington Post of the 30th November 1969, and is entitled "Lundy Now Nature Preserve". It is a straightforward report on the transfer of Lundy Island to Britain's National Trust; but, about halfway through it states blandly that: "Persistent tales of buried treasure never produce any buccaneer gold. So far shovels have uncovered only a pair of ancient, unexplained stone coffins, holding two eight-foot skeletons and remains of what appear to be sacrificed slaves."

Lundy Island lies near the southern shore of the Bristol Channel which separates southern Wales from the southwestern toe of England. It measures about 3 miles long by half a mile wide, is largely cliff-bound, and roughly 400 feet above the sea, with one landing place at the southeast-'corner'. It is relatively remote and has been used throughout the ages by Norse vikings, French privateers, and general pirates, as well as a modest number of ordinary fishermen. It has — taken all in all — a rather quaint history. From time to time millionaires and such have bought it and, it lying outside the territorial line claimed by the U.K. and approved by international law, have proclaimed it an independent state, or something; and have even gone so far as to issue postage stamps. It is also the tag line of probably the greatest, most classic, off-color (British) story ever; but unfortunately, like all the better limey stories, it takes about half an hour to tell! There are a few buildings on it and its population numbers about 20. The Encyclopaedia Britannica notes that there are some "pre-historic remains" aboard; but the map of "The major visible antiquities of Great Britain older than A.D. 1066", published in 1951 by the Director General of the Ordnance Survey, shows nothing at all on Lundy Island. It would seem to be a rather strange place for such ceremonial burials.

There are, in fact, two problems here. The designation "stone coffins" is not at all helpful. Were they carved stone sarcophagi or simply slabs of stone rudely put together? Were there any artefacts

present and, if so, of what kind? And exactly what, and where, were these "remains of what appear to be sacrificed slaves"? Were they also in the coffins, or was there some kind of crypt?

Secondly, there is this business of eight-foot skeletons. The Guinness Book of Records lists only nine authenticated heights of over 8 feet (the tallest was 8'11.1"), but notes that all these had a pituitary disease and also suffered from acromegaly, a bone disease that results in gross enlargement of the jaw, hands, feet, and forehead. The tallest true (i.e. non-pathological) giant was a Scotsman 7'9" tall. The stature of circus giants is notoriously exaggerated. Most actually turn out to measure between 7 and 7½ feet. The same is true of the regiments of 'giants' — such as that of Frederick William I of Prussia — though few of those were actually over 7 feet tall. One chap in this regiment was allegedly 8'3", but his skeleton (in the Berlin Museum) has been measured, and he was only 7'2.6". Has anyone actually measured the Lundy Island skeletons? And are they normal, or do they also show signs of acromegaly? All this is most unsatisfactory, and we are asking member No. 5 to pursue the matter, since he has access to original sources used by the NGS.

As a parting shot, we can not resist quoting the final paragraph from this article, to wit: "Lundy's most celebrated tourist, Queen Elizabeth the Queen Mother, visited the island for two and a half hours in 1958."

SO HELP US — ATLANTIS AGAIN

For the past year or so there has been a considerable uproar in kookie newspapers and even in some serious-minded journals about a discovery in the Bahamas which has, for some reason, been declared something like "So, you see, the lost continent of Atlantis may indeed have existed." How or why on earth such a contention should have been expressed in this case we fail to understand, and we still fail to do so.

This bit began with a report from a commercial pilot that he had spotted some obvious "ruins" under a shallow sea off the coast of one of the Bahama

Islands, through crystal-clear water. This was in August, 1968, and the pilot took some photographs. As a result, a team of scientists on the faculty of Palm Beach Atlantic College in Florida — Drs. Dimitri Rebikoff, J. Manson Valentine, and Richard Evans — organized an exploratory investigation. They located the structure and dived to investigate it. The best account of what they found so far was given by Melvin D. Saunders in *The ETM Log*, Vol. III, No. 4, for the Autumn of 1969. This reads in part as follows:-

"What they found was completely out of order with accepted history of the Americas. Diving on the area, they viewed a main wall structure measuring approximately 90' by 50', 'although we didn't pace it off,' said Dr. Valentine. The structure was oriented in an east-west direction, and appeared to be partitioned off at the east end and rounded at the southwest corner. There was only 2 feet of wall protruding from the ocean floor (which was probably uncovered by a tropical storm), but through a 2 foot hole in a thicker section of the wall, one could see uninterrupted stone work going at least 2 or more feet deeper. Photos of larger stones making up the walls show the sizes to be about 15' by 15' and probably weighing from 20-25 tons each. Such stones, fitted so evenly together, may possibly have been assembled in the same mysterious way as the pyramids of Egypt — perhaps by some means of levitation yet to be discovered. The scientists do agree that the ruin is pre-Columbian, but add that it might be as ancient as the legendary lands of Atlantis, which were supposedly destroyed over 11,500 years ago."

This is all very fascinating, especially as the facts are confirmed. However, the speculation, and particularly vis-a-vis the old bugbear "Atlantis" is extremely troublesome. All sorts of people have been popping up for decades now stating that they have either found or have definite proof that they know where said "continent" or group of large islands lay. We have had them from the Baltic, the Aegean, the North, and several other seas. Then there have been the advocates of continental locations like Sweden, Ireland, Centraamerica, and even the Andes. There are sunken cities off just about every major coast in the world, including, we would like to point out, even Australia (see in a later issue), but not even Plato who started all this jazz ever said that land was anywhere but around the present Azores in the middle of the mid-Atlantic! Admittedly there were others who stated that, in addition to this big group of islands, there were others named Ogygeia between northern Brazil and West Africa, and a much enhanced mass where the West Indies now lie and which they called Antillia. So what on earth, or below it, has a 90' x 50' foundation, inshore off the Bahamas got to do with this bloody "Atlantis"?

The 15' x 15' blocks of dressed stone in this thing are, however, most interesting and pertinent. There is ample evidence that the arc of the Antilles was, until comparatively recently, much more extensive above sea-level. There are some crude, though admittedly very large, megalithic structures on those West Indian islands that are currently above sea level, but they are not composed of any such precisely dressed blocks. Moving to Central America such blocks may be found lying about all over the place and neatly fitted into literally hundreds of monuments. Admittedly, nobody has even a suggestion as to who quarried these blocks, cut them, moved them, and piled them up, or how; but this does not mean that whoever did so had power tools or levitational devices. Indeed, they could have had but, if you will read Thor Heyerdahl's book, *Aku-Aku*, you will learn firsthand just what can be done by a few men chopping away with stone hand axes, elevating with a few wooden levers, hauling about with some ropes, and erecting vast blocks with a very modest number of helpers. The Easter Islanders of today wedged out, shaped, transported, and erected blocks as big as their ancient statues, under the eyes of this scientist and in a matter of weeks. Unless Heyerdahl made all this up, we must confront the simple fact that such enormities as 25-ton blocks of stone could have been quarried, shaped (and with great precision and with very primitive tools), and then moved and erected by our pitiful ancestors.

ANCIENT GLASSES

Glass is a rather mysterious substance, from any point of view; since there aren't a great many transparent solids around. Basically, it is manufactured by melting sand (i.e. silica) with soda, and it is believed that the art was originally discovered in Mesopotamia, probably by accident when some sand got into the cooking fire and combined with ash from some grain or other. Green glazes (a kind of glass) are found on pottery dated at about 12,000 B. C. though the first known pure piece of glass that we know of now was made about 7000 B.C. The Egyptians were noted for glass beads and jars, and so were the Romans. But who made the third largest single piece of glass ever made? This is a slab 11 feet long, 6 feet wide, and about 20 inches thick, found about 12 miles southeast of Haifa, Israel, in 1956 when excavation of an ancient cistern was begun. This area is known to have been a glass-making center in Roman times, and the slab of glass, which was not even recognized as such until 1963, is believed to date to the period between A.D. 400-700, though there is a suggestion that it may be much older. It is far from being a perfect piece of glass, and contains some rather odd ingredients (e.g. wollastonite) and, accord-

ing to experts at the Corning Museum of Glass, necessitated heating some 11 tons of material to about 1050° C. and holding the temperature at that level for about 5 to 10 days. This is some going for chaps who presumably lacked modern industrial machinery and techniques. There are only two larger pieces of glass, both mirrors for telescopes, and both were made very recently.

But there is an even more alarming business, brought to our attention by a real forteen who has been carrying a clipping from the New York Herald Tribune in his wallet since the 16th February 1947 (just to annoy people, no doubt)! This reads as follows: "When the first atomic bomb exploded in New Mexico, the desert sand turned to fused green glass. This fact, according to the magazine Free World, has given certain archaeologists a turn. They have been digging in the ancient Euphrates Valley and have uncovered a layer of agrarian culture 8000 years old, and a layer of herdsman culture much older, and a still older caveman (sic) culture. Recently they reached another layer . . . of fused green glass. Think it over, brother."

Bits of green glass, possibly fused in an ancient fireplace, is one thing; areas of fused green glass is something quite else again. And this site is not the only one. There are also the fused forts of the west coast of Scotland and elsewhere, in which one side only has been fused, as if hit from above by intense heat. Lightning occasionally fuses sand, but always in a root-like pattern (some of these 'tubes' are on display in natural history museums). So just what produced a whole stratum of green glass in various parts of Mesopotamia?

Section: HISTORY — Sub-Section: Medicine

NO-COUNT DRACULA

A delicious story appeared in The National Observer, of the 8th of December last year written by Nancy A. Palmisciano of Boston College. This was titled: 'Dracula' Lived, Say Two Professors, And He Was a Cruel Romanian Prince. (sic) Some type-setting, what? This report goes, in part, as follows:-

"Since Dracula was written in 1897, the classic horror tale about a diabolic vampire has been raising goose bumps on millions of youngsters and adults... But was Count Dracula pure fantasy? Could he have existed like such infamous characters as Hungary's Countess Bathori who had 650 girls murdered in the Seventeenth Century? Radu Florescu and Raymond

McNally, two Boston College history professors, often discussed such a possibility. The two professors were particularly intrigued by Stoker's exacting biographical information on Count Dracula. The descriptions of Transylvania and historical references astonished Prof. Florescu, a native of Romania and an expert on Balkan history.... Slowly the pieces fit together. Dracula emerged as Vlad Tepes (Tepes means the impaler), a Romanian prince who ruled in Walachia from 1456 to 1462 and again in 1476, before he was assassinated. Official diplomatic reports of the time also refer to him as Dracula, a name he may have derived from his father, Vlad Drakul, or devil.... Professor Florescu isn't sure how the vampire myths grew about Dracula, but the bats that lived in the castle may have played a part ('italics' ours). There are records of bats, which may have been rabid, flying from the castle and attacking and biting people in the area. To the peasants the deaths that followed must have seemed to be the work of a demon."

In 1938 two of us (AVS & ITS) were seconded from the British Museum to the Dept. of Health of Trinidad to investigate the natural food of the Blood-lapping Bats (Desmodus) in that country and in what was then British Guiana (now Guyana) and Dutch Guiana (now Surinam). These bats carry rabies along with several other most undesirable diseases of both humans and domestic stock. During this work, we learned a lot about rabies, including two mighty pertinent facts. The first was that the Central Amerindians told the first Spanish arrivals that they knew horses very well but that all of theirs had, only a short time before, been exterminated by bats. Second, the Desmodus bats regularly bite fruit- and insect-eating bats that share with them the caves and hollow trees in which they rest, and thus transfer rabies to them. Note then that rabies, like syphilis and other diseases, turned up in a new and particularly virulent form in Europe just about the time "Columbus sailed the ocean blue". Further, rabies comes in two forms, called technically 'furious' and 'paralytic'. These usually alternate between carnivorous (like the Desmodus) and herbivorous or omnivorous animals that they bite. Most human victims develop the paralytic form, but sometimes they become 'furious'. We have always contended that so-called vampires were humans infected with the negri-bodies of rabies but who developed this furious form and went around biting people and other animals and sucking — or lapping, please note — their fresh blood. But, we would stress, this has always been but a suggestion.

British History

"The Bank of England: It was Williamammary who first discovered the National Debt and had the memorable idea of building the Bank of England to put it in. The National Debt is a very Good Thing and it would be dangerous to pay it off, for fear of Political Economy." From 1066 and All That, by Walter Carruthers Sellar and Robert Julian Yeatman, E. P. Dutton & Co., Inc., New York, 1931, p. 77. (If you haven't read this history book, your education has been sadly neglected.)

UFOLOGY

As is doubtless already known to all those of you who are specifically interested in the business of Unidentified Flying Objects, an outstanding and in some respects surprising event took place at the annual meeting of the American Association for the Advancement of Science which ran for a week, starting the day after Xmas, in Boston. The first afternoon of the next day were devoted by one of the major sections of activity, to a special symposium on UFOs. This had been organized a year before by Dr. Thornton Page, Director of the Van Vleck Observatory at Wesleyan and currently adviser to NASA, with the backing of the retiring president, Dr. Walter Orr Roberts; and, during the two days, fourteen papers were read by leading scientists. In addition to these open meetings, nine of the participants — Drs. Roberts, Page, Sagan, Hynek, Hall, Hartman, Roach, Hardy, and Grinspoon — gave a press conference on the first morning.

The Administrative Director of SITU (Ivan T. Sanderson) and the Assistant Director in charge of Regional Affairs (Michael R. Freedman) covered this whole meeting. We were able to tape record both the press conference and the three open sessions. Further, we were granted the privilege of entertaining several of the leading scientists, including Drs. Page, Roach, Hynek, and Sagan, for exclusive private interviews.

We have the only complete transcript of this whole symposium, plus several exclusives. It transpires also that the AAAS failed to record the press conference, and their recordings of the open sessions were not complete, since these were undertaken by a private company from Rhode Island with inexperienced personnel. Another important point is that only two of the speakers prepared full texts of their speeches in advance, but even they did not adhere to these texts, and went 'way out', all the way through, by ad-libbing. Some of the things they said are absolutely fascinating.

The press relations set-up by the AAAS was exceedingly bad, although the officers went to extraordinary lengths to help us in such physical problems as finding scientists. Due to the snowstorm, a number of participants failed to arrive on time so that the computerized roster of scientists, giving their temporary addresses and phone numbers, which had been set up, could not go into operation in time to be of any use and was therefore abandoned, resulting in considerable chaos. But the worst feature of this aspect of the meeting was the ambiguity of prior advices on copyright, legality, etc. On the 'copyright' page of their large bound and printed program, it was stated: "Video and/or Audio taping of any sessions or parts thereof for commercial purposes is not permitted without prior approval from the speakers and from the American Association for the Advancement of Science". This was ambiguous.

First, it did not mention press conferences. We asked the PR Dept. about this and they told us that it should have done so. Second, after considerable telephoning we obtained an answer, which we recorded, concerning the exact significance of the word "permission". It transpired that, provided the speaker gave his permission, that of the AAAS was automatically implied. Thus, transcription, and publication of all this material is permissible for private consumption; such as for circulation to scientific and other non-profit organizations, provided it is not then picked up by commercial outfits.

Since we alone seem to have complete transcripts of this symposium, it has been decided to publish a volume as a special report on it. To this end, we spoke to the Aerial Phenomena Research Organization about this suggestion and came to a tentative preliminary arrangement with them. A.P.R.O. has some 6000 members, and they are willing to circulate them, asking if they would be willing to buy one of these special volumes (which by our first estimate will run to book length of about 60,000 words) for somewhere between two and three dollars, representing cost and postage. We herewith ask you, our members, the same question.

Our overall plan is to get the material transcribed, edited, and compiled, along with the exclusive material that we have, and then to publish it as a bound volume of intermediate format such as is used by the U.S. Government Printing Office for special reports. (This is 5-7/8" x 9 1/8", and can be bound with angular spine by the new adhering method.) We (SITU) will undertake the publishing, working with our excellent printers, and A.P.R.O. will share the costs of distribution with us — proportionate to our mailing lists. We will, of course, not proceed if the response is insufficient or any money might be lost by either of our societies. We feel that this would be an historical document because this is the first time that the scientific establishment has not only recognized this mystery of "nature" or whatever you want to call it, but also made so bold as to put on record some of the things the participants in this symposium said.

Having been involved in this enquiry for just on 40 years now, we frankly admit that we never thought we would live to witness such a meeting; and we just as frankly have to admit to having had to sort of shake our heads when we listened to these transcriptions. Just wait until you hear what Dr. Franklin Roach, an Affiliate Astronomer of the University of Hawaii and Research Associate in Astronomy at Batelle Northwest, Richland, Washington, and a scientist who devoted 100% of his time to the Condon Committee, had to say. Now that the Government has washed its hands of the whole ufological bit by cancelling their Project Blue Book and accepting the Colorado Project's drivelling report, it is most re-

freshening to know that real science has picked up the ball. And, anent this, we will be able later to report on the most pertinent question of all, which is: Will the AAAS be setting up a Permanent Committee to keep a watching brief on this business?

THE FACTS ABOUT NICAP

For the past month or so we have been hearing the wildest rumours about this now somewhat ancient and 'venerable' ufological outfit, culminating in some word-of-mouth statements by several people attending the AAAS meeting in Boston. Further, the most venerable ufological organization of all, namely the Aerial Phenomena Research Organization of Tucson, Arizona, stated in its last issue that, and we quote: "This office has received word from several sources that NICAP has recently been returning inquiries about membership and renewals with the information that their membership is closed indefinitely — presumably they have suspended operations." As a result, we rang Mr. Stuart Nixon, the new acting secretary-treasurer of NICAP who was gracious enough to let us interview him on the telephone. The situation with NICAP is as follows.

The Board of Directors decided late last year that their members were too widely scattered geographically, and that the organization as a whole should become much more active. As a result of this, it was decided by the Board that a complete reorganization should be undertaken. To this end, a new Board was duly and legally voted into office. This consists of the following: (1) Chairman of the Board and Acting President — Col. Joseph Bryan, III, USAF Ret'd.; (2) Ex-Congressman Edward Rausch, who was instrumental in initiating the hearings on UFOs before a Congressional committee; (3) Major Donald Keyhoe, previously executive director; (4) J. B. Hartranft, president of the Aircraft Owners and Pilots Association; (5) Major D. J. Fournet (Ret'd.); (6) Dr. C. P. Olivier, President of the American Meteor Society (i.e. meteoritics as opposed to meteorology); (7) Dr. B. A. Rogers, Professor Emeritus of Engineering, Texas; (8) Col. R. B. Emerson, USAF Ret'd.; (9) Dr. Marcus Bach, Foundation for Spiritual

Understanding; and (10) the Rev. A. H. Baller, long-time member of the Board.

The policy and objectives of the new Board have not yet been finally decided upon but will be disseminated in due course. The Secretary informed us in answer to pointed questions that NICAP now has two major objectives — (1) a complete investigation of finances, membership records, and other such purely business matters; and (2) the promulgation of an entirely new approach to their special interests (i.e. ufology). Mr. Nixon was very frank in stating for the record that the finances of NICAP have become grossly snarled; and he agreed as how this was probably due primarily to the lack of initial, competent, legal counsel when NICAP was originally founded, prior to Major Donald Keyhoe taking over its administration and the original Board assembled by him at that time was set up. For instance, this organization has suffered grossly and quite unnecessarily regarding its fiscal status, vis-a-vis the Federal tax authorities, due entirely to this situation that it inherited.

It is nice to know that this organization is not being disbanded, and that it has not abandoned its thousands of well-wishers and the generally interested public. We of this Society wish it, both corporately, and individually, all the luck in the world, and we will endeavour to aid it in any way possible in its forthcoming endeavours. Just because of the Condon report and the fact that the U. S. Air Force, and thus officialdom generally, has washed its hands of the whole business of UFOs does not mean that they are going to go away. If for no other reason, they continue to be (doubtless quite unwittingly) a terrible menace as long as people are indoctrinated with the idea that they, as natural phenomena, do not exist. Only one young man so indoctrinated, manning an early warning system, could in all good faith, and in the line of duty as taught him, press an alert button due to mistaking an UFO for an ICBM. Then, due to the terrifying shortage of time, the computers would automatically take over and might initiate retaliatory action which would automatically bring on Armageddon. We need outfits like NICAP in our modern over-complex world.

DEPARTMENT OF CHAOS AND CONFUSION

There are some things that don't fit into any neat category of intelligent enquiry. Most of these are what we call "cross-overs" in that they concern more than one field of enquiry; but sometimes there comes one so utterly bizarre that it just does not fit in anywhere. We present a modest example herewith. This comes direct, and in toto, from the News of the World (1) of London, England, and is dated the 21st of December, 1969. It carries the byline of Simon Regan, and goes as follows: —

"One hundred feet below the sea off the coast of

Cornwall last week, I had the most frighteningly eerie experience of my life. I can still scarcely believe it. I had travelled to Cornwall to investigate the riddle of the seals and fish dying (2) with mysterious burn marks on them — and the strange happenings that have been worrying professional divers there. Something very strange IS happening. And it's not just the pollution. The underwater world pulsates with screaming, humming, whining and drumming. At anything below 20 feet, the noise can suddenly catch at your ears and the vibrations can pluck your

body like a violin string. At 100 feet, loud voices speaking in French, English, and what sounds like Russian can be heard. And, most incredible of all, I heard Rachmaninoff's 2nd Piano Concerto and a violin concerto by Brahms. The sounds have all been heard repeatedly by professional men who make their living beneath the grey waters. I have spoken to nearly a dozen. They have all seen the sulphur waste and other filthy pollution which kills the seals and fish and has driven the crayfish from which the men make a living further and further out to sea. They can pinpoint and understand the muck. What they can't understand is the mystery of the 'sounds in the sea.' The 'search area' for my expedition was off Nancekuke, North Cornwall, where there is a top secret Ministry of Defence chemical warfare establishment. Portreath is the nearest town and St Ives and Hayle are just along the coast.

"I hired a small trawler, the *Frances*, at Penzance, and put on the rubber suit, mask, lead weights, air bottles, gloves, flippers, and belts essential for safe diving. Each day, with expert help, I was able to penetrate a little deeper into the swirling waters. Each day I heard more and more strange things. A 25-year-old diver called Neill Borthwait gave me the first clues to the weird sounds in the sea. 'I've been diving for five years,' he told me. 'We have all heard strange sounds off the coast near Hayle and Nancekuke. At first we didn't take much notice. We thought they were probably some sort of underwater detection device, dreamed up by the boffins. But a few days ago, when I was diving all day with three other men, we all heard strange voices speaking in French. The deeper we got the louder they got. Many other divers have heard music — always classical.' Neill dived with me and gave me expert guidance. Several times when I lost direction in the swirling darkness he had to take my hand and guide me back to the surface.

"On the first day we dived about five miles from the huge Hayle power station. (3) I experienced the unnerving buzzing but I could see nothing. The water was a mess of thick black sludge. I dived to only about 25 feet. But even so there were times when panic gripped me. Suddenly a strong current sent me tumbling head over heels in the water — and it was so black I couldn't find my way to the surface again. Neill grabbed my legs and then my hand and we shot to the surface where I tore the mask off my face and gasped for air. When I clambered back into the boat my 'wet suit' was covered with thick, slimy grease.

"Next day we went further out and I dived for a total of about 45 minutes, each time descending a little deeper into the gloom. Suddenly I heard the strains of music. As we went deeper and deeper they became louder and louder. Sometimes, when the pressure began to hurt my ears, we swam along at the same depth for a time. We then seemed to go through waves of noise. As we started down another 20 feet, we heard the piano concerto. This was replaced by a loud drumming noise which kept up a steady beat wherever we went.

"Later that day we took the boat five miles further to the east of Nancekuke and made ready for another dive. At about 30 feet I heard two male voices speaking in French. It sounded as though we had tuned in to a French radio station during a wartime bombing raid. Later the voices were English. I heard 'Listen' ... 'In the morning' ... 'Perhaps we could'. The rest was just a jumble of words.

"A Ministry of Defence spokesman said last night: 'I'm sorry, but we can't help you. We can give no explanation for the sounds. We can't explain the yellow substance either.' "

On the question of the underwater sounds reported, we have only this to say. The Americans, Russians, and French are the only ones to have nuclear submarines regularly off the west coast of Europe. They play cat and mouse and often rest on the bottom in comparatively shallow water with a minimum of machinery running in order to reduce detection to a minimum and to aid in their own probing. However, 'light' EM devices must continue for intercom, and a sort of "musac" is routine. Could it be that these weak sonic disseminations leak through the hulls and are then amplified in certain strata of the surrounding sea and especially in those in which there are specific concentrations of ions?

The natural sonic uproar below the seas and oceans is absolutely deafening when one hits certain bands. Just about everything from swimming clams and pincer-snapping shrimps to Blue Whales are continuously pouring out sound. May be that the sonics produced from the electromagnetic devices in submarines are enough to produce the results noted in this article. Wouldn't you know — the Russians playing classical music; the French arguing. So where's the rock music or have the Americans kept their mouths shut for once?

(1) The *News of the World* is not the most reliable newspaper and it has for half a century had a reputation for sensationalism. However, when it names names under a professional writer's by-line, we can but take what it says seriously.

(2) This is another story into which we have been enquiring for some time and which has some exceedingly unpleasant connotations. In view of excessive caginess on the part of officialdom we are assuming that its unexplained aspects are due to human activity.

(3) This could be the cause of official reticence since government plants would seem to be the polluters. However, the presence of sulphur is not explained nor are these alleged burns on the animals' exteriors. The reporter mentions "a mess of thick black sludge" saying it was so "black" he got lost, but then the Defense Ministry says "We can't explain the yellow substance either." And please note that they have a secret chemical warfare plant on the adjacent coast.

CUMULATIVE BIBLIOGRAPHY

Von Daniken, Erich, Chariots of the Gods, London: Souvenir Press, 1969; Toronto: The Ryerson Press, 1969.

We recommend that this book be read, but not taken at its face value. German science led the world before W.W.I, but then collapsed. Under the Nazis it went completely to pieces, to be replaced only by the button-pushers and bottle-washers, better known as technologists. Since W.W. II anything labelled "popular science" emanating from that country should be approached with the greatest caution and circumspection. This book — a best seller in West Germany — is, as a famous scientist to whom we loaned our copy said, "atrocious"; and, if the statements in two chapters on subjects with which this reviewer is acquainted firsthand, are any criterion, it must indeed be so as a whole. However, it should be read by forteans because it assembles many of the old saws, with photographs. But only forteans will be able to separate the heavy cream of this opus from the light, and both from the buttermilk. In other words; don't believe a word of it, but use it as a starting point.

Schroeder, Lynne, and Ostrander, Sheila, Psychic Discoveries Behind the Iron Curtain, Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1970.

We recommend most strongly that you watch out for this book. Its title may be somewhat misleading to forteans because this is neither a "kookbook" nor is it concerned with those aspects of the subjects with which it deals that have become commonly accepted. It is a hard-boiled document, with forty pages of references and bibliography in several languages — the junior author, a Canadian, reads, writes, and speaks Russian — reporting on what has been accomplished in the Eastern "West" by Russian, Bulgarian, Rumanian, and Czech scientists in the multifarious fields of the Mind Sciences. The authors were invited from behind the "Curtain" to attend conferences on what we erroneously call "ESP" and related subjects. Their report should go a long way towards straightening out us of the "West-West" on these esoteric matters. We would warn you, however, that this book presents some pretty terrifying thoughts.

Thomas, Chan, The Adam and Eve Story, Los Angeles: Emerson House, 1965 (3rd edit.).

Here is a slim volume (56 pages) obtainable only from the publishers (P. O. Box 45154) in Los Angeles, that also should be read by forteans, but not taken at face value. As with Von Daniken, it contains some pretty wild statements but it is much better documented, and quite a lot of the author's "dates" and "datings" no longer conform with more recent findings. However, if read in conjunction with works such as Desmond Leslie's part of the book Flying Saucers Have Landed, a most interesting pattern of "thinking" (at least) begins to emerge. Biblical references must always be somewhat suspicious to forteans but it would be totally unfortean to toss them out wholesale; and more especially when they represent direct translations from the Aramaic and Ancient Hebrew texts into modern English. Further, in this case, the author has actually read, and seems to have understood, the expressions of DeLuc, Cuvier, Forel, and among the moderns, Hapgood and Hibben, without which any such translation would have no more validity than the theories of Velikovsky.

FURTHER RECOMMENDED READING

Cohen, Daniel, Mysterious Places, New York: Dodd, Mead & Company, 1969.

Fuller, John G., Aliens in the Skies: The New UFO Battle of the Scientists, New York: G. P. Putnam's Sons — Berkley Medallion Books, 1969.

----, Incident at Exeter, New York: G. P. Putnam's Sons, 1966.

----, The Interrupted Journey, New York: The Dial Press, 1966.

Klass, Philip J., UFOs — Identified, New York: Random House, 1968.

Schwenk, Theodor, Sensitive Chaos, London: Rudolph Steiner Press, 1965.

Vallee, Jacques, Passport to Magonia, Chicago: Regnery, Inc., 1969.

NOTICES

Please notify us promptly of any change of address, and include zip code.

There have been a number of articles recently on the problem of junk mail and the way in which one's name gets on such a mailing list. We should like to assure our members and subscribers that our mailing list is available only to resident staff at our headquarters.

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Vol. 1, No. 3* — June, 1968
Vol. 1, No. 4* — Sept., 1968
Vol. 2, No. 1 — Jan., 1969
Vol. 2, No. 2 — April, 1969

Vol. 2, No. 3 — July, 1969
Vol. 2, No. 4 — Oct., 1969*
Vol. 3, No. 1 — Jan., 1970

*These are out of print and not available.