Rhodomagnetic Digest

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OF

THE ELVES', GNOMES' AND LITTLE MEN'S SCIENCE-FICTION CHOWDER AND MARCHING SOCIETY

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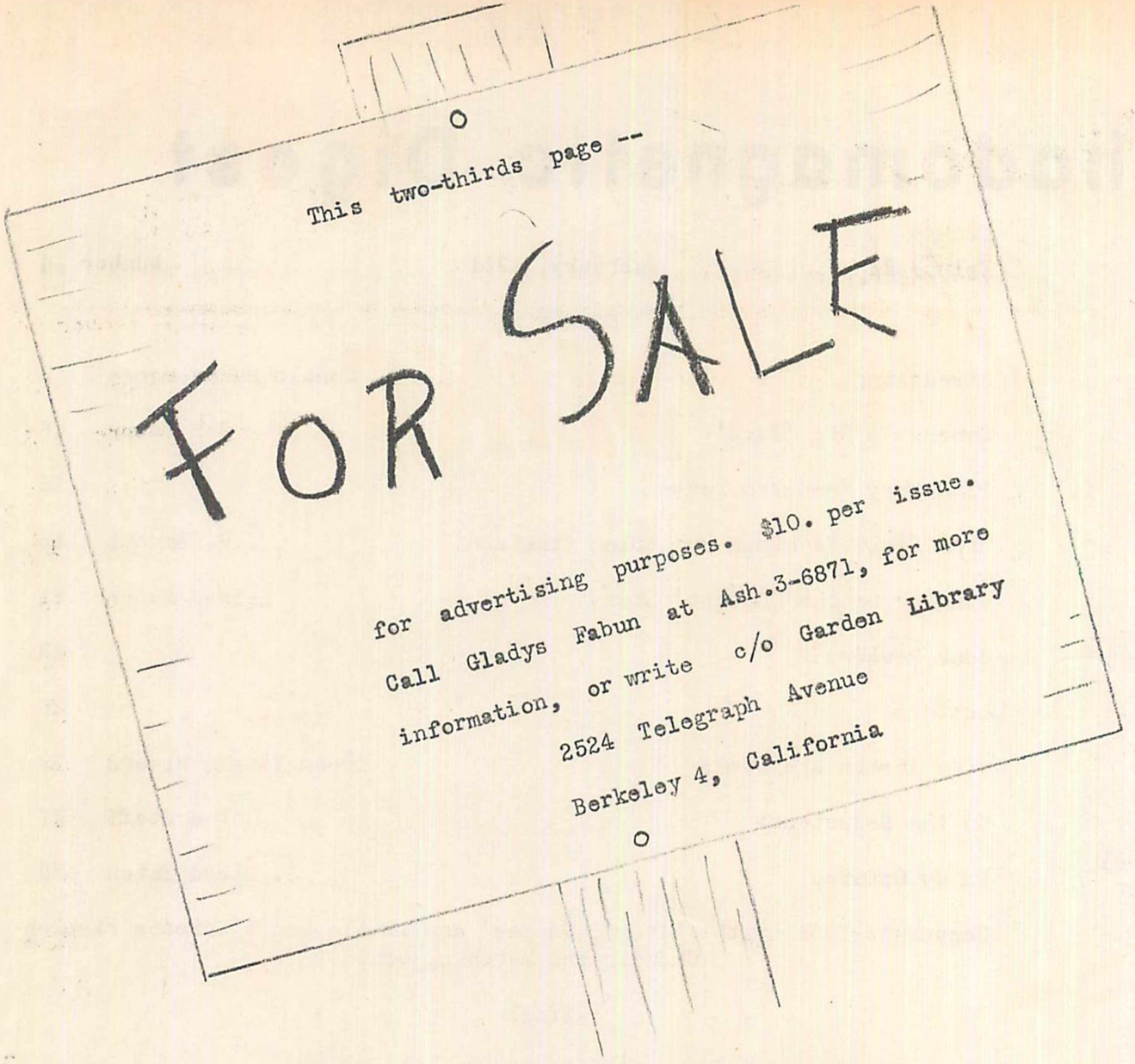

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STRADDLING...

by Donald Baker Moore

There have been many articles and much talk recently about preparations (or lack of) for atomic defense. This issue almost became openly political with the Governor of California accusing the federal government of delay and disinterest. I believe that all the thoughts expressed so far have tended to ignore the one really serious accusation that can be made, that of half-heartedness or fence-straddling.

Now if the authorities are openly lackadaisical, or even completely uninterested in the problem of atomic defense, each citizen will begin to take personal steps to protect his family and prepare himself for eventualities which might conceivably arise. Unfortunately the governmental administration pretends to be taking proper preventive measures. We see great numbers of committees being appointed. Pretty little leaflets are passed out telling the people all about the horrors of atomic attack, with great talk of percentage mortality rate. Retired generals are delegated the responsibility for seeing to the matter of forestalling the terror and damage that can arise from an air raid on an unsuspecting city.

Examination of the action to date tends toward the belief that no one in any authoritative position has as yet been able to persuade himself that we may honestly and truly be bombed.

This statement is perhaps a bit surprising at first when one thinks of all the words that have been spread about, and all the calls for volunteer civilian defense aids, etc. Let's examine the situation.

They tell us that people outside a certain radius will havd a better than fifty percent chance of survival, even though they may have received serious radiation dosage. Now. What do they propose to do with those inside this radius who may have up to a ninety-nine percent expectancy of death within days or weeks? According to the *Weapons Effects Handbook*, a person may have received an assuredly lethal dosage and yet not undergo any immediately disabling effects. Aside from a certain nausea and vomiting, fatigue or weakness, he should be able to move about, engage in light tasks, much as usual. His apparent condition, may in fact, be not markedly different from persons who have received only moderate radiological doses.

Aside from the bare disclosure of these facts, who has taken any consideration of the practical consequences? Who is going to be responsible for denying a *Walking Dead* man medical aid in order to preserve the severely overtaxed facilities for persons with an at least fifty percent chance of survival?

In combat one finds none too rare cases of soldiers *persuading* a doctor at gun point to give aid to a wounded friend at the expense of an enemy who may be dying. Who has anticipated the reaction of a father when a doctor attempts to explain to him that his children are certain to die and that blood or plasma must be spared for those who may live?

Are plans being made to provide *mercy deaths* for the unfortunates who, sure to die within days, cannot be spared drugs or assistance, let alone hospital beds? If they are, it is better that we be warned in advance of the truths we must face. A soldier was never made any happier by being told that a rough job would be a push-over. This sort of attempt only results in distrust and contempt for those in command. People will accept what they must but they insist on knowing the extent of what they face.

They tell us that a radiation badge will probably be provided which will indicate dosage received. Suppose your child's film dose meter indicates that there is almost no chance of survival, what would be your reaction? I strongly expect that you would throw the meter away and turn the child over to the medics explaining that the dosemeter had been lost.

These are the factual probabilities which must be considered along with bare statistics. The military authorities have made the casual statement that in event of atomic attack their aid cannot be expected since they will be more urgently engaged in further defense efforts or in mounting counter attacks. This simple statement must be analyzed to mean that army doctors will be too busy attending to soldiers to divert effort toward the civilian population. None of the military barracks, hospitals, camps, or ships can be spared to help a stricken city. Civilians must be prepared to have army bulldozers shove their pretty chrome automobiles off the streets, or plow through their yards and garages in attempts to clear access roads to vital areas. If fire is approaching an important dock or storehouse, buildings may be blasted down without question and it may not always be possible to consider persons who might be trapped inside.

Soldiers and military supplies are going to have to be moved in and out of the area as well as assistances for the civilian population. This means that in San Francisco for example no indiscriminate attempts at evacuation on the limited highways can be tolerated. There must be armed guards stationed about who are fully prepared and willing to shoot panicky civilians attempting to flee the city. The people must be warned of this reality in advance. It would be no easy thing to sit tight in a bombed and burning city, particularly after an underwater burst had contaminated the area. The situation would scarcely be alleviated if the people suddenly discovered that they were trapped by armed guards without being ready to face it.

Is it going to be more important to fight fires around a hospital or a power plant, around a dockyard or a residence area? Thinking about it calmly the answer is obvious, but try to explain to an unwarned and frightened citizen that you can't spare trucks or water for his endangered home.

We are informed that there is a booklet on biological warfare going the rounds of the authorities. In it is mentioned the fact that some of the possibilities cannot be discussed in detail as being *too horrible*. It is small wonder that the people are disturbed by vague threats and complain about attempts to *frighten* and *upset* them. If the authorities are not willing to face the facts, serious though they may be, how do they expect the less informed population to react? It's hard to persuade a man to be ready to jump into a sewer when you are talking statistics to him. It's even harder to persuade him to spend a thousand dollars or hours of hard labor building a back yard bomb shelter when the official preparation is limited to talk and pamphlets.

Mayors are not satisfied with the poor response to appeals for volunteer help. Dammit, if Mayor Robinson of San Francisco really believed that we might be attacked he would be out drafting workers. He would have the city painting the streets with signs and directions to safe areas. He would be organising trained and armed reserves to take over after a disaster. He would be forcing the public to look at the facts and anticipate them, no matter how unpopular they might be. I am quite sure that he would at the very minimum have a shelter built in the basement of the city hall.

As a further example of the presence of that dangerous old *It can't happen here* attitude obscuring potential threats: the city of Birmingham, Alabama was recently thrown into an alarm and the vital telephone exchanges and switchboards paralysed for hours by a casual rumour that the water supply had been poisoned. Imagine if you can what the result would be if a Russian enemy deliberately announced via short wave or smuggled leaflets that an atomic bomb was to be detonated in San Francisco in the near future. They would perhaps state that the bomb had been smuggled into the city long before and would be exploded by clockwork. Now I think that very few people would be willing to believe Mayor Robinson or J. Robert Oppenheimer himself if the denial came *after* such an enemy warning. If however the public has been warned in advance by the authorities that such wild claims may be made and that they will be false, we might be somewhat easier in mind. At least the urge to leave the area could be controlled in an orderly fashion. It's identical with the old idea that it's hard to prove a bank is sound after the run has started.

Well no one seems to be worried about this happening. My friend with a family has suspended the question of a back yard bomb shelter because he has heard that the matter is *being considered*. Perhaps some agency is concerned, yet I do know that another friend of mine, who is highly trained in the techniques of informing and influencing the population volunteered his services to a *civilian defense committee*. He was not even answered. He certainly received no letter explaining that other means were at hand. I suppose that *planning* has not yet reached the stage of really giving some fundamental programs to the people and yet, if nothing else, British information is available which is surely better than complete inaction.

It is a highly serious accusation, but I am forced to the conclusion that the subconscious fear of the politicians that we *might* be attacked is being augmented by their love of organization and *planning*, the result being an amplification of typical political bureaucracy. It is certainly true that there are as yet no signs of a realistic and positive defensive program planned to protect and prepare us for the *reality* of atomic warfare.

RJ

SWEENEY'S BIG JUMP

'space' tests at Aero-Med.-

by Don Fabun

We can design rockets all right, and in time we will have the fuel or power sources that will blast them off to wherever man is headed for. But we're stuck with the bodies nature gave us and these bodies are better adapted to climbing trees or throwing rocks than to blasting along in outer space.

Along in 1936 it became obvious that even plain old, everyday airplanes were outstripping the human body for the simple reason that where you can knock out a new plan for a plane in a few months on a drafting board, the only machinery for changing the body is a kind of unwieldy one involving genes and chromosomes and stuff like that.

So in 1936 the Aero-Medical Laboratory was established at Wright-Patterson Field in Dayton, Ohio with a daily budget of 40 cents, a bunch of bodies belonging to miscellaneous scientists, and the very practical but painful philosophy of "Let's try it and see."

By the time World War II roared in the Aero-Medical Laboratory was geared to go, and today it tortures 40 experts and practical scientists with unholy glee.

Many of the problems that are being considered at Aero-Med under the direction of Lt. Col. A.P. Gagge, operations chief are also problems that may become crucial when the "wide blue yonder" is replaced by the big, black Outside.

Take the problems of sudden acceleration and deceleration. The limits of the human body, or at least his human body were discovered by Lieutenant Col. H.N. Sweeney in 1946. He had himself catapulted 80 feet into the air and stopped with a jolt equivalent to 33 gravities.

"Paralyzing pains in the stomach bent him almost double. Intense internal bleeding cut his blood count from a normal 5,000,000 to less than 3,000,-

000 units. He hemorrhaged for five days."

The tests were, originally, to see how much human pilots could stand if they had to get out of a jet plane with the assistance of a swift kick in the backside. 33 g's turned out to be too much and the jolt was out to 16 g's, which is enough to help the pilot clear the tail assembly and still keep him more or less intact. So 33 g's also looks like about the limit the human body can stand.

RED-OUT and BLACK-OUT

What happens to the human body when there is a sudden change of direction at high speed? Obviously, if the head part of the body is at the outside of the arc, the blood will be driven into the brain by centrifugal force. This is known as the "negative gravity" effect or "red out". Fliers have always assumed that if the speed was high enough, the blood vessels in the brain would burst and the flier would die.

Well, one way to find out was to strap an obliging Captain named Maher to a centrifugal arm and then speed up the arm until something happened to him. Except for one hell of a headache and pains no aspirin could kill, Captain Maher survived the ride. What the biggest speed was has not been given out, since it is information that will have a profound effect on air fighting tactics. Many previous techniques were planned to allow for "red out," which naturally limited the maneuverability of high speed flying.

The other sudden-change-in-direction problem is, of course, blackout, and again the whirligig established the limits to which the human brain can be drained of blood through centrifugal force and still survive.

Both "Red-out" and "Black-out" are closely related to how the human body will fare during the acceleration of rockets. The space traveler will gain in weight in proportion to the acceleration of the ship during take-off. The ship must accelerate in several stages with each stage lasting one to two minutes. Toward the end of each period the crew would take an increase of body weight of about sixfold to tenfold.

In the Aero-Medical centrifuge a human "guinea pig" began to suffer at 2 g's, looked like something the cat dragged in at 5 g's and blacked out completely at 6 g's. The conclusion drawn from the experiments was the human body is able to stand acceleration close to 6 g's without permanent damage and without losing consciousness. But it won't be comfortable.

STOPPING'S FUN, TOO

So that's how fast you can go. How fast can you stop without going into the trouble Sweeney had? One of the experiments made at the Aero-Med lab was to put Major John Stapp into a 1500 lb. sled, powered with rockets up to 75 miles per hour and then bringing him to a full stop in 12 feet. (An automobile would take 400 feet to stop with full braking power at this speed and weight.)

Major Stapp stepped out of the sled as jaunty as ever. His special harness had not cut into him undully, and the old and scary air corps myth about a man being "speared to death by his own skeleton" was effectively scotched.

Not only starting and stopping will be difficult problems for the human body in a rocket. What happens in outer space where there is no gravity? It is a problem science fiction writers have frequently mentioned, or at least the more realistic of them have, but it is the kind of problem that is solved easier in fiction than in fact.

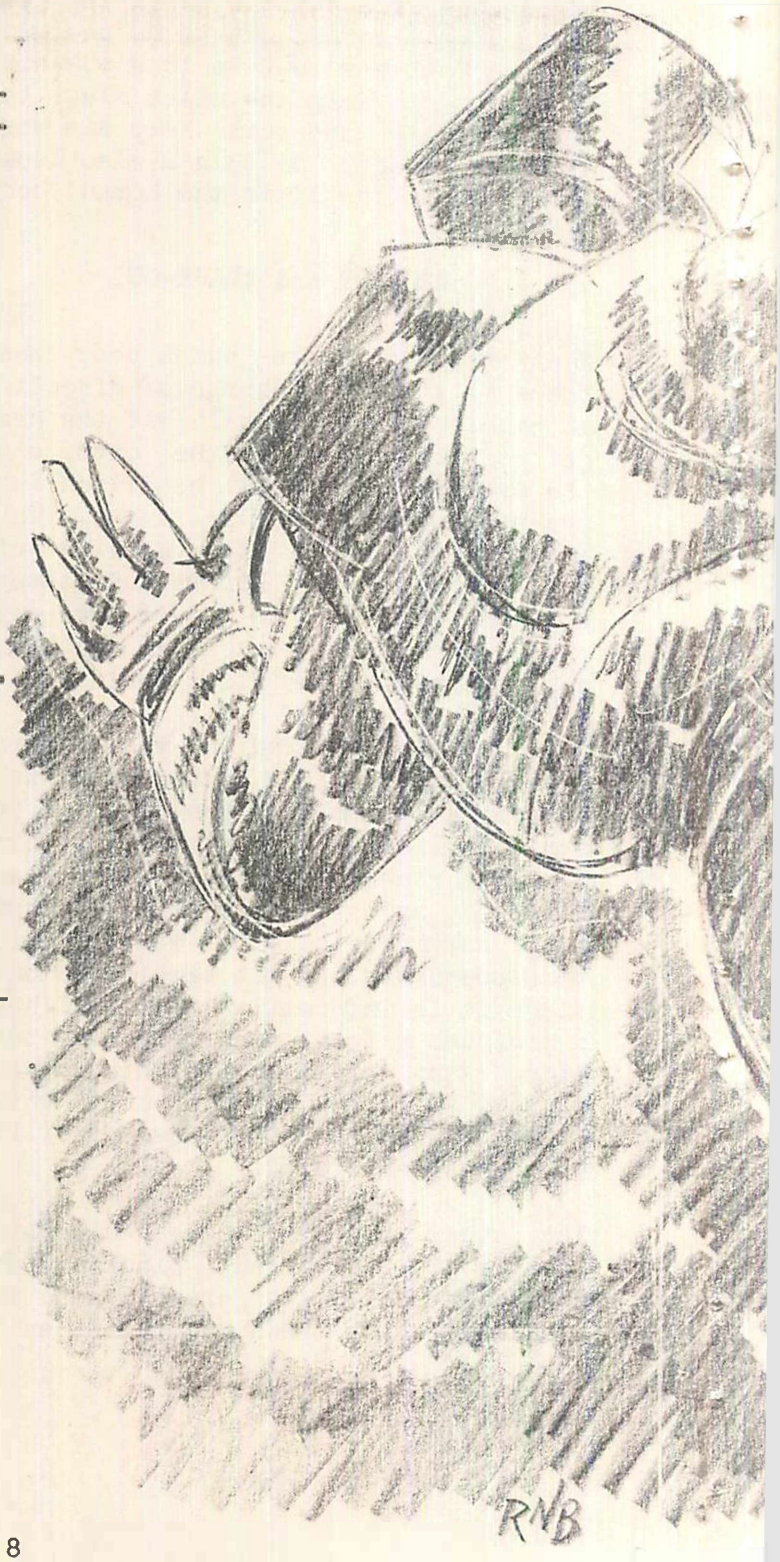
There is no place on Earth for conducting realistic experiments on this problem, so what we have to work with is inference and deduction. The Aero-Med slogan "Try it and see" doesn't pan out too well in this case, but that doesn't keep them from brooding about it.

In the first place, circulation and breathing will probably be not affected, since both depend upon rhythmical muscular contractions that could continue to work. Air, however, would be weightless. So would blood, and there may be minor difficulties there, because this weight plays a small part in the normal circulation of the blood.

The nervous system, product of a long evolution where gravity was one thing you could count on, will not fare so well.

"The body possesses an intricate system of receptors which provide detailed information of all kinds of mechanical stimulation. Among these mechanoreceptors are the receptor organs for rotatory and translatory motion in the inner ear, the receptors responsible for the pressure sense of the skin, the muscle spindles imbedded in all muscles that fix and move bodily masses, and the so-called Pacinian or Vater's corpuscles found throughout the connective tissues, especially near the muscles.

"The last three receptors are chiefly responsible for man's special posture



sense. On this sense depends our perception of position, the active and passive movements of the body, and it is also closely linked to the reflex mechanism that helps us maintain equilibrium and helps us regulate bodily movements."

It can be assumed that lack of gravity would not adversely affect the posture sense, because it is the tension of connective tissues that provides the stimulation, and this tension is largely independent of outside forces. We would, therefore, know where our arms and legs are.

We would know where they are, but we wouldn't know what to do with them. For all of our power of coordination is based on reflexes trained to overcome not only inertia, but weight. Much has been made in science fiction of the humorous situation when a man on the moon suddenly picks up an enormous contraption and walks jauntily away with it. But it will not be so funny when the effort to twitch a finger throws a whole arm into motion, or the effort to bite brings upper and lower jaws crunching together. A great deal of special training might be needed before space crews will be able to coordinate movements in space.

Another great difficulty is that our picture of the world and the objects around us depends on the careful matching of two types of perceptions: the eyes orient the body in relation to the position of an object; the weight of the body orients what is seen to the direction of gravitational forces through the mechano-perceptors, acting on information given them through the gravitational pull on the body.

In high spaces, what will be seen will

not at all match where it is "felt to be." With perception out of kilter, difficult psychological and neurological difficulties may arise. However, this same perceptor dislocation also arises in "blind" flying, and pilots have been trained to overcome it.

THE ORDEAL OF SPACE

Nevertheless, this disassociation may well create that unhappy state of affairs that on a ship is called "seasickness", and in an airplane "airsickness", and, in rockets, what will be known as "space sickness." It will be a hazard for crews, and act as a brake against extensive pleasure travel in space by ordinary passengers.

When the discomfort of space sickness is added to the pain of take-off and landing accelerations, the space trip begins to loom as more of an ordeal than a pleasure - at least in the pioneering stage.

In addition to special training to reduce the problems mentioned above, engineers may be able to build artificial gravity systems that will reduce the mechanical part of the problem. For instance, it has been suggested that the traveler's cabin, or in any event that portion of the space ship that is manned, could be swung from the space ship on a long cable and swung around continuously; the centrifugal force forming an artificial gravity and giving weight to the human body and the objects surrounding it.

This is, however, to jump from the frying pan into the fire because of the so-called "Coriolis forces" which affect all bodies moving within a rotating system. The result, for the human body, is discomfort. A passenger would be all right so long as he was at rest but whenever he moved a limb, the Coriolis forces would pull it sideways. Each voluntary movement would give the traveler the peculiar illusion that he was being moved haphazardly.

It has also been suggested that the crew of a spaceship might be anchored to the floor by equipping the members with iron shoes and magnetizing the floor itself. What this might do to delicate electrical apparatus is a question that only the engineers can answer. But so far as solving the problem of the crew, the system would not work very well. Their bodies are still weightless, however heavy-footed they might be.

Excessive ultra-violet intake and the as yet unpredictable effects of cosmic rays are questions that also must be examined, but since they will be of importance long before man takes to real space, it is assumed they will be safely out of the way before space travel begins.

Another problem that Aero-Med men are working on is what might happen to the human body if the protective shell of the rocket or space vehicle is suddenly ruptured by a small meteorite or through internal accidents from faulty equipment.

Using the empirical method with a vengeance, Colonel Sweeney, wearing a "space suit" that had been pressurized for high altitude bombers, was put in a great iron tank where the air pressure was reduced to that equivalent of an altitude of 40,000 feet.

THE PATCH ON SWEENEY'S PANTS

In the seat of Sweeney's pressurized pants (pressurized at an altitude of 8,000 feet) there was a hole with a temporary patch over it. Sweeney stood there with a screwdriver in his hand and when the engineers indicated the pressure outside him was equal to that at 40,000 feet, Sweeney reached down and ripped open the patch in his pants with the screwdriver.

The effect was as if in 1/15th thousandth of a second, he had been jerked

up from an altitude of 8,000 feet to 40,000 feet. "His eyes bugged out and his face twisted; a gasp worked from behind tight lips as the change in pressure wrought its force on his body. Then he raised his right hand, thumb and forefinger in the old Army 'okeh' circle. No damage had been done."

Thus Sweeney, a man of the mid-20th Century was experiencing what other space crewmen in the 21st Century may face when a metecrite no larger than a half-ounce rips a hole through the shell of their space ship. It won't be fun - but it can be done.

The experiments are continuing. Someone may work out some way of testing the human body in free fall, and other conditions of high space, long before the first crew has to step into a rocket.

But they'll have to hurry, the engineers are pressing them closely.

Rd

Compiled from two magazine articles:-- "THE HUMAN BODY IN SPACE" by Heinz-Haber. Scientific American, January 1951.

"TORTURE CHAMBER OF THE AIR-FORCE" by Bob Deindorfer. Colliers, October, 1950.

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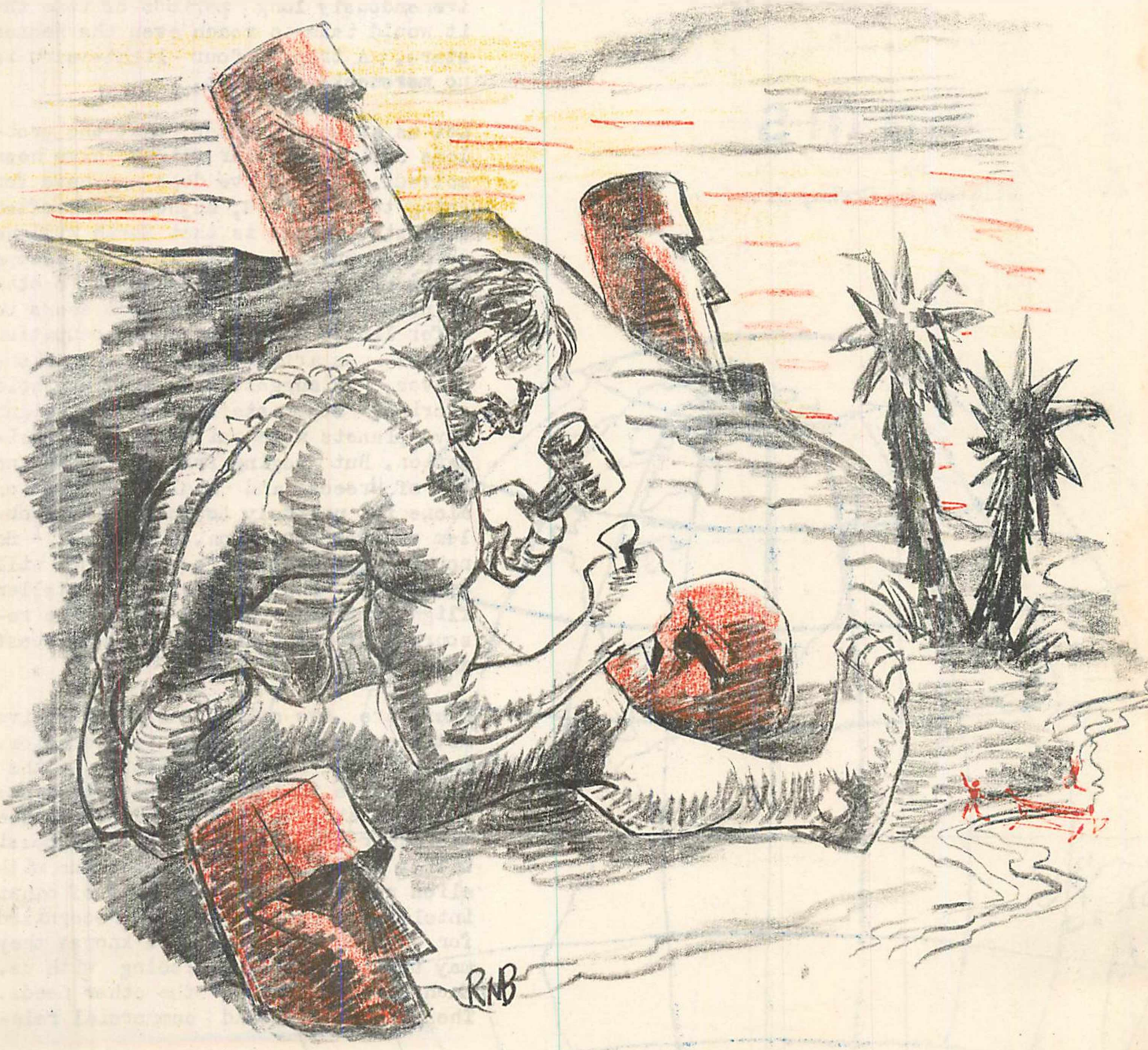
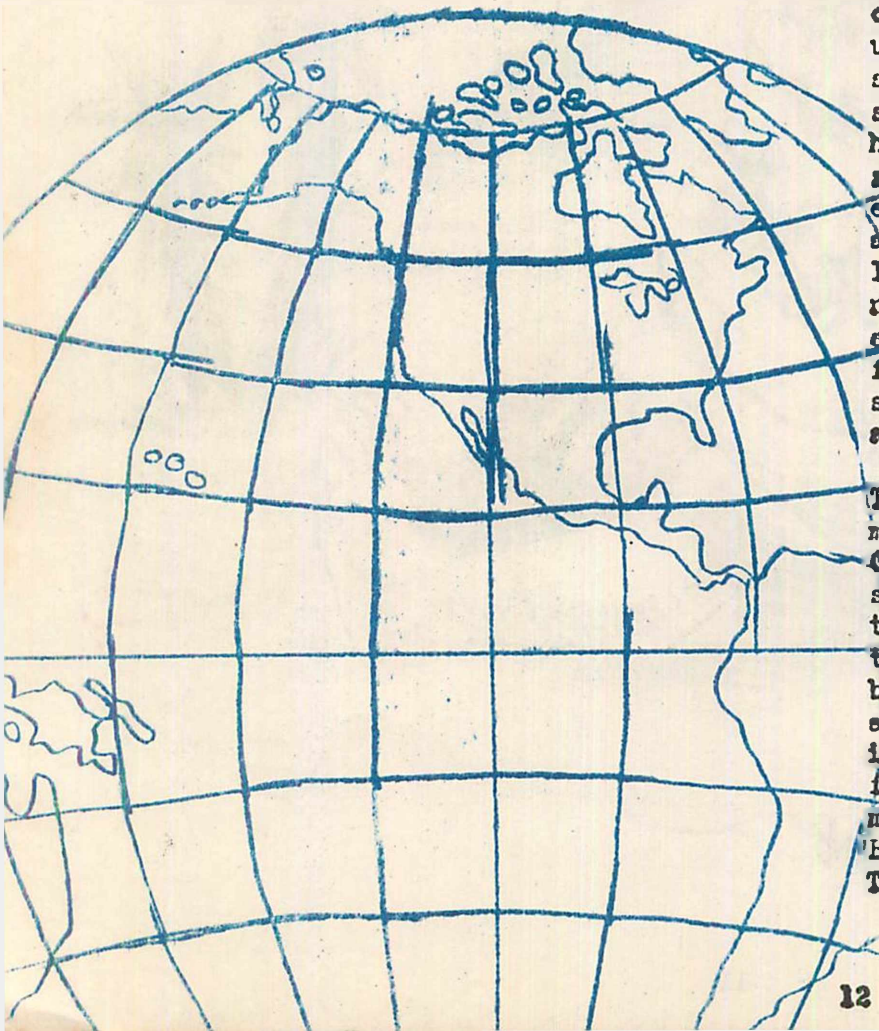


Planetary Research Teams

by
William A. Erwin, Jr.



In modern science-fiction, a trip to the moon or to another planet of our own system is commonplace, taken at a moment's notice. Trips to the distant stars are also thrown about in a very casual manner. Yet every thoughtful fan realizes that the attempt to reach the stars will be a very hazardous and difficult task. Not only are there the problems of meteorites and cosmic rays (purely physical phenomena) but also the problems of what will happen to the human organism when it is subjected to high accelerations, free fall, and the confinement of a ship for the tremendously long periods of time that it would take to reach even the nearer stars. A trip of four light-years is no mereweek-end jaunt.

Let us assume, however, that the problems of interstellar flight have been solved. What motive does man have for going to the stars, anyhow? One often suggested reason is that Earth will be so overpopulated that it will become necessary to send out colonies to other planets. The solar system seems to offer little hope for human occupation unless men artificially adapt themselves, as suggested in the Threshold stories; other stars, however, might have planets more suitable for colonization. But judging from the experiences of Greece and Italy, emigration alone is unlikely to solve any problem of overpopulation. Moreover, I do not believe that man's technology will ever reach the level of interstellar flight until he learns to use the resources of his own planet to his best advantage.

There are two other, more attractive motives for interstellar exploration. One of these is pure curiosity -- the same motive that led the bear to cross the mountain, because he wanted to see the other side. The other is the possibility of commercial intercourse with alien races. The possibility of other intelligent beings has been recognized for a long time and, who knows? they may be interested in trading with us. Each may have things the other needs. The change of sound commercial rela-

tions, not a la Bureau of Slick Tricks but instead with fair value given on both sides, is not to be sneezed at. Very probably, the final reasons for man's interstellar operations will be a combination of both these factors.

Our first task, therefore, will be to find out all we can about the culture and environment of any alien planet we may discover. This takes for granted the presence of intelligent life. Once friendly relations have been established with the aliens, it hsould not be too difficult to arrange for a scientific mission to study the planet.

We should, of course, arrange for an alien mission to visit Earth, thereby disarming suspicions that might be in their minds about our peaceful intentions. The mission should be given a free hand to observe everything about our own culture, just as we would want our mission to be treated.

What sort of men would be sent on this mission? Scientists, of course, but it should be borne in mind that science is rather a method of approach than a specific sort of study. Some of the old-line physical scientists have in the past looked down at the social sciences, condemning them as a lot of unscientific mumbo-jumbo. But social scientists like Toynbee have shown that the data relating to man's culture are as capable of being analyzed and synthesized as experimental data in chemistry and physics. The importance of understanding what the relationship of science to man may be is becoming more and more plain. Even mathematics, once regarded as a purely physical science, is now thought of as being more like a philosophy in which the acme of logic is reached.

BASIC PERSONNEL

The first mission will therefore probably be rather strong on the social sciences. There will have to be political scientists to study the political structure of the aliens, sociologists and anthropologists to study their culture, technologists to study industry, agronomists to examine what passes for agriculture in their culture, economists to study economic structure and commerce, and many other specialists. The linguistic group will be of great importance, as it will be necessary to communicate with the aliens in their own language. As Koblick aptly pointed out in the August Rhodomagnetic Digest an alien race would not necessarily need to communicate by sound, but instead might "talk" by sight, touch, taste, smell, or even ESP. This complicates matters.

NATURAL SCIENTISTS

But the natural sciences would also be well represented on our mission. It is logical that man's culture is influenced by his environment, though not as much as the extreme environmentalists thought, because man is more able to control his environment by artificial means. Nevertheless, it would be ridiculous to wear mukluks in the Congo or go about naked north of the Arctic Circle. The natural sciences would be represented by men whose duty it would be to study the natural environment of the alien race. They would be divided into two principal sections, one dealing with biological sciences, the other, with physical sciences. The biological group would cover botany, zoology, ichthyology, and so on, all of which are very necessary to a true understanding of the ecology of a planet. The physical scientists would include geologists and mineralogists, climatologists, meteorologists, oceanographers, analytical chemists, surveyors, to produce maps of the surface of the new world, and cartographers to work up the survey results and compare them with those produced by the aliens. A good mathematical section would be needed for calculating the enormous amount of mathematical data turned out.

The objection may be raised that with all these scientists there will be no room for the crew aboard ship. Why not train the scientists in ship handling as well as in their own specialities? Space travel will likely be a young man's game, at any rate, so is there any real objection to using young scientists as a crew? Scientists need not be helpless old fogies, even if the word "scientist" may conjure up in the mond of the general public a vision of an old gray-bearded dodderer in a laboratory smock.

The man in charge of the research team will have to be a very special sort of individual. He will have the enormous task of correlating and synthesizing the data gathered by the various members of the team and it will be he who writes the final report. He will have to be very tactful in order to keep peace between the various sections of the team; scientists are only human and may not agree in their estimation of the situation even though working with the same data. At the same time, the coordinator will have to know a great deal about a variety of subjects in order to give each science its just and proper role in the report.

This is certainly a large order! Is it possible that such an individual can be trained? What sort of approach will give valid results? Is there really a science that can hope to correlate so vast an amount of data and assemble it into a coherent, lucid report? I propose the science of geography for the job.

NOT QUITE NEXIALISM

Modern geography has come a long way from the sixth-grade level of memorizing the names of the capitals of obscure nations by rote. Naturally, geographers do not pretend to be able to correlate all science -- that would be rank Nexialism. But geography defined as the study of Earth's surface and the character of the human use and occupation of that surface, is a correlative science which tries to bridge the gap between the social sciences and the physical sciences as they are related to the surface of the earth. In a way, one might call geography a study of human ecology, in which cultural as well as physical factors are taken into consideration.

GEOGRAPHERS PAR EXCELLENCE

It is not the ideal of the geographer to pick the brains of other sciences or attempt to control them. No geographer would try to tell a physicist how to use a cyclotron. While the geographer may use data collected by other scientists in his findings, he has a definite contribution to make and is more than a mere plagiarist. This contribution is the analytic and sythetic approach to the study of the surface of a planet, since our earth is a planet, it seems reasonable that geography, which has been found adequate for its study, should be a proper approach to the study of other planets.

But a planetary synthecist will have to be a special sort of geographer. He will have to have, for one thing, wider knowledge and a broader viewpoint of the field than most geographers now possess. This implies longer and more dispersed subjects to be studied. Our planetary synthecist will have to have an IQ of 3-star plus, definitely. Perhaps this would be a field for some of Wilmar Shiras's "wonder kids." A person of less than super-genius would be unable to assimilate the huge amount of facts that a planetary synthecist must have at his finger tips. But the geographical approach and technigue seem to be better fitted for the job than any other discipline.

Ed.

sinä lämittää minua kun tulen takaisin?

by J.R. Emmett

Science fiction writers are realizing more and more the need -- and the difficulty -- of learning to speak the other fellow's language. Consider, for instance, THE TIMID TIGER by Eric Frank Russell (ASTOUNDING SCIENCE FICTION, Feb. 1947, page 136):

> "Did you explain that to Mithra?"
>
> "Goldarn it! That's what we tried to do," complained Mason, his voice rising, "but without his lingo we couldn't make him understand."
>
> "Naturally?" prompted Sam.
>
> "I can't see what else we can call it but a miserable misunderstanding," said Sam to Mason . . . "It's not for me to place the blame, but I reckon it'd be wiser if you gave one of your guys time off to learn the language. When people on Earth can't always make themselves understood, what hope have you got semaphoring at a Greenie?"
>
> "I'll see what can be done," promised Mason . . .

Suppose now that you have just been told off to learn the language. How do you go about it? "sinä lämmittää minua kun tulen takaisin" means no more to you than to the man in the moon. And Sam, who was a speaker of the language, left a

week ago. Besides, how did he learn it? There must have been a first time.

Well, there are several ways it can be done. The most effective one uses the principles and techniques of descriptive linguistics. Let us find out then how a linguist would go about learning the language. Our linguist, Dr. George Kenneth Thompson, tells us the first thing to do is to find out something about its sounds and structure, only Thompson calls them its 'phonology' and its 'morphology.' Phonology, it seems, is split up into 'phonetics' and 'phonemics,' the latter being the 'significant sounds' of the language; its vowels and its consonants.

"Right now," Thompson continues, "I think I'd better stop and give you an example from English even though it will take a few minutes, as it will help you understand some things later on.

"English t in top and stop are different sounds, phonetically, because the first is aspirated, (t^h), while the second is not, (t). This is easy to show. Put the back of the hand very close to the mouth (1 to 2 inches away) and say the two words out loud in a normal voice. When top is said, we feel a puff of breath (called aspiration) that is lacking for stop.

"Despite the difference, we still feel that the two t's are somehow the same. And this is correct. In English, aspirated t (t^h) and unaspirated t (t) are 'allophones' of the one 'phoneme' /t/ since they are in 'complementary distribution'; that is to say, (t) and (t^h) never occur in the same environment. (t) occurs after s and before a vowel (call this Environment 1) while (t^h) never occurs there. (t^h), on the other hand, occurs initially before a vowel (Environment 2) while (t) never occurs there.

"Thus we can say: when the phoneme /t/ occurs in Environment 1, pronounce it as (t); when it occurs in Environment 2, pronounce it as (t^h). Other allophones of /t/ occur in other environments. Note however that the closely related phoneme /d/ does not have an allophone (d^h)."

We don't get the point of this yet, but Thompson says we will as soon as we get into the language. "I'll finish up my little sermon," he continues, "and then we'll get started on the language."

"Now note that we have shown all of this only for English. English has two 'apical stop' phonemes, /t d/; some languages, like Hindustani, have four, /t t^h d d^h/; some, like Burmese, have three, /t t^h d/; while others have only one, /t/. Each language has its own system of sounds; and sounds which are allophones in one language may be two separate phonemes in another, for just because they are in complementary distribution in the one is no sign that they are in complementary distribution in the other. Each language must be analyzed on its own merits.

"My second point, morphology, I will take up in detail later on; for the present I simply quote Nida's definition:[1]

> Morphology is the study of morphemes and their arrangements in forming words. Morphemes are the minimal meaningful units which may constitute words or parts of words, e.g. re-, de-, un-, ish, -ly, -ceive, -mand, tie, boy, and like in the combinations receive, demand, untie, boyish, likely. The morpheme arrangements which are treated under the morphology of a language include all combinations that form words or parts of words.
>
> Combinations of words into phrases and sentences are treated under the syntax."

TABLE NO.1

CLASSIFICATION OF CONSONANTS (Abridged)*

MANNER OF ARTICULATION		LABIAL	APICAL	DORSAL or VELAR	GLOTTAL
STOPS:	Vl. Unasp.	p	t	k	
	Vl. Asp.	p^h	t^h	k^h	
	Vd.	b	d	g	
SPIRANTS:	Vl.	f	s		h
	Vd.	v	z		
NASALS:	Vd.	m	n	ŋ (as in sing)	

ABBREVIATIONS: Vl., voiceless; Vd., voiced; Asp., aspirated Unasp., unaspirated.

*This table is incomplete and omits several categories. For a complete table see Bloch and Trager[2] or Pike[3].

We begin to get a trifle restless, so we tell Dr. Thompson that undoubtedly this is all very interesting but still he hasn't told us how to actually go about learning the language. We are beginning to see what to do with the sounds and words after we get them, but still, how do we get them?

"Yes," Thompson grins, "I know this is up in the air as far as you can see, but you need it for background. Now let's go down to the village. I'm going to stay there and I haven't unpacked my stuff yet. Living right in the village helps a lot because you can pick up the customs and hear the language day in and day out. Also you work at it a lot harder than if there are English speakers around. If you want something, you either speak their language--or else you don't get it, as Mason just found out.

"Now before I came here, I looked up what had already been found out about the language, so I think I know what questions to ask. However, to get you started, we'll assume I don't know a thing about it and have to start in at the beginning.

"When I start unpacking, there will, I hope, be a crowd around. And if we're lucky, they'll look the stuff over and point and ask each other, what's that? The first thing to find out is how to point--you look surprised. Some peoples point with their fingers, others with their chin or elbows or thumb. You can imagine what would happen if a foreigner tried to pick up English by pointing at everything with his middle finger. It simply wouldn't do. However to save time, I'll tell you now that they use their elbows, so we will too. Also smile and laugh at your own mistakes; it helps keep a friendly atmosphere.

"There's my junk and here are the people, so let's start unpacking. You can write down any words you get; I'll go over the phonetics with you later--by the way, don't try to hide your writing from them; we don't want them to get the wrong impression of us.

"Here's a canteen; I'll pass it around. Watch out you don't get wet. See the kids pointing? What does the word the little fellow is saying over and over sound like to you?"

"Dulan? That's close; actually it's tulan with that unaspirated t we were talking about. And the other word is k^hozit with aspirated k and unaspirated t. Probably one means 'canteen' or 'container' and the other one 'water, wet, pour' or something similar.

"Now, if you'll hand me that machete, I'll show you something. See if you can figure it out. Tulan again? No. Here, I'll hold up the canteen and say tulan and then do the same with the machete. See, they didn't like it and corrected me. Do you hear the difference yet? They both sound like dulan to you? Well, they probably will for a while, but you'll get used to it. Actually the second word is dulan. The word for 'wild turkey' fits in here too, although you probably wouldn't come across it until much later. It's t^hulan, with an aspirated t, just like English. I'll tell you now there's no d^h; this language has three separate 'apical stop' phonemes; /t t^h d/. Now, having found these, you should suspect the same thing for p and k--if there is a p in the language; some languages don't have it--I'll explain why when we go over your notes tonight.

"From the way those kids are trying to look over the others' shoulders, I'd guess they're saying 'what's that?' or 'what have you got there?' Or maybe it's 'look here!' Let's see what words you've gotten so far. Yes, this looks pretty good for the first time. Let's see if we can get some numerals now. Zil 'stone' looks like a good word to use. If you'll pile these stones up one at a time, I'll say 1 zil, 2 zil, etc., and see what we get. They seem to have caught on we want to communicate. O.K., let's go ...

"Well, here's what we got:

zilgoskela	'1 stone'
zilgosp^{h}ami	'2 stones'
zilgost^{h}anu	'3 stones'
zilgostasi	'4 stones'
zilgosfuno	'5 stones'

The zil 'stone' part is clear enough, but we don't get the -gos- that seems to be stuck in the middle. Thompson suggests counting something else, say yab 'finger' and mik 'stick.'

This time we get:

yabsalgela	'1 finger'
yabsalbami	'2 fingers'
yabsaldanu	'3 fingers'
yabsaldasi	'4 fingers'
yabsalfuno	'5 fingers'

and:

mikkotkela	'1 stick'
mikkotp^{h}ami	'2 sticks'
mikkott^{h}anu	'3 sticks'
mikkottasi	'4 sticks'
mikkotfuno	'5 sticks'

Thompson asks if we heard the long t's and k's (-tt- and -kk-) in the last set. He laughs when we tell him it's just like the Italian we used to hear when we were in Rome on vacation.

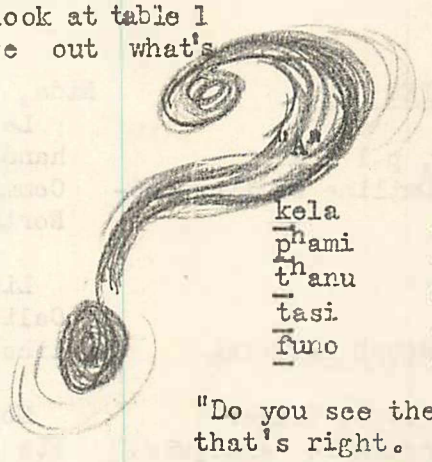
That evening as we go over our notes, Thompson takes up one by one the various points he mentioned earlier in the day. "The first thing I want to do," he begins, "is to explain how we classify consonants. Table 1 shows the two basis divisions: Manner of Articulation and Point of Articulation. It also gives a few of the usual phonetic symbols for the sounds. Labials, for instance, are all made or 'articulated' with the lips. But their manners of articulation are different.

"Stops are made by shutting off the air passage completely; labials with the lips closed (p,b), apicals with the apex of the tongue tight against the back of the teeth or alveolar ridge (t,d), etc. Nasals are similar to stops except the breath goes out through the nose rather than being released suddenly through the mouth. You can look through Block and Trager[2] for the details of the others.

"Now you see why I said /t t^h d/ suggested there might be /p p^h b/ and /k k^h g/; they are all articulated in the same way. We don't know that they actually exist, but it's certainly worth keeping in mind as a good possibility.

We think we get this o.k., but what about those numerals?

"Well, you got the first part as zil 'stone,' etc. The -gos-, -sal-, and -kot- are 'classifiers' which I'll explain in a minute. The final parts kela, p^hami, etc., are the numerals. The "stone" and "stick" sets have the same forms but the "finger" set is different. Let's list them side by side and then take a look at table 1 and see if we can figure out what's happened:



kela	gela	'1'
p^hami	bami	'2'
t^hanu	danu	'3'
tasi	dasi	'4'
funo	vuno	'5'

"Do you see the connection now? Yes, that's right. They all have the same point and manner of articulation. The only difference is that the initial consonant of set B is voiced and that of set A is voiceless (either aspirated or unaspirated).

"Now let's take a look at the sounds just in front of these, i.e. at the final consonants of the 'classifiers.' Set A has s and t, while set B has l. Now s and t are voiceless and set A is

voiceless. But l is voiced and so is set B. So we say set A are the numerals from 1 to 5, but that when they follow a voiced consonant--we don't have any examples of a vowel--the initial consonant is replaced by its voiced counterpart. The two forms are called 'allomorphs.' We have to take set A as basic. Both t and t^h become d; but, given d, we cannot tell if it becomes t or t^h.

"We can take this idea of voicing after voiced consonant one step further. In the "stick" set, s does not change to z after b. This seems to overthrow our theory, but we can get out of it as follows. Perhaps yab is one word and salgela another, and perhaps our rule applies only to consonants within words. Or, to play this backwards, we may be able to use our rule as a criterion for a word. However this is going pretty deep into morphophonemic theory, so maybe you'd better not worry about it until you come across it in Pike[3] or Nida.[4]

"Now, just a word about classifiers. In English, instead of saying 2 pants, 3 pants, etc. we say 2 pairs of pants, 3 pairs of pants, etc. Now some languages go much further and 'classify' every noun they count. They may have a classifier for 'long, slender object; stick' and would say: 2 sticks of bamboo, 3 sticks of pencils, 2 sticks of flag poles, etc. Sometimes there isn't any reason behind the classifieers; you just have to learn which classifier goes with which noun, just as you have to learn the genders of German nouns. For example, Yurok, a California Indian language, has a special classifier for woodpecker scalps. But I think at this point I'd better turn you loose on the few books I brought along. Good luck!"

FOOTNOTES

1. NIDA, Morphology, p.1
2. BLOCH & TRAGER, Outline of linguistic analysis.
3. PIKE, Phonemics
4. NIDA, Morphology

BOOKS WITH BACKGROUND MATERIAL

Bloch, Bernard, and G. L. Trager
Outline of linguistic analysis. Baltimore, Linguistic Society of America, 1942. 82 p. (Its Special publications)

Bloomfield, Leonard
Language. New York, Holt, 1948, c1933. 564 p. Many reprintings.

Outline guide for the practical study of foreign languages. Baltimore, Linguistic Society of America, 1942. 16 p. (Its Special publications)

Hall, Robert A., Jr.
Leave your language alone! Ithaca, N.Y. Linguistica, 1950. 254 pages.

Nida, Eugene A.
Learning a foreign language; a handbook for missionaries. New York, Committee on Missionary Personnel of North America, c1950. 237 p.

Linguistic interludes. Glendale, Calif., Summer Institute of Linguistics, c1947. 176 p.

Morphology, the descriptive analysis of words. 2d and completely new ed., based on actual-language materials. Ann Arbor, Univ. of Michigan Press, 1949. 342 p. (Univ. of Michigan publications. Linguistics, v.2)

Pike, Kenneth L.
Phonemics, a technique for reducing languages to writing. Ann Arbor, Univ. of Michigan Press, 1947. 254 p. (Univ. of Michigan publications. Linguistics, v.3)

Sturtevant, Edgar H.
An introduction to linguistic science. New Haven, Yale Univ. Press, 1947. 173p.

-Ry-

winding up the

GADGET STORY

(With this final summing up, Leland Sapiro concludes his examination of the "gadget" story in science fiction. In the preceding issue, he took a good, long look at the various scientific concepts embodied in an early "gadget" story by John W. Campbell -- PIRACY PREFERRED. We hope that Mr. Sapiro's example will lead others (as well as himself) to conduct for us the same good humored investigation of other phyla and genera in the science fiction field.)

by Leland Sapiro

In the preceding lecture, I have mentioned only a few of the subjects discussed by Mr. Campbell: a complete list thereof would include -- in addition to those already mentioned--such topics as microchemistry, probability weather control, and the utilization of solar power.

Campbell's treatment of these and related matters is unusually thorough. Whenever it is necessary to introduce a new device, he is careful to convince the reader of its plausibility, not only by citing the appropriate experimental evidence but by giving a detailed and lucid explanation of the accompanying theoretical background. In each instance, Campbell's scrupulously documented method of attack is in welcome contrast to the naive approach shown by some of our contemporary periodicals of "super-science."

At this point, one might be tempted to ask, "What is the purpose of all these 'gadgets'?" Is it really necessary for Campbell to interrupt the continuity of the narrative by introducing all these devices with their long and involved explanations?

An answer to these questions is furnished by a consideration of the purpose for which the science fiction story was originally written. Hugo Gernsback, in his famous justification of the science novel[1], writes as follows:

> "By scientifiction I mean the Jules Verne, H.G. Wells and Edgar Allen Poe type of story -- a charming romance intermingled with scientific fact and prophetic vision."

These writers, he continues:

> "supply knowledge that we might not otherwise obtain -- and they supply it in a very palatable form. For the best of these modern writers of scientifiction have the knack of imparting knowledge, and even inspiration, without once making us aware that we are being taught."

In this particular case, Campbell has demanded of us a relatively small expenditure of mental effort, and in return has given us an insight into the modern kinetic theory of matter that we "might not otherwise obtain." We perceived a few consequences of the first hypothesis constituting the kinetic theory -- that of the molecular structure of matter -- by following Arcot's efforts to combat the Pirate's omni-penetrant gas, and became famil-

iar with the second, that which identifies heat with the random to-and-from motions of these molecules, through Arcot's explanation of his Molecular-Motion Machines.

Campbell's way of using these various devices is, therefore, simply a manifestation of the educational purpose which at one time constituted the main justification of the science fiction story.

Obviously, the criteria used for evaluation of the contemporary "Astounding" story cannot be applied to any of its progenitors such as "Piracy Preferred." Unlike the form, which attempts to infer the political, economic, and psychological consequences of technological advancement -- with the inventions themselves being taken for granted and explanations thereof considered superfluous - the "gadget" story instructs the reader through the elucidation of those very devices which its present-day descendant ignores.(2)

Those who judge this type of narrative by current standards and complain that "So many of the stories read like essays or lectures set down in the form of fiction"[3] overlook the fact that it was precisely this -- the presentation of scientific knowledge in fictional form -- which constituted its main reason for existence.

I shall not carry this argument further; to do so would entail a complete history of pulp science fiction, but I shall merely repeat the conclusion reached in my first lecture; namely, that the "gadget" story was both a necessary and sufficient condition for the development of the present-day sociological-philosophical novel. For this reason, we owe to Campbell and the other writers of the Stone-Gernsback school our everlasting gratitude.

FOOTNOTES

1. Amazing Stories, April, 1926.

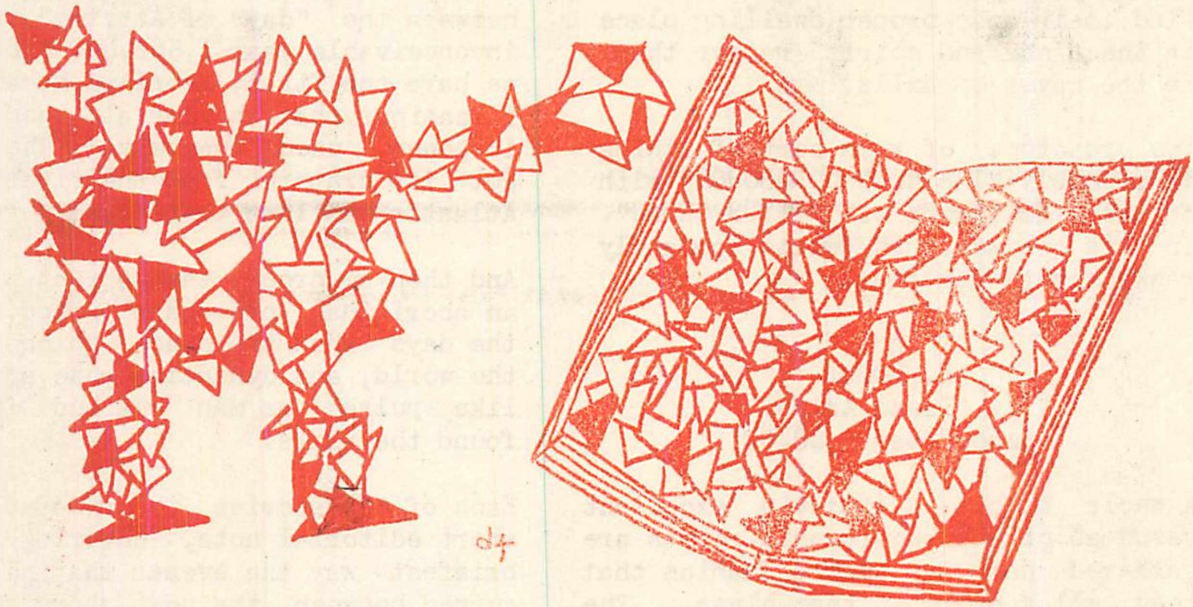
2. The novels of George O. Smith would appear to be an exception to this. However, I have previously shown that the "Venus Equilateral" series, far from being typical of the contemporary science fiction story, is in fact an anachronism which rightfully belongs alongside the "Arcot, Morey, Wade" series discussed here.

3. THE ARKHAM SAMPLER, Autumn, 1948 Mr. Haley's remarks concerned the collection of Mr. Campbell's short stories appearing in "WHO GOES THERE" and would therefore apply a fortiori to the far more complicated stories in the "Arcot, Morey Wade" series.

BB

In TOMORROW magazine novelist Christopher Isherwood noted: "It is easy to understand why science fiction, and more particularly space-travel fiction, should be enjoying a revival of popularity at this time. Faced by probable destruction in a third world war, we turn naturally to dreams of escape from this age and this threatened planet. But that is not the whole of the explanation. For while the realistic action story is going through a phase of imaginative bankruptcy, the science fiction story grows more prodigious, more ideologically daring. Instead of the grunts of cowboys and the fuddled sexual musings of half plastered private detectives, we are offered an adult, anthropological, and non-violent approach to the future of technocratic men and the inhabitants of other worlds. Insofar as the reading public is turning in this direction and forsaking the cops and the cowboys, it definitely is growing up."

Book Reviews



COSMIC ENGINEERS
by Clifford D. Simack
Gnome Press -- $2.50

Typically space opera in style, this "old one" remains exciting, and (while you're reading it) quite believable. A sleeping beauty girl physicist is aroused from a thousand years' slumber just in time to help avert a collision between our universe and a runaway galaxy. She does it with the help of a newspaper association reporter and a race of super-humanoids, and they all join hands to create a hyper-space which takes care of the runaway. Full of gimmicks and monsters and, though dated, well worth reading or rereading.

THE COMETEERS
by Jack Williamson
Fantasy Press -- $3.00

Two of the "Legion of Space" stories appear in this book, the second being "ONE AGAINST THE LEGION."

One deals with a great green comet, Bob Star, Giles Habbibula, et al, and is resolved to everyone's satisfaction in the very nick of time. The second is more of the same, except instead of the green comet, we have The Basilisk and a far-away red sun with robot Pteradactyls. Williamson's Legion yarns are entertaining, but rather unreal in their presentation. And certainly old Giles Habbibula is the least successful reincarnation of Falstaff this reviewer has ever had the misfortune to meet.

THE DYING EARTH
By Jack Vance
Hillman Periodicals -- 25¢

This reviewer has known Vance as a personal friend ever since he (Vance) used to knock out the hot music columns for the Daily Cal in the dear dead days beyond recall. So any thing that is said here may be tainted at the source. With that reservation, let it be said that this is a quite remarkable book. It is not really a single novel, but rather a collection of episodes, situations, short stories and fragments that, taken together, weave a spell.

The time Vance has chosen is in the twilight of Earth. The culture is, in part, Medieval and in part, advanced science. No clear divising line separates the incantation from the form-

ulae and the world has been repopulated by many of those creatures who find their most proper dwelling place in the mind and spirit rather than in the caves of hills.

The prototype of this sort of thing is probably "THE WORM OUROBOROS" with a strong admixture of "TITUS GROAN". In its own way, it quite possibly ranks right with them.

I, ROBOT
by Isaac Asimov
Gnome Press - $2.50

A whole bunch of Asimov's excellent yarns about the positronic robots are gathered here in such a fashion that they tell a story in themselves. The device Asimov has used is that of a writer gathering material for a biography of Dr. Susan Calvin, the robot psychologist, who has been responsible for much of the success of "U.S. Robots and Mechanical Men, Inc." By means of the successive interviews, the reporter pieces together about a century of the company's history. It begins with "Poor Robbie" and ends with "THE EVITABLE CONFLICT" and includes the very ingenious "LITTLE LOST ROBOT". It is a very happy collection, well conceived and well carried out. Even if you have read the robot stories earlier, you will find that, put in sequence, they achieve a new interest.

JOURNEY TO INFINITY
Edited by Martin Greenberg
Gnome Press -- $3.50

Those who remember Greenberg's fine "MEN AGAINST THE STARS" will, with good reason, reach for "JOURNEY TO INFINITY". It represents that same happy combination of good stories plus good editing that made the first one so outstanding.

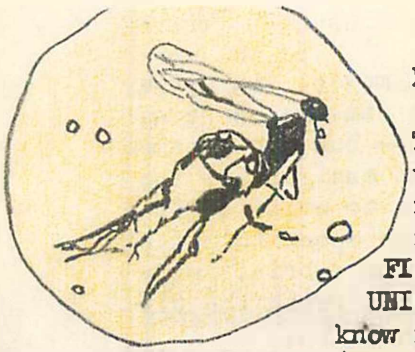
In this one, Greenberg has put together twelve stories that cover the time between the "days of Attring" to the inconceivable year 1,562,430 A.D. Here we have the first, abortive human civilizations that, having attained atomic power, used unwisely. The moon got its craters from the first time; Atlantis was lost the second.

And then we cross the current period, an aboriginal pre-space period, into the days when the space unions ruled the world, and dynasties rose and fell like pulses as man reached for and found the stars.

Each of the stories is preceded by a short editorial note, covering in the briefest way the events that have occurred between the new story and the next one. The end result is a smooth, interlocking compilation of the future history of the world - a history in which "MEN AGAINST THE STARS" was but a chapter.

A GNOME THERE WAS
by Lewis Padgett
Simon and Schuster -- $2.50

You have to like the slightly wacky school of science fiction writing before you can take too kindly to this pot-pouri of "Padgettiana". The title story is about as weird as they come, and not, it seems to this reviewer, very entertaining. In fact, the only story in this collection that still seems to have the old wallop is "MIMSY WERE THE BOROGROVES" and even it, possibly because it has been reprinted so many times, seems a little worn at the edges. There is, of course, nothing at all wrong with humor in science fiction or fantasy. And many of Padgett's situations are ingeniously contrived. But maybe that's what's wrong, they <u>are</u> contrived.



DRAGONS IN AMBER . . by Willy Ley . . Viking Press . . . $3.75

Those who have had the pleasure of reading Mr. Ley's earlier work, "THE LUNGFISH, THE DODO AND THE UNICORN" will need to know no more than that this new one "continues the adventures of a romantic naturalist," that it is Ley at his best, and that it is all brand new material.

Besides his detailed and fascinating account of the story of amber, Ley ventures into the frozen north to pick at mammoths, watches life return with an explosive vehemence to the desolate crater of Krakatoa; tracks the five toed Chirotherium through red sandstone and picks up a little green cricket whose only known habitat was the Botanical Garden in Berlin.

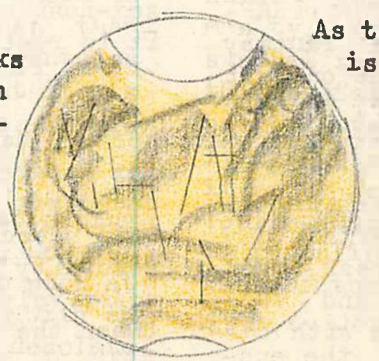
He tells about "wanderers across the planet;" flowers and insects and trees that have migrated thousands of miles, deadheading on our planes and trains and ships. He looks for the Giant Panda and wonder how he fares under Communist rule, and searches the American deserts for the last of that herd of camels that Jefferson Davis brought in and that the teamsters' lobbies sabotaged.

And he does it all with a high good-humor, and a great deal of common humanity, restoring to the reader that special feel of wonder about the world that professors and teachers and textbooks drove out of us. Perhaps the only criticism against the book is that it ends far too soon; you have the feeling that Ley could just go on and on revealing the diversity and strangeness of the living world about us.

THE PLANET MARS
by Gerard de Vaucouleurs
Faber & Faber --- London

Science fiction writers who want the most up-to-date description of Mars would do well to read this slim, fact packed volume. M. Vaucouleurs has put together virtually everything that is likely to be known or deduced about our closest neighbor until the close apposition in 1956.

He tells what the land looks like; grey, brown volcanic ash with a high perdentage of silican compounds. Polar caps in season; probably of hoarfrost, 0.1 to 10 in. thick, and the atmosphere is about the same pressure as ours at 25,000 feet; largely made up of nitrogen, with minute traces of CO_2, and rare gasses. Blue and yellow clouds float over with a speed of 2-4 miles per hour at an altitude of 2 to 3 miles and 6-19 miles respectively. The clouds are thin and translucent, made up of ice and dust. The climate is more rigorous than that of earth with greater termperature variation.



As to the canals; best evidence is that they is and they aint. Opinion is still divided, but there is reason to believe they are faint markings on the surface that appear as straight lines at this distance.

PRELUDE TO SPACE
by Arthur C. Clarke
Galaxy Novel No. 3 -- 25¢

Most science fiction these days reads as if written by one man -- pseudonymously several, but stylistically single. To be sure, a few authors, like Bradbury, avoid the telegraphic prose that stereotypes the field. Personally, I don't object much to this confinement of technique -- it isn't literary quality that in general attracts me to science fiction. Nevertheless, it is rather pleasant to read the smooth-flowing, unhurried sentences of Mr. Clarke's PRELUDE TO SPACE. Therein is none of that jumping from one idea to another that always puts me in mind of a nimble flea.

I not only like the style, I like the way Mr. Clarke treats his subject. As the jacket states, it is about the "near future;" this nearness almost amounts to a sense of the contemporary. He tells the story of the building and launching of the first space ship designed to escape the earth with a human crew, land on the moon, and return. A novel twist is the fact that the central character, through whose mind most of the action moves, is not a scientist -- at least in the sense of the natural sciences -- but a historian. He is a young American assigned by the Rockefeller Foundation to write a living history of a great epoch in human achievement. Except for a brief epilogue, the story ends with the ultimate launching of the ship.

By writing through the medium of the historian, Mr. Clarke avoids many of the cliches of the science fiction writer. There is, thank goodness, none of that schizoid dianetic bias that poisons the work of many authors who ought to know better, but apparently don't. In fact, the whole approach of PRELUDE TO SPACE is unusually fresh and convincing. And perhaps the most pleasing accomplishment is the fact that despite the book's essential lack of contrast in mood, despite its slow tempo, I suddenly realized as I neared the end, a sense of quiet, but powerful emotional crisis which had gradually and smoothly gathered throughout the book to reach its full impact when mankind was at last flung from his little planet out among the stars.

(by Ellsworth Dougherty)

THE DISAPPEARANCE
by Philip Wylie
Rinehart -- $3.50

"The electron tube, the locomotive, the internal combustion engine, the suspension bridge, vaccine and the glass giant of Palomar (have been) turned over to the cruel bumpkin of the Middle Ages and his pal, the naked bushman leaping around his tribal fire."

This quotation from the GENERATION OF VIPERS might serve as introduction to THE DISAPPEARANCE. Although THE DISAPPEARANCE is superficially a fantasy and, I might add, an excellent one, it is primarily another of Mr. Wylie's "sundry moral preachments" designed to give certain homely hints as to the care of the human soul. The setting is fantastic enough -- on a certain day the males of the world disappear (from the female point of view) and vice versa -- but the concern is with the "why" of the disappearance and with the steps that must be taken before a reappearance can occur.

Why, then, the disappearance? What state of society caused it? As Wylie has said before, there are two dichotomies which characterize Western 20th Century society. The first is that we have developed a scientific objectivity that has no equal subjective logic; that is, that we examine all objects honestly and scientifically except ourselves. The second dichotomy is the sex-schism, purely subjective. Briefly it is rooted as follows:

Western Man's religions are rooted in sex management and sustained by inculcated sex fears. Woman has been pushed into a secondary position, and where sexuality is concerned she has been positively denigrated. So the split between the sexes becomes ever wider,

with constant emphasis being laid on the differences between the sexes. Equal political rights for women have nothing to do with this schism; for, as mentioned previously, it is a subjective schism. What has been long forgotten is that we do not exist alone; that a person is a man-plus-a-woman and that separated neither is complete.

The results of these two dichotomies is a sweeping guilt complex, an excellent example of this is, according to Wylie, the present position of the atomic scientists who developed the bomb. First the bomb was developed. Then, (as if to say: We have gone as far as we can in this field, it's your turn now) they called for a moral science capable of dealing with the fact - a science which should have existed long ago. This is sadly symbolic of our history; our primary advance is technical; only secondarily, if at all, do we progress morally. The result is a highly advanced technology in the hands of a morally medieval common man; a man who is as he exists today, says Wylie, a common, no-good son of a bitch.

Obviously, the disappearance is symbolic of these schisms and of man's dead-end position today. Only when men and women, men especially, have recognized and dealt with these problems does the reappearance occur.

What is the solution and what does it imply? It is something stated long ago and disregarded: "Know thyself" - and "Ye shall know the truth and the truth shall set ye free." But we do not as yet know ourselves, nor have we taken the trouble to investigate. We have today a "disorientation of the mind in relation to the realities of its environment. This being a classic definition of insanity, the conclusion is obvious: we are all mad. We have raised up from time immemorial false gods unto ourselves, and have ignored any and all signposts pointing in the right direction. We have suppressed (call it what you will) "instinct," "caution," or "common sense."

We must then develop integrated personalities; this is in line with Christ's one great teaching; that no man can know himself until his inner honesty is complete. We must recognize the law of Opposites, and that one is implicit in the other, like man and woman or yang and yin. We must, says Wylie, submerge the ego in the collective unconscious (Jung's term for 'instinct') and regain our original kinship with the world; we must recognize our animality and no longer repudiate the timelessness of instinct. No plan for this need be offered; the Plan is, only a recognizance is needed.

Thus we know what things are--when we become honest with ourselves we may know why things are. To do this we are forced to eliminate the gulf between pretense and fact.

If I have seemed to neglect Mr. Wylie's plot for his thesis, it is because the thesis is all-important. The book is well written and entertaining, and let no man think from the tone of this review that it is naught but a dry, philosophical essay. It is not; it is fine mellow Wylie -- Wylie when at his most thoughtful. The ladies may note that his tone seems to have moderated since GENERATION OF VIPERS. This is not altogether the case, since in it he condemns the present state of affairs, while in the DISAPPEARANCE he deals primarily with causes of that state and with the eternally asinine conduct of the human male.

Read in conjunction with the GENERATION OF VIPERS and the ESSAY ON MORALS this book presents a well worked out philosophic position. There is only one difficulty that I find. In the novel a miracle brings about the disappearance and rejuvenation of man. We today can hardly expect such an opportunity. For us there remains to make the attempt, but the time is appallingly short.

David G. Spencer

TO THE EDITOR:

It was with some misgivings, and considerable difficulty, that I deciphered Miss Bradley's contribution "A Little Plain Speaking." The difficulty lay not in her writing, but rather in the fact that on the copy I had, many of the letters were missing or broken. However, having had some experience in cipher work (purely as an amateur) I managed to piece together much of what she had to say. And let me add, quickly, that I agreed with her conclusions, but not with her premises.

She feels, or seems to feel, that the reason why there should be so much low-order pulp fantasy and science fiction writing is that the justification for publishing is to make money, and there is more money to be made from magazines that appeal to "mass tastes" than in magazines that appeal to "class tastes." If I may borrow one of Wilde's phrases, "There is something in what she says, but there is not everything in what she says."

It is true that publishing of any kind calls for investment; the larger the publication in terms of distribution, the larger the investment. It is also true that publishing money comes from businessmen and not from literary people. From a business standpoint a publication is no different from toothpaste or deodorants; it has to be packaged and sold more or less on the premise of "give the people what they want."

Making money is not, however, generally the motivating force behind the people who actually get out a magazine, in contradistinction to the people who merely put up the money for it. Editors and layout men and artists and writers want most of all to be appreciated, and will strive to that end, hoping, along the way, to have their efforts also turn out financially successful.

Just the same, the impetus is to put out something that people will like, and in a democracy, that is going to include a lot of people who like Ace Comics as well as a lot of people who like the New Yorker. To attempt to up-grade the fodder in Ace Comics is as harmful as to down-grade the New Yorker. And it is a posture that is indefensible to have someone whose sole criterion of what is "good" is Astounding, venture a criticism on how "bad" Amazing is.

Only someone who habitually reads and enjoys Amazing is a good judge of a particular issue of a magazine. It represents an attempt to please him as a regular reader. If it does it is a good magazine; whether it makes money or not, and whether self-styled critics, reared on Astounding, do or do not like it.

Sincerely,

John Walsh

L E T T E R S

the atomic age's

FIVE FOOT SHELF

by
Green Vaughn Rivers

(If anticipation counts for anything, then the minds and imaginations of science fiction readers should be among the most receptive to the sudden impact of new ideas, new sciences, new fears and hopes attending the birth of "The Atomic Age." Recently, there have been many non-fiction, popularized accounts of various facets of the new era published to beguile, or frighten, or bemuse the reader. Some of the more important of these books are described below:)

THE HELL BOMB
by William L. Laurence
Alfred A. Knopf -- $2.75

As the dean of American science news writers, it has befallen Mr. Laurence to attend the rude births of both the A-bomb and the H-bomb. The first of these received its journalistic debut in Laurence's "DAWN OVER ZERO" wherein Laurence managed to catch some of the awe-inspiring grandeur of the literally earthshaking event for readers to whom one neutron looks very much like another.

In this one, he beats the event to the punch, appearing on the scene as a harbinger of death, as the chronicler of a soon-to-be-born sun, as yet in its embryo stage. Without reservations, he says that we will build the hydrogen bomb; that we will built it, probably, before Russia, but not long before. It will be a D-T mixture with a plutonium bomb as a "trigger." He further predicts that we will, in all probability have the H-bomb this spring.

None of this comes as much of a surprise to readers who have kept up with their "Atomic Age" reading -- nearly all of which has forecast nearly the same thing.

What is newest and of most interest is Laurence's belief that the H.Bomb will be largely used as a military tactical weapon. With a blast area of 300 sq. miles and a fire area of 1200 sq. mi. it is an admirable weapon against both massive fixed defenses and against massed armies or fire points of an offensive force. At one crack it can rip gaping holes in defenses, utterly wipe out an amphibious beachhead, or stop cold a mass attack.

With the final perfection of the Hell Bomb" nearly all classical military strategy will have to be overhauled. Complete dispersal of forde, rapid deployment, hit and run and harassing tactics, backed with the mobility of atomic powered submarines and possibly aircraft will be the order of the day. Unless, of course, somebody gets busy on those other science fiction ideas - impervium domes and force fields.

A valuable inclusion in Mr. Laurence's book is a chronological sequence of events leading up to the H- bomb.

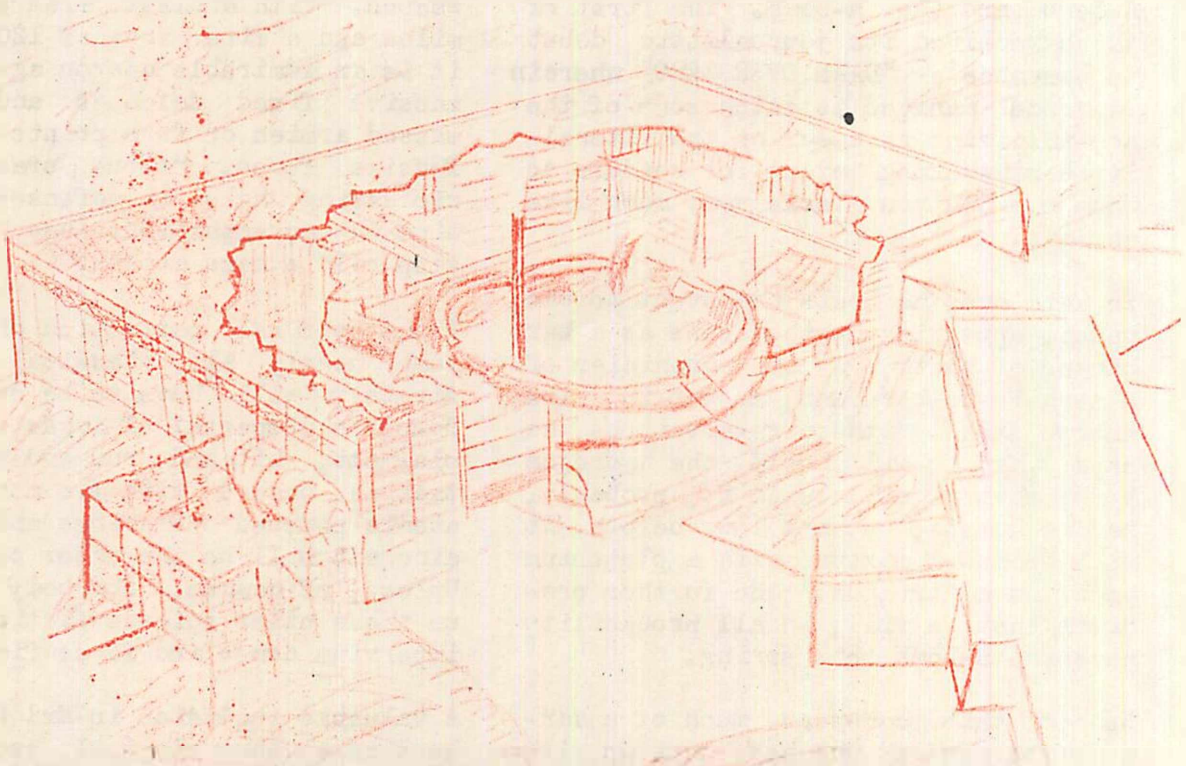
THE ATOM AT WORK
Jacob Sacks
Ronald Press -- $4.50

Although it's all dressed up in an eye catching bookstore dust jacket, and is full of snappy little sub-heads like "X Marks the Spot," and "How the Atoms Change Partners," this is really a text book and requires just as much effort to read.

Just about half of the book is devoted to the history of modern physics and can be safely skipped by anyone who has read anything in the last five years. On page 148, beginning Chapter 8, "How to Trace the Tracers," the author begins to get on new ground and from there to page 290, it's an extremely interesting and worthwhile book.

Dr. Sacks is an M.D. and a PH.D. and is on the staff of the Brookhaven National Laboratories. He writes, therefore with authority, completely at ease with his subject. The lay reader may not be quite so at ease with it, but by taking it slowly, can figure it out.

What Dr. Sacks tells about is the use of the many new isotopes in the fields of chemistry, botany, archeology, medicine, etc. It is, of course, a fascinating story, not only because these new fields are opening brand new avenues of investigation, but also because handling isotopes has given rise to a great deal of ingenuity on the part of the scientists doing the work. On all these subjects, Dr. Sacks writes well, although some fields are highly technical and hard to understand. This is the first of the semi-popular books to give detailed treatment to the use of atomic products for peaceful ends. Recommended for the serious student.



Cutaway diagram of the cosmotron, the proton synchroton which will accelerate protons to energies up to 3 billion electron volts. (From "The Atom at Work" - Ronald Press, 1951)

ATOMIC ENERGY AND THE HYDROGEN BOMB
by Gerald Wendt
Medill McBride Co. -- $2.75

In most ways, Gerald Wendt's book on the H-Bomb and William Laurence's "The Hell Bomb," are much alike. Both, of course, deal with the same subject matter. Both are aimed at lay readers and therefore dispense with mathematics and concentrate on analogy. Both agree that an H-Bomb can be built, and both feel that it will be a combination of deuterium and tritium, with a plutonium bomb as a "trigger." this is natural, since both simply correlated all of the information that is now public plus whatever they might be able to gather from their scientific informants.

Of the two, Wendt's book makes the greatest bid for popularity. It uses the so-called "visual education" devices which, in my opinion, undermine the authoritative nature of what he has to say.

Wendt differs from Laurence, in that he sees the H-Bomb as a strategic weapon of importance to our enemies, but of little value to us. Used against large civilian population centers it would be most effective against a highly complex industrialized culture like our own.

It is interesting to note in passing that both the Wendt book and the Laurence book contain a long resume of the growth of nuclear science. This is much as if a book dealing with Ichthysaurus should use up half its space talking about the formation of paleontology. As a result, the reader gets a little new information, and a great deal of "old" information for his money.

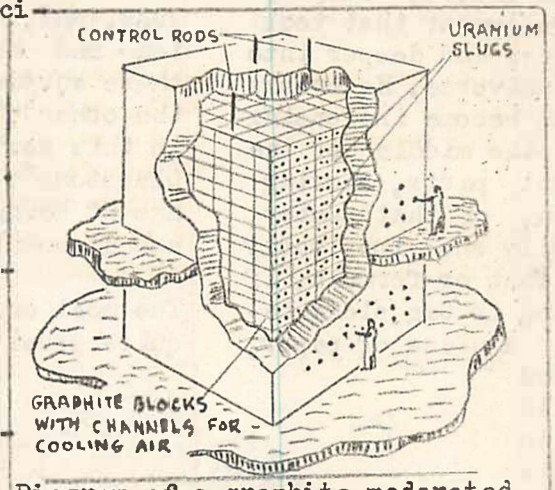


Diagram of a graphite moderated nuclear reactor. From "The Atom at Work," Ronald Press, 1951.

THE ATOMIC ERA
edited by Freda Kirchway
Medill McBride --- $2.75

In this one, the political and economic aspects of the early years of the atomic age are discussed by leading educators and thinkers. Although it was written as a series of separate pieces the book as a whole presents a running argument to the effect that a general atomic war can be averted within the framework of the United Nations, and if it is averted for a long enough period of time, there is a good opportunity for atomic power to afford the world a lasting peace. Primarily, the writers believe that nuclear reactors can be developed and used by the "have not" nations. This will remove economic dislocations that are one of the main causes of war. They further feel that the United States can use the promise of atomic power as a bribe, to all those smaller countries that lie on the periphery of the Soviet and American "spheres."

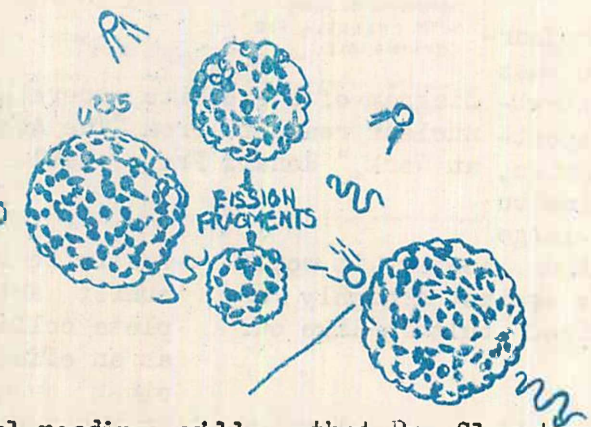
The arguments are well thought out and ingeniously presented, but they seem a little unrealistic in the light of Chinese communist activities in Korea, the complete collapse of the Security Council as an effective political force and other events that have come to a head in the months since this book was written.

Still, as a word portrait of the world "that might have been," or, indeed, might still be, this is a valuable addition to the "atomic age library." You cannot help but feel, as you read it, that somehow we can work our way out of the morass. The feeling lasts until you read today's headlines.

THE SOURCE BOOK OF ATOMIC ENERGY
by Samuel Glasstone
D. Van Nostrand Co. -- $2.90

Of all the books on nuclear research now being offered to the general public, this one by Glasstone is the most authoritative and the most complete. Dr. Glasstone is the author of the definitive work in the field of physical chemistry; he knows his subject, and in this book, he's careful to see that the reader knows about it, too.

Dr. Glasstone begins way back when the atom was a philosophic concept rather than a plaything for politicians. He traces, step by step, each new development that took the mind of man deeper and deeper into the riddles of the universe. He breaks down formulae (which become increasingly complex toward the middle of the book) into component parts, showing how this expression, or that number, is derived, naturally and inevitably from some previous fact or formula. If the reader is willing to tag along behind with a pencil, a piece of paper, and the radio turned down low then he will find the doctor an excellent guide. This reader, however, dropped off a ledge midway through the book and didn't get back on the trail until the forest of formulae were well behind. Even without trying to follow Dr. Glasstone too literally, however, just a careful reading will give the general reader a good idea of what has been going on these last few years.

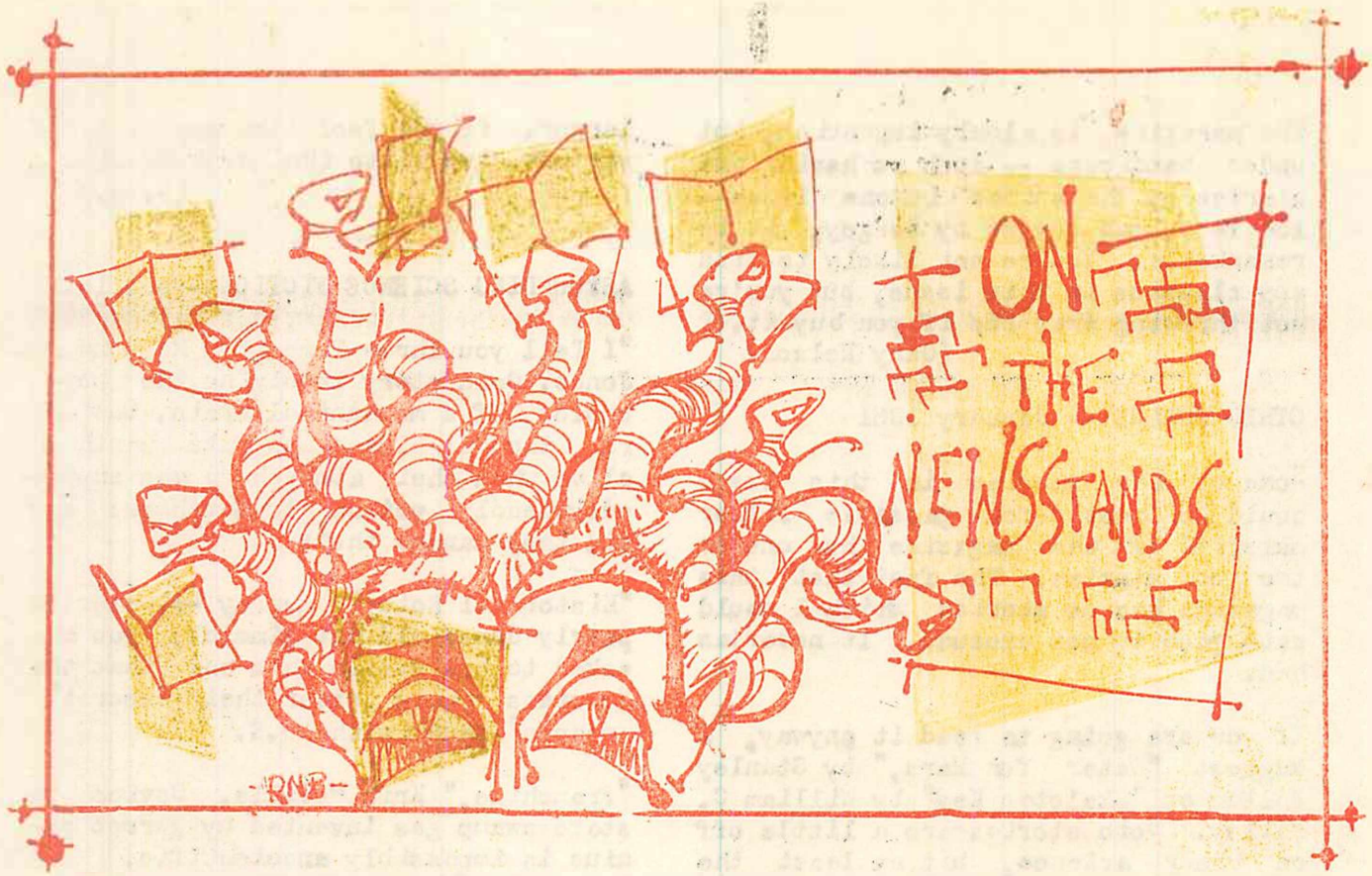


Roughly, the first two thirds of the work are devoted to the detailed history of the main currents of thought that culminated in modern nuclear physics. Having struggled that far, you will find the remainder of the book a completely absorbing story of the current research being done on the peacetime uses of this newly liberated energy. Quite appropriately, Dr. Glasstone spends very little time on the development, as such, of the atomic bomb and other weapons, and considers, or seems to consider, the military uses of nuclear physics purely a passing phase.

Among topics considered by Dr. Glasstone in the end third of his work are the nuclear reactors as power sources; the uses of isotopes in chemistry, botany, medicine and industry; the creation of new artificial elements; cosmic rays and mesons, and, finally, radiation protection and health physics. Certain of these subjects are covered in each of the other "atomic age" books reviewed in this section of the Digest, but Dr. Glasstone's treatment has the advantage of being brief, perfectly clear, and structurally sound.

The most ordinary use of this book quite possibly will be as an authoritative reference, to be placed on the shelf next to your copy of the Smythe Report. The two of them together will give your nearly everything that is accurate and readable at the lay level. However, to treat the book as a reference is to overlook the fact that Dr. Glasstone also has a real story to tell.

In itself, the book is a convincing argument against those who hold nuclear physics to be a national secret. And the story the book has to tell is primarily one of the free exchange of information between scientists of many countries; free inquiry -- not secrecy, solved the riddle of the atom.



GALAXY SCIENCE FICTION - February 1951

For excellent writing and good ideas, GALAXY is the only magazine to compare with ASF, or perhaps it should be turned around; ASF is the only one that can compete with GALAXY.

Looking over the first five issues of GALAXY and the last five of ASF, I would give GALAXY three firsts and four seconds, to ASF'S two firsts and one second. With the exception of the current GALAXY serial "Tyrann" (a fair space opera), and a few shorts, the story level has been amazingly high. If H.L.Gold can keep this up, Campbell is really going to have to get to work.

The current issue is the weakest one, yet its two first stories are the best on the newsstands this month. These two are "The Fireman" by Ray Bradbury, and Clifford Simak's "Second Childhood." The shorts are weak and Asimov's space opera should have been printed elsewhere, but despite this GALAXY is a must for every fan.

Larry Ratner

THRILLING WONDER STORIES - April 1951

Apparently Mr. de Camp has found that he can make more money by hacking out stories than he could writing better and higher paying ones, which take more time to write. Luckily for the readers, de Camp's hack stories are superior to many writers' best work.

His lead story in this issue, "The Continent Makers," is another of the Krishna series, but instead of placing earthmen on other planets, he has placed extra-terrestrials on earth. The plot does not live up to its high possibilities and the story is slightly wordy, but is definitely above this magazine's average. The ending is an improvement on de Camp's usual style of having everybody live happily ever after. This story's ending was much more realistic and believable.

Neither of the novelettes are worth mentioning. Same with the shorts. In fact they are lousy with the exception of Gallun's "The First Long Journey" which is the second best in the issue.

The magazine is slowly improving, but under handicaps -- such as having two stories by the editor in one issue-- low fees, and covers by Bergey, it is remarkable. You're not likely to find any classics in this issue, but you're not throwing away 25¢ if you buy it.
(Gary Nelson)

OTHER WORLDS -- January 1951

Some of the stories in this issue could be considered passable filler material if the magazine had one or two good stories. The fact that this magazine has no stories which I would rate good is not unusual. It never has had.

If you are going to read it anyway, I suggest "Water for Mars," by Stanley Mullen or "Skeleton Key" by William C. Bailey. Both stories are a little off on their science, but at least the authors made an attempt to use some in their plots. "Courtesy Call" and "Troubador" are the only other stories that I could have possibly read if I were not reviewing the magazine. The rest of the stories are fugitives from either FANTASTIC or AMAZING.

OTHER WORLDS is still a long way above these magazines, but it looks as if the editor is trying seriously to get down to their level as fast as he can.
(G. M.)

IMAGINATION -- February 1951

One glance at the title page of this shows that an author's reputation is no criterion of any one story of his. Ross Rocklynne, Ted Sturgeon, and Poul Anderson have stories in this issue, but they read as if they were trying to see who could write the worst story and still sell it. Rocklynne won. The magazine gets a new editor with this issue also, the ex-managing editor of FANTASTIC, but don't worry--he can't make it any worse if he tries.

You could not give me the magazine. In my opinion FANTASTIC ADVENTURES is a better buy. It costs only 25¢ and is larger. If you feel like spending 35¢ why not give it to the March of Dimes?
(G. M.)

ASTOUNDING SCIENCE FICTION--Feb. 1951

"I Tell you Three Times," Raymond F. Jones. Good story involving the psychology of a mechanical brain. One error, though: Tugorians ate Earthmen alive when their atmosphere was supposedly deadly poison to Earthmen: How did they manage that?

"Historical Note," Murray Leinster. Is poorly done; old hat gimmick; you are asked to believe in this one that the Russians would order their "secret" weapon" made in the U.S.

"Franchise," Kris Neville. Device to store swamp gas invented by garret genius is impossibly unscientific.

"Hideaway," F.L. Wallace. Routine problem story, fairly well written.

"The Friendly Man," G.R.Dickson. Dull.

"Fair Prey," J.D. Lucey. A dilly, best thing in the issue. An old problem, grimly unsolved.

"As Quick as a Thought," Edmund C. Berkeley. An article on the giant brains--good, but not as entertaining as the speech Terry A. Jeeves gave us at the last meeting of the Little Men.
(Karl Boyer)

Do you consider yourself an intelligent judge of science fiction magazine fiction? Do you frequently say, I'd like to tell the editors of this so-called magazine what I think of their latest output? Do you have an impulse to tell all your friends who read s-f about something you've just read that is worth reading? If your answer is yes, then we need you. The DIGEST is asking for half a dozen more reviewers to help cover ON THE NEWSSTANDS. We'd like volunteers to help with this next issue, to cover at least one magazine apiece.(g.w.f.)

Planet Stories

(as seen from the fresh viewpoint of L. E. LIPETZ)

My first impression on reading this magazine was one of enjoyment; my second was one of puzzlement. None of the stories had met my standards for science fiction, yet I had enjoyed them. How come? Perhaps I had been misled by the references to interstellar civilizations, time-travel, and non-human intelligences, and actually these stories were not science-fiction. I checked through the magazine, and, sure enough, nowhere does the editor refer to the content as science fiction. In fact, it was only in the letters of misled readers that PLANET STORIES is referred to as a "s-f mag."

The stories are adventure stories. They aren't concerned about the effect of this invention or that idea on mankind. They aren't worried about what will happen "if this goes on." The stories are intended to pump adrenalin into the reader. And to allow the reader to sit back with relief and satisfaction that despite the insuperable obstacles, his (the reader's, of course) extra tenacity, extra cleverness, extra vitality, extra and-so-on, have permitted him to achieve the goal. It's not science fiction, but I loved it.

The lead story is "BLACK AMAZON OF MARS" by Leigh Brackett. It concerns the adventures of an iron man (in constitution, not construction)among exotic peoples. It is an entertaining story of the type found in fantastic adventure magazines. The cover is based on, but does not illustrate, a scene from this novel. For which I'm glad. I'd much rather look at the titian-haired-amazon filling the cover than at the amazon described in the text. And that bright yellow cover is like the spring sun flooding the room.

"ASTEROID OF FEAR" by Raymond Z. Gallund is a homesteader v. cowboys story transplanted to an asteroid. Skip it. "DUEL ON SYRTIS" by Poul Anderson could have been just a rewriting of "THE MOST DANGEROUS GAME", but the author has cleverly made the idea of symbiosis an integral part of the plot and produced an above average short story. "THE ENVOY, HER" by H.B. Fyfe is an off-trail story. On the first reading, it seemed wordy and pointless, yet I enjoyed it more on each subsequent reading. Try it for yourself. "THE DIVERSIFAL" by Ross Rocklynne is a revived probability-world story. It should have been left honorably dead.

For last I have left A.E. Van Vogt's novelet, "THE STAR SAINT". It is one of his better stories, so you are sure to enjoy it. To me, Van Vogt's writing is unique in the field of pulp fiction insofar as it is based on what I would call a "Greek tragedy" theme. These themes embody the idea that man is not master of his fate; that every man has a fate preordained for him by forces so powerful that, struggle as he will, he cannot affect them. He inexorably moves on to that fate. The Greeks called those forces Gods. Van Vogt calls them a galactic civilization (WORLD OF NULL-A) or a source of immortality (THE HOUSE THAT STOOD STILL). In "THE STAR SAINT", the forces are the pressures of an expanding human interstellar civilization, inimical alien life, and a human mutant with power to deal with that alien life.

In the conflict, the protagonist, though he is a brilliant man and a leader of his people, and though he struggles mightily to prevent it, loses both his honor and his faith in himself. And yet you realize that he could never have acted other than as he did. "THE STAR SAINT", though not as well written as NULL-A and THE HOUSE, remains true to the Greek tradition and so is the stronger story--read it and judge.

Collier's

(Is this the first big 'slick' to enter the science fiction field?)

by Don Fabun

Anyone who has been seeing COLLIER'S magazine regularly for the past year and a half has been aware that an increasing number of science fiction and fantasy stories are appearing on its pages. The entry of a major, mass circulation weekly (circulation 3,217,530) into the science-fiction field is itself an event of importance. Rightly or not, the "big slicks" have a higher prestige value with readers than the pulps. And what is more important, the big slicks have more money, which is always a nice thing to have in the publishing business. Sometimes it means "better" artists, better writers, and, even, sometimes better stories.

Without having any inside information, it is still possible to speculate on this COLLIER'S change of heart. Knox Burger is the fiction editor and he said, during a trip out here last spring, "We don't have any formula; we'll buy any story as long as it's a good one." So, of course, that opens the door to a certain amount of science fiction and fantasy. Whether openly admitted or not, COLLIER'S has had a recognizable fiction formula for a good many years. It looked like this:

1 pt. Western 1 pt. young love 1 pt. detective
1 pt. romantic adventure = 3,217,530 circulation.

You don't make many innovations in a formula that pays off like that. But it is no secret to the trade that COLLIER'S was having a tough time meeting the competition from its weekly rivals: POST (Formula - Western, Detective, Young Love, Business Success) and LIFE (Formula - Blood, legs, the American Way, Churchill and McArthur) and LOOK (Formula - Sex, Money, Sex, Money.) So COLLIER'S had a shakeup awhile back, and emerged with a formula that now includes a rather good portion of science fiction and fantasy. It also got back a number of blue chip advertisers who had been conspicuously absent from its pages, and some of its lost circulation. Needless to say, the inclusion of science fiction had littler or nothing to do with it.

Now the interesting thing in all this is that if a major slick can continue to pay off with a fiction formula that includes a good portion of science fiction, then we may start to see some new stuff by some new people. At the same time, if enough COLLIER'S readers take to science fiction, they may start looking for other stories of the same type in pulps. So that we may hope that the entry of COLLIER'S in the science fiction field will have a very good effect on the field as a whole.

Here's a partial sample of some of the types of story COLLIER'S has gone in for this last fall. The list is not exhaustive:

September 2 -- THANASPHERE by Kurt Vonnegut, Jr. -- a story about the first rocket ship to the moon, wherein the pilot discovers "space" densely populated by the figures and voices of Earth's dead.

October 7 -- BASEBALL IN 2000 A.D. by Branch Rickey -- the "national sport" has undergone some radical changes by 2000; but then, so has the audience.

October 7 . . . THE THIRD LEVEL by Jack Finney -- any New Yorker knows there are only two levels at Grand Central Station. Or is there a third one that connects with the Gay Nineties?

October 21 . . THE MIMOSA BLIGHT by Frances Gray Patton -- the trouble with a mutant baby with wings is it's so damn hard to keep it in the crib.

November 25 . . EPICAC by Kurt Vonnegut, Jr. -- just another of those Colliers' love stories -- except one of the lovers is a very young, and very heartbroken electronic computer.

December 16 . . TOURIST REST by Hamelen Hunt -- a "Johnny Appleseed type fantasy, and a house that moved in the night.

January 27 . . REVOLT OF THE TRIFFIDS by John Wyndham -- a four part serial about a walking, carnivorous plant from Venus, and the troubles it caused.

And there were many more throughout the year, including several by Bradbury. The point, however, is that Collier's will bear watching; and so will the Letters to the Editor column, showing how the Collier's public is taking to this new fare.

SCIENTIFIC AMERICAN

(A glance at two recent issues)

JANUARY -1951 issue: The most interesting thing in this issue, so far as science fiction readers are concerned, is Heinz Haber's article on "THE HUMAN BODY IN SPACE," a partial account of the space-sickness tests being made at the Aero Medical Laboratory. (This reported on in detail elsewhere in this issue of the Rhodomagnetic Digest). Also of interest is Ralph Solecki's appraisal of the new archeological finds in the Mackenzie Basin, and an outline of "The Economic Basis of Atomic Power" by W.T. Astbury, who is a co-author of the Cowles Commission report on the same topic. There are also descriptions of the new nuclear reactors, "LOPO, HYPO, GLEEP and ZEEP". Of these, "HYPO" (high powered water boiler) is the most provocative. This reactor itself (not counting the shielding) is entirely contained in a stainless steel sphere only 1 foot in diameter, uses only one and one-half pounds of "soup," and generates 6 kilowatts.

FEBRUARY ISSUE Of most interest to Berkeley readers will be the detailed article on the Berkeley "Bevatron" by Lloyd Smith, which will be operating full blast by the end of the year. From the standpoint of new ideas, the study reported by David B. Hertz and Sandra Lloy Lesser on "PEOPLE IN GROUPS," is the most exciting. It shows how laboratory conditions can be set up to study such nebulous and unphysical qualities as group leadership, what determines leaders in a group, and how various types of organizational set up may produce greater efficiency and less happiness; or greater happiness but more mistakes. A straw in the wind of the future is the article "WINDOWS" by Eugene Ayres, telling about the possibilities so far uncovered for solar heating of residences; a possibility that may upset the big utility industries worse than the advent of atomic energy.

(The listing which follows is a continuing feature of the RHODOMAGNETIC DIGEST. The books mentioned are a part of the personal collection of Chairman J. Lloyd Eaton of the Society. It is one of the largest and most comprehensive collections of fantasy and science fiction in the world. For more information, see Volume 1, Numbers 2 or 6 of the DIGEST).

by J. Lloyd Eaton

The stories are rated as follows:
*** Good to excellent
** Fair to good
x When included in the rating, may be considered as an additional * by those who enjoy cerebral stimuli with their reading. It may also serve as a warning to those who want an evening of light reading.
* A fantastic, but not good escape reading; for collectors or students only. To be read at your own peril!
- Not fantastics; masqueraders---religious, economic, etc. Treatises thinly disguised as fantasy with little story value, or too poorly written, even for the collector!
() Not fantastics, possibly marginal, rated as escape reading.
s Short story collections. Total number of stories given, with each fantastic listed and described as above.
C Not in the CHECKLIST.

Blore, Trevor
C*** The House of Living Death. Aldor; Lon.; '46 -- A 'mad scientist' thriller, not very much of the sci-fict., but I like them!

Bloundelle-Burton, John
** The Desert Ship. Warne; N.Y.; N.D. - Apaches, and Spanish galleon stranded in the Colorado desert. Fantastic?

"Bluewolf"
** Dwifa's Curse. Scott; Lon.; '27 - Prehistoric; (fairish).

Blum, Edgar C.
- Satan's Realm. Rand, McNally; Chicago & N.Y.; 1899 - Satiric essays on man. No story).

Blundell, Peter
C- The Star of the Incas. *Oxford Press; Lon.; '26* - Juvenile.

Blyth, James
* The Aerial Burglars. *Ward, Lock; Lon.; '06* - Dime novelish unscientific sci-fict.

Bodin, Ed
*** Scare Me! *Tremaine; N.Y.; '40* - Non-fict. - good.

Bogoras, Waldemar
*** Sons of the Mammoth. *Cosmopolitan; N.Y.; '29* - Pre-historic.

Boldrewood, Rolf
The Ghost Camp; or, The Avengers. *Macmillan; N.Y.; '02* - Novel of Australia not fantastic.

Bolitho, Hector
s The House in Half Moon Street and Other Stories. *Appleton-Century; Lon.; '36* - Shorts (14).
*** The House in Half Moon Street. - Prevision.
(**) Empty Clothes. - Not fantastic except unknown kingdom for story purposes.
** The Duke of Ethirdova. - Fantasy; faith.
** Cracky Miss Judith. - A haunting ghost story.
*** The Albatross. - Uncanny.
* The Boy Who was Mad.
*** Taureke's Eyes. - Atavism.
*** Dirge. - Revenge; horrible.
*** The Crying Crate. - Ghostly curse.

Bombal, Maria-Luisa
(**) House of Mist. *Farrar, Straus; N.Y.; '47* - Psychology; what is behind dreams. Not a true fantastic.

Bond, Mary Bligh
** Avernus. *Blackwell; Oxford; '24* - Souls enslaved by Magi and the fight back. Many too many words, (would make a very good novelette) but even so, powerful and horrible.

Bond, Nelson
C** Exiles of Time. *Prime; Phila.; '49* - Fairish time story.
s Mr. Mergenthwirker's Lobblies and other Fantastic Tales. *Coward, McCann; N.Y.; '46* - Shorts (13).
** Mr. Mergenthwirker's Lobblies. - Fantasy; "others".
*** The Magic Staircase. - Sci-fict.
** The Remarkable Talent of Egbert Haw. - Fantasy; humor.
** Johnny Cartwright's Camera. - Sci-fict.; humor.
** The Master of Catswold. - "Old Ones".
** The Einstein Inshoot. - Sci-fict.; humor.
** The Fountain. - Fantasy; water of youth.
** Dr. Fuddle's Fingers. - Sci-fict.; 4th dimension.
*** Conqueror's Isle. - Sci-fict.; later man.
** Socrates of the South Ferry. - Sci-fict.; humor.

** The Bacular Clock. - Sci-fict.; humor.
** Union in Gehenna. - Fantasy; humor.
* The Bookshop. - Fantasy.
Cs The Thirty-first of February. *Gnome; N.Y.; '49* - Shorts (13).
- The Sportsman. - Very mild fantasy.
* The Mask of Medusa. - It works!
** My Nephew Norvell. - Fantasy; sci-fict.
** The Ring. - of Judas, Power.
*** The Gripes of Wrath. - Humorous ghost story.
** The Cunning of the Beast. - The Garden.
** The Five Lives of Robert Jordan. - Talisman.
* Take my Drum to England.
** Saint Mulligan. - With a halo.
*** The Monster From Nowhere. - Sci-fict.
** The Man Who Walked Through Glass. - Fantasy.
** The Enchanted Pencil. - Amusing.
*** Pilgrimage. - After the "Flud".

Boothby, Guy
(*) 1. A Bid for Fortune. *Ward, Lock; Lon.; '29* - First Dr. Nikola story; not fantastic.
*** 2. Dr. Nikola. *Appleton, N.Y.; 1896* - Fantastic Adventure.
** 3. Dr. Nikola's Experiment. *Appleton, N.Y.; 1899* - Sci-fict.
** 4. Farewell, Nikola. *Ward, Lock; Lon.; N.D.* - Adv.; sl. supernatural.
** The Curse of the Snake. *Bell; Lon.; '02* - Horror; supernatural.
*** Pharos the Egyptian. *Appleton; N.Y.; 1899* - Fantastic adventure.
(**) The Kidnapped President. *Ward, Lock; N.Y.; '02* - Not Fantastic. Revolution in unknown South American republic.
(**) A Lost Endeavour. *McMillan; N.Y.; 1895* - Love; not fantastic.

Borden, Mary
- Jehova's Day. *Doubleday, Doran; N.Y.; '29* - Not worth mentioning as fantasy.

Borodin, George
C* Spurious Sun. *Laurie; Lon.; 48* - Starts and ends as sci-fict. Ironical politics and economics in between.

Boshell, Gordon
** Dog's Life. *Lecker and Warburg; Lon.; '45* - Man into dog. Humorous in spots; some preaching.

Botkin, B.A. (ed.)
C*** A Treasury of American Folklore. *Crown; N.Y.; '44* - 500! stories, among others, the sagas of Wild Bill, Billy the Kid, Jesse James, etc., as well as sections on ghost, devil, and queer tales.

Bourdillon, Francis William
** Nephele. *New Amsterdam; N.Y.; 1896* - Mystic and music.

Bourget, Paul
- The Night Cometh. *Putnam's; N.Y.; '16* - Religion; not fantastic.