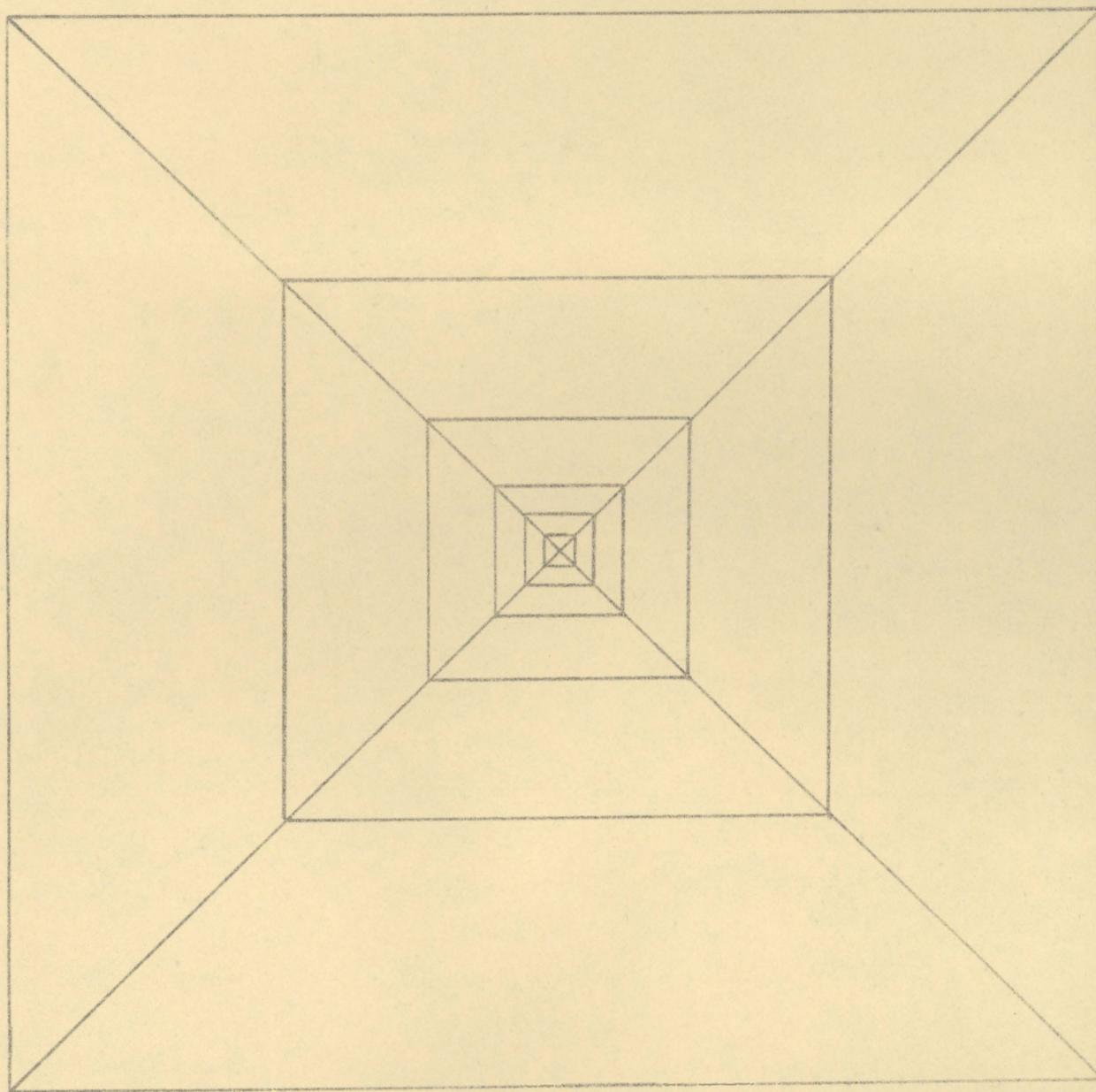


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Editorial.

by Harry Griesberg & Keith Basterfield.

In January 1980, ACUFOS initiated the ACUFOS JOURNAL which was designed to present the work of Australian researchers to the global ufo research community. Copies go to throughout many countries and to a variety of organisations. The bibliography service compiled by John Prytz of Canberra has been extremely well received as an almost unique needed tool for the researcher.

January 1981 saw the commencement of the ACUFOS investigation system and the monthly ACUFOS BULLETIN providing brief details of interesting reports to subscribers. Although the network is still very small, we are hearing of more good cases today than we did a year or so ago.

In 1982 ACUFOS will be broadening its input of reports by actively seeking additional investigators, especially in country areas. In this way we hope to be across even more cases which are currently not coming our way.

However, we need YOUR assistance. If you are an ACUFOS JOURNAL reader and not an ACUFOS investigator why not inquire about becoming one? If this is not your line of interest we'd still be grateful for your press clippings. Please don't assume that someone else will forward an item if you see one. The more you particpate the more feedback we can give you. If you are interested contact us with a 10x20cm self addressed stamped envelope at P.O. Box 546 Gosford NSW 2250

We would also like to take this opportunity to wish all our readers the very best for christmas and the new year.

Among the many "origin" theories that populate the UFO field there are those that are favoured above others by ufologists and the general community alike. Heads and shoulders above all is the Extraterrestrial Intelligence (ETI) hypothesis. Gaining ground are the collective internal intelligence theories, of which Imagery is a prime example. Very rare, poorly explained/investigated, but natural phenomenon is still high on the list. Some broad-minded ufologists believe in all three simultaneously as such theories are not mutually exclusive.

Bringing up the tail end of ufological theories are such things as the Secret (American, Russian, Chinese, Nazi, etc.) Weapon hypothesis and the Hollow Earth tales. Another is the Time Travel (TT) hypothesis and it is the latter that will be discussed in this article.

Let us begin by finding out just what is the Time Travel hypothesis. D.A.J. Seargent (in: UFOs: A Scientific Enigma (Sphere, London - 1978 - p.97)) says that this "hypothesis states that the UFO phenomenon is caused by visits of men of the future returning to examine their own past". (By "men", ufologists mean human beings.) Another variation on the theme has some terrestrial super-civilizations (ie: Atlantis) of the past visiting the future (our present). In either case, our UFOs are, in actuality, time machines; ufonauts are time travellers.

It is interesting to note that the possibility of UFO occupants being extraterrestrial time travellers is hardly ever mentioned. This is curious as it is within the realm of various astrophysical enigmas such as black holes and quasars that equations describing physical processes break down (including units of time) and where travel in time has achieved respectable scientific airing.

But for the moment, let us assume that UFOs are terrestrial time travel devices from our own future; that time itself is a traversable medium; that problems in navigation (not the least of which is the sticky problem that the Earth itself is constantly shifting position in a highly complex manner over time) are no sweat to future super-humans. We can now raise the question "would people from our future want to travel backwards in time?"

Time travel would not be as easy as "Dr. Who" makes it seem. Such travelling is fraught with dangers, not the least of which is perhaps materialising inside a solid object, or even the atmosphere as no two objects (on the macro or micro scale) can occupy the same place at the same time. Apart from such "minor" physical dangers, another obvious one is having the ability to change the past you are going into, hence alter the future from which you came, and in doing so, do yourself a considerable mischief. The classic example (variations of which have, are, and will keep science fiction writers busy for decades) has (in the case of a short story one of us (JP) once wrote) a team of future scientists travel back in time to just shortly after the earth was formed, pollute a small puddle of water, which just happened to be THE SMALL PUDDLE where life was originating, and in so doing they vanished in a puff of smoke and the sun forever shone down upon a sterile Earth! The paradox is obvious, and only science fiction writers have seriously come to grips with them (some ignore them), although often in the same manner as faster-than-light travel is achieved - by pulling scientific sounding, yet pie-in-the-sky, literary phrases out of a hat. Be that as it may...

Consider the example set in the recent motion picture/novel The Final Countdown (Caidin, M. - The Final Countdown - Bantam, N.Y. - 1980.). In this scenario the American nuclear aircraft carrier U.S.S. Nimitz is transported (via a literary turn of phrase) into the past to a time immediately preceding the Japanese attack on Pearl Harbour. The U.S.S. Nimitz with its ten squadrons of eight different type of aircraft, certainly possessed sufficient firepower to stop this attack. The problem was, should they stop it?

If the Pearl Harbour attack was nipped in the bud, a number of events could of taken place. The war with Japan would have been short and sweet; the atomic bomb might not have been developed; the other applications of atomic energy might not have followed suit and hence the U.S.S. Nimitz, being a nuclear powered vessel, might not have existed. Such is the stuff of which science fiction is made.

Some would argue that there exists some "natural law" which would immobilise any attempt by any agency to alter the past (some writers propose a Time Patrol Police Force). However, even if (in the case of) UFOs were holographic projections from the future, or some sort of technological wonder where by our future generations could view their past from the comfort of their world, the past has still been altered! If the future technology, holograms, etc. did not exist, then UFOs would not exist, and if UFOs did not exist, our present world, hence the future, would be different. If a future human society has introduced the UFO phenomenon into our present, when it otherwise would not have happened, then that future society has altered itself. To claim otherwise can lead to a very circular situation. The future society is like it is because UFOs existed in the past; UFOs exist in our present because our future society is like it is! It is another case of what if a man were to go back in time, have a love affair with a woman who would be his mother, and conceive himself! Which came first, the chicken or the egg? Such again are the stuff of which science fiction is made. But, "science fiction is no more written for scientists (to put into practice) as ghost stories are written to influence ghosts"!

And when dealing with time travel, it is the science fiction writer to whom we usually turn for guidance. John Brunner in his novel Times Without Number (Hamlyn Paperbacks, Feltham, Middlesex, England - 1969) (which deals with time travel and its problems) puts a central problem like this.

"To begin with, there are, are there not, in history certain crucial turning points? Yet each of these in turn was composed of the sum of vast numbers of individual acts and attitudes, and it's rare that we can find down any event in history to the point of being able to attribute it to one unique causative factor. The majority stem from such a wide spectrum of influences than we cannot grasp the entire range - effectively, therefore, we must regard them as random This vast flow, or stream, of events tending toward a crisis might be compared, in one sense, to a river. The presence or absence of a single pebble on the river's bed will make no significant difference to the course of the waters, and no detectable difference to the level along the bank. Detectable or not, however, it is a difference - a priori! Therefore one may also compare the time-flow to an avalanche. It is not beyond the bounds of possibility that something done by a visitor from the future might serve to stay the first stone that triggered the landslide, and thus turn history into another course."

O.K., so this is the problem, the paradox that would confront the time traveller whether in person or via some technological surrogate. Let's just point out a few other paradoxes. There is the one about going back in time and killing a direct ancestor before you were born (as one of us (JD) did in the example above but on a grand scale). But why not go back and kill yourself? Or go back and teach yourself how to build a time machine? Or go back in time one minute and meet yourself, then one minute later both of yourselves go back one minute and meet the both of you, and one minute later, the four of you go back one minute and introduce the quartet of you to the other quartet of you... and so on until the entire surface of the planet (let's thing BIG, the entire universe) is full of you - something which would upset the balance of nature no end!

What if you invented a time machine, went back in time, and got yourself killed? In short, going back in time is one hell of a good way to upset the causality applecart. What becomes of the entire foundation of philosophy, physics, religion, psychology, sociology, economics, and so on down the list when "effect" can come before the "cause"?

For time travel to be viable it must be two directional, as it goes against the grain to suggest that our future generations would travel back to the here and now in UFOs, and not be able to get back to their own time with whatever knowledge they wanted and gained. Paradoxes work their magic when one goes into the future, as well as when one travels into the past. For example, leave on 1 January to the future of 8 January only to read in the newspaper of the 8th that you were killed on the 7th of January. Then just stay put!

One can engage in countless hours of fun playing with the variations of this sort of scenario generation - and make a good living at it too if you have a flair for writing!

Now of course all these sorts of paradoxes only appear if we believe that there is but one unique past and that there will be but one unique future. That is, there is only one (for lack of a better word) plane of reality comprised of the three dimensions of length, width and height, plus the one of time. There is nothing to suggest that you couldn't go back in time to meet a younger you, but on some sort of parallel plane with a parallel Earth and a parallel you (any or all of which may or may not be absolutely, down to the nth detail, a carbon copy of our plane, although philosophically, if it is the same, then it is really the same, and if there is no difference, is there really another plane at all?). Thus, with respect to UFOs, they would not be from our own unique future, but from a unique future (or present, or past) of some parallel Earth, which wouldn't be an exact carbon copy of our own, hence in a real sense an extraterrestrial world, which brings us back to ETI except that the travel is inter-plane, not inter-stellar (although it could be both just to really make things complicated). But to return to a degree of normality (or as normal as hairy discussions over time travel can ever be)...

To move on. There is no evidence to suggest that apart from being a mental plaything, the concept of parallel Earths et.al. has any degree of reality. But, by sticking to the one set of unique conditions we are convinced have, are and will exist we have run headlong into one lump set of paradoxes in-so-far-as time travel is concerned, such that to our way of thinking, the TT theory is unsatisfying on philosophical grounds as backed up by our day-in, day-out experiences in dealing with cause-effect relationships (not to mention the revelations revealed in the pages of many a physics textbook). However, many times in the history of our civilization, a philosophical concept has gone the way of the frequent Canberra winter fogs when the sun rises - poof! - when faced with solid evidence to the contrary, What is the evidence (suggestive or otherwise) that UFOs come from our unique future (or past)?

As we know, UFOs come in many sizes and shapes, so how do these variations fit in with the Time Travel hypothesis? To quote D.A.J. Seargent again (p.97): "TT readily explains the difference in shape and appearance of UFOs by pointing out that they are simply the different designs used at different epochs in the future history of mankind." However, there are many ufologists who believe that this variation is really quite restricted relative to what could be; that any combination of the ETI, perception, and natural phenomenon theories can more than account for the variation, such as it is. One of us (JP) has already devoted many articles and pages on this problem of variation and is quite at ease in not having to resort to TT.

Science fiction writers have ingrained in to our collective heads an idea of what humans of the future would evolve into - hairless bodies, large heads, small and underdeveloped bodies, etc. To a point, reports of ufonauts mirror this image, and explain how they can seemingly be at home in our gravity and atmosphere. D.A.J. Seargent again (p.98):

"However, the vast variety of UFOs and, especially, occupanets seems to push even TT to unreasonable limits, For instance, is there sufficient reason to believe that the human race will eventually become diminutive in stature to the extent that normal men of the future would appear dwarf to a man of to-day? Then, what are we to make of the hairy creatures sometimes seen in conjunction with UFOs, not to mention the occasional cyclops?"

Further, any ETI with the technological ability to visit us, no doubt wouldn't be put off by such minor things as gravity and/or the composition of the atmosphere. Indeed, some ufonaut sightings have them wearing suits and helmets.

One last point is with respect to the lack of formal contact, which is at first glance more logical for time travelers (noninterference - can't alter the past) than ETI, who one would think would desire contact with other intelligences. Of course, we could be to ETI what mice are to behavioural scientists and the argument does down the drain.

Moving onto the idea that UFOs are holograms or projections from the future is used to explain the mysteries that relate (for example) as to why a visual without a radar sighting that should have been (and sometimes vice versa) was not; how UFOs can appear and disappear like magic, etc. Of course this passes over the entire field of CE2K cases, abduction cases, and some CE3K cases as well. Besides, if our future selves can project UFO images/holograms, why not ETI?

That our race should survive the present atomic age is still a matter for conjecture. That our race should develop a civilization capable of time travel is a case of racial egotism and self deception on the part of those who hold this view. To quote Arthur Curtis from his article "Time Travel: The Fantasy of Science Fiction" (see Bibliography):

"There is no evidence that anyone has ever traveled through time or ever will be able to travel through time (If there are time travellers, where are they? Why has no one spotted any time travellers at any of history's high points*?).

L. Sprague de Camp, noted science fiction writer and an occasional author of time travel stories, has pointed out that there is more scientific basis for believing in werewolves than in time travel."

*To which we add: Why no UFOs spotted with any national emblem on it or a "Made in Japan - 6945 AD"?

As D.A.J. Seargent also points out (p.98) "the behaviour of the UFOs and their occupants... does not seem consistent with the activities of advanced time travellers, unless the whole UFO phenomenon, as we see it, is deliberately contrived to alter the future course of history" in which case the time travellers run the risk of snowballing themselves right out of their future existence as (p.99) "A moment's reflection will soon show that the ETI interpretation of the UFO phenomenon (the time travellers front) has brought about considerable changes in the collective thought of mankind; beliefs and attitudes have been created which probably would have never originated but for the UFOs, and we dare not even speculate about the effects of those beliefs and attitudes...in the very long term". And so we stick our toes into the murky waters of a possible paradox again: Future time travellers posing as ETI, return to their past (our present) in an attempt to alter their future, which, because of the complexities inherent in Brunner's avalanche/landslide analogy could easily backfire, in which case the altered future might never produce the UFOs to go back in time....

D.A.J. Seargent concludes then, based on the evidence and philosophical grounds that this TT theory (p.100) "is forced, contrived and uneconomical. I would, therefore, place little value upon it unless all other explanations are found wanting". We couldn't have put it better ourselves.

In summary then:

Is time travel possible? If not, end of theory!

Is time travel desirable given problems in navigation, physical dangers, etc. as an exchange for knowledge or other benefits gained?

Can the philosophical physical paradox problems be overcome, or do they amount to nothing more than a load of fodder for science fiction writers?

Is there any ufological evidence to hand which only the TT theory can come to grips with? We believe not - at least not now.

As J.R. Greenwell points out (see Bibliography): "the time travel theory lacks any empirical supporting evidence; contrary to what one might expect, however, it is probably the least popular theory in circulation." We think that this is a reasonable position for it to remain in barring some new dramatic ufological breakthroughs.

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A VIEW OF GRAVITY

comments by Frank Gillespie

The article which follows appeared first in UFO Encounter No.87, July - August, 1980; a journal which is edited by the author, Martin Gottschall. A brief criticism of the article was submitted for publication in the same journal, but apparently did not receive editorial approval. In the interests of equitable scientific discussion, the original paper is reproduced here in full, and followed by comments submitted by Frank Gillespie.

As one searches for a way to understand the propulsion of Flying Saucers, or to improve on the method of rocket propulsion currently in use, the need for a fuller, or perhaps more 'useful' understanding of gravity becomes more and more apparent. In developing another 'view' of gravity, let us list it's features as they are known to us.

1. Right from Newton's day, gravitation was described as "universal". This can be understood as meaning that all objects are equally affected, and that gravity is the same everywhere. The first of these two meanings has been well proven by experimentation.
2. All objects create, and are influenced by gravitational fields, and these fields have an "inverse square law" character, like electric fields. The gravitational constant 'G' defines this ability of objects to generate a gravitational field.

Because of the "universal nature of gravitation, it makes sense to regard it as the property of space around objects. The quality of the objects which is universal is their inertia or "massiveness" and the energy needed to create them. These two qualities are distinct and it is not so surprising then that gravitational force and inertial force have demonstrated a one to one relationship to an exceedingly high order of precision.

The view we will adopt here is that what we call a "gravitational field" is a condition in or of space where the velocity of light changes, and in fact decreases towards the gravitational body. We take the view also, that the energy released when bodies are lowered in a gravitational field was previously part of the 'rest mass energy' or energy of creation of the body.

A corollary of this idea is that for any freely falling object, the total energy (ie kinetic and rest mass energy) remains constant. With these two principles we can now determine the properties of such a gravitational field. We will do this by considering various special cases.

CASE 1. Photon in Vertical Motion.

A quantum of electromagnetic energy prepagates vertically (up or down), always travelling at the local value of the speed of light 'C', and undergoing a corresponding change of mass, since the total energy mc^2 remains unchanged. This may be written as :

$$m \cdot c^2 = \text{constant} \quad (1)$$

where 'm' is the 'mass' of the photon.

However, this quantum is subject to the gravitational force which causes it to change momentum 'mc' for a force acting always causes a change in momentum as for example the effort that swings a hammer. If we let R be the distance from the gravitational centre, and 'g' the acceleration due to the gravitational field, then we may readily show taking upwards as positive, that

$$d(m \cdot c) = mgdt = -mgdR/C \quad (2)$$

It is also convenient to define the gravitational potential 'P' by

$$dP = -gdR \quad (3)$$

and then it is readily shown that;

$$cdc = -gdR = dP \quad \text{or} \quad (c_0^2 - c^2) = -2P \quad (4)$$

Where c_0 is the velocity of light infinitely far away from the gravitational centre, and P is taken as zero. At all other points 'P' is a negative quantity and measures the amount of rest mass energy that has been released.

CASE 2. An Object slowly raised or lowered.

In this case there can be no change in momentum since the object is supported. We are interested to find the mass of the object. All objects at rest in the field will exhibit this mass.

We now have;

$$d(mc^2) = mdP = -mgdR \quad (5)$$

this relationship, together with (4) allow us to find that if the mass at infinity is M_0 then $m_0 c = M_0 C_0$ (6)

Now we can replace the quantity 'c' as given in equation (5) and obtain

$$m = m_0 / \sqrt{1 + \frac{2P}{C_0^2}} \quad (7)$$

When you recall that 'P' is a negative number, you will see how closely this equation resembles the mass/velocity equation of 'Relativity'.

$$m = m_0 / \sqrt{1 - \frac{v^2}{c^2}} \quad (8)$$

Note especially that ordinarily $2p = -v^2$ when an object falls from rest very far away from the gravitational centre.

Equation (7) tells us that as we lower objects in a gravitational field, their mass increases. We can also calculate the energy given up by an object as it is lowered into a gravitational field from infinity.

The missing energy is the starting rest mass energy $m_0 c^2$ less the final rest mass energy $m c^2$ Thus

$$\text{Energy given up} = m_0 c_0^2 - mc^2 = -2m_0 P / (1 + \frac{c}{c_0}) \quad (9)$$

$$\text{or} \quad = m_0 c_0 (c_0 - c) \quad (10)$$

Which is well approximated by $-m_0 p$ in all ordinary cases.

CASE 3. An Object in free fall.

Here as in case 1, the total energy remains, unchanged, but the object undergoes a change in momentum. The difference with case 1 is that this object can exist at rest and can have any velocity V.

These conditions may be expressed as;

$$d(mc^2) = 0 \quad (11)$$

$$d(mv) = -mgdR/v \quad (12)$$

and (5) is also relevant here. This gives;

$$cvdv - 2v^2 \quad (13)$$

and it may be shown by checking that this equation conforms to (1), (7) and (8). We can do this by allowing a particle of rest mass m_0 . At infinity to fall into the gravitational field with an initial kinetic energy $d m_0 c_0^2$. In the gravitational field, when the rest mass of the same particle is m_0 at a local light velocity c , the total mass m is

$$m = m_0 c_0 (1 + d)/c \quad (14)$$

This equation should be the same as (8) and if we assume this,

$$v^2 = c^2 - c^4/c_0^2(1+d)^2 \quad (15)$$

and this is the velocity of fall of the particle.

It is readily shown that (14) is a solution of (12). Incidentally the particle velocity at infinity, v_0 is

$$v_0 = \frac{c_0 \sqrt{d(2+d)}}{1+d} \quad (16)$$

Effect on Measuring Instruments.

We might ask ourselves what will happen to measuring instruments as we descend in a gravitational field.

First consider measurement of length. The wavelength of light is the standard measure of length. If we go back to case 1, where we considered a light particle falling in a gravitational field we found that the mass increased while the energy remained constant. However the wavelength shortens because each wavefront is always going a little slower than the one behind it. If the wavelength is λ it is readily shown that

$$\frac{d\lambda}{\lambda} = \frac{dc}{c} \quad (17)$$

and if λ_0 is the value at infinity when $c = c_0$

$$\frac{\lambda}{\lambda_0} = \frac{c}{c_0} \quad (18)$$

If the same atom is emitting the same spectral line in the gravitational field, the wavelength will be longer than λ because the energy emitted is less.

If this wavelength is λ' we can see from (6) that the ratio of the two energies $m_0 c^2 / m_0 c_0^2 = c/c_0$ will be c/c_0

Since wavelength is inversely proportional to energy, it follows that

$$\frac{\lambda'}{\lambda} = \frac{c}{c_0} \quad (19)$$

whence

$$\frac{\lambda'}{\lambda_0} = \left(\frac{\lambda'}{\lambda}\right) \left(\frac{\lambda}{\lambda_0}\right) = \left(\frac{c}{c_0}\right) \left(\frac{c_0}{c}\right) = 1 \quad (20)$$

Thus we see that the spectral emissions of atoms do not change wavelength in a gravitational field, and our yardsticks for length remain constant.

We can measure time by using the velocity of light and yardsticks (which remain constant). We obtain the duration of a certain number of waves, t , at c and t_0 at c_0 . Their relationship is

$$\frac{t}{t_0} = \frac{c_0}{c} \quad (21)$$

The same result would be obtained if we considered a clock using an oscillator like a quartz crystal. We see that clocks slow down.

Spring and instruments for measuring force are more easily extended in a gravitational field with the consequence that the unit of force changes also in the manner.

$$\frac{F}{F_0} = \frac{C}{C_0} \quad (22)$$

Relevance to Flying Saucers.

The reader who has no particular interest in physics may well wonder why this subject has been pursued in this publication. The reason is that the proposed view of gravity has great relevance to space flight. Recall that we proposed

that the energy released by falling objects in a gravitational field is really a portion of the rest mass energy of the object itself. The gravitational field is merely a condition in space which causes this to happen.

This condition is a change in the velocity of light - an electromagnetic property. If we now assume that it is possible to create such a condition artificially, then we have near light velocity space travel available. By subjecting the space vehicle and all its contents to such an artificial field, a portion of the rest mass energy of the entire system is available as kinetic energy of motion. At the end of the journey the process is reversed, and the original rest mass energy is restored. By this means velocities approaching light are possible.

The process by which this is achieved is to create a gradient in the velocity of light in the space around the vehicle. As the vehicle accelerates, the average light speed is reduced, just as in a gravitational field. Since no external source of energy is needed, no external force is required. From the point of view of the surrounding objects the vehicle although moving has not undergone a change in momentum, and if the artificial field collapsed the vehicle would return to its initial state of motion.

It may be assumed that if the velocity of light is artificially reduced without the gradient, then no particular motion will result and the available energy may show as heat. Conversely, if the velocity of light is increased, then heat is absorbed. This can pose considerable dangers to the vehicle and its crew if the gravitational field and potential $\frac{dc}{dx}$ and $(c^2 - c'^2)$ are not precisely matched.

It can also explain why Flying Saucers land so rarely. If they started from a point far above the earth, then if they switched off the field on the surface of the earth everything would disappear in a great explosion. If the crew wished to land and switch off their artificial field, they must dissipate this excess energy by flying around in the atmosphere, or by some other convenient means, until they are at the gravitational potential of the landing point within about 1°C temperature change at least, ie about 400 meters altitude. When they leave they have to recover this energy. This may be done in various ways, such a 'sling-shot' effect from a planetary fly-by. They may, of course carry a large enough energy storage facility to cope with such changes.

From our point of view, the ability to produce artificial gravitational fields is the ultimate answer to our energy requirements because by its use we can absorb ambient heat from our environment and release it as useful energy. In ordinary processes this has been found to be so difficult that a law has been devised to the effect that it can not be done.

The reader is again referred to Daniel Fry's account of his contact with 'Aylan' in the course of which the matter of artificial fields is discussed. The answer is not, of course given, but the pointers may be valuable indeed.

Comments by Frank Gillespie:

From the outset, the view adopted by Gottschall is contrary to the best experimental evidence available. He demands that the velocity of light should decrease with its depth in a gravitational well; and that the rest mass of a body should be variable, according to its movement in a gravitational field. Gottschall, in private correspondence, insists that he should be allowed to take this view, in order to explore the alternate "possibilities"; so I propose to examine the remainder of his paper, without object to these fundamental flaws.

Referring to the headings in Gottschall's paper, in Case 1., he derives equation (4) from (2) & (3) by progressing from $c/m d(m.c)$ to $c dc$, which would be true only if m were a constant; yet he has already declared that m is variable! Since (according to Gottschall) $m.c^2 = \text{constant}$, then $m.c = \text{constant}/c$, so that:

$$c/m d(m.c) = c/m d(\text{constant}/c) = 1/m d(\text{constant}) = 0$$

simply by treating c as a constant. This is just as valid a conclusion as that reached in the paper.

In Case 2., we have the interesting conclusion that the mass of an object increases as it is lowered in a gravity well; but, at the same time, it loses rest mass energy. The process by which this conclusion is reached is unclear, because a quantity M_0 is introduced, and then forgotten with no explanation.

Case 3., is impossible to check because :

- (a) equation (13) is incomplete,
 (b) there is no explanation for M_0 which is introduced in (14),
 (c) there is no explanation for d which appears in (16), and
 (d) once again M_0 appears and mysteriously disappears.

It is not at all clear what Gottschall is trying to prove in this case.

When considering the effects of gravity on measuring instruments, Gottschall shows that he has a basic misconception about the properties of light. It is well known that the energy of radiation is directly related to the frequency through Planck's constant 'h'. Gottschall claims that energy is inversely proportional to wavelength -- which would, of course, be true if the velocity of light were everywhere constant, rather than variable as he believes. Rather amazingly, yardsticks remain constant in the otherwise changeable Gottschall universe. This is particularly surprising in view of the way in which Gottschall's mass variation equation was very similar to the Lorentz version -- one would confidently expect corresponding similarities in the variations on length and time!

Throughout this paper, Gottschall talks of an object giving up energy as it goes deeper in a gravitational field. The lost energy is, of course, potential energy, which, strangely, he never mentions by name. In the discussion on relevance to flying saucers, Gottschall substitutes kinetic energy gain for the potential energy 'loss' caused by the creation of a gravitational field around the object; forgetting that the object has zero potential energy in the absence of gravity. By this bit of legerdemain, he is able to create large amounts of kinetic energy at no permanent cost. Unfortunately, it is not quite that easy.

IMAGERY: IT'S MAINLY IN THE MIND

(by) John Prytz

In search of the major cause behind the UFO phenomenon, it has become trendy to look to internal intelligence theories, such as Imagery, as opposed to external intelligence theories, such as ETI. But upon reflection, internal intelligence theories, as typified by Imagery, either can't explain, or only explain by a considered stretch of the imagination, most facets of the UFO (and related) phenomenon. As is usually the case, one or more of those facets will be part and parcel of outstanding UFO cases, meaning that few good UFO cases can be put down to an internal intelligence cause. Therefore, I suggest the current wave of popularity of internal intelligence theories has much less to do with the real evidence for them, than the fact that such proponents can exhibit as much of a will to disbelieve in external intelligence theories, as the reverse (which has often been alleged by pro-internal intelligence supporters against pro-external intelligence spokesmen). I suggest that the thought that UFOs could be directed by an external intelligence, and out of our control to come to terms with, is disturbing to some, and if controlled by ETI, downright scares some totally. Rather than admit this (and the fear could even be subconscious), it is more inwardly appealing to put forth, and believe in, any UFO theory which places ourselves as the sum cause for the phenomenon, and damn the evidence to the contrary. And although this "ostrich-with-the-head-in-the-sand" attitude does not apply to all pro-internal intelligence believers, I believe it applies to enough of them such that they are doing ufology an injustice if not down-right damage.

Now internal intelligence theories (and here I've singled out Imagery as an example) can be highly attractive when reconsidering UFO cases placed in the "too hard" basket. But when considering the Big Picture, internal intelligence can only "solve" a very few of the cases some of the time, and certainly not the overall picture, whereas an external intelligence viewpoint (and here ETI is a case in point), can come to grips with most UFO cases most of the time, and can explain the broad brush picture. Clearly the overall score is not ETI 100 and Imagery zero, but neither is it the other way around either. And even if the score were Imagery 99 and ETI 1, THAT IS JUST AS SIGNIFICANT FOR BELIEVERS IN ETI as if ETI had 100 points on the board. The overall and profound scientific/social/religious/philosophical importance of ETI (if proved) is orders of magnitude greater than proof of Imagery and/or any other internal intelligence theory. Thus, it makes no difference whether one, or one million UFO reports turn out to have ETI as a cause. The implica-

tions/significance/importance etc. is the same. Internal intelligence theorists have a long, long, long road to travel before ETI can be dismissed out of hand. I don't think they can do it now; I don't think they can ever do it. So, while the work of Imagery et.al. ufologists is unquestionably valuable, and more power to them, I draw the line whenever they start to discard any external intelligence theory, in particular ETI, to the scientific scrapheap, on such little logical ground. Internal intelligence advocates have more problems than they can shake a stick at! Imagery (as my catchall for all psychological or social explanations) is no ufological panacea. It cannot come to grips with many, many facets of the UFO phenomenon. Imagery has many failings as this paper sets out to remind us. I may be stating the obvious in what follows, but often the obvious needs stating and restating. Let's keep Imagery in proper perspective. And who better to pull the reins in than the Dean of scientific ufology, Dr. J. Allen Hynek:

"A...popular misconception is that...reporters of UFOs...have greatly overstimulated imaginations. The reports themselves argue strongly against this. For the reports do not range over a broad spectrum. There are virtually no reports of unidentified sailing objects (J.A.H.'s emphasis), or of UFOs with wings or wheels, and there are no reports of flying pink elephants (FPEs!) or of the Empire State Building being seen upside down in Pittsburgh. Overheated imaginations should certainly generate a far wider range of reports than that of the typical UFO reports we do receive. Granted, although the unexplained reports we do get are truly incredible, they almost always fall into...distinct patterns... . Pure imagination should produce, by definition, all sorts of things - but concerning UFOs, it does not (J.P.'s emphasis). ...Lastly, a...misconception is that people 'see what they wish to see,' that is, that they are victims of their own desire to see a UFO. Once again, experience denies this."

(Hynek, J. Allen - "The UFO Mystery" - FBI Law Enforcement Bulletin, February 1975 - p.16-20.)

Can Imagery explain consistency? No. Can advocates of psychological explanations accounts for the fact that UFO witnesses are not the "victims of their own desire to see a UFO"? I doubt it. So whether subconsciously or consciously, internal intelligence advocates have some problems here in explaining Hynek's observations. There has been a general consistency over the past 35 years; there has been patterns noted, whether in location (near power lines, over military bases, etc.), or in description (of the object and occupants); and witnesses do try to rationalise what they see, but often fail.

Where there is no consistency is in the numbers over time - the "flap" phenomenon - and here again an Imagery et.al. theory falls flat. The internal processes which make human beings tick remain constant over time, and only the number of human beings (potential witnesses) increase. Thus, UFO reports, if internally produced, should mirror population growth. It does not. Nor can one fall back on sociological factors to explain flaps, such as publicity. One well publicized UFO sighting may bring out of the woodwork any previous sightings that people in that area may have had, but it won't generate very many new sightings unless the UFOs are there to begin with. The proof of that pudding is at hand now. Within the last four or five years, UFO publicity, in the form of books, journal articles, and motion pictures (ie: Close Encounters of the Third Kind) has gone up and up and up, but sightings are down and down and down. If anything, there recently has been an inverse correlation between UFO publicity and UFO cases. This must play hell with believers in internal intelligence! The "flap" phenomenon can easily be accommodated in an external intelligence theory - thank you.

And while on the general topic of UFO density and population density, one would expect, if Imagery were a major contributor to the UFO mystery, that the density of UFO sightings would mirror the density of where the generators of internal intelligence (human beings) live. Thus, one would expect a city of 3 million to generate one thousand times as many UFO reports as a town of 3 thousand; Sydney and environs should generate as many UFO reports as the

rest of N.S.W. put together. Does that expectation fit the facts, or is it more likely that a UFO report will come from a rural, even isolated area?* ETI has no trouble coming to grips with this knotty problem.

If UFOs "flap" by year, they also "flap" by month, day of the week, and hour of the day. Only the latter can be easily accommodated by internal intelligence theories as human beings have defined diurnal cycles. Not so easy the month of the year or day of the week patterns. This is not to say that ETI prefers Sundays over Mondays; August over December, it's just that imagination should be no more or less prone to be active on any given day of the week or month of the year, whereas "nuts-and-bots" objects will be sighted more frequently when people have time off (ie: Sundays) and the weather is warm (August for the Northern Hemisphere). ETI can also be accommodated to account for the hourly patterns (ie: more cover in the dead of night (recalling that 9pm and 2am seem to be favoured); people aren't at work, busy concentrating, away from windows; more prone to react to disturbances such as in the dead of night would be a typical witness reaction). Imagery does not of necessity have to play a central role. If that is so, then why invoke it?

As no two people are alike in their internal intelligence makeup, not even identical twins, any multi-witness UFO sightings (which are not rare) pose trouble for Imagery.

Differences in internal makeup are even wider as one crosses international borders. Few would debate the issue that the entire psychological and sociological makeup of the Mainland Chinese are vastly different from that of Americans, or Canadians, the British, or Australians. Wouldn't one expect that Mainland Chinese UFOs (if any) to be just as different, assuming some sort of Imagery theory? If so, I invite readers to look over carefully the article by Paul Dong, the American editor of the Chinese Journal of UFO Research, which shows how closely Chinese UFOs mirror UFOs from anywhere else in the world.** In particular, I suggest Imagery buffs to think carefully about one very interesting 1942 UFO photograph taken in Red China. Were it not for the street scene, it could have been a UFO photograph taken in Canberra in 1981! And nobody faked UFO photographs in 1942! So, UFO reports/statistics are uniform world-wide. Internal intelligence characteristics are not uniform world-wide.

The mention of a UFO photograph is as good an introduction to another facet of the UFO phenomenon which Imagery et.al. can't cope with. And that is the entire sphere of physical evidence.

Imagery et.al. can not explain for example the Tremonton, Utah, Great Falls, Montana or Kaikoura, New Zealand UFO films. Let's in fact be honest, internal intelligence theories cannot explain any UFO photograph, be it a still picture or motion picture.

Imagery et.al. can not explain the Tully, Queensland "saucer nests" or any physical/geological trace associated with UFO activity.

Imagery et.al. can not explain the July 1952 Washington, D.C. UFO radar trackings, or any radar UFO case.

Imagery et.al. can not explain disappearances that are, or could be, associated with UFOs, such as the Travis Walton abduction, the vanishing act of Frederick Valentich over Bass Strait, or satellites which have gone walk-about. That latter aspect is telling as no possibility of a hoax can be suggested. How could a satellite vanish? I don't know, but what of "Satcom III and the Japanese telecommunications satellite, Ayame 2, both of which have mysteriously disappeared without trace".*** Further, what of the many perplexing cases of satellites which have ceased functioning, only to start again on their own? It may not have anything to do with UFOs, but if so, it sure isn't internal intelligence behind these mysteries!

* Plot the geographical locations given in the "Catalogue..." of K. Basterfield's book Close Encounters of an Australian Kind and you'll see what I mean.

** Dong, Paul - "UFO Update: Mainland Mysteries" - Omni, May 1981 - p.36,125.

*** The Weekend Australian, 12/13 September 1981 - p.21.

And what of astronomical phenomenon, some of which has been tied to UFOs, such as TLP (transient lunar phenomenon), flashing lights seen on Mars, dark "spots" seen against the full disc of the sun where no known natural object should have been, artifact-like constructions photographed on both the lunar and Martian surfaces, etc.? Imagery? I think not.

And back on Earth, Imagery et.al. has a difficult (but not impossible) job of explaining various physiological reactions that some witnesses have during and/or after a UFO encounter. And while it is easy to "explain" a visual UFO by resorting to Imagery et.al., it is stretching things to invoke the same sorts of internal intelligence mechanisms to account for tactile, auditory, and/or olfactory stimuli accompanying a UFO encounter. Although not beyond the bounds of plausibility to account for the complete spectrum of stimuli through internal intelligence, Imagery theorists are on far less steady ground when they go beyond just the visual.

Further, Imagery et.al. falls flat in explaining any animal reactions(s) to a UFO, and whether the reaction is on-the-spot and/or afterwards.

Imagery et.al. can not come to terms with any of the thousands of UFO reports involving EM (electro-magnetic) effects and related; cases involving angel's hair or other reported UFO-associated artifacts.

And although this may have nothing to do with ufology at all, cases involving animal mutilation certainly fall outside any internal intelligence mechanisms (except hoaxes of course, but hoaxes by definition fall outside the realm of Imagery et.al.).

As distance between an event and a witness decreases, so do the odds that Imagery et.al. has anything to do with it. It's easy to say that some nebulous "something" at a considerable distance away, and acting in any unusual fashion, could probably be a result of various internal intelligence mechanisms. But the closer and more vivid an experience, the greater the odds of it being real, and really external, and less subject to invention (by the mind) and misinterpretation by the witness. There is no lack of "close encounter" UFO cases. (For a more detailed examination of Imagery et.al. with respect to "close encounter" UFO cases, see this author's paper "Close Encounters of the Fourth Kind - An Analysis" in UFORAN, Sept./Oct. 1981 - p.23-30, which is parallel and companion to this article.)

Not all pre-1947 UFO reports can be said to be clothed in the "social expectations" of that day. Many such reports, were it not for the date, parallel post 1947 UFO reports in terms of object description, sightings of occupants, physiological effects, etc. In the eras prior to massive Flying Saucer/UFO publicity and recognition levels, can Imagery et.al. satisfactorily account for such parallels, in particular when taking into account how much different today's psychological and social environment is? Couldn't "nuts and bolts" (external intelligence) cater for this facet just as well - even better?

That brings up perhaps the biggest stumbling block of all for the internal intelligence proponents - the year 1947. What, oh what were those precise set of psychological and social conditions in the human population at large that flowered in mid-1947, and hence caused the explosion in imaginary objects, which so perfectly mimic objects that appear to have external intelligence behind them? Was the human condition so vastly different in May 1947, or in Sweden in 1946, or during the latter stages of WWII that sightings of unusual objects wouldn't have triggered what Kenneth Arnold did such a short time later? It wasn't as if Kenneth Arnold was really famous prior to his sighting, or that his sighting was vastly more spectacular to those which had been made before. I'd suggest as an explanation that the external intelligence behind the UFO phenomenon, for reasons best known to themselves, only made infrequent appearances prior to mid-1947; not in sufficient numbers to trigger world-wide notice, but that around the mid-1947 period, increased their appearances; re-enforced their presence to an unprepared world, and in so doing set off the modern phenomenon. In other words, ufology bloomed in mid-1947 because UFOs bloomed in appearances, not because the human condition, their collective internal intelligence, didn't ripen to invest a fad which just won't go away, until that point in time. But the question of the ultimate cause for the flowering of ufology in mid-1947 remains unanswered, just sitting in the internal intelligence theorist's ballpark demanding attention and a probable

Nobel Prize for him who can solve it. As for the external intelligence theorists, we have put in our 2¢ worth and can sit back while waiting (and waiting and waiting and waiting) to see what, if anything, the opposition can make of this sticky situation.

These then are some of my objections to internal intelligence being the end-all to ufological mysteries. Collectively, I suggest they form a less than encouraging picture for Imagery et.al. and those who wax lyrical about it. Internal intelligence theorists will have to do better than they have done as these flaws point out, before they so readily dismiss ETI (or any other external intelligence theory) and adopt Imagery et.al.

Perhaps it would not be amiss for those expounding Imagery et.al. to put themselves in the place of those who they say are prone to letting internal intelligence run riot, the UFO witness. What would you think if you experienced a typical "close encounter" event only to be told that it was only your internal intelligence mechanisms acting up, or even acting normally? I bet you'd be pissed off at being told you couldn't distinguish an internal stimulus from an external one (unless you knew your body was under some abnormal condition such as being without sleep for 100 hours straight or under medication or that you were so drunk that even flat on the floor you had to hang on for dear life!) that in your normal environment, day-in, day-out routine, you couldn't distinguish fact from fiction, and a dream from reality. don't you have faith in your own sense of reality, a sense that you have proved to the world by being able to cope full stop, regardless of "expert" theoretical statements to the contrary? be honest...then figure out how UFO witnesses feel after seeing and/or hearing statements by the pro-internal intelligence lobby. So, who will cast the first (Imagery) stone? Let the accusers put themselves in the position of the accused and then see how far they push their theories!

Meantime, I'll go along with the point of view that Imagery is mainly in the mind - the mind of some ufologists!

1954 AIRLINE CREW OBSERVATION UNEARTHED

Keith Basterfield

Recently my parents in law were taking up some old lino in one of their rooms when they came across an old 1954 newspaper. This they showed me just out of interest, when what should come to my attention but an item on the front page about UFOs! The following is the text of that article, which may be of interest to readers. The paper was the Adelaide Advertiser of Jan.11, 1954.

"PLANE CREW SEES SKY OBJECT: The crew of an ANA airliner reported last night having seen what appeared to be a strange object in the sky about 15 miles north of Morgan.

Cpt. W Booth, pilot of a DC3 which left Broken Hill for Adelaide at 6.25pm said the object appeared on and off for about six minutes.

His co-pilot, First Officer Furness, said the object seemed to move back and forth across their line of flight as though circling, but they could not catch up with it. Both men said the object must have been an optical illusion but could not explain how it occurred.

Capt Booth said he would probably not have noticed the object at all had he not been watching out for a north bound plane which was due to pass at 7.40pm.

At exactly that time he saw an object which he first thought was the other aircraft, but as it appeared to manouvre he thought it might be an RAAF plane.

The sun had just set and the object, which was practically dead ahead of the DC3 appeared to move quite fast from side to side and slightly from east to west. Capt Booth then learnt from the Parafield control room that there were no other aircraft in the area and assumed that the sight was caused by refraction rays from the sun.

After about six minutes it became too dark to see the object. Capt Booth said he had been flying for 14 years but had never seen a similar sight before

First Officer Furness said the object remained in view for about ten minutes.

It appeared to be circling slowly and resembled the silhouette of an aircraft at a distance of 40-50 miles. "We sighted it at about 7.40pm 15 miles north of Morgan when we were flying at 8000 feet," he said. "At first I thought it was another aircraft, and wondered that it was flying at the same altitude as we were. We spoke to Parafield and were told that the nearest aircraft was a DC4 at Tailem Bend. I thought it was an eagle flying unusually high, but we didn't seem to get any closer to it. It disappeared several times in the haze and

cloud layer while it was circling."

First Officer Furness said he felt the object must have been an optical illusion of some sort, but he could not explain how it might have occurred."

ACUFOS Bibliography Service: Information Resources

by John Prytz

Compiler's Note: In my article "Information Needs of Ufologists" (ACUFOS JOURNAL, October 1980 - p. 2-9), I gave a very brief list of reference tools useful to the information seeker. This bibliography is an expansion of that list, and although still a minor fraction of tools available, it is: a) a select but basic guide of indexes, catalogues, directories, bibliographies, etc.; b) available in most libraries; c) covering a wide range of general and scientific topics; d) not for the most part to information itself but to information about what information is or will be available (*) and where to find it (+); e) concentrating on Australian, New Zealand, North American, and British materials; and f) tools that I find highly useful in my personal and professional work. Most of the following exists in hard copy, but some items are also on microforms and/or in computerized data bases. Though not referenced in this bibliography, information seekers should make use of electronic terminal facilities linked to computerized data base collections such as AUSINET: Australia's Information Service (about 20 data bases) for Australian emphasis, and DIALOG Information Retrieval Service (about 120 data bases containing over 45 million records) for overseas coverage. Readers who make use of the following information resources can cover 1000% more ground in uncovering ufological and related topical information (and on other topics of personal interest too) while being far more specific as well, than I can hope to achieve in this column.

1) GENERAL

A) Current Events

- 1) Facts on File - Facts on File, Inc., N.Y. (weekly, annual, 5 year index).
- 2) Keesing's Contemporary Archives - Keesing's Publications, London (weekly).
- 3) Survey of Current Events - HMSO, London (monthly).

B) General Subject Indexes to Published Literature

- *1) APAIS: Australian Public Affairs Information Service - National Library of Australia, Canberra (monthly, annual).
- *2) PAIS: Public Affairs Information Service Bulletin - Public Affairs Information Service, Inc., N.Y. (semi-monthly, quarterly, annual).

C) Newspapers

- 1) Editorials on File - Facts on File, Inc., N.Y. (fortnightly).
- *2) The New York Times Index - The New York Times Co., N.Y. (semi-monthly, annual).
- *3) Newspaper Index to the Washington Post - Bell & Howell Co., Wooster, Ohio (monthly, quarterly, annual).
- +4) Newspapers in Australian Libraries: A Union List: Part 1: Overseas Newspapers - National Library of Australia, Canberra - 3rd Edition - 1973.
- +5) Newspapers in Australian Libraries: A Union List: Part 2: Australian Newspapers - National Library of Australia, Canberra - 3rd Edition - 1975.
- *6) The Times (of London) Index - Newspaper Archive Developments Ltd. Reading, England (monthly, annual).

D) Serials

- *1) Ayer Directory of Publications - Ayer Press, Bala Cynwyd, Penn. (annual).
- *2) Current Australian Serials - National Library of Australia, Canberra - 9th Edition - 1975.
- *3) Guide to Current British Journals - The Library Association, London - 2nd Edition - 1973.
- *4) Irregular Serials and Annuals: An International Directory - R.R. Bowker Co., N.Y. (biennial).

- +5) SALSSAH: Serials in Australian Libraries: Social Sciences and Humanities: A Union List - National Library of Australia, Canberra - 3rd Edition - 1975 (with quarterly updates).
- *6) Ulrich's International Periodicals Directory - R.R. Bowker Co., N.Y. (biennial).
- *7) Ulrich's Quarterly: A Supplement to Ulrich's International Periodicals Directory and Irregular Serials and Annuals - R.R. Bowker Co., N.Y. (quarterly)

E) Subject Indexes to Journal Articles

- *1) British Humanities Index - The Library Association, London (Quarterly, annual).
- *2) Canadian Periodical Index - Canadian Library Association, Ottawa, Ontario (monthly, annual.)
- *3) Index to Current Information - Department of the Commonwealth Parliamentary Library, Canberra (fortnightly, quarterly, some annual cumulations).

(Note: this would have very limited availability as few public libraries receive copies.)

- *4) Pinpointer: A Current Subject Guide to Popular Periodicals - State Library of South Australia, Adelaide (bimonthly, annual).
- *5) Reader's Guide to Periodical Literature - H.W. Wilson Co., N.Y. (semimonthly quarterly, annual).

F) Official and Government Publications

- *1) Annual Catalogue of Commonwealth Publications - Australian Government Publication Service, Canberra (annual)
- *2) Australian Government Publications - National Library of Australia, Canberra (quarterly, annual).
- *3) CIS/Index: (Abstracts to Publications of the United States Congress) - Congressional Information Service, Washington, D.C. (monthly, annual).
- *4) CIS/Index: (Index to Publications of the United States Congress) - Congressional Information Service, Washington, D.C. (quarterly, annual).
- *5) Government of Canada: Publications - Canadian Government Publishing Centre, Hull, Quebec (quarterly, annual).

F) Government Publications.

- *6) Government Publications (Great Britain) - HMSO, London (monthly, annual).
- *7) Index to the Papers Presented to (the Australian) Parliament - Parliament House, Canberra (sessional).
- *8) Monthly Catalog of United States Government Publications - U.S. Government Printing Office, Washington, D.C. (monthly, with semiannual and cumulative index).
- *9) (New Zealand) Government Publications - Government Printing Office, Wellington (general plus various subject sub-divisions; various issuings).
- *10) UNDOX: Current Index (United Nations Documents Index) - United Nations Publications, N.Y. (monthly, annual). (Note: previously called UNDI & UNDEX).
- *11) (U.S.) Government Reports: Announcements & Index? U.S. Department of Commerce. National Technical Information Service (NTIS) (fortnightly).

G) National Bibliographies.

- *1) Australian National Bibliography - National Library of Australia, Canberra (monthly, annual).
- *2) British National Bibliography - The British Library, London (weekly, $\frac{1}{2}$ ly, annual).
- *3) Canadiana - Canadian Government Publishing Centre, Hull, Quebec (monthly).
- *4) Monthly Bibliography: Part I: Books, Official Documents, Serials - United Nations Library, Geneva (bimonthly).
- *5) Monthly Bibliography: Part II: Selected Articles - United Nations Library, Geneva (bimonthly).
- *6) New Zealand National Bibliography - National Library of New Zealand, Wellington (monthly, annual).

H) Current and Forthcoming Monographs (Books)

- *1) Australian Bookseller and Publisher - D.W. Thorpe Pty. Ltd, Melbourne (monthly)
- *2) The Bookseller - J. Whitaker & Sons Ltd, London (weekly)
- *3) Whitaker's Books of the Month & Books to Come - J. Whitaker & Sons Ltd, London (monthly)
- *4) Whitaker's Cumulative Book List - J. Whitaker & Sons Ltd, London (quarterly)

(Ed. Notes: Books in Print, Book Reviews, Bibliographies, Biographies, Science & Technology as well as usual Updates to be continued in next issue).