TO MEN OF EARTH



TO MEN OF EARTH

Including
THE WHITE SANDS INCIDENT
by
DANIEL W. FRY, Ph.D.
(New Combined Edition)

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Contents

ABOUT THE AUTHOR	5
INTRODUCTION	7
PART ONE	8
THE WHITE SANDS INCIDENT	27
Transparent Door	39
ELECTROGRAVITIC PROPULSION	42
"THE ORIGINAL CIVILIZATIONS"	45
DIAGRAM OF THE SHIP	50
ATLANTIS AND LEMURIA	57
'IT IS EASIER TO RIDICULE THAN TO INVESTIGATE'	66
NO LANDING ON THE WHITE HOUSE LAWN	67
PHYSICAL, SOCIAL, AND SPIRITUAL SCIENCE	70
LEMURIA, ATLANTIS, AND THE ARTIFICIAL STRUCTURES ON MARS	75
POSTSCRIPT	79

ABOUT THE AUTHOR

DANIEL W. FRY was born in Verdon, Minnesota (a small steamboat landing on the Mississippi River, in the northern part of Aitken County). The date of his birth was July 19, 1908.

He was left an orphan at the age of nine, and from that time until he reached the age of seventeen, he was reared under the guardianship of his maternal grandmother, with whom he came to California in 1920.

There was little to distinguish his childhood and early youth from that of any other normal American boy except, perhaps, that his craving for knowledge (especially scientific knowledge) was out of all proportion to the natural curiosity of the young boy.

His parents had left practically no estate and at the age of eighteen, he found himself entirely dependent upon his own resources. He completed his high school training and attempted to go on to college, but because of the great depression which was then causing a desperate competition for all types of employment, he found it impossible to support himself while attending school. Realizing that he might never have the opportunity of matriculation at a recognized seat of learning, he thereupon instituted a night school class of one in the textbook and reference section of the Pasadena Public Library. Here he spent most of his evenings for several years, studying the same subjects which he would have been taking if he had been able to attend a college or university.

He became especially interested in the chemistry and use of explosives, with the result that he became an explosives technician and blaster. He followed this trade until it eventually led him into the field of rocketry.

He was married in Pasadena in 1934, and has had a happy and peaceful domestic life, marred only by the necessity of frequent moving which was required in the pursuit of his profession. They have three children, one son and two daughters.

Mr. Fry has been employed for the past five years by Aerojet General Corporation, the world's largest developer and manufacturer of rocket engines.

During the years of 1940 and 1950, Mr. Fry spent most of his time at the White Sands Proving Ground in New Mexico, where he was engaged in setting up instrumentation for the testing of a series of very large motors.

Dr. Fry is an engineering executive, lecturer and world traveler. He participated in the organization of the Crescent Engineering & Research Co., in 1940, and became its vice president in 1956. He was one of the prime movers in

the Crescent liquid fueled missile program begun in 1945, and has been employed in the development of the science of rocketry for more than thirty years.

He has written a number of books, and has been the editor of the *Understanding Magazine* since 1956. He is now the president of Merlin Development Co., Inc., and the international president of Understanding Inc., (a worldwide service organization.)

Dr. Fry has been listed in Who's Who in the West, since 1963, the National Social Register since 1968, The Blue Book, in 1969, and World Who's Who in Finance & Industry, in 1971. Elected to the Wisdom Hall of Fame in 1970, and the Writer's Directory in 1971. Member of the Smithsonian Institution, the International Platform Association, and the National Historical Society.

INTRODUCTION

"To Men of Earth" is the account of an unusual visit, which began at the White Sands Missile Proving Ground, near Las Cruces, New Mexico, on July 4, 1950.

It happens to be a true historical record of an event which did take place just as described, although that is probably too much to expect the average reader to believe. Fortunately, there is no need for him to do so, since the book, even if considered only as fiction, is fascinating reading, and makes a substantial contribution to the understanding of the subject.

It is by no means a new book. The first report, under the title of "The White Sands Incident," was published in book form, in June of 1954. Since that time it has gone through eighteen printings in the English language, and has been translated into and published in nine other languages, including Icelandic and Braille. All of this has come about spontaneously, with virtually no effort on the part of the author or the publisher to enlarge its distribution.

The public demand for the book, although never at the Best Seller level, remains constant, year after year, as edition after edition is distributed. It seems destined to become one of those perennial books that go on for decades, never becoming a Best Seller, but never lacking readers.

If some of the scientific concepts expressed in the text should appear to be somewhat dated, the reader should remember that it was first written more than twenty years ago.

TO MEN OF EARTH

PART ONF

From the fathomless depths of the interplanetary void, a Deep-space Transport Ship was approaching the Earth. In a softly lighted lounge compartment, two youthful appearing travelers, a man and a woman, sat facing each other over a small conference table. Between them, on the wall, a silent video screen awaited the electronic impulse that would bring it into action. The young woman was speaking. "I'm sorry there wasn't time to brief you before our departure, but this was not considered essential, since there will be plenty of time for a full explanation of the mission, and of the many problems involved. We have on board, all of the video and audio data necessary for such a study, and the material has been organized carefully for simple and orderly presentation."

The woman touched a control at the base of the video screen, which instantly came on, showing a complete spiral galaxy. The galaxy approached rapidly on the screen, until one of the spiral wings filled the entire viewing area. Meanwhile, the woman's voice continued. "As you know, the planetary system we are approaching, is located on the inner side of this spiral wing of our galaxy. The planet itself, has been under occasional observation, by passing ships of the Galactic Federation, for more than a hundred generations, and there are a few records which were made much earlier. It has been of particular interest to some of our anthropologists, because of the race of humanoid beings, similar to ourselves, that is developing there. During the past few generations, our ships have made additional records, and collected more data, whenever their course has taken them within observational range of the planet. With our present observational technology, that would be, of course, anywhere within their solar system." As the young woman continued to speak, the video screen portrayed, in vivid color, each facet of the planet, as she described it.

"We have only a small fraction of the total data with us, but I understand that the main library of the Confederation now contains more than a thousand viewing hours of video and audio records of the planet, as well as samples of its atmosphere, water and soil. There are even a few artifacts, obtained during brief landings, by some of our more intrepid explorers!

"About 71% of the planet's surface is covered by water, to a considerable depth. While this does limit the land area, the continual evaporation and condensation, furnishes ample water for most animal and vegetable needs. The

situation is ideal for the development of life forms, both in the water, and on the land. As you will see innumerable varieties of living things are to be found there.

"The Social Study Patrol group, which made the first extensive observation of the planet, stated in their report that it seemed as though nature, in a whimsical mood, had chosen this planet as an experimental laboratory, in which to put together organic molecules and protoplasmic cells, in every imaginable pattern and combination, just to see what would result! Among the present group of biostudents, there is a growing suspicion that it was not nature or chance along that brought about this diversity of form. The theory is that some advanced race, unknown to the Confederation, may have used the planet as a 'proving ground' and that many of the life forms now found there, were developed and planted there as a part of some long term research program. In any case, whether by evolution or by transplant, the humanoid form eventually appeared there, just as it has been found, in various stages of evolution, upon most of the planets that have a suitable environment.

"One of the most remarkable facts of this particular planet, is that the humanoid race can be found there, in all of its earlier stages of development simultaneously. There are races which have not yet achieved the bow and arrow, and whose tools and weapons are still made from stone. At the same time, there are other races which have attained rather remarkable levels of technological ability, including the controlled release and use of energy from the atomic nucleus. As you know, these two points in the evolution of a human race, are normally separated by many hundreds of generations, yet, on this planet, they both exist simultaneously, and almost side by side.

"While the most primitive races have virtually no knowledge of the advanced races, the advanced races are well aware of the existence and condition of the primitives. They now have aircraft which fly to all parts of the planet, and they could, if they chose, easily assist in the development of the primitives. After examining the many critical problems which the advanced races have created for themselves, however, it seems just as well, perhaps, that they do not! Although they possess a rather strong technological instinct, and take considerable pride in their technological achievements, they seem unable to distinguish between scientific knowledge, and basic intelligence. There is very little of the latter in evidence among any of the races.

"While their philosophers constantly extol the virtues of logic and reason, both the people and their governments are still motivated almost entirely by instinct and by their emotions. Most of the people pay lip service to certain high ideals and principles which almost none of them actually practice. They create beautiful structures and artifacts as symbols of their beliefs, but very few have learned to apply their beliefs to the conduct of their daily lives. Their spiritual aspirations remain an ethereal rather than a material manifestation of their progress.

"They expend a considerable amount of time and effort in their attempts to advance what they describe as their 'Social Science' even though they have never made any definite or concerted attempt to determine or to document, even the most rudimentary of the rules or laws which are required as a foundation for any science. Most of their leaders tend to formulate their own doctrines concerning the proper attitude and actions of man towards his fellowman. Each of these doctrines, when published, will attract followers. In some cases the followers may be few, while in other cases, entire nations or races may become eager and devout followers. Yet those who follow each leader do so primarily because of the esthetic or the emotional appeal of the doctrine, rather than because of any tested and proven merit. Thus, throughout the ages, an ever changing series of more-or-less random social experiments have been conducted by those whose public position, or political power, has enabled them to influence the thoughts and actions of their neighbors, their nation or their race. Some of these social experiments have been partly or wholly successful, others have been total failures, and some have brought terrible tragedy and destruction to whole races of people. Yet none of these social experiments, successful or otherwise, could contribute significantly to the science of human relationship, because none were designed from, or built upon, any foundation of mutually accepted facts, or even belief. Their social arts can never become a social science until a mutually accepted and documented foundation of basic principles has been established. This is one of the tasks which will be entrusted to you, if you succeed in making the necessary biological adjustments, and become a resident of the planet. As you must realize, however, this will require a rather lengthy preparation. There are a number of obstacles which must be overcome, and many hazards which must be faced. We will discuss these in detail after the preliminary briefing has been completed.

"Even the most advanced races of the earth exhibit, among themselves, a considerable degree of paradox. There are remarkably wide differences in the social status and living standards among people who have quite similar degrees

of knowledge and ability. Their social and economic systems are tremendously competitive, and those who lead in this competition usually maintain a level of luxury seldom found, even on our most modern craft. Those who's constant struggle barely manages to keep them abreast of the tide, have more modest, but generally satisfactory standards, while those who are thrust aside by the competition, are usually left to eke out their living as best they may, regardless of their intrinsic value or potential.

"The advance of all phases of technology is pressed with almost feverish enthusiasm even though that same technology is now producing several very serious threats to their continued existence.

"Their manufacturing and disposal processes either ignore or deliberately interrupt the normal cycles of ecology, with the result that they are rapidly polluting all of their atmosphere, their land surface, and even their tremendous oceans, upon which they must eventually depend for most of their food requirements, as their constantly increasing population becomes too great to be supported by their relatively small land surface. Even the birds do not soil their nests as badly as Earthman is now soiling his, and, unless the trend can be reversed, he will soon have to leave his planetary nest permanently, and before he is ready.

"The instinct to kill is still very strong in all of the races of the planet, and almost half of their combined creative ability and technological resources are devoted, in one way or another, to the development and the manufacture of more rapid and efficient means of intimidating, or of killing each other. At least once in each generation, each nation finds an excuse to enter into armed conflict with one or more other nations. Each side is determined to subdue or to destroy the other, and every device or system which their minds can conceive, and their technology can create, is used in some way in the furtherance of this senseless purpose. These periodic acts of tragic nonsense have been performed, almost as a ritual, by every tribe, race and nation, since the beginning of our ancestor's observations, more than one hundred generations ago!

"The leaders attempt to justify these mutual acts of mass slaughter in various ways. They perform some truly amazing feats of moral and philosophical gymnastics, in their determined efforts to convince themselves, and even their victims, that their tremendously destructive acts of passion, brutality and greed, are actually motivated by the highest of ideals and principles!

"Five of their leading nations have begun to work toward the uncontrolled release of energy from the atomic nucleus. At least two have succeeded, and soon there will be others. The first to succeed, immediately used the new ability as a weapon of mass destruction. It was obvious to our social study group that if another general war occurs, and if these weapons are used, the result will be the total destruction of all technology, the loss of such social order as has been achieved, and the death of the majority of the population of the entire planet.

"There was a long debate among the members of the Social Service Committee, as to whether this civilization could be saved or whether, indeed, there was anything worth saving! Several suggested that we simply ignore the situation and let nature take its course. It was pointed out that, since the nations and the people were so determined to destroy themselves, by one means or another, perhaps it was only proper to leave them to their own devices until their purpose had been accomplished!

"Other members reminded us that this race is already preparing to move out into space, and if it should achieve independent and unlimited space travel before it destroys itself, its space traveling remnants, with their tremendous egos, and their perverted philosophy, might well become a genuine threat to other races, and perhaps to members of the Confederation. It was even suggested that we might quarantine the planet until its self-cleansing was complete! We nodded sagely to these comments, but all of us were wrong and we knew it, and the knowledge frightened us a little. Could the ego philosophy of the race we had been observing and discussing be so contagious that we could be infected simply by observing it? In our hearts, we knew that these races were no worse than dozens which we, and our ancestors have, in times past, assisted on the path to true civilization."

From his attitude of close attention and deep concentration, the young man raised his head and spoke for the first time. "If the methods of communication and the general knowledge of the Earth peoples is as far advanced as the records indicate, surely many of them must realize the inevitable results of the things they are doing."

The young woman smiled a little wryly, and replied, "Of course they do! And they are very concerned! Each man is looking eagerly to his neighbor, or to his government, to find a remedy that will not cost too much, and will not inconvenience anyone! Meanwhile, they move en masse, toward a common grave, each one complaining that his fate is the result of others negligence."

"The planet itself is a very beautiful one, as planets go. It has the most ideal conditions for the development of advanced life forms, that we have ever found upon any planet. It is still very young, of course, since its solar system was one of the last to be formed in this galaxy.

"There is always a small feeling of nostalgia present when one studies the life patterns of humans who still live upon their natal planet. In a strictly primitive way, their lives are somewhat fuller than ours, since the struggle for survival is the basic essence of all life. In our lives, there is very little in the way of struggle, and survival is taken for granted. On our ships, the production and distribution of food is automatic and dependable. The temperature and humidity are always maintained at the optimum level, and even the gravitational force is adjustable to the needs of the moment.

"Planet dwellers have a wider variety of experience, in some respects, and may enjoy some of the beauties of nature that are not available in space or on our ships. The sight of ocean waves, breaking upon the shore, and the colors of the sunset on a planet, are unknown to us, except when we observe them with one of our long range scanners.

"The inhabitants of the Earth must, however, pay a high price for their few advantages. Nature is fickle on a planet, especially a young and relatively unstable one. The surface may erupt, almost without warning, and spew forth mountains of molten lava, burning ash and poisonous gas. Whole cities have been covered, and many thousands of persons have lost their lives in these devastating manifestations of nature. On Earth these are called Volcanos; named after Vulcan, one of their early Gods of fire.

"When unusually heavy rainfall occurs, over land areas, large masses of water accumulate and rush downward toward the sea, overflowing the normal river banks, and sweeping through streets and low lying areas. Such floods wash away many homes and other buildings, and often bring ruin and destruction to large areas.

"Earthquakes are a constant hazard to many cities which have been built along, and over one of the tremendous cracks in the surface rock layers known as 'Fault Lines'. The rock layer on either side of the crack tends to move in opposite directions along the crack. The pressure gradually builds up until the rock can no longer withstand the force, and a sudden slippage will occur. The slippage produces a violent shaking motion which can shatter buildings, and cause many fires to start in the ruins. The pressure water systems which Earth's city dwellers normally use to control unwanted fires, are frequently disrupted by the quake, and the fire, burning unchecked, may consume a large part of the city.

"Unusually strong winds are another problem that frequently plagues the people of Earth. Circular storms, known as 'Hurricanes' form over oceans and move in toward the shore. The force of the wind raises huge waves and drives them ashore with great speed and irresistible impact. Large numbers of buildings along the seacoast are undermined and swept away.

"With the many hazards which constantly threaten those who dwell upon a planet, it is not difficult to see why most technological races eventually build their own planetoids, in which life can be much simpler and safer. Some of them would, of course, build their own space dwellings, regardless of the conditions on their planet, because man requires an unlimited environment for successful development and, sooner or later, he will tire of his confinement upon a single tiny planet.

"The first permanent space dwellings recorded in our history, were created by the inhabitants of some of the older planets near the center of the galaxy, about fifty thousand generations ago. They had limited capabilities and were relatively slow moving craft, sometimes requiring several generations to cross the void between two adjacent stars. If a new star was found to have a planetary system, another generation or two might be devoted to the exploration of the planets, before moving on to the next star.

"Each planetary race which had achieved the ability to build space ships, built a constantly increasing number of them during each passing generation, and with each generation, more races on other planets, acquired the ability to build them. It has been estimated that, during the first thirty generations of space flight, the total number of space ships increased by at least one power of ten with each generation. The rate of increase tapered off however, as new technology encouraged the scrapping or rebuilding of older ships. The best estimates presently available, indicate that the total number of permanent space dwellings, not including smaller transport ships, is now equal to about the thirty-third power of ten.

"Each ship, regardless of its location, can now establish electro-magnetic communication with several other ships in its vicinity, and most items of information and discovery are relayed from ship to ship until they are picked up and recorded by one of the Data Ships of the Confederation. An individual data bank is maintained for each inhabited planet which has not yet passed the critical

point in the social development of its population, so that if there is need of assistance at the critical time, it can quickly be offered by the nearest of the planetary assistance ships.

"Perhaps it is time that I satisfied your curiosity as to why you were selected as the assistance agent for this particular mission; or perhaps I should say 'experiment,' since its success is far from assured. Since the agent must, in this case, take up residence on the planet, an individual was needed whose body could be adapted to the environment without prohibitive changes, or too extensive waiting period. The minimum physiological requirements for successful adaptation were computed and tabulated. A subsequent scanning of the Public Service Personnel records indicated that your physical characteristics met more of the requirements than those of any other member of the Service Group. Not very flattering, perhaps, to be chosen because of a close biological resemblance to such a primitive race, but that is not all! In tracing the genealogy of your group, it was discovered that a part of your remote ancestry is traceable to this very planet. These ancestors of yours, abandoned the planet almost a thousand generations ago, after having rendered it totally unfit for human habitation through a nuclear holocaust very similar to that which their descendants are again preparing to launch. A thousand generations represent a considerable time gap, but most of the biological traits are quite persistent, and it was found that you would require relatively little in the way of physical adjustment to enable you to live there. To be accepted as a native of the planet will, however, be a problem of greater magnitude.

"It will be necessary to accustom your body to a gravitational force almost twice that which we use in our craft. Your muscular system, and especially the ligaments which support the vital organs must be strengthened. We must also find a way to supply your system with the trace elements which we acquire from our atmosphere, but which are not present in theirs. You must undergo an extensive program of immunization to the biotics of the planet, which are many and varied, and some forms of which can be quite deadly. All of this will require considerable time, but that time can also be used to study and practice the languages of the Earth, and the history and customs of its people.

"It will be necessary to establish a direct and continuing contact with at least one member of the earth race. While we have many records of the spoken and written languages, they were made intermittently, and over a long period of time. Both the idiom and the accent of a language change considerably with time, and if you are to be accepted as an ordinary citizen, your language must be that of today, and not of several generations past. The discovery that you were alien to the planet would, of course, render your position there completely untenable, and result in failure for the entire mission.

"You will require certain documents of identification if you are to travel about the planet, and also a supply of a medium of exchange known as money. Only an able and cooperative Earthman can arrange these things for you.

"The establishment of direct contact with a member of the earth race may be the most delicate, if not the most difficult of all our problems. The individual chosen must be sufficiently intelligent to understand our purpose, self-reliant enough to keep his own council regardless of outside pressures, and above all he must be able to consider our suggestions without interposing his own habits, emotions or prior beliefs. This is a combination of characteristics which I fear will not too readily be found among the earth races, and yet we must be sure the individual chosen does have the necessary qualifications, before any contact is arranged."

The viewing screen, which had been continuously illustrating the young woman's dissertation, now became blank as she turned with a small sigh. "That's enough for this session," she said, "It's time for food and rest. Your rest period will be extended over a longer than normal time so that knowledge of the language and such other information as we have available, can be transmitted directly to your memory cells, and so eliminate some of the tedious and time consuming study which would otherwise be necessary. We will impress the data very lightly on your memory, since some of it may now be obsolete, and you may have to unlearn when your earth contact has been established. You must, however, have a certain minimal knowledge of the language, the history and the customs of the race if you are to communicate successfully with your earth contact.

"You will use the name Alan during your stay on Earth, since it is a rather common name there, and is quite similar to your own. If you have occasion to communicate with me, I will answer to the name of Vera which is also a name common to earth, and so will attract no attention if overheard."

The two arose and made their way to the dining compartment, where they partook sparingly, of the variety of tempting foods provided by the ship's automatic synthesizer.

Although the transport craft offered various means of enjoyment and relaxation, this was a work trip and, immediately after the meal, Alan and his companion, proceeded to the sleeping quarters which, as in most modern space craft, was located in the central part of the ship, where the gravity is so small that the sleeper is almost floating in the air during his rest period. Here the young woman assisted him in adjusting the headpiece of the data transmitter, before seeking her own quarters.

The soft drone of the ship had a soothing quality, and Alan drifted into sleep almost at once, having time only for a bit of mild speculation as to what the future might have in store for him.

After a period of time which, on earth, would have been equal to about ten hours, Alan was awakened by an impulse from the data transmitter. He arose, carefully removed the headpiece of the data transmitter and entered the cleansing room. (The necessity of rapid and complete recycling of all material used on a deep space transport, prohibits the lavish use of water for bathing, but comfortable and efficient means of cleansing and refreshing the body are provided. On the larger artificial planetoids however, complete bathing facilities are usually available.)

After a brief but satisfying meal in the dining section, Alan returned to the small conference room. Vera, his companion and mentor had arrived some time before, and was ready to continue the preparations for his earth mission.

"We are quite close to our destination," she said, "and we don't have much time for preliminary discussion before the search for a suitable contact begins, although there will, of course, be plenty of time after the contact before you first set foot on the planet itself.

"You were given a general knowledge of one of the principle languages of the earth during your rest period, and we should begin to use that language now, so that you will have had some actual practice before you attempt to communicate with any earthman.

"We will take a fixed position with respect to the planet, about 900 earth miles above its surface." "But," Alan broke in, "if there has been so much observation, a number of landings, and even a few face-to-face meetings, surely the people of Earth, or at least the more advanced races, must be well aware of this repeated monitoring and, with their rapidly expanding technology, they must have instruments capable of detecting our approach. If the people are still

motivated by emotion rather than reason, won't it be rather dangerous to take a fixed position? Our welcome may be a barrage of nuclear weapons!"

"It is true," Vera replied, "that Earth races are beginning to develop instruments for the detection of approaching objects, at a distance beyond the range of the unaided eye. We do not believe however, that any they have yet produced are sufficiently sensitive to detect our approach at the distance we have chosen. We could be mistaken in this, but even if our craft should be observed and reported by some space monitoring group, there is very little likelihood that any action will be taken. While it may seem incredible to us, the fact is that the people of Earth, as a whole, are still unaware of any life forms whatever, except those upon their own planet and, while their scientists frequently speculate upon the possibility of extra-terrestrial life, their own egos prevent them from recognizing the almost unmistakable evidence of its existence. Although data gathering devices have been seen and reported in their skies, from time to time, for more than a hundred generations, and small transport craft have made landings at least a dozen times in the presence of some of their people, the reports of the relatively few who have seen them are still ignored or explained away as 'Earthly Phenomena,' 'Hallucinations,' or plain falsehoods, by the great majority, who have seen nothing. Anyone who is unfortunate enough to observe one of our sampling or monitoring devices, and is rash enough to report the fact, almost automatically becomes an object of public scorn or pity. No matter what his previous status may have been, his credibility, his morals and even his sanity will be questioned!

"There are, of course, some scientists and other thinkers, whose knowledge and reason force them to accept the statistical possibility of life, and even highly technological races exterior to the Earth, but even these usually salve their egos with the assurance that such races, if they should exist, could live only upon planets in close orbit about some remote star, and, because of the great distance, could never visit the Earth!

"Their Astronomers know that stars in the central portion of the Galaxy, are far older than their own solar system, but somehow they fail to grasp the corollary fact that every technological ability now being developed upon their own planet, was achieved by races on other planets, at least a few millions of years ago, and have been undergoing a continuing process of advancement and refinement ever since. Earth biologists spend days in their laboratories, analyzing bits of meteorites in the hope of finding a few molecules of the Amino-acids or

other building blocks of life, while we, from our ships, a thousand miles from their planet, look over their shoulders as they work. We could, if we chose, even peer through their microscopes, or read from their minds, the conclusions they are reaching. Yet they refuse even to consider the possibility that instead of being the observer, they may be the subject of observation.

"Even with partially controlled population growth, during the past few thousands of generations the demand for additional planetoids has been so great that most of the planets with conditions unsuitable for the development of life, have been completely disassembled to obtain new material for ship construction, and a large percentage of the interstellar debris has been collected and used for the same purpose. Since the process began in the central sphere of the Galaxy there has, as yet been relatively little exploitation of the spiral wings, although even the Earth's Moon has occasionally been mined, on a small scale, for the element Titanium, which is found there in quantity, and is difficult to synthesize from other elements. The intense light emitted during the extraction process, has been observed and reported by Earth Astronomers, who then 'explained' it as being due to 'volcanic activity' or 'meteoritic impacts.'

"Much of this history you already know, but a repetition of it may help you to understand the beliefs and attitudes you will find when you take up your residence on Earth.

"We have been decelerating for some time, and in a few minutes we will have reached our fixed position. We can then begin to examine the planet and its people directly and at close range. In the meantime, the data projector will show us some of the early efforts by Earthman to imitate the birds. They are interesting, and can be quite informative. Most of the first attempts were simply crude attempts to fly by using muscle power alone. None of these were successful, of course, and many of them would be laughable, except that the failure of each attempt was, at least a minor tragedy in the life of those whose dreams were shattered, along with the product of their labors. There was failure after failure, yet man would not give up his determination to fly. "Birds are no better than men," he said, "and if they can do it, so can we!" Almost a full generation passed in these futile attempts. We do not have all of the data, of course, observation was intermittent and far from complete, yet it was realized by the Galactic Confederation, that air flight is the first step in the achievement of space flight, and considerable interest was directed toward this planet and its fledgling people.

"Various types of primitive engines were beginning to be developed, and many of these were used in the continuing efforts to fly. Unfortunately, all of them had too much weight in proportion to the energy they could produce. Most of these machines were built by men who had relatively little knowledge of science, because those who had greater knowledge understood the great difficulties involved, and were sure that it would never be possible. They were, therefore, not interested in making the attempt.

"If Earthman could not yet fly, he could at least float in the air by using huge bags of light gas to lift him. It was only a temporary compromise at best but, for more than a generation, and long after successful flights had been made in heavier than air devices, a great deal of effort and ingenuity was devoted to this means of escape from the surface. It was a delicate and hazardous art. The entire assembly of gas bag, cockpit, or cabin, motors, if any, passengers and all equipment, could not weigh more than the air which they displaced. In the beginning Hydrogen Gas was used because it was the lightest of the gasses, and the only one which was readily obtainable. Hydrogen gas, when mixed with the oxygen of the air, becomes a most inflammable combination, and any small rip in the bag would permit such a mixture to take place. Almost all of their 'Airships' as they called them, were eventually torn apart by heavy winds, or exploded and burned. In either case, there was usually a considerable loss of life. After numerous, and usually tragic failures, the art was almost entirely abandoned, although one or two small ships may still be seen from time to time. These ships however, use Helium which does not combine with other elements.

"Earthman finally succeeded in building combustion engines which could produce enough energy per pound of weight to make machine flight possible. He also discovered, at about this time, the merits of the cambered wing. The combination made truly successful flight possible, in what came to be known as the 'Aeroplane.' The validity of the principle had been proven, and now the real development began.

"Both men and women made aviation history during this time, and many became the idols of their people, because of their daring and of their skill, but most of all because they proved that man could indeed fly like the birds!

"A research ship of the Galactic Confederation began a rather close monitoring of the Earth at this time. It was necessary to chart the rate of progress in air-flight so that the beginning of space flight could be predicted, at least a few years in advance. The beginning of space-flight is a very critical point in the development of any race. It usually coincides in time, with the achievement of a technological potential capable of wiping out the race if it should be misdirected.



"New high-speed planes of many varieties were designed, built and tested. Some performed well, others failed at critical moments. Some were destined to bring fame and fortune to their pilots, while others brought only death. Nevertheless, the struggle went on constantly, to build planes that would fly faster, or higher, or farther, or would carry more payload than any plane had ever done before. The extremely competitive nature of Earth Man's society spurred him on in these efforts. Many varieties of plane came into being. Some were to carry passengers, some for the transportation of freight, and some to carry explosive bombs, with which men could kill their neighbors.

"It was clear that the time was approaching when Earthman would no longer be content with flight within the atmospheric envelope of the planet. Having learned to fly, he now demanded a still greater medium in which to exercise his newly acquired ability.

"As yet, he knew nothing of the possibilities of gravity control, and so he began to look toward the form of reaction propulsion, known to him as Rocketry, as the only practical and attainable means of flight in space. At first, as in his attempts to fly, there were many failures, and a few successes. Yet he persisted, learning from each failure, as well as from his successes.

"The ridicule and scorn with which the leading scientists greeted the plans and efforts of the rocket enthusiasts, gradually subsided as the full potential of the art began to emerge into public view.

"As usual, in Earthly affairs, the first large rockets were used as instruments of destruction, and most of those now being built are especially designed for that purpose. The present rockets, together with the nuclear warheads they are designed to carry, form a weapons system which could quickly decimate the entire population of the planet, and all of the evidence we have, indicates that, unless there is some intervention now, this tragic event will soon came to pass.

"The determination of Earthman to travel in space has not abated however, and the projections of our study group predict that he will begin to do so very soon."

As Alan's companion finished speaking, a small blue light at the base of the video screen began a rhythmic blinking.

"Our navigator is signaling that we have reached our fixed position," she said, "and we can begin our search for an Earth contact."

"We have chosen, as our first study area, a sparsely populated section of the 'United States' known as the 'Great American Desert.' While this may seem to be an odd place to begin our observation, the area contains a large 'Proving Ground' where much of the new space oriented technology is being tested. Although their efforts are still quite primitive, and not very successful, it is among people in this field of endeavor that we are most likely to find a person who can give us the assistance we require.

"We have with us, two psychoanalytical experts who will assist us in the choice of an Earth contact. As soon as we have reached our fixed position over the rocket testing station, known as the White Sands Proving Ground, they'll begin to seek for, and to tune in to the minds of, one after another of the men who are employed there. If they find any who conform to the general specifications, a complete mental analysis will be made. When we submit our final report, we will probably be reprimanded by the Ethics Committee of the Social Assistance Department, for undue violation of personal privacy, but I know of no other way to be sure of finding someone who will be both willing and able to assist us. While the analysts are making their preliminary scan, we will discuss some of the more critical problems of the Earth races, and the means by which we might be able to assist in their solution.

"At present, all progress toward true civilization is blocked by the fact that warfare is still considered by many of their leaders, to be a valid instrument of national or racial policy, even though it has always failed in the end.

"When large numbers of people, and sometimes whole nations or races, are led to adopt basic suppositions and beliefs that differ substantially from those of others, a constantly increasing friction is likely to develop between the groups. Since they have no adequate or accepted means of testing the relative merits of the opposing concepts, (as they do in their physical science), the heat of emotion generated by the continuing friction may, and frequently does, lead to open warfare.

"The tragedy and the futility of warfare lie in the fact that it cannot determine the relative merits of the conflicting ideologies, it can only demonstrate the relative fighting abilities of the participants! No matter how violent or prolonged the war, and no matter who may be the victor, there will still have been no approach to a solution of the problems or the differences that brought about the fighting. In a few months or a few years, when the contenders have recovered somewhat from their wounds, they will be ready to fight again! The winner usually learns nothing from such encounters, and if the loser learns anything, it will only be how to avoid in the future, the worst of his military errors! In every war, both sides suffer far more loss and damage than would have been incurred by either if they had accepted the principles of the other.

"So long as the Earth's civilization possessed only simple weapons, of limited destructive power, it could tolerate, and it managed to survive these futile acts of mass violence. Millions of innocent persons met senseless and untimely death, and hundreds of years of patient human effort were wiped out at the passing whim of one leader. Still the race, and at least some part of its culture remained, to begin again the seemingly endless struggle toward peace and security.

"When weapons of total destruction come into being however, the situation changes, for no civilization and no race can survive the holocaust of the weapons now being created by the peoples of the Earth.

"There is now but one choice left to Earthman, his society and its culture. That choice is whether to be, or not to be! There is little doubt as to which he would choose, if he were fully aware of the alternatives between which he was choosing, and this we must, somehow, make clear to him.

"All evidence which we have accumulated indicates that the common citizen of the Earth has been ready for peace for some time. It is their leaders who seem to be the laggards. The disease of political or economic power seems to confuse and mislead them, although they usually manage to find logical sounding excuses for the things which they do.

"For hundreds of generations Earthman has cried, "Peace, Peace," and there has been no peace. Many of their most intelligent and educated men and women have dedicated their lives to the search for peace and, although it may seem utterly ridiculous, many millions have fought to the death for it, in their periodic wars, "To end all wars." Still they seem unable to comprehend the simple fact that peace can never be reached through any direct approach. It is not as gold, which can be obtained by continued digging, nor is it a treasure which can be had at once, if only one knows where to look! Peace is simply the automatically resulting by-product of complete understanding, between man and man, between race and race, between state and state, and between all man and that all pervading power and intelligence known to Earthmen as God. When such understanding exists, there is no need to search or to work for peace, it exists automatically, but until understanding has been achieved, no amount of effort can ever be successful.

"While complete understanding is still somewhat beyond the reach of Earthman, as, indeed, some phases of it are still beyond our reach, it is only to the degree in which it is approached, that man can find peace.

"There are certain specific steps which must be taken before general understanding can be achieved by any race or group of races. In the area of physical science, the advanced races of Earth began to take those steps several generations ago, which is why their technology moves ahead so rapidly. In the area of the social science however, these same steps have never been taken, nor even seriously considered. The result is, as I have already mentioned, they have no social science, only social arts which cannot progress substantially or significantly because they depend upon the beliefs and attitudes of many leaders, each of which is likely to lead in a different direction, resulting in confusion and uncertainty among their followers.

"From time to time, efforts have been made to create international organizations capable of dealing with political and social problems, and resolving disputes among nations. As yet, none of these efforts have been truly successful, although some lowering of political tension has occasionally been achieved.

Since none of the individual governments involved are willing to delegate to the organization, any of their own authority or sovereignty, such bodies have never had any real power to implement their decisions and so are in fact, only advisory groups whose pronouncements can be, and usually are, ignored by those to whom they are directed."

The video screen, which had been blank for some time, now came on, showing an ordinary appearing man in his early forties, walking briskly toward a group of transport vehicles which apparently served as the motor pool for the proving ground. At the same time, the voice of one of the ship's analysts came over the intercom. "This is an individual who seems to meet our basic requirements. We will however, require a much more extensive analysis before it will be safe to initiate an open contact.

"We have a problem in that the subject is planning to leave the test base soon, and ride into a nearby town. If he does, he will be in the constant company of many other persons. There will be much interlocking mental activity, and it will be quite difficult to obtain the complete and dependable read-out which we must have. If we wait until he returns, he will be considerably fatigued, and his mental energy will be at a low ebb. This also would make our task more difficult, and the results less dependable. It seems advisable that we take steps to prevent the subject from leaving the area this evening, and to persuade him to return to his quarters where he will be alone, relaxed and mentally available. We are, of course, aware that the rules of the ethics committee forbid any overt interference with the plans or actions of any subject of observation, but in this case, where the welfare and perhaps the lives of an entire planetary race may depend upon the outcome of our mission, we may, for once, be permitted to employ the ancient, and usually invalid excuse that, "the ends justify the means!"

"The subject is approaching the motor pool to inquire of the dispatcher the departure time of the last bus to town. If we cause him to miss this bus, there will be no other way for him to leave the base, and we can easily incline him to return to his quarters. We can then complete our analysis in a relatively short time. If he proves to be suitable for contact, we will land a small sampling carrier, equipped with an observation and communication system, at a safe distance from the occupied area of the base. At the same time we will persuade him to leave the uncomfortable heat of his quarters for a stroll in the cooler evening air, and will lead him to the sampling carrier where the contact will be made. There is an additional safeguard in this method of approach. If for any reason, our judgment

of the subject's reactions should be in error and he should decide to report the contact at once, there will be no physical evidence of the event, and it will be very unlikely that any of his fellow workers will give serious attention to his report."

As the communication ended, the video screen again became blank and silent.

"We had better go into the communications room," Vera said, "If contact is made with the earthman, it is you who will do the talking."

TO MEN OF EARTH

PART TWO THE WHITE SANDS INCIDENT

(Taken from the personal diary of Daniel W. Fry, Test Engineer at the White Sands Proving Ground.) July 4, 1950

As I attempt to record the events of the past evening, I find them so completely fantastic and so utterly incredible, that I hesitate to write of them even in my own diary. Yet they are events which did take place. They are hard facts from which I cannot escape, no matter how much I may try. They are facts which have placed upon me a burden of responsibility such as I have never had before, nor ever thought to have! Whether I was the beneficiary or the victim of these events is not yet clear, and may never be, but one thing is certain, my life will never again be the same.

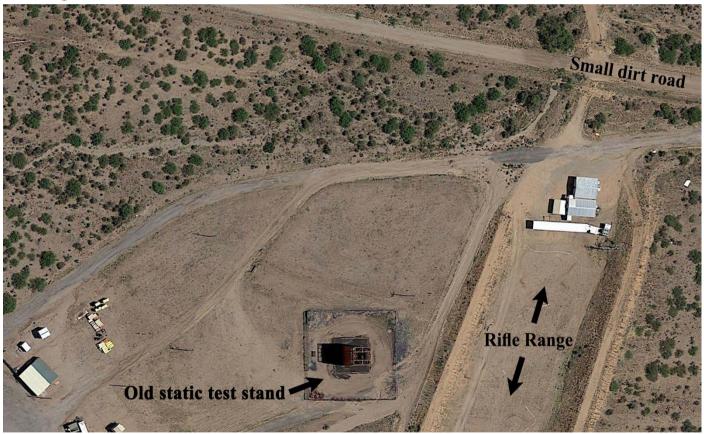
Because this was a holiday, I had planned to go into the nearby town of Las Cruces in the evening, to do a little mild celebrating and to view the fire-works display in the city park. The team of Aerojet engineers, with whom I worked, had left for Las Cruces in the company car earlier in the afternoon, but since the car was already crowded and since I still had a few small jobs to finish, I decided to wait and take the evening motor pool bus into town. When I consulted the dispatcher, he assured me that the evening bus will be leaving for town at 7:30 P.M., but when, after having had a quick snack at the officer's mess, I arrived to board the bus at 7:15, he calmly informed me that it had left at 7:00 sharp, as it always did! When I questioned him, rather heatedly, about his earlier statement that the bus will be leaving at 7:30, he vaguely remembered having said it, but could not remember why!

Since there was no other way to get to town, except by walking the 24 miles, which I had no inclination to do, I found myself stranded in an almost deserted test base with nothing much to do but go back to my quarters and read. I had no fiction available, but did have a partly read text book by James Cork, on the subject of Heat Transfer. Since heat transfer is one of the most important problems in the design of rocket motors, the book was of considerable interest to me, and I decided that this might be a good time for some advanced study. I was soon to learn however, that the problems of heat transfer can become as uncomfortable physically, as they are interesting academically.

The B.O.Q. building, in which I was quartered, was a single story frame structure. It contained a simple evaporative cooling system hopefully intended to moderate slightly, the inferno that the proving ground can become during the months of July and August. Unfortunately, the system was heavily overloaded and frequently became completely inoperative.

The malfunction this evening must have occurred at about 8:00 P.M., because by 8:30 the room was unbearably hot and stuffy. After suffering through a few more pages of Dr. Cork's treatise, I gave up and decided to go for a walk in the hope that by now, it would be cooler outside. At least there might be a little breeze.

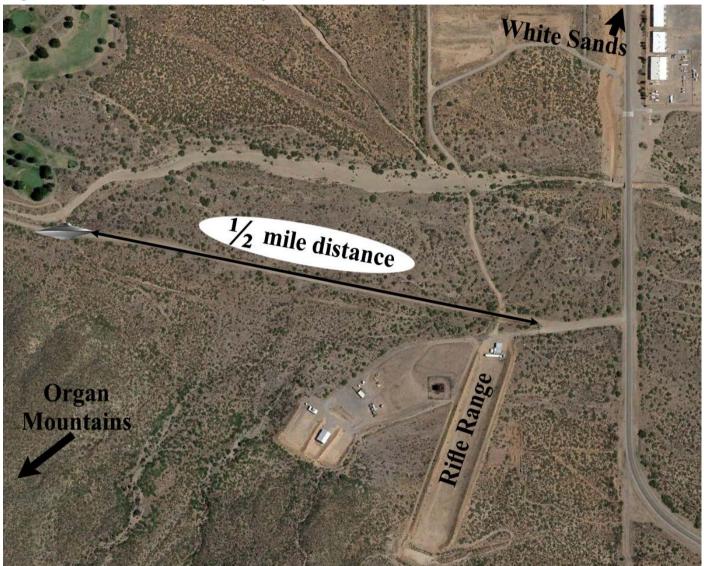
I headed first in the direction of the old static test stand, on which we were mounting our largest rocket motor for static tests. The stand is about a mile and a half from the cluster of buildings which form the nucleus of the proving ground, and the distance seemed about right for a leisurely stroll in the relatively cool evening air.



About two thirds of the way to the test stand, a small dirt road intersects the main road, goes past the rifle range, and leads off to the right toward the base of the Organ Mountains. When I had reached this point, the thought suddenly struck me that this was the only road in the entire base area that I had never been over. The road was hardly more than a pair of wheel tracks in the desert, and they wound in and out among the dunes in a rather indecisive fashion yet, on what

seemed at the time to be only a sudden whim, I left the main road and began to follow the wheel tracks out into the boondocks.

The sun had been down for some time, and there was very little daylight left but, in the clear air of this high desert region, the stars and the moon, or even the stars alone usually furnish plenty of light for a comfortable hike at any time of night, unless, of course, the sky is overcast.



Directly ahead of me, and just over the peaks of the Organ Mountains, an especially bright group of stars seemed to beckon to me as I walked leisurely along. I had gone about half a mile past the rifle range, when suddenly, the brightest of the stars simply went out. This immediately riveted my attention on the spot, for stars don't just stop shining, at least not in a clear sky. Something I could not see was eclipsing the light of the star, but I had no idea what it could be. An aeroplane would require less than a second to pass a given spot and the star did not come back into sight. Also, in the silence of the desert at night, a plane could be heard much farther than it could be seen, and there was no sound at all. No weather balloons were released at night and in any event, a weather

balloon would be rising quite rapidly and so would only eclipse a star for a second or two.

While these thoughts were going through my mind, another star just to the right of the first also went out and, a few seconds later, two more just below. A strange prickling sensation began to travel up and down my spine. Whatever it was that was cutting off the light of the stars was increasing rapidly in apparent size and, since the bearing remained constant, the object, whatever it might be, must be coming almost directly toward me.

Finally I could see what it was, and at the same time I understood why I had not been able to see it sooner. Its color seemed to blend so well into the evening sky that, even when it was quite close, it was difficult to make out anything but the outline. As it continued to come toward me, I felt a strong inclination to run, but long experience in blasting work and later experience in rocketry had taught me that it is foolish to run from an approaching missile until you are sure of its trajectory, since there is no way to judge the trajectory of an approaching object while one is running.

The object was now only a few hundred feet away. It was descending at an angle of about 45 degrees and was slowing at a rate that should bring it to a full stop at about the time it reached the ground. Somewhat reassured by its rapid deceleration, I remained where I was and watched it glide, as lightly as a bit of thistle down, floating in the breeze. About seventy feet from where I was standing, it settled to the ground without the slightest bump or jar. Except for the crackling of the brush upon which it had settled, there had been no sound at all.

For what seemed like a long time, but probably was not more than a minute or two, I stared at the now motionless object as a child might stare at the rabbit which a stage magician has just pulled from his hat. I knew it was impossible, yet there it was! My years of experience in the field of rocketry had made me familiar with most of the advanced technology of aeronautics and the newly born science of astronautics, yet the craft which had just landed had ignored all of the physical principles we had worked so hard to perfect. The operation was completely silent. No propellers churned the air, and there was no flash and roar of incandescent gas being hurled from nozzles to produce thrust. The thing had simply coasted smoothly in from the 'great blue yonder,' or whatever it had come from, and settled gently to earth. Before landing, it had slowed to only a few miles per hour, and yet had shown no sign of falling. Only a helicopter or a lighter than air craft could do that, but there were no propellers or wings on this

device, and the fact that the heavy bush was crushed flat beneath it, proved conclusively that this was no lighter than air craft. Whatever it was, it had demonstrated its complete contempt for Sir Isaac Newton's best known law.

Obviously, the intelligence and the technology that had designed and built this vehicle had found the answers to a number of questions which even our most advanced physicists have not yet learned to ask.

Suddenly I realized that, while all this was going through my mind, I had been approaching the craft, in spite of my reason and instinct, both of which shouted that I should be putting as much space as possible between myself and this unknown, and therefore unpredictable device. Like most of those who have devoted their lives to research, I have always been afflicted with an oversized bump of curiosity, and when the object of that curiosity is an important advance in scientific knowledge or technological ability, the curiosity becomes an irresistible force which sweeps all reason and caution out of its path.

I approached the craft very slowly until I was within a few feet, and then paused to watch and listen for any sign of life, or any sound that might come from within. There was neither. After several minutes of expectant waiting, I began to circle slowly about the craft so that I could examine it more completely. It was, as it had appeared from the air, a spheroid, considerably flattened at the top and bottom. The vertical dimension was about sixteen feet, and the horizontal dimension about thirty feet at the widest point, which was about seven feet from the ground. Its curvature was such that, if viewed from directly below it might appear to be saucer shaped, but actually it was more nearly like a soup bowl inverted over a sauce dish. The dark blue tint which it had seemed to have when in the air, was gone now, and the surface appeared to be of highly polished metal, silvery in color, but with a slight violet sheen. I walked completely around the thing without seeing any sign of doors, windows or even seams. "If there are people inside this thing," I thought, "they must get in through the top or bottom."

I paused then, to consider what I should do next. Should I return to the base and report the arrival of this strange new device? At first this seemed the logical thing to do, and I had actually taken several steps away from the craft, heading back toward the base, when another thought intervened with a force that brought me to a stop at once. It would take at least three quarters of an hour for me to get back to the base, report the incident to whomever might still be there on this holiday evening, and to return with them. What if the device had taken off again in the meantime? Since I had no idea of its purpose here, I had no way of

guessing how long it might remain, and I had seen how effortlessly it could move. Suppose I did rush back to the base and, half out of breath, gasp out the story of what I had seen? Suppose that a few of my skeptical fellow workers did condescend to follow me back to this spot, only to find a crushed patch of brash where I had said a space craft would be found? The mental picture of the position I would be in was so clear and so probable that I immediately dismissed all thought of reporting the advent of this craft, at least until there was a great deal more evidence to back such a report. I had heard something of the ridicule heaped upon those who had been incautious enough to have admitted seeing unexplained objects flying through the air. How much worse would be the lot of one who claimed to have seen one land, and to have been close enough to have touched it, yet had no proof except a small patch of flattened brush? My curiosity still demanded satisfaction however, and I decided I would learn whatever I could about the craft, and hope that I would survive to make a report at some later date.

It occurred to me that I had not as yet actually touched the craft, although I had been close enough to have done so for some time, Perhaps I could learn something of the material of which it was made, and certainly I could tell the temperature. I stepped forward and cautiously extended my index finger until it touched the metal surface. It was only a few degrees above the air temperature, but it had a quality of smoothness that seized my attention at once. It was simply impossible to produce any friction between my fingertip and the metal. No matter how firmly I pressed my finger on the metal, it drifted around on the surface as though there were a million tiny ball bearings between my finger and the metal. I then began to stroke the metal with the palm of my hand, and could feel a slight but definite tingling in the tips of my fingers and the heel of my palm.

Then a crisp voice suddenly broke the silence. "Better not touch the hull pal, it's still hot!"

I had not fully realized the degree of tension I was under until this totally unexpected voice triggered my reflexes. I leaped backward several feet, caught my heel in a low bush, and fell backward at full length in the sand, in as undignified a position as it is possible to imagine. I heard something that sounded like a low chuckle, then the voice came again, this time in a somewhat friendlier tone. "Take it easy, pal, you're among friends."

The humiliation of my ungraceful posture, combined with the mild tone of the voice and its familiar phrases, served to sweep away the momentary fear, and replaced it with a slight resentment. I arose, brushed off my clothes, and tugged at a sand burr that had found a home in my hair. I looked for some person or gadget from which the voice might come, but could find neither. "You could have turned the volume down a bit," I grumbled, "You scared me out of a week's growth when you blasted out like that."

"Blasted out?" the voice hesitated. "Oh yes, you mean the amplitude of the warning was too great. Sorry buddy, but you were in the process of killing yourself and there wasn't time to diddle with controls."

"Do you mean the hull is highly radioactive?" I asked. "If so, I am still much too close."

"It isn't radioactive in the sense that you use the word," was the reply. "I used the term 'hot' because it was the only one I could think of in your language to explain the condition. The hull has a field about it which repels all other matter. Your physicists would describe the force involved as the 'anti' particle of the binding energy of the atom. When certain elements such as platinum are properly prepared and treated with a saturation exposure to a beam of very high energy photons, the anti-binding energy particle will be generated outside the nucleus. Since these particles tend to repel each other, as well as all other matter they, like the electron, tend to migrate to the surface of the metal where they manifest as a repellent force. The particles have a fairly long half-life, so that the normal cosmic radiation received by the craft when in space is sufficient to maintain an effective charge. The field is very powerful at molecular distances but, like the binding energy, it follows the seventh power law so that the force becomes negligible a few microns away from the surface of the hull.

"Perhaps you notice that the hull seemed unusually smooth and slippery. That is because your flesh did not actually come in contact with the metal but was held a short distance from it by the repulsion of the field. We use the field to protect the hull from being scratched or damaged during landings. It also lowers air friction greatly when it becomes necessary to travel at high speed through any atmosphere. The field produces an almost perfect laminar flow of air or any gas about the craft, and little heat is generated or transmitted to the hull."

"But how would this kill me?" I asked. "I did touch the hull and felt only a slight tingle in my hand. And what did you mean by that remark about *my* language? You sound pretty much American to me."

"As to your first question," the voice replied, "it would not have killed you at once. In fact it might have taken several months, but it would have been just as

certain as if it had been instantaneous. The best way to explain the effect is to say that exposure of the skin to the force field causes it to produce what you would describe as antibodies in the blood stream. The antibodies are absorbed by the liver, whose function they attack causing the liver to become greatly enlarged and congested. Exposure above certain, limits, will completely destroy the liver's function. In your case the exposure was so short and over such a small area that you are not in any great danger, although you will probably feel some effects sooner or later, provided, of course, that your biological functions are similar to ours, and we have good reason to believe they are.

"As to your second question, I am not an American such as you, nor even an 'Earthian' although my present assignment requires me to become both. The fact that you believed me to be one of your countrymen is a testimonial to the effort I have expended to learn and to practice your language. If you talked with me for any length of time however, you would begin to notice that my vocabulary is far from complete, and many of my words would seem outdated and perhaps obsolete.

"As a matter of fact, I have never yet set foot upon your planet. It will require at least four more of your years for me to become completely adapted to your environment, including your stronger gravity, your vitiated atmosphere and your myriad of deadly biotics. I will also require the complete cooperation of someone like yourself who is already a resident of the planet."

I stood silently for what seemed a long time, attempting, without too much success, to digest the full meaning and implication of the words. At last I said slowly, "If anyone else had described to me the things I have seen and heard tonight, I would have said they had been reading too much science fiction. As it is I am prepared to accept the possibility of almost anything. In any event, since my being here and seeing you land was entirely accidental, it is obvious that my belief or disbelief could not be of the slightest concern to you."

"On the contrary," replied the voice, "it is important to us that you be given every opportunity to acquaint yourself with the facts and to form your opinion accordingly. One of the purposes of this visit is to determine the basic adaptability of the Earth's peoples, particularly your ability to adjust your minds quickly to conditions and concepts completely foreign to your customary modes of thought. Previous expeditions by our ancestors, over a period of many centuries, met with almost total failure in this respect. This time there is hope that

we may find minds somewhat more receptive so that we may assist you in the progress, or at least in the continued existence of your race.

"Your own mind, for example, seems to be exactly the type which we require, which is why we are speaking with you now."

"I can see," I said, "that your race, whatever it is, and ours has at least one thing in common, that sarcasm is considered a form of humor. However you can't annoy me that way. In our business we are frequently needled by experts.

"I realize that everything I have done since you first came into sight has been wrong. In the first place, if I had had any sense, I would have gotten out of here fast when I first saw you coming, instead of waiting, perhaps to be crushed under the ship, or to become a specimen in some museum. When you landed, instead of leaving quietly or remaining at a safer distance, I had to come snooping around your craft. Then, when your warning voice came through your speaker, or whatever it is, instead of reacting to the warning calmly, I jumped like a scared jackrabbit, and assumed what is probably the most undignified position from which the representative of one race has ever greeted the Emissary of another. Last, but not least, you seem to assume that I believe the statements you have made. As I said before, I am prepared to consider the possibility that they are true. I am also prepared to consider the possibility that you are pulling my leg and that this whole thing is some huge and complex hoax, for purposes which I can't guess at the moment. The only thing that inclines me toward the first assumption is that I did see the craft come in and land, and I know that, hoax or not, it does represent highly advanced technology."

"Precisely," replied the voice. "Let me explain my position. No sarcasm was intended. I meant exactly what I said. In the first place you said that curiosity impelled you to investigate the sampling craft, subjecting yourself to unknown hazards rather than to seek safety in flight. This typifies the struggle between the desire for knowledge and the desire for the safety of the status quo.

"I believe there is an old saying among your people that self-preservation is the first law of nature. It is encouraging to note that the desire for knowledge can occasionally overcome the basic animal instinct.

"When I called a warning to you, your reaction was not one of fear, as you seem to think. A reaction of pure fear would have frozen you into immobility at least for a moment or two. Instead you acted instantly and in the proper manner. The fact that you stumbled only indicated that, in your eagerness to learn, you had failed to assure yourself a clear avenue of retreat.

"The fact that, in spite of being in circumstances completely unique in your experience, you are listening calmly to my voice and making logical replies, is the best evidence that your mind is of the type we hoped to find."

"Thank you for the compliments," I said, "even though I know I don't deserve them, but your statements imply that you propose to use me in some project for the advancement, in one way or another, of the people of Earth. To this I have only one question. Why me? Is it just because I accidentally happened to be here when you landed? I could easily put you in touch with a number of men right here at the test base who could be of far more value to you that I."

"Perhaps they could," was the reply, "but would they? And under what circumstances? These are the critical factors with us. If you think you are here by accident, you greatly underestimate our abilities. Why do you think the dispatcher at your motor pool gave you incorrect information? Why did you think your air conditioning system had failed tonight when, as a matter of fact, it was functioning perfectly? Why do you think you turned off on this small road, when your intention had been to go to your static test stand? And finally, why do you think you changed your mind about going back to your base to report the arrival of our sampling carrier? It is seldom that we superimpose our will upon that of others, in fact our rules forbid it, but this a case of such urgency for your people that we felt an exception to the rule was warranted. To initiate and to carry on our planned program for the welfare, and in fact for the preservation of your people, we will need the complete and confidential cooperation of some member of your race. We believe that you are the individual who can best accomplish the things that must be done, but the decision must be made by you after you have heard our plans. The decision should not be made quickly, nor is there any need to do so. Several of your years will pass before any actual services are required from you, but once your decision to assist us has been made, there are certain preparations which you should make.

"Assisting in our program will bring you neither fame nor fortune, and may cost you the respect of many of your friends who will misunderstand your actions. Your only reward will be the inward satisfaction of having been of assistance to your fellowmen at a very critical time. This is the only reward we expect, and we have come a very long way to offer our services.

"We will be glad to offer you a short test flight in the sampling craft if it will help you to decide that we are what we say, and that our technology has much for you to learn." "I would certainly like to see the inside of your craft," I replied, "and I would give anything to be allowed to ride in it, but how does one get in? I have been completely around the thing and saw no sign of opening. Also you said you were not accustomed to our atmosphere. If I come in I will have to bring my atmosphere with me. How will that affect you?"

"As I have already mentioned," replied the voice, "the craft is a remotely controlled sampling device, or cargo carrier and while I am speaking through its communication system, I am not in it. I am in a much larger deep space transport ship, or what you would call a 'Mother Ship.' At present, it is some nine hundred of your miles above the surface of your planet, which is as close as ships of this size are permitted to approach any planet with an appreciable atmosphere.

"The cargo craft is being used to bring us samples of your atmosphere so that my lungs may gradually become accustomed to it, since it is I who will, if the project is successful, take up residence upon your planet.

"All of the previous atmosphere that was in the craft, was allowed to escape while it was in space, by the opening of the remotely controlled valve in the top. There is now an almost perfect vacuum inside. When the port is again opened, which I shall do now, your air will rush in to fill the craft, and we will have a large scale sample of your atmosphere, together with any microorganisms which may be present in it. We need these also, for study and for immunization. Your breathing of the atmosphere during this short demonstration flight, will, of course, distort this particular sample somewhat, but we will have ample opportunity to obtain others before my adaptation to the environment of your planet is complete. I will open the intake port now."

I heard a sound that was partly a hiss and partly a murmur, coming from the top of the craft. It lasted for about fifteen seconds, after which all again became quiet. I was surprised at the small volume of the sound. Any port large enough to have filled a ship of that size with air in fifteen seconds should have produced quite a roar. I realized then that the walls of the ship were almost, if not entirely sound proof, and since most of the sound of the entering air would be produced inside, very little would be audible outside. Then I heard a single click come from the lower wall of the craft, a small but sharp click such as might have come from the operation of a single arm relay or a small solenoid. A portion of the lower side of the hull, just to my left, moved back upon itself for a distance of several inches and then moved sideward disappearing into the wall of the hull

and leaving an oval shaped opening about five feet in height and about three feet in width at the widest point.

I walked over to the port, or hatch whichever it might best be called, and, ducking my head slightly, advanced into the opening. (Because of the curvature of the hull, my head was, of course, inside the craft while my feet were still on the ground. The compartment into which I was looking occupied only a small portion of the interior of the ship. It was a room about nine feet deep and seven feet wide, with a floor about sixteen inches above the ground and a ceiling between six and seven feet above the floor. The walls were slightly curved and the intersections of the walls were beveled so that there were no sharp angles or corners. Of course, the wall nearest me, through which the opening led, was the hull itself and had the same curvature inside as outside. This wall was about four or five inches thick, as I had noticed when I entered through the door or hatch, and it was into a slot in this wall that the door had been drawn.

The room contained four seats, they looked much like our modern body contour chairs, except that they were somewhat smaller than the ones to which we are accustomed. The seats faced the opening in which I was standing, and were arranged in two rows of two each in the center of the room, leaving an aisle between the seats and either wall. In the center of the rear wall, where it joined the ceiling, there was a small box or cabinet with a tube and what appeared to be a lenses arrangement. It was somewhat similar to a small motion picture camera or projector, except that no film spools or other moving parts were visible. Light was coming from the lenses. It was not a beam of light such as would have come from a projector, but a diffused glow. While it did not seem particularly bright, it still furnished ample light for comfortable seeing in the small compartment.

The seats and the light seemed to be the only furnishings in the otherwise bare metal room. "Not a very inviting cabin," I thought, "looks more like a cell."

"As I said before; it's plain," said the voice, "it's only a sampling carrier, and was not really designed or intended to carry passengers, the small compartment was designed for emergencies only, but you will find the seats quite comfortable. Step in and take a seat if you wish to make this test flight."

Almost automatically I stepped up and onto the floor of the cabin then toward the nearest seat. I had taken only a step when I heard a click as the door began to slide out of the recess in the wall behind me. Instinctively, I turned as though to leap out to the comparative safety of the open desert behind me, but the

door was already closed. If this was a trap, I was in it now, and there was no point in struggling against the inevitable.

"Where would you like to go?" came the voice again. This time it did not seem to be coming from beside me but rather from all around me, almost as though I was hearing my own voice. "I don't know how far you can take me in whatever time you have," I replied. "And since this compartment has no windows, it won't matter which way we go, as I won't be able to see anything."

"You will be able to see," was the reply, "At least as much as you could see from any of your vehicles in the air at night. If you would like a suggestion, we can take you over your city of New York and return you here in about thirty minutes. At an elevation of about twenty of your miles, the light patterns of your major cities take on an especially fascinating appearance which we have never seen in connection with any other planet."

"To New York—and back—in thirty minutes!?" I said, "Your minutes must be very different from ours. New York is two thousand miles from here. A round trip would be four thousand miles. To do it in half an hour would require a speed of eight thousand miles per hour! How can you produce and apply energies of that order on a craft like this, and how can I take the acceleration? You don't even have seat belts on these seats?"

"You won't feel any ill effects from the acceleration," was the reply, "In fact, you won't feel the acceleration at all. Just take a seat and I will start the craft. I will explain some of the things which seem to puzzle you during the ride."

I sat down in the left front seat, which was the one nearest the door, and found it was indeed quite comfortable. The material of which it was made felt like foam rubber with a vinylite covering. However, there were no seams or joints such as an outer covering would require, so the material, whatever it was, probably had been moulded directly into its frame in a single operation. Then the voice broke into my thoughts again. "I will now turn off the compartment light, and activate the viewing beam."

Transparent Door

For a moment the room became utterly dark. Then the projector again became active. This time it was not a diffused glow but a beam, just as in a movie or slide projector. The beam, or the part of it which was visible at all was a deep violet, at the very top of the visible spectrum. The beam was focused so as

to exactly cover the door through which I had come, and under its influence, the door became totally transparent. It was as though I were looking through the finest type of plate glass or Lucite window.

"There isn't time to give you a complete understanding of all the things you would like to know about this craft and about us, but perhaps I can explain a few of the basic principles about which you seem to be curious," the voice said. I was just beginning to realize that the words which I had been hearing were probably not coming to my ears as sound waves at all but were originating directly in my brain.

"As you see," the voice continued, "the door has become transparent. This startles you because you are accustomed to thinking of metals as being completely opaque. However, ordinary glass is just as dense as many metals and harder than most, and yet transmits light quite readily. Most matter is opaque to light because the photons of light are captured and absorbed in the electron orbits of the atoms through which they pass. This capture will occur whenever the frequency of the photon matches one of the frequencies of the atom. The energy thus stored is soon re-emitted, but usually in the infra-red portion of the spectrum, which is below the range of visibility, and so cannot be seen as light. There are several ways in which almost any matter can be made transparent, or at least translucent.

"One method is to create a field matrix between the atoms which will tend to prevent the photon from being absorbed. Such a matrix develops in many substances during crystallization. Another is to raise the frequency of the photon above the highest absorption frequency of the atoms. The beam of energy which is now acting upon the metal of the door, is what you would call a 'frequency multiplier.' The beam penetrates the metal and acts upon any light that reaches it in such a way that the resulting frequency is raised to that between the ranges which you describe the 'X-ray' and the Cosmic Ray spectrums. At these frequencies, the waves pass through the metal quite readily. Then, when these leave the metal on the inner side of the door, they again interact with the viewing beam, producing what you would describe as 'beat frequencies' which are identical with the original frequencies of the light. As a rough analogy the system could be compared to the carrier wave of one of your radio broadcasting stations except that the modulation is applied 'upstream' as it were, instead of at the source of the carrier."

"For one who has never set foot upon our planet," I said, "you have an amazingly complete knowledge of our technology. How is it that you know about our 'carrier waves' and modulation?" "You are underestimating *our* technology," was the reply, "and you have no idea of the amount of close range observation to which your planet has been subjected by passing space craft during the past few generations. The radio messages and programs which you continually hurl into space can readily be monitored by our receiving equipment, at distances equal to several times the diameter of your solar system. Within such a volume of space there will always be at least a few ships either passing through the system, or pausing to store up energy from its solar radiation. Any data received from earthly broadcasts, which is considered to be of potential interest to other races, will be recorded and relayed to more distant receiving points which will relay in turn, until the data is ultimately available to much of the galaxy."

"If you are quite ready, we will now begin the acceleration of the sampling vehicle."

In spite of the fact that I had been assured I would not feel the acceleration of the craft, I instinctively braced myself in the seat and gripped the sides firmly with my hands. A moment later, the ground suddenly fell away from the ship with almost incredible rapidity. I say that the ground "fell away" because I did not feel the slightest sense of motion myself, and the ship seemed as steady as a rock. Only through the viewing screen could I see the earth falling away from beneath the ship.

The lights of the army base at the proving ground, which had been hidden by a low hill, instantly came into sight and began seemingly, to draw together like a flock of baby chicks when called by the mother hen. A few seconds later the lights of the town of Las Cruces came into view in the lower left hand corner of the viewing screen, or window, as it might more properly be called, and I knew that we must have risen at least a thousand feet in those few seconds. The ship was rotating slightly to my left as it rose, and I was also able to see the highway from Las Cruces to El Paso, a narrow but brilliant ribbon, illuminated by the headlights of the countless cars that were upon it.

The lights of El Paso and Ciudad Juarez, gave out a solid glow on the horizon, but as we continued to rise, they began to break up into patches of varied brilliancy. I could see the hundreds of lights of Fort Bliss, the patch which represented the Presidio area, and the intensely bright spot that was downtown El Paso. I could even distinguish the very thin dark line of the Rio Grande river

which separated El Paso from its Mexican twin, Ciudad Juarez. A few seconds later the ship had rotated until the lights of these cities were no longer visible. The viewing screen was now pointed south east, and apparently the ship had stopped revolving. The surface of the earth appeared to be glowing with a slightly greenish phosphorescence. The sky outside the ship had become much darker, and the stars seemed to have doubled in brilliance.

"We must have entered the stratosphere," I thought, "if so we must have risen more than ten miles in what can't have been more than twenty seconds or so, yet I have not felt the slightest sensation of acceleration!"

"You are now about thirteen miles above the surface." I heard the voice say. "And you are rising at about one-half mile per second. We have brought you up rather slowly so that you might have a better opportunity to view your cities from the air. We will take you up thirty-five miles for the horizontal flight. At that level the residual atmosphere is attenuated to the point that it can offer but little resistance to the passage of the craft, at the relatively low speed which we will be using.

"By the way," I said, "What happened to the moon? It must be somewhere in the sky, but everything looks so dark outside."

"It looks dark," was the reply, "simply because there is not sufficient atmosphere at this level to diffuse the light. You wouldn't see any evidence of the moon unless it were shining directly in the viewing screen. I have purposely prevented the craft from rotating far enough for this to happen, since the light is quite intense above the atmosphere, and it would be difficult, if not impossible to see anything else while it was visible."

Electrogravitic Propulsion

"Now that you are above most of the atmosphere, we can begin to add a substantial horizontal component to your vertical motion. Since there will be little of interest to see during the next few minutes, I will take this time to explain a few of the things that seem to puzzle you. In the first place you mentioned something about 'seat belts' and questioned whether you could endure the acceleration. This is a question which seems to have come up quite often in the minds of the men of science, and many others of your people. Whenever our sampling devices or landing vehicles have been observed by them, and when the velocities and acceleration are described, disbelief is always apparent. We have recorded the statements of some of your most learned men that, "No human

being or other higher form of life, as we know it, could endure, or even survive accelerations of this order of magnitude." This has been one of the causes of disappointment to us in our evaluation of the level of intelligence of the people of Earth. It seems to us that even a moderately intelligent layman, with the average knowledge which your people possess should be able to refute this statement at once. The answer is simply that the force which we use to accelerate our vehicles is identical in nature to a gravitational field. It acts, not only upon every atom of the vehicle, but equally upon every atom of mass that is within it, including the mass of the pilot and any passengers. Regardless of the intensity of the field therefore, every particle of mass within the influence of the field is in a uniform state of acceleration or, as you would term it, free fall, with respect to the field. Under these circumstances acceleration has no effect upon the vehicle or upon anything within it, and, as you have just experienced, cannot even be felt by the passenger."

"But in that case," I thought, "why am I not floating around in the air as things are supposed to do in a missile that is in free fall?"

"The answer to this should also be fairly obvious," was the reply. "Before the ship's own field was generated, it was resting upon the earth, and you were resting upon the seat. There was a force of one gravity acting between your body and the seat. Since the force which accelerates both the ship and your body acts in exact proportion to the mass, and since the earth's gravity continues to act upon both, the original force between your body and the seat will remain constant except that it will decrease as the force of gravity of the planet decreases with distance. When traveling between planetary or stellar bodies far from any natural gravity source, we find it necessary, for practical reasons, to reproduce this force artificially.

"The gravity to which we are accustomed is but little more than one-half that of Earth. It is one of the reasons that it will require so much time for one of us to become completely acclimated to your environment. If I were to land now upon your planet, I could tolerate the doubled gravitational force for a time but the double weight of all my internal organs would cause them to be displaced downward, seriously hampering their functions. The difference in blood pressure between head and feet when standing erect, would be double that to which we are accustomed, and there would be several other complications. This is not merely theory or calculation, it has been learned by experience in the past. If, on the other hand, I remain in my own ship, the gravitational force to which I am

subject can be increased by small but regular increments, the supporting tissues will gradually increase in size and strength until, eventually your gravity will become as normal to me as my own is now. When this time comes, and if the immediate problems of survival for your race can be solved, it is our hope that you, together with a few others who may be willing to join us, will be able to assist us in bridging the considerable gulf which exists between our culture and yours. As I explained before, we will never attempt to thrust either our knowledge or our culture upon your people, and will not even offer it unless there is substantial evidence that they desire it, and that it would be advantageous to them. There is certainly no such evidence at the present time!

"It is also true that the purpose of this visit is not entirely philanthropic, since there are some materials upon your planet which we could use to the advantage of both our peoples, materials which you have in great abundance but which are rather scarce elsewhere in this solar system. While the use of some of these materials would be of assistance to us, our services to your people will not be made contingent upon such use. Any knowledge or aid which we can give will be freely offered."

"Could you explain to me the principles of operation of this craft?" I asked, "How do you produce the tremendous amount of energy necessary to accelerate a ship like this to such high velocities, and how do you apply that energy without producing any outward evidence of its application?"

"Before I could give any explanation that would be truly understandable," was the reply, "I would first have to extend your knowledge considerably in the area which you refer to as Physics. There are several concepts and a number of words that are necessary to explain the propulsion system, which do not yet exist in your vocabulary or your consciousness. Perhaps I can make my meaning clearer by a simple analogy. A man seeking scientific knowledge is somewhat like an ant climbing a tree. He knows when he is moving upward, but his vision is too limited to encompass the entire trunk. The result is that he is likely to find himself climbing one of the limbs, without realizing that he has left the main trunk. All goes well for a time. He can still climb upward and even pluck some of the fruits of his progress, but eventually he begins to become confused as the solid branch begins to break up into myriad of twigs and leaves all pointing in different directions. So the seeker of knowledge, if he is on a limb, finds that the great 'Basic Laws' which have always seemed so unshakeable, now begin to divide and to point in different directions. The scientist comes to the conclusion

that he is nearing the limit of the knowledge that can be grasped and understood by the mind, and that all physical laws ultimately become purely statistical. When he has reached this point, he can make further progress only by following a line of abstract reasoning employing mathematical symbols, many of which represent quantities which have no actual existence, and so cannot be pictured or followed by the mind. Such a process is like traveling on one of your subways, if you take the proper train you will probably arrive at the destination you had in mind, but since you cannot see where you were going or how you got there, it is always possible that there was a shorter, simpler and easier way to get to the same place.

"The fundamental truths are always simple and understandable when viewed from the proper perspective. So the branch becomes simple and understandable as a 'branch' when viewed from above, on the main trunk. Unfortunately, your science is still attempting to make one lower limb take the place of the entire tree of knowledge. However, there will be time enough for further discussions of physics later. Since this test flight is principally a sight-seeing tour, I should, as the host, be pointing out the sights to you.

"The Original Civilizations..."

"The large city to the north of you is Saint Louis, and the glow on the horizon dead ahead is Cincinnati. You will be over it in less than two minutes, and soon after you will be able to see the lights of Pittsburgh. You can see that we have learned a great deal of your geography as well as your language. Your history is not quite so well known to us, since your race does not think much in terms of the past, and so our knowledge of it comes primarily from random and intermittent observations. Of course the history of the original civilizations of this planet are known to us, much better and more completely than they are known to your race."

This last statement did not fully register on my consciousness at the time, as I was engrossed in watching the lights of Cincinnati swimming silently toward me, on the earth's surface thirty-five miles below.

Because of our eastward travel, I knew that the moon must now be almost directly overhead, but the earth gave little evidence of its reflected light. The greenish phosphorescence I had seen when rising in New Mexico, had almost disappeared. I speculated briefly upon the probable albedo of the earth, but then

realized that it was only moonlight that I was judging by and in any event, I was not nearly far enough from the earth to form any valid estimate of the albedo.

The lights of Cincinnati were almost directly beneath me now. There were too many lights, and they were too close together to distinguish many of them individually. The general effect was that of looking down upon a bonfire which had burned down to a bed of bright coals, with a few much brighter points which flashed and sparkled like rhinestones in a spotlight. Of course, Cincinnati was not the only city visible from this point. At an altitude of thirty-five miles, the line of sight becomes very long, and even in the restricted area of the viewing screen, I could see literally hundreds of various sized 'embers,' sparkles and pinpoints of light, all representing cities, towns, industries or guiding beacons.

"You will be over New York City in a few minutes," the voice said, "I am about to bring the level of the sampling device down to about twenty miles. Since the craft in which you are riding was not designed especially to carry passengers, (The passenger compartment being only an emergency provision), it was not considered necessary to incorporate complete negative gravity compensation, such as we have in all of our larger ships. Consequently, as you start downward, you will be accelerating in the direction of your own gravity so that your body weight will become somewhat less. If this becomes distressing to you I will lower the rate of acceleration."

I felt a mild lifting of my stomach, such as one feels when starting down in a rather slow elevator, except that the sensation persisted for about thirty seconds. Then my weight seemed to become normal again.

"You are now moving downward at a constant rate which will bring you to the proper level in another minute. The levelling off process, of course, involves positive gravity acceleration which is compensated so that you will not feel it. You did not seem to be disturbed by the change in gravity, but since your race has not yet developed gravity compensation devices for your transportation vehicles, I suppose that you may be more accustomed to such changes than we."

"If you think that I should be distressed by a change as mild as that," I replied, "you should try riding on one of our roller coasters or doing an outside loop in one of our 'squirt jobs'."

"Just a moment," came the reply, "I am afraid that you have me at a disadvantage. I had flattered myself that my command of your language, or at least its vocabulary, was practically complete. Yet, in a single sentence, you have

used two terms whose meaning is unknown to me. Would you please explain them or at least give me synonyms?"

"You mean 'roller coaster' and 'squirt job'?" I asked, "The roller coaster is a mechanical device found in many of our amusement parks. It consists of a low open car with seats for passengers, and stout handrails for them to grip. It has steel wheels which roll upon a pair of steel tracks laid upon an elevated framework. When the passengers have taken their seats, the car is connected to a moving chain between the tracks, which tows the car to the highest point in the structure. There the car is released from the chain, and gravity is allowed to take over. The tracks dip downward at a very steep angle, until they reach the ground level and then again rise sharply, almost to the level of the starting point. These sudden climbs and drops are repeated a number of times, and there are several steeply banked turns of short radius, so that the track is actually continuous, and at the conclusion of the ride the passengers have been returned to the starting point, and the car is ready for another load of thrill seekers. The feeling of exhilaration produced by the ride is caused by the fact that the reflex portion of the brain, upon sensing the rapid change of gravity, causes adrenalin to be released into the blood stream. This occurs, of course, whenever the body is confronted by sudden peril, but in this case, the rider knows there is no real danger, and is able to enjoy the stimulation produced by the adrenalin without being subject to any actual hazard."

"A 'squirt job' is a term in American 'slanguage' referring to one of our jet propelled aircraft. I presume you are fully familiar with these, since you should have had ample opportunity to study them. An 'outside loop' is a maneuver in which the aircraft describes a circle in a vertical plane, during which the upper side of the plane remains at the outer periphery of the circle."

"Thank you," replied my host. "I am now sure that we made no mistake in choosing you as a means of direct contact.

"You are now at the twenty mile level, and your city of New York lies before you. The craft is approaching it from the northwest side, and will continue on this course until it reaches the ocean at the northeast extremity of the city. Your velocity has been reduced to about six hundred miles per hour so that you will have more time to enjoy the view. The craft will circle the city until it is travelling westward along the southern extremity. At the same time the craft will rotate slowly so that the viewing screen will always be pointed toward the center

of the city so that you will be able to see every portion of it before the return trip is begun."

If I were a writer or a poet I might, perhaps, do some small justice to the sight that met my eyes as the greatest metropolis in the world rotated slowly before me. Since I am neither a poet nor a writer, but only a technician, with limited vocabulary for aesthetic expression, it seems almost hopeless even to make the attempt. At the twenty mile level the lights were much brighter and had greater individuality. This was no glowing bed of coals with a few brighter sparks. This was a vast array of millions of blue white diamonds, scintillating and coruscating against a black velvet background. The differing temperatures of the various air strata beneath me, combined with the rapid motion of the ship, caused the lights to twinkle violently, so that the entire city was a sea of pulsing, shimmering luminescence.

"If I were an artist," I thought, "this would probably be the greatest moment of my life, but it seems that my need for knowledge must outweigh my appreciation of purely aesthetic values. Beautiful as this scene is, and interesting as the ride has been, I would gladly have traded it all for a five minute tour of the mother ship." Although I had not expressed my thoughts aloud, they were immediately answered.

"We regret that there was not enough time to arrange such a tour, but you will remember that we are not yet adapted to your atmosphere, nor are you adapted to ours. If there had been more time we could have prepared a suit such as your people wear when they go beneath the surface of the sea. This would have enabled you to come into our ship without changing either your atmosphere or ours, but even then the tour would have been awkward and cumbersome, and not very enlightening to you. While we are not nearly as enslaved by time as your race appears to be, nevertheless, in maintaining a fixed position above your planet while not in orbit, we are drawing heavily upon our energy resources and, even as men of your race who sail the sea, we sometimes find it necessary to 'sail with the tide.' "If you will agree to assist us when the time comes, we will have completed our task here for the time being, and will be leaving your planet shortly, in order to replenish our energy supply. This can best be done by dropping in close to your sun, and making one or two close orbits, through the outer portion of its corona.

"Our ship, like all interstellar vehicles, is equipped with a completely enveloping field mechanism. One of the functions of this field is to absorb all

forms of electromagnetic radiation, from radiant heat to cosmic rays, and to convert their energy to a stable form suitable for storage and later use. Thus our ships can collect small amounts of useful energy, even while traveling in interstellar space, although the amount is seldom sufficient to balance, even the biological requirements of the passengers. Occasionally therefore, after a deep space journey, it becomes desirable to bring the ship into close proximity to the nearest star, so that the energy banks may be fully charged.

"The rate at which the field can absorb and convert energy is almost unlimited so that no amount of heat or other forms of radiation reaching the ship will have any measurable effect upon it or its passengers. Some of our faster patrol ships, while in compound acceleration for an interstellar flight, have passed through small portions of a star's photosphere, without damage or severe discomfort. During such passages, energy equal to several millions of your kilowatt hours is converted and stored during each second of exposure. In the ship's conversion chambers, the energy first takes the form of exceedingly dense plasma contained within very strong fields, and finally becomes a form of matter which is reasonably stable, but readily reconvertible to useful energy.

"The momentum we acquire in falling toward your sun, will be used to balance the sun's gravity as our ship circles in a partial orbit, and finally, in what you would describe as a 'sling-shot effect', the ship will be hurled by its own momentum, back in the direction from which it came.

"When we have completed the recharging of our energy banks, we will return to the vicinity of your planet. Whenever it becomes necessary or desirable, we will contact you again. In the meantime, the process of adapting my body to the environment of your planet will go on."

"But," I replied, "I will not be here when your return. My work here will be finished, and I will have to return to my home in California. Incidentally, I don't even know your name, or do your people have given names?"

"We have names," was the reply. "Though there is seldom any occasion to use them among ourselves. If I become a member of your race, I shall use the name Alan, which is a common name in your country and is nearly the same as my given name which is pronounced as though it were spelled in your language 'Ah-lahn'."

"As to your being in California when we return, this should make little difference in our ability to contact you. We have recorded your exact frequency pattern and, as I said, your mind receives well. In fact if you had had a little more

practice in resolving mental images, it might have been possible for us to have shown you the details of our own craft without you having to be in it."

Diagram of the ship

"I should like very much to learn more about your ship and how it operates," I said, "If the details of your mother ship are too difficult as a starter, how about trying me out on the details of the small one I am in? If I close my eyes and concentrate, won't it be possible for you to give me at least a cross-sectional view of this craft?"

"Hardly," Alan replied, a little dryly. "You are making the error which your people so often make when they attempt what they refer to as, Extra Sensory perception. In the first place, it isn't extra sensory at all. It is just as much a part of the body's normal perception equipment as any of the others, except that during one phase of the development of a race it falls into disuse because it is a rather public form of communication, and during this phase of development, the individual requires a considerable degree of privacy in his words and thoughts. Most of your animals use the sense to a greater degree than your people, and for some of your insects, it is the only means of communication.

"Secondly, do not concentrate. Concentration is the attitude of transmission and is almost a complete bar to reception. To receive properly, you must achieve a state of complete relaxation. This you have the ability to do, and it is an ability that is rather rare among your people.

"In the analysis of your mind, made before this contact was decided upon, we found that you made use of a mental relaxation device which was very interesting because of its simplicity and effectiveness. Do you know the one to which I refer?" "Oh yes," I said. "I use it often when sleep doesn't come readily. I simply visualize a room which is completely dark except for ten luminous numerals on the far wall of the room. I focus my attention upon these numerals until all other thoughts have been excluded from my consciousness. I then begin, one by one, to erase the numerals, keeping my mind focused upon the remaining ones, but lowering the degree of concentration with each erasure. I usually fall asleep while there are still several numbers to go, but in no case have I ever remained conscious more than a few seconds after the last one is gone."

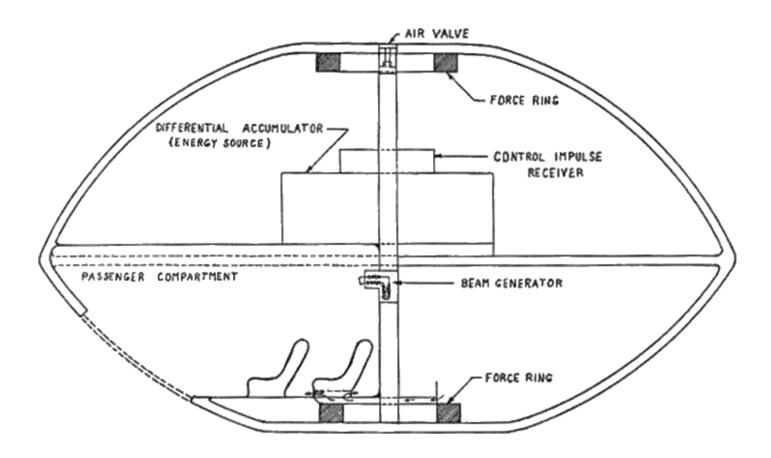
"Exactly," Alan replied, "And not only does this process relax the conscious mind, but it also returns all extraneous thoughts to their proper place in the filing cabinet of the memory banks. Under these conditions the unconscious and the conscious portions of the mind become one under the best possible conditions for both transmission and reception. But again we have strayed from the project at hand. I was going to suggest that you use your own method of relaxing your mind. Keep your eyes upon the area of the viewing screen, which is now dark, and when your mind is sufficiently relaxed, I will attempt to give you a mental picture of the interior of the craft in which you are riding."

It was not necessary for me to visualize a darkened room. When the viewing beam was turned off, the compartment in which I was riding became totally dark. I had no difficulty in visualizing the luminous numerals on the area of the viewing screen, but when I attempted to exclude the dozens of questions that were beating an insistent tattoo upon the fringe of my consciousness, I found it practically impossible. Eventually I gave up trying to exclude them entirely, and sweeping them as far back as possible, I began to erase the numerals. So great is the force of habit that, as I mentally erased the numerals, one by one, my mind cleared, so that by the time I had reached the last one I was almost asleep.

With the removal of the last numeral, I became aware of a picture upon the viewing screen, which I had not noticed before. It did not appear suddenly, it seemed as though it had always been there, but that I was seeing it for the first time. In the left hand portion of the picture I recognized the compartment in which I was riding, and I knew that the picture must represent the interior of the entire craft.

I heard a voice coming to me, but this time as from a distance. Somehow, I knew it was Alan's voice although the timbre had changed considerably. The voice I had been hearing had been crisp and rather sharp. This one was soft and flowing, with an almost musical quality.

"You are seeing the parts of the ship and its mechanism which your mind is capable of grasping. The large drum like structure just above the central bulkhead, is the differential accumulator. It is essentially a storage battery that is capable of being charged from a number of natural energy sources. We can recharge it from the energy banks of our own ship, but this is seldom necessary. In your stratosphere, for example, there are several layers of ionized gas which, although they are highly rarified are also highly charged. By placing the ship in a planetary orbit at this level, it is able to collect, during each orbit, several times the energy required to place it in orbit. It would also, of course collect a significant number of high energy electrons from the sun.



"By the term 'charging the differential accumulator' I merely mean that a potential difference is created between two poles of the accumulator. The accumulator material has available free electrons in quantities beyond anything of which you could conceive. The control mechanism allows these electrons to flow through various segments of the force rings which you see at the top and bottom of the craft. You are familiar enough with electrodynamics to know that a moving electron creates a magnetic field. The tremendous surge of electrons through the force rings creates a very strong magnetic field. Since the direction and amplitude of the flow can be controlled through either ring, and in several paths through a single ring, we can create a field which oscillates in a pattern of very precisely controlled modes. In this way we can create magnetic resonance between the two rings or between the several segments of a single ring. As you know, any magnetic field which is changing in intensity, will create an electric field which, at any given instant, is equal in amplitude, opposite in sign and perpendicular to the magnetic field.

"If the two fields become mutually resonant, a vector force will be generated. Unless the amplitude and the frequency of the resonance are quite high, the vector field will be very small, and may pass unnoticed. However, the amplitude of the vector field increases at a greater rate than the two fields which generate it and, at high resonance levels, becomes very strong. The vector field, whose direction is perpendicular to each of the other two, creates an effect similar

to, and in fact identical with a gravitational field. If the center of the field coincides with the craft's center of mass, the only effect will be to increase the inertia, or mass, of the craft. If the center of mass does not coincide with the center of force, the craft will tend to accelerate toward that center. Since the system which creates the field is a part of the ship, it will, of course, move with the ship, and will continue constantly to generate a field whose center of attraction is just ahead of the ships center of mass, so that the ship will continue to accelerate as long as the field is generated.

"A very simple analogy would be the small boy who harnesses his dog to his toy wagon, ties a wiener to the end of a stick, and holds the wiener in front of the dog's nose. The dog will, of course, pursue the wiener, and so pull the wagon, but because the position of the wiener is fixed with respect to the wagon, the dog will never overtake it. Note that this system does not involve 'free energy' or what your people would call 'perpetual motion'. In pulling the wagon, the dog is dissipating considerable energy and, while he does not overtake the wiener, he must occasionally be fed if the process is to continue. To slow or stop the craft, the controls are adjusted so the field is generated with its center just behind the center of mass, so that negative acceleration will result.

"You may have wondered how long you could breathe the air in the small passenger compartment before it became stuffy and vitiated. You can see here that there are small vents beneath each of the two rear seats, with a mechanism to circulate the air from the cargo hold, through the passenger compartment. There is no means, in this craft, of renewing the air, but the large volume of air in the hold would, in an emergency, supply even four passengers with adequate oxygen for several hours.

"The case which you see just above the differential accumulator, contains the remote control equipment. There is no particular point in going into this since you are already familiar with many types of remote control equipment and servo-mechanisms. While our controls are considerably simpler and more dependable than most of yours, it would require quite a bit of reorientation in physics to give you a true understanding of their operation.

"Our time is running out. We have returned you at a velocity somewhat greater than that of the outward trip, and you are now almost directly above your point of departure. Since your people, unlike ours, appear to derive a certain degree of pleasure, or as you would call it a 'Kick' from experiencing wide variations of a gravitational force, we can, if you wish, create during the descent,

a condition closely approaching zero gravity or what you would term 'free fall'. To reach this condition fully under the present circumstances would be somewhat dangerous, but we can approach it closely enough so that while you will still retain some stability, you will experience the sensation of weightlessness."

The sudden realization that the trip was nearly over snapped me out of the state of semi-trance in which I had been since I had first entered the craft.

"O.K.," I said. "Lead on McDuff. I'll try anything once."

Instantly the compartment light came on. After the period of total darkness, the light was blinding. While I was attempting to adjust my eyes to the light, my stomach suddenly leaped upward toward my chest. For a moment I seemed to feel my heart beating against the lower end of my throat, while my lungs and other upper organs seemed determined to extrude through my ears.

I had been through steep dives and sharp pullouts in airplanes, and have ridden in many amusement devices designed to produce the feeling of weightlessness, but had never before experienced zero gravity applied instantly. There was no sensation of falling. It simply felt as though my organs, having been released from a heavy strain, were springing upward like elastic bands when released from tension. Fortunately this sensation was of short duration. In a few seconds I felt almost normal again.

"I don't feel very weightless now," I thought, and pushed down sharply with my hands on either side of the seat. I rose in a slow and, more or less, graceful sweep, almost to the ceiling of the compartment. My rise would have been more graceful except that I had apparently applied the force somewhat to the rear of my center of mass, so that my body tipped forward as I rose, and also rotated to my left. By the time I had started to fall back, I was almost head downward, and I was forced to reach out and grasp the back of the seat to right myself. The result was that I came to rest with my knees in the chair, and my eyes only a few inches from the back cushion.

It was then that I saw something which I had overlooked when I had first entered the ship. It was only a simple design imprinted in the material of the seat, but I recognized the symbol and the recognition must have produced a strong mental shock wave which Alan mistook for fear or pain, because the gravity was immediately normalized, causing me to experience another rough moment as my organs all attempted to occupy the space normally assigned to my intestines.

"What is it?" I heard Alan say, and for the first time there seemed to be a definite trace of concern. Then—"Oh, I see you have noticed the symbol and recognize its significance."



"Yes," I said. "Anyone who has ever read to any extent would recognize the symbol of the tree and the serpent. It is found, in one form or another, in the legends, the inscriptions and the carvings of virtually every one of our early races. It has always seemed to me to be a peculiarly earthly symbol, and it was startling to see it appear from the depths of space, or from whatever planet you call home."

"These are questions which I had hoped to put off until there is more time," Alan replied. "It is difficult even to outline, in a few minutes of discussion, the events of many centuries. For it has been centuries since we have called any planet home.

"The space ships upon which we live, and work and learn, have been our only home for generations. Most of them are quite large as compared with your ocean going vessels, and we have long since developed technological abilities that make us independent of any planet.

"Our ships are closed systems. That is, all matter within the craft remains there, nothing is emitted, ejected or lost from it. We have learned simple methods of reducing all compounds to their elements, and for recombining them in any form required for our use. For example, we breathe in the same manner as you. That is, our lungs take in oxygen from the air, and some of that oxygen is converted to carbon-dioxide in the body processes. Therefore, the air in our ship is constantly passed through solutions which contain plant-like organisms which absorb the carbon-dioxide, use the carbon in their own growth, and return the oxygen to the air. Eventually those plants become one of our foods.

"The dozens of natural cycles through which life is created and maintained on a planet such as yours, are all duplicated within our ship. Since the size of our ships is small compared to a planet, the cycles must move more rapidly, and under precisely controlled conditions, but in every other respect, the cycles of life and reproduction are the same. There is, of course, some loss of energy occurring during these cycles, which must be replaced from some outside source. As I mentioned a few moments ago, when we are in the vicinity of a star such as your sun, we can easily collect all the energy we require, just as your planet receives more energy from your sun than you are using.

"During our occasional interstellar journeys, our ship may be traveling for one or more generations in areas which are rather remote from any star and, although we can still collect some energy, we must depend primarily upon that stored in our energy banks.

"It may be difficult for you to conceive of a race of intelligent beings who spend all of our lives within the relatively restricted confines of a space ship. You may even be inclined to feel pity for such a race. We, on the other hand, are inclined to feel pity for the relatively primitive races which are still confined to the surface of a single planet, where they are unable to control many of the conditions around them, and often become the helpless victims of earthquakes, floods, tornadoes, tidal waves, blizzards, drought, and a dozen other hazards which constantly threaten those who dwell upon the surface of a planet.

"Every aspect of our environment is precisely controlled within our ships. The temperature is maintained within a fraction of a degree, the humidity, the atmospheric pressure, and even the gravitational force which we create within our ships, are all maintained at the exact point of maximum desirability.

"While our bodies seldom leave the ship, our technology has provided us with almost unlimited extensions of our senses so that, for the purpose of observation, learning and understanding, we can be intimately present at any time and at any place which we may choose to observe or to visit, providing that the place is within a few thousand miles of our ship. Through a portion of our

technology which your race has not yet begun to acquire, we are able to generate and apply simple forces at points quite remote from our craft.

"Our abilities may be somewhat startling and incredible to some of your people but they are not actually as startling and incredible as the scientific knowledge and abilities your people now have, compared to those which your own ancestors possessed a few hundred years ago. Any scientific knowledge or ability seems incredible to those who have not yet achieved it.

"You are perfectly correct when you point out that the symbol of the tree and the serpent is a common one in the history and legends of your people. It is also fairly common among several of the races in space. The symbol is a natural one which seems to spring spontaneously to the mind, perhaps because life is said to originate in the waters of a planet, and the undulations of a serpent are a convenient symbol for the waves of a sea. The tree is almost always the symbol of life, beginning in the sea, rising to the atmosphere, and finally into space. There is another factor which may, perhaps, have some significance. Your people and some of mine, including myself, have, at least in part, a common ancestry.

Atlantis and Lemuria

"Tens of thousands of years ago, some of our ancestors lived upon this planet, Earth. There was, at that time, a small continent in a part of the now sea covered area which you have named the Pacific Ocean. Some of your ancient legends refer to this sunken land mass as the 'Lost Continent of Lemuria, or Mu.' Our ancestors had built a great empire and a mighty science upon this continent. At the same time, there was another rapidly developing race upon a land mass in the south-western portion of the present Atlantic Ocean. In your legends, this continent has been named Atlantis.

"There was rivalry between the two cultures, in their material and technological progress. It was friendly at first, but became bitter with the passing years, as each race flaunted its achievements in the face of the other.

"In a few centuries their science had passed the point which your race has reached. Not content with releasing a few crumbs of the binding energy of the atom, as your science is now doing, they had learned to rotate entire masses upon the energy axis. Energies equal to seventy-five million of your kilowatt hours were released by the conversion of a bit of matter about the mass of one of your copper pennies.

"With the constantly increasing bitterness between the two races, and with their constantly increasing command of destructive energies, it was inevitable that they should eventually destroy each other. The energies released in that destruction were beyond all human imagination. They were sufficient to cause major shifts in the surface configuration of the planet, and the resulting nuclear radiation was so intense and so widespread, that the entire surface became virtually unfit for habitation, for a number of generations.

"The balance of this discussion must wait, however, until our return. Our time is more than up. Already it is requiring too much energy to keep our ship in its present position, and we cannot abandon the cargo craft. It is on the ground now, and I will open the door. We will wait until you are a little distance from the craft before we retrieve it. As you would say, 'so long' and take care of yourself until we return.

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Like a person walking in his sleep, I stepped down from the floor of the craft, and stumbled a dozen paces through the sand before I turned to look back. The door had closed behind me and, as I turned, a horizontal band of orange colored light appeared about the central, or widest part of the ship, and it leaped upward as though it had been released from a catapult. The air rushing in to replace that which had been displaced upward, impelled me a full step forward and almost caused me to lose my balance. I managed to keep my eyes on the craft while the band of light went through the colors of the spectrum from orange to violet. As the light went through the violet band, the craft had risen several thousands of feet in the air, and I could follow it no longer.

A strong sense of depression settled over me then. I felt as though my work, and consequently my life had lost all significance. A few hours before, I had been a rather self-satisfied engineer, setting up instruments for the testing of one of the largest rocket motors in existence. While I realized that my part in the project was a small one, I felt that, through my work, I was traveling in the forefront of progress.

Now I knew that rocket motors, however efficient they might be, had been obsolete for thousands of years. I felt like a small and insignificant cog in a clumsy and backward science, which was moving only toward its own destruction.

For a long time I stood in the sand, looking from the crumpled patch of brush, up to the stars.

Alan had said that their ship would return in a few months, and he would contact me again. Did he mean it, or was it just a polite parting gesture? He had not asked me for a final decision in regard to the assistance they would require. Perhaps he was satisfied that I would offer it, and perhaps he had decided that I was incompetent to give it. I had no way of knowing and could only wait.

The most difficult part of waiting was that I was not sure exactly what I was waiting for. I could not report, or even mention to anyone, what had happened on the evening of July 4; first, because I had tacitly agreed that I would not, and secondly, because I was sure that no one would believe me if I did.

I went on with my work of testing various types and sizes of rocket motors, but most of my previous enthusiasm was gone. Having learned how space travel should be approached, it was very difficult for me to trudge along, following a clumsy and obsolete branch of technology which I knew had been abandoned by other races, thousands of years before.

Days passed and grew into weeks. Weeks passed and became months, with no further word from Alan or his companions. There were many U.F.O. sightings over and around the area of the proving ground. Each time one was reported I would think, "perhaps this is it. Perhaps they are back and will now tell me what I am expected to do, and when." (I knew that the How, was something I would have to work out for myself.)

Still nothing happened. Each new sighting over the proving ground brought excitement and conviction to those who observed the object, and elicited banal and highly improbable 'earthly' explanations, from those who had not.

In the meantime, I had completed the first test series, had returned to my home in California, and finally had been sent back to White Sands with a second series of tests to perform.

I had given up the thought that I would hear any more of Alan, his people, or his plan to take up residence on Earth. It had seemed so incredible to begin with, and the passage of time had made it even more so. I had almost decided that I had been the victim of some form of temporary insanity, and had often congratulated myself on my caution which had prevented me from reporting the event to any of my superiors or to my fellow workers.

On a Tuesday evening, just after I had left the Officer's Mess, where I usually took my meals, and as I was heading across the roadway and parking lot to the H building, where I was quartered, I suddenly remembered that I had

neglected to switch off the power to the main instrument panel, after the test run we had made that afternoon. It was not a very serious oversight, several amplifiers would be on all night and a tube or two might burn out if they overheated. Even this was quite unlikely, but leaving the instrument panel on was contrary to a rule which I, myself had laid down with some firmness, and I could not understand how I could have been so thoughtless.

It would have been a long walk to the test stand, but fortunately, there was no need to walk. The company car was parked next to the H building, and the key was in the ignition. Five minutes later, I had reached the test bay, had parked the car and was striding toward the instrument room.

The days were shorter now, and it was already dusk.

Before I had reached the instrument room, my attention was drawn to a dim glow that seemed to hover just above the top of the test stand. I knew of no light that had been mounted in this position, and this glow seemed to be a foot or more in diameter, and too dim to be any kind of light fixture. As I walked quickly toward it, a sudden suspicion entered my mind, and was confirmed almost immediately when Alan's voice came to me as though he was standing at my side. "Yes Dan, it's ours. Since we are not using the sampling craft now, we thought it best to send down a small communications amplifier. We could get along without it, but it does have advantages, and it reduces the chance of error in our communications almost to zero."

"Incidentally, you can quit worrying about your instrument panel. You did turn it off this afternoon, but we had to persuade you to come out here for a talk without mentioning it to anyone else."

It was some time before I could make any reply. My mind was whirling. So it was true after all! Or—was it a hallucination, and was this another attack coming on? Finally I gave up the pointless conjecture and said to myself, "It seems to be real, and I'll just have to handle it as though it were."

"An excellent decision." Alan said, as though he had been listening to my thoughts. "I can assure you that it is real. Far more so than many of the things your people accept as reality."

"However, we didn't get you out here just to talk about sanity or hallucination. We must discuss the future.

"Although it may take more time than we at first estimated, it now seems certain that I will be able to adapt my body to your environment closely enough so that I will be able to pass for a native of your planet. To do that successfully

will, of course, require a number of things which only one who is already an accepted resident of Earth can obtain for me.

"The time has come when you must make the final decision as to whether you will be that person. It is a free choice on your part, and there is no penalty for refusal. If you do not wish to assist us, you will be permitted to return to your quarters at once. All memory of this meeting and the previous one will be erased from your mind, but everything else will be the same. You will be no worse off than before we came.

"If, on the other hand, you do decide to assist us, you may find yourself in a situation that is not easy to endure. You will have thankless tasks and seemingly profitless investments of time, effort and money. Your reputation will probably suffer, at least in the beginning, and you may find yourself much worse off than before.

"The only reward we can promise you is the inward satisfaction of having assisted in the survival of your race, and the acquisition of considerable knowledge and understanding that you would not otherwise be able to gain."

"That last sentence of yours did the trick," I said. "Up to that point, you hadn't sounded like much of a salesman. In fact you seemed determined to dissuade me from taking the job, but it has always seemed to me that the acquisition of knowledge, experience and understanding, together with service to one's fellowman, were the only valid excuses for living. If you can assure me that you are acting only for the welfare of my people, I will be yours to command."

"Thank you," was the reply, "I wasn't trying to discourage you, but we did not want you to have any illusions about 'Earthly rewards.' We neither ask nor receive any reward for what we do, and, in the end you will learn, as we did, that the greatest and most enduring reward is the knowledge of having served.

"We cannot truthfully say that we are acting for the welfare of your people. In the beginning at least, we will be working only for their survival. If they survive, then we can work for their welfare. If they do not survive, welfare has no meaning."

"That is good enough for me," I said, "Just let me know what you want done, and if there is any possibility at all, I will do it."

"You won't be asked to do anything beyond your ability." Alan said. "Although sometimes it may seem so. Our analysts have determined your abilities quite precisely, and in several areas, they are considerably greater than

you think. However, there should be no great difficulty with the things we require now.

"First of all, while I have a fairly good command of your spoken language, my knowledge of your written language is only rudimentary, and must be perfected before I can mingle with your people. I would appreciate therefore, copies of any of your textbooks designed to overcome illiteracy, both in reading and writing your language. I could also use any of your textbooks on higher or lower mathematics, since our system of mathematical computation varies in several significant respects from yours.

"Our ancestors, like yours, had ten fingers upon which they first learned to count. The inevitable result was that we developed an entire computation system very similar to that which you have now, based upon multiples of ten. From long habit, this system continued in use several generations after it had been fully realized that a system based upon multiples of twelve would be far simpler and more useful, primarily because of its greater divisibility. As you know, twelve is divisible by two, three, four and six whereas ten is divisible only by two and five.

"Finally, our race decided to break the habit of the past, at any cost, and established by law, a mathematical system based upon multiples of twelve. For several generations there was a mild form of mathematical chaos which resulted from the refusal or the inability of some to give up the old way of counting, even though they recognized the ultimate benefits to be gained by accepting the new. Eventually it became necessary to destroy all mathematical texts based upon multiples of ten, and forbid any further publication of them. The law was unusual, and considered harsh by many, but it did succeed in converting our race to the twelve based system. Consequently, while I am considered to be a very competent mathematician among our people, I would have difficulty in passing a simple arithmetic test in one of your elementary schools.

"As you can see, my problems are not simply the adaptation of my body to your environment. I must also adapt my mind to your habits of thought if I am to be successful in posing as one of you.

"We could acquire most of the material we need directly from the minds of your people, and some of this has been done by investigating groups in the past, but, because it is done without the knowledge or consent of the subject, such mind probing is contrary to our rules concerning the right of privacy, and is permitted only in cases of emergency. I am afraid we have already stretched these rules severely in your case, but there seemed to be no alternative."

"As far as my mind is concerned," I said, "you are welcome to dredge around in it as much as you please, but I had better get you the text books anyway. I'm afraid my mind doesn't contain very many, and there are probably lots of typographical errors.

"How will I deliver the books to you, or how will you pick them up? Also, how long will you need them? We have a library, of sorts, in a large Quonset hut, here at the base. I could get quite a lot of material there, but I would be in trouble if I did not bring it back."

"One day will be ample for us to analyze and to copy it." Alan replied. "If we pick them up one evening, we can return them the next.

"On your test stand, directly below our communications device, there is a metal ledge with a protective roof above it. Tomorrow night, when you leave the area, place as many books as you can obtain by then, on the ledge. We will drop a small sampling device to pick them up, and they will be returned to the same place the following night."

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Alan's earthly education went on in this manner for almost two months. He must have been a very fast student, because the amount of material, books and general data that I sent him, should have been sufficient to keep an average student occupied for several years.

Just a few days before I was scheduled to return home to California, I picked up the last batch of books I had sent, and found between two of them; neatly written on paper which I had furnished him, and with a pen which I had also furnished him, a brief note from Alan, which read—Dan: I think I am getting the hang of it now. Thanks again for all the books, but don't send any more because we won't be able to pick them up. We have another small job to do and will be away for a while.

Yours.

Alan.

There was something strangely appealing about the note. It seemed to me almost like a graduation card from a student whom I had taught but had never seen.

I kept the note among my papers for almost a year.

As the weeks and months went by, and finally became years, without any further contact, I again began to feel that I had heard the last of Alan and his plan to take up residence on Earth.

This time I had no suspicion of hallucination, or doubt about my sanity. The contact had been too long and too detailed, and too much information had passed between us. The knowledge and information I had received from Alan had proven to be valid, and some of it had been exceedingly useful to me in my work. There was no possibility that it could all have originated in my own mind. Alan was real enough, and so were his companions and their ship, but something must have caused them to change their plans, or surely I would have heard something more, especially since it had been implied that I was to play a part in those plans.

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During the last week in April of 1954, I had taken a brief vacation from the endless problems of rocket development, and had driven to my special retreat, deep in the woods of southern Oregon. There were several difficult decisions I would soon have to make, and I needed a place of complete peace and isolation in which to make them.

For some time I had felt a growing responsibility to make a complete report of the arrival of extra-terrestrial beings, and the landing of the sampling device, at the White Sands Proving Ground. If Alan had given up his plan to visit the Earth, such a report could not harm him or his people, and might be of some benefit to ours.

In our brief conversations, Alan had described several of the problems now facing our society, and threatening our civilization, and even our survival as a race, problems which were not yet completely understood by our people, but which would become critical within a relatively short time. He had also outlined some of the means by which the impact of these problems could be eased and their pressure lessened when, finally, we could no longer ignore them.

The question which had continued to grow in my mind, now demanded an answer.

If Alan had changed his mind about using his knowledge and experience for the benefit of our race, was it not my responsibility to use, as best I could, the knowledge and understanding he had imparted to me? I realized of course, that very few people were likely to consider seriously, anything I might say, but was the mere fact that I probably could not succeed, a valid excuse for not trying? It seemed that the only certain solution would be to discuss the problem with Alan himself.

While I had no means of establishing contact with Alan, I was sure that if he, and his ship, were anywhere in the vicinity of the Earth, he could, if he chose,

make contact with me. He had given me a rather detailed explanation of the electronic beam modulation of the auditory nerve, which makes communication possible between individuals over very considerable distances, and one of the thoughts in the back of my mind when I had started for my retreat, was that it would be an ideal spot for such a communication, if Alan were still around, and still had any interest in me.

I had been completely alone for three days, without having reached any decisions on my problems, and had almost given up hope of contact with Alan, when, early in the evening of the third day, his voice came to me in its usual abrupt fashion.

"Well Dan, how much longer are you going to hide your light under a bushel?"

In spite of the fact that I had come eight hundred miles, and had been waiting for three days in the hope of making this contact, I was just as startled as though I had never heard Alan's voice before. I looked around quickly, half expecting to see someone standing in the shadows, although I knew there could be no one there. Finally I recovered enough to make an answer, though all I could say was, "What do you mean?"

"You know what I mean," Alan replied, "In your greatest book of wisdom and philosophy which you call the Holy Bible, a copy of which you were kind enough to send me along with the other books, it is stated, 'When a man has lighted a candle, he does not place it under a bushel, but holds it forth so that men may be guided by its light'.

"We have expended considerable time and patience in the effort to light a few candles among the many nations of your planet. It has been our hope that the light of these candles might grow in brilliance until they expose the terrible abyss toward which the people of your world are so blindly rushing. We have given you information which is both of interest and of value to your people. Why do you keep it to yourself?"

"In the first place," I said, "I was afraid that any report by me might endanger your proposed visit on Earth, if you still plan to make it. In the second place, I am unknown. Except for a few people in the rocket business, no one has ever heard of me. How could I reach the people, and who would listen if I could?"

"Those who are not blind to truth can recognize the value of a message regardless of the status of the messenger." Alan replied.

"Our estimate of four years for adaptation to your environment was over optimistic. The actual time will be closer to five. In the meantime, one of your major problems is becoming critical. Unless some small balancing force is applied in the right quarters, your entire civilization may wipe itself out in a planet wide holocaust before we are in a position to be of assistance. You are one of the very few who are now in a position to create that small but critical balancing force.

"Write what you have learned from us in a book. If you take a few precautions which we will explain to you, the report will not endanger my stay on your planet. Repeat what we have told you through your newspapers, your radio and television stations, and if necessary, shout it from the house tops, but let the people know the critical nature of their position."

"You don't realize what you are asking," I said. "If I do as you say, a few people may listen, but the great majority will not. There are too many in this world who are afraid of the truth, and even more afraid of anything which might change their way of life, or the existing order of things.

"If I attempt to make public the information you have given me, it will only mean that I will be scorned and ridiculed. I will be called a liar by some, a fool by others, and a charlatan by still others. If I give a statement to our newspapers, they will either ignore it entirely, or they will print a comic distorted version which will make me appear stupid and ridiculous."

'It is easier to ridicule than to investigate...'

Alan's voice took on the patient, but slightly strained tone, of a teacher who is attempting to explain a simple fact to a somewhat backward student.

"Of course you will be ridiculed. Ridicule is the protective barrier which the timid or the ignorant erect between themselves and any possibility which frightens or disturbs them. Can you name any man of your planet who has ever accomplished anything of great value to your people, who was *not* scorned and ridiculed by some? It is the price exacted from every individual who is as much as one step in advance of his fellows, in thought or in action.

"There is a saying in the records of an earlier civilization, which I believe should be on the frontispiece of every book of philosophy. 'It is easier to ridicule than to investigate, but it is not as profitable.' Yes, you will be called a liar by some and a fool by others. Some will call you both. Some will make it their business to question, deny and attack almost everything you may say, even though its truth may be obvious.

"There are many problems you will have to face, but remember that they are not exclusively yours. They have been faced and met by every individual who has ever offered his knowledge and his services to his neighbors, in the attempt to advance the culture of the race. Remember also that you will have friends. More friends than you ever dreamed of. While it is true, as you say, that there are too many who fear any change in their way of life, there are others, more than you think, who sense the critical position of your society and your civilization, and are searching diligently for a remedy. They will look before they laugh, and for everyone who looks, you will have another friend. Never discount the power of thought. When you have friends you are never alone, no matter where you may be. Every mind that is for you will be with you, and will give you added courage and ability."

"I hope so." I said, "I have a feeling that if I do as you say, I am going to need plenty of both."

No Landing on the White House Lawn

"Even though you are not yet completely adapted to our environment, you should, by now, be able to tolerate a short stay, especially if you do not have to pretend to be one of us. Why don't you just set a small landing craft down on the White House lawn some morning, ask for worldwide communication facilities, and give your information and advice to the whole world at once?"

"Such a simple solution is only wishful thinking on your part," Alan replied. "We have discussed this before. If you think a little, you will see that there are many reasons, both general and specific, why such a course would not be successful.

"In the first place, there is the psychological aspect. If we were to appear as members of a superior race, coming from 'above' to lead the people of your world, our arrival would seriously disrupt the ego balance of your society. Tens of millions of your people, in their desperate need to avoid being demoted to second place in the universe, would go to any lengths to disprove, or simply deny our existence. If we took steps to force the acceptance of our reality upon their consciousness, about thirty percent of the people would insist upon considering us as Gods, and would attempt to place upon us, all responsibility for their own welfare. This is a responsibility we would not be permitted to assume, even if we

were able to discharge it, which of course, we are not. Most of the remaining seventy percent would adopt the belief that we were potential tyrants or dictators, who were planning to enslave their world, and many would begin to seek means to destroy us. If any great and lasting good is to come from our efforts, they must be led by your own people, or at least by those who are accepted as such. This is why I must become one of you before I can be of assistance.

"In flying over your 'White House' and especially in landing upon its lawn, we would, as you know, be in direct violation of several stringent laws created to protect the heads of your government from possible danger from the air. There is, as a matter of fact, no way at all in which we could legally approach your people. We could not even fly through your air space without violating several of your laws. We could not even communicate by radio with any of your stations, nor could they communicate with us because our transmitter has not been licensed by your people.

"The real problem lies in the fact that your people are not yet ready to accept, even the possibility of extraterrestrial life and intelligence. Consequently, they make no provision whatever in their laws for the arrival of beings whose existence they continue to deny.

"It is obvious that when the time comes for me to take up residence among your people, I will be doing so in violation of a number of laws. We deeply regret this fact, but there seems to be no way to avoid it. What we regret even more however, is that you and at least one other member of your race must share in these violations. Not only must you know of them, but in some cases, they cannot be committed without your active participation.

"If I am to travel about your Earth, which I will need to do, I must have the travel document known as a Passport. In order to obtain one I must have a certificate showing the time and place of my birth. Since my origin was actually extraterrestrial, there is no legal way in which I can obtain either a birth certificate or a passport, yet I must have both. It was therefore necessary to find, somewhere in your country, a County Registrar who could understand the need for my being here, and be willing to assist, even at some risk to himself.

"Our psychoanalysts have been busy with that problem for almost three months, and have only recently found an official who seems to have the mental qualities required. We will arrange for you to meet him, and you must become well acquainted since it will be up to you to conduct the negotiations.

"Our 'Head Shrinkers' as you would call them, with their professional excuse for probing minds, often make interesting discoveries which would otherwise remain unsuspected. While searching for the proper County Recorder to assist me in my need for a birth certificate, they discovered two who made a practice of preparing and filing false birth certificates for citizens of the Soviet Union who wished to obtain positions in your 'defense' industries. Since these men were performing this unlawful function solely for personal gain, and not through any feeling of patriotism or other possibly justifying purpose, I could probably have purchased a certificate from either one of them without much difficulty, but there is always an unacceptably high degree of hazard in dealing with anyone who makes a habit of violating any accepted code of law, simply for personal gain.

"We have made a careful analysis of the steps to be taken so that I may move easily and unnoticed, among your people. The goal is simply to achieve the greatest possible degree of normalcy. For example; one can neither be noticeably rich nor noticeably poor, since the first state arouses envy, and the second arouses pity, either of which tends to focus attention upon their case.

"I must have a profession, or at least a gainful occupation, preferably one which is generally known to and accepted by the public, but which is normally conducted in private, and without advertising or display. The ideal occupation would be that of a purchasing agent in an international trading concern. Such a position would furnish a means of livelihood, a good background cover, and an excellent excuse to visit other countries whenever it might become necessary. It would also provide a non-political contact with most of the governments of your world, since every country, whether friendly or not, has things which it wishes, either to buy or to sell, and anyone who is in a position to arrange such a purchase or sale, is always welcome in the country.

"The average business man of your country has a moderate amount of money on deposit in some banking institution, and, since I am to become an average business man, I must also have such an account.

"It seems that most of your money systems are related to the value of gold. I will therefore arrange to have a few pounds of the metal delivered to you here, so that you can exchange it for your currency and open an account in my name, at whatever bank you may choose."

For the first time, I felt the need to interrupt. "Not gold," I said. "Gold has too many legal strings attached, and anyone who offers it for sale, must be able to

prove its source. If you happen to have some small ingots of platinum handy, they will do nicely. The demand for platinum somewhat exceeds the supply, so that it is not difficult to sell, and its present value is several times that of gold."

"Very well," Alan replied, "platinum it will be, although it seems strange to think it as having so much value among your people. During the last few hundreds of generations, the demand for various metals for the construction of space homes has become so great that entire uninhabited planets have been disassembled for their nickel-iron cores. Near the center of a planet, the heavier elements will, of course, be found in considerably greater proportions than those which exist near the surface. While platinum is an excellent substance for the plating of surfaces that will be exposed to corrosion, and most of our ships are plated with it, it has few other uses in our technology, and its value is only a little greater than that of copper, which has many uses.

"We will work out the many small problems and various details of adaptation to your social structure, as the need arises, but, as I mentioned earlier, it will be some months yet before I can take up residence on your planet and, unless a few small balancing forces are applied soon, there may be no society, no civilization and no population to visit. There are several of your world leaders who seem to feel that the brink of war is the only spot from which a nation can properly discuss peace. Such 'brinks' are notoriously unstable, and many a nation has slipped over without intending to do so."

"I realize the danger to our civilization that the possibility of nuclear warfare poses," I said. "Everyone whose work is in the scientific field does. Almost every one of the top scientists of our country has, at one time or another, made the statement that full scale nuclear war would certainly result in the destruction of our civilization, and the death of most of the world's population, but no one seems to pay much attention to them."

Physical, Social, and Spiritual Science

"That is because they have stated only the problem, without offering any solution." Alan said. "Actually the possibility of atomic warfare on your planet, while it is an immediate danger, is not the basic problem, it is merely a symptom, and few illnesses can be cured by treating only the symptoms.

"Your civilization is facing a great problem and, during the last few years, it has become a critical one. Its existence is not the fault of any race, creed or political ideology. It is a problem which develops, sooner or later, in the development of every civilization, no matter where or when it may begin.

"When life begins upon any planet, it first appears in the simplest possible forms, but as the ages pass, some forms of that life constantly tend to become more complex and more sentient. At some point in time, a race will appear which has what you would describe as the 'Human Traits'. They include the consciousness of existence, the need for purpose in life and the realization of a power and intelligence greater than that of any living thing. A civilization may be said to begin when such a genus appears. The quest for knowledge and a purpose in life follows a broad spectrum which can be divided into three major sections for the purpose of discussion and better understanding. These sections can be defined as follows:

- (1) *The physical or material science*, which deals with the needs and desires of the physical body of man, and the nature of the physical universe in which he dwells. In this division are the subjects of physics, chemistry, astronomy etc., as well as the study of the manufacture of the endless number of products necessary to the well-being, the comfort and the security of man.
- (2) *The social science*, which deals with the relationship between man and his fellow man, and with the means by which this relationship may be made more successful, more productive and more enduring. In this division are the studies of society, government, psychology, the nonmaterial phases of economics, etc.
- (3) *The spiritual science*, which deals with the relationship between man and the great creative power and infinite intelligence which pervades and controls all nature, and which your people refer to as God.

"All of the science in the universe, all of the search for truth and the pursuit of understanding will come under one of these headings or divisions. We cannot draw a sharp dividing line between them of course, because they overlap each other, but the fundamental laws which govern them are the same for all divisions.

"If any civilization in the Universe is to develop fully and successfully, each of the branches of advancement must be pursued with equal effort and diligence. The Spiritual and Social sciences however, must come first. There can be no development of the material science except upon a foundation of spiritual and social science. You can prove this to yourself if you consider the difference between man and the animal. There are some, of course, who will say that there is no real difference, that man is just an animal who has acquired greater intelligence than the rest, and so has been able to achieve a material science. The

fact is that there are several specific differences between any man and any animal. One of these is that the animal has no spiritual or social science, and consequently has never developed a material science, and never will, because there is no foundation upon which such a science could be built. A few of your insects, such as the ant and the bee, (You call them the Social Insects) have developed a rudimentary form of social science, to the extent that they live together in large numbers, work for the common good, and have a form of discipline that is common to all. As a result, they have developed a very limited form of material science in that they do create simple structures in which they store food for a future time of need. The fact that they have no spiritual science however, has proven a complete bar to any further development. They have not advanced a single step in thousands of years, and of course, they never will because they have long since reached the limits of the structure which can be erected upon their minute foundation.

"Mankind, on the other hand, no matter where or when he may come into being, is endowed with the innate realization of the infinite intelligence and the creative power of the supreme mind, even though he may not yet be able to understand. During the many stages of his development, man's attitude toward this power may vary from fear and resentment in the beginning, to reverence and love in the final stages, but always he will have the instinctive need to learn more of the nature of the creative power. Thus the Spiritual science has its beginning in the very dawn of human intelligence. From the realization that man can improve the conditions of his life only through cooperation, come the first tribal gatherings which represent the beginning of the social science.

"From the foundation provided by these two sciences, the superstructure of the material science begins to emerge, and here also begins the great problem.

"The development of the material science, being constantly stimulated by the ever increasing needs and desires of the body, takes place at a constantly increasing rate. If you consider the technological advance of your science during the last thirty of your years, you will see that they exceeded the advance of the previous one hundred years, and that that advance, in turn, exceeded the advance of the previous one thousand years.

"The social and spiritual sciences, on the other hand, progress normally, only directly with time, and even this rate of progress is not always maintained.

"Eventually you have the problem of a huge and massive structure, growing at an ever increasing rate, standing upon, and supported only by a foundation which is growing at a much smaller rate. Unless some means can be found to stimulate the growth of the foundation, a time will inevitably come when it can no longer support the structure, and the structure will collapse upon the foundation, bringing ruin and destruction to both.

"This total collapse of civilization has occurred before upon this planet, and your present civilization has now entered the stage where it is quite likely to occur again unless some outside stimulus is given.

"The entire population of your planet is now in constant danger of total destruction by an agency which you yourselves have created, with great labor and diligence, and at great expense in time and money. Why should a race be threatened by its own creations? The answer, of course, is simply that the race has not progressed far enough in the foundation sciences to enable its people to control their own creations, and so their creations control them.

"Most of the thinkers of your race are well aware of the dangers inherent in the use of nuclear weapons, but there is another aspect of the problem which is not so well recognized. Unless the present degree of tension between your major nations can be eased within a reasonable amount of time, the very existence of such weapons will eventually bring about the downfall of your civilization, or at least your society, even though they may never be used.

"Civilizations are built and maintained by men of vision who think and work for the future. What man will be willing to dedicate his life and his work to the benefit of generations yet unborn, when the entire race may be wiped out in the next twenty-four hours? Unless some lowering of tension and security of future can be achieved within the next decade, the motto of the following generation is likely to be: Let us eat, drink and raise Hell, for tomorrow we die! Already many articles have appeared in your newspapers and magazines commenting upon what they describe as 'juvenile delinquency.' Some writers place the blame upon the parents, some upon the schools, while others blame the church or the state. Actually none of these agencies are especially at fault. Youth is particularly sensitive to conditions of insecurity, (any of your psychologists will verify this,) and never in the history of your race has the future been less secure.

"By the time two more generations of your people have been born and reared under the constant threat of imminent annihilation, the state of apprehension will have evolved into one of deep seated resentment against those elements of society which were responsible for the danger. The resentment will manifest itself in many ways, but principally in various forms of passive or violent revolt against existing beliefs, morals, institutions, and almost all forms of constituted authority."

"I can readily understand the problem," I said, "but what is the solution? There are many people who sense the hazard of our present course, but their advice varies. Some say we should halt the progress of our material science. Some have even suggested that we do away with the material science entirely and 'go back to nature' living as the animals do."

"If you had begun to erect a large new building." Alan replied, "and you discovered that, through a miscalculation, the foundation was not strong enough to support the finished structure, would you solve the problem by tearing down that part of the structure which was already built? Not likely. The logical course would be to seek means to enlarge and strengthen the foundation.

"The progress of the material science cannot successfully be halted. Either it will go forward or it will go back. If it goes back it will collapse, because the principal supporting members will be the first to weaken under a program of retrogression.

"There is nothing basically wrong with your material science. It can expand and progress to horizons as yet undreamed of, if only your people will provide a foundation capable of supporting it."

"And if they do not?" I asked.

"Then your civilization will cease to be." Alan replied slowly. "It will destroy itself in a holocaust that will leave few survivors. Those who do survive will have neither the will nor the ability to rebuild their science or their technology. In a few generations their descendants will have returned almost to the level of the animal. Then the process of evolution will begin again. In ten to fifteen thousand years another civilization and technology will emerge. They too will face the same problems, and have the same opportunity for their solution. If it fails, it too will go down. This is an immutable law of the universe, but as you see, it is one which operates according to the free choice of the race.

"Your race and your culture are not doomed to extinction. They may continue upon their upward course until they have left this danger behind them forever.

"The choice, you see, is yours."

"There is little doubt," I said, "Which choice the people would make, if they were aware of the alternatives between which they were choosing."

"Precisely." Alan replied, "That is why we are here, and that is why you are here.

Lemuria, Atlantis, and the artificial structures on Mars

"As I mentioned before, a portion of my direct ancestry were in a group of survivors of the last complete collapse of civilization on your planet. This was more than a thousand generations in the past, but even then they had developed a technology which was, in some respects at least, considerably more advanced than yours.

"They followed, and made use of all aspects of the natural laws, instead of pitting one against the other, as you have fallen into the habit of doing. As a result, their science was somewhat simpler than yours, and yet they could accomplish many things which you would not even think of attempting.

"With all their advancement however, they too, failed to realize the absolute necessity of maintaining an equal development of the social and spiritual values. A political and social cleft developed between the two principal nations of that era. As I mentioned to you during our first discussion, the friction between the two increased yearly, until at last it exploded into a war of annihilation. There was no question of victory or defeat, they simply destroyed each other. There were few survivors, and the level of radiation of the entire surface of the planet, had been raised beyond human tolerance.

"This did not mean that all survivors were doomed to immediate death from the radiation, but it did mean the progressive deterioration of the mental and biological functions. This, together with the large number of undesirable mutations produced in succeeding generations, would bring their level of existence down, at least to that of the stone age, if not even farther.

"On a high plateau, in what is now the land of Tibet, six of the surviving aerial craft were landed by their crews, for a conference to determine what, if anything, could be done to preserve the remnants of the race.

"It was suggested that an attempt be made to reach another planet. The aerial craft then in use were capable of traveling in space, and had frequently been used to reach elevations of a few hundreds of miles, but no attempt had yet been made to leap the vast gulf between the planets, and the crew members were far from certain that such an attempt could succeed.

"The planet which you now know as Mars, was then in conjunction with the earth, and preliminary estimates seemed to indicate that the crossing could be made.

"At that time, the surface conditions of temperature, atmosphere, water, etc., were somewhat better suited for human survival than the conditions your astronomers report to exist today.

"A vote was taken, and the members of the crews of four of the craft elected to take the huge gamble in the hope of preserving, thereby, at least a portion of the culture of the race. The remaining crews decided to remain on earth. They believed that, because of the elevation of the plateau on which they were gathered, and the relatively low level of radiation at that point, they could continue to live in this area without suffering complete physical or mental degeneration in themselves or their descendants.

"I can see the question forming in your mind, so I will explain that this race had achieved perfect equality of the sexes, and both were about equally represented in this council, and in the crews of the ships.

"Of the four craft which essayed the great leap, three arrived safely at their destination. There is no record in our history as to the fate of the fourth.

"For many generations the grim struggle for survival demanded the entire time and energy of the people. These were the dark ages of the new race, and we have relatively little knowledge of this period. The original crew members, immediately after their arrival upon the new planet, compiled a carefully written history of the races of earth, documenting the reasons for their downfall.

"Through the intervening centuries, this history has been preserved. It is known as 'The Great Lesson,' and is still the first thing taught to the descendants of that race when they begin to prepare themselves for active life.

"As the battle for survival against the harsh environment, was gradually won, the development of the material science resumed its normal pattern, and technology spurted ahead. With the lessons of the past constantly before the people, however, the material values were carefully maintained in their proper relationship to the social and spiritual values.

"Space travel and space dwelling became more and more common until the planet was almost completely abandoned. After all, living in space is so much simpler, safer and more convenient than struggling to survive the whims and often deadly perversities of a planet.

"Like all space dwelling races, we are now essentially independent of planets. Some of our craft are very large, judged by your standards, since they are many times larger than your largest ships, and we have the knowledge and ability to produce all of the necessities and comforts of our physical lives, within our craft. We have no personal need to approach or land upon any planet, except occasionally to obtain raw materials for new construction, and that we usually obtain from asteroids or uninhabited satellites.

"The satisfaction of our physical needs now requires but little time or effort. Consequently, we are able to devote much of our time and energy to the assistance of those races which have not yet passed the critical point in their development. The craft which brought me here, and from which I am now speaking is devoted entirely to this purpose. In a few months, when my preparations are complete, I will become one of your people. In the meantime you have many things to do, and I am keeping you from doing them."

"Just a moment," I interrupted, "In the beginning of this discussion you said that I should arrange to appear on radio and television programs, give interviews to newspapers, and write a book. You have given me considerable ammunition for all of these activities, but there should be a keyword or a specific goal around which to organize the presentation."

"Of course." Alan replied. "One of the most important words in your language is frequently being overlooked or bypassed through the use of words which seem to be similar in meaning, but which may actually mislead. The word is 'Understanding' and the words with which it is often confused are, knowledge, wisdom, love and charity. All of these are desirable characteristics, but none can take the place of understanding.

"In the Bible which you sent me, as in most of your books of wisdom and religion, your people are advised, and even commanded to, 'Love God, and their Fellowman.' This would be excellent advice, if only it could be followed, but unfortunately, love is an emotion that is not subject to the will. No one can actually love anyone else simply because he is advised, or even commanded to do so, nor can he because of any reward that may be offered.

"Imagine, for example, that a very wealthy man should offer you a great sum of money if you could love your next door neighbor. Entranced by the thought of all that money, you would probably exclaim, "Of course I will, why, for that much money I'll love that stupid, no good so and so, if it kills me!" "And it probably would. You might make a very good pretense of love, complete with all

the outward symptoms, but in your heart there would be no change. In fact, you would eventually begin to despise the individual even more than before, because he is now the living symbol of your own hypocrisy. Understanding must come first, before there can be any genuine love, charity, or even wisdom.

"The greatest need of your race, your civilization and your society today, is simple, basic understanding between man and his fellowman, between nation and nation, and between all men and that greater power and intelligence that pervades and controls all nature. Understanding is the key to survival for your race. There is little value in a treaty, a pact or a guarantee between governments, if understanding is lacking between the people.

"As nuclear weapons proliferate among your nations, it should always be remembered that, 'An ounce of understanding is worth a megaton of deterrent.'

"You have your keyword, and your work is laid out for you. I can't say that I envy you, but we must all do our best.

"As one of your radio operators would say, "Over and Out."

POSTSCRIPT

This is a saga for which no ending can yet be written. The principal actor is still on the stage, and the play goes on.

In the years that have passed since Alan took up residence on this planet, he has become well accustomed to the primitive way of life on Earth, and to its backward technology. He has never quite been able to understand Earthman's continued efforts to deceive himself, or his equal, but usually futile efforts to deceive his fellowman.

The account of his arrival among us, and the many small problems he faced in completing his adjustment to earthlife, would fill a book, larger than this one. Someday perhaps, when it has become safe to do so, that book will be written.

The electronically boosted telepathy, by which Alan reaches the subconscious minds of world leaders and, when necessary, injects a few words of wisdom and patience, is a subject fit only for a technical paper, which also may some-day be written.

Alan has not yet been completely successful in his long extended mission. Understanding is still a rare, rather than a common faculty. Yet the fact that we are still alive, and our civilization and society, such as they are, still exist, is proof that he, and his fellow workers, have not failed completely either.

If the present relaxation of tension between the major nations of Earth becomes a lasting trend, Alan may finally be able to resign his unofficial and thankless task as the 'Conscience' of world leaders, and disclose his true origin to what will probably be a totally unbelieving world.