This was a great day for Colgate University celebrating the opening of the Accelerator Building. It was a great day for its President Frank Manuel. The Accelerator Building housed the great Cosmocyclotron which was built at the cost of three million dollars provided as, you would expect, by the Army and Navy. None of the other smaller comparable in size to Colgate had any Cosmoclytron, least of all the largest of all such machines.

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Frank Harris was chairman of the board of Colgate College. On the morning of this sunny day we drove out to the campus of the college which was located twenty miles from the center of the town, to take part in the celebration of the opening of the great Accelerator Building. This building housed the great Cosmocyclotron, the largest Accelerator in the United States built to date. It was built at the cost of three million dollars, which came as you would expect from the Army and Navy.

Two years earlier when the project was first presented by the President of the College to the board of trustees by the young President of the college Frank Manuel, Harris, as well as the other members of the board of trustees, all of whom were solid citizens of the state voiced misgivings about the magnitude of the project.

In favor of the President was the fact that the cost of the building of the Cyclotron was underwritten by the Army and Navy. And, moreover, some how or another Manuel had been able to wangle a contract from the Army and Navy. They undertook to reimburse the University up to one half million dollars a year to cover the cost of water and electricity which the Cyclotron would consume as soon as it was fully operating. There were no provisions made in this contract for the salary of the scientists who were supposed to operate the giant machine. No scientists of standing could be hired by the college without being given tenute that his college would have to guarantee their salaries until they reach retirement age.

The endowment of the college was certainly not sufficient to permit the college, if it were to follow sound business principles to guarantee salaries for such long periods of time.

Rrank Manuel, the President of the college, started out as a ecientist. The presidency of the college was his first experience in administration. He was picked by Harris and showed by Harris to other members of the board. Harris took a liking to

him at first sight when he interviewed him for the job. What had won his heart more than anything else was Manuel's frank admission of the young man that he decided to become an administrator when he realized that he could not have made the grade as a scientist."

From time on for a number of years, Harris and Manuel were very close to each other. But, about six months preceeding the date when Manuel brought his big project before the board of trustees, Harris and Manuel began to take opposite sides on almost any issue that came before the board. During those six months it evolved that some six members of the board invariably lined up with the President, when another six supported Harris right or wrong. The four remaining members played politics, throwing the vote sometimes to Harris and sometimes to Manuel without any discernible regard for the merits of the case. Yet, for a while the tone of the meetings remained gentlemanly and Harris and Manuel kept on addressing each other in a manner which was friendly at least on the surface. This came to an end when Frank Manuel presented his big project to the board.

If you will read the minutes of that memorable meeting, you will see that when the meeting opened practically all the board members expressed some concern about the financial responsibility that the project would involve for the college. Some were more violent in stressing this point of power. A recess was called and when the meeting convened, Manuel gave an important speech in which he stressed the great service that the college would render to national defense by the embarking of this project. He also expressed his firm conviction that within five years the project would solve the problem of cancer by utilizing the high energy particles produced by the giant machine. Most of the members of the board were well about fifty years of age and knew well enough what Manuel did not fail to stress, that everyone of them had one chance in four to die of cancer well within the next twenty-five years.

Whether it was due to this consideration to Manuel's eloquence or to the drinks that were served to them during the preceeding recess, some of the members of the board began to take a more friendly attitude towards the President's project.

Even so, it was apparent that the President's proposal would be defeated after a vote had been taken at a time when Manuel finished his speech. And it is pretty certain that the project would have been defeated had not Frank Harris arisen at this moment and made a speech.

In this speech he attacked the project with unprecedented violence and ill temper. Even though it seemed to all those present that the project would be defeated if it were put a vote then and there. Up to the time when Frank Harris rose to speak with unprecedented violence and ill temper, he attacked the project. He questioned Manuel's sincerity and accused him of thinking of his own glory only without regard to the welfare of the college and expressed doubt of the soundness of mind of any member of the board who would vote for the project. Immediately afterwards the project was put up for a vote at the motion of the President and was carried by a small majority. It was generally expected that Frank Harris would resign as chairman of the board but he did nothing of the sort. As a matter of fact the relationship between Harris and Manuel began to improve again and pretty soon thereafter they were as close to each other as they had been in the early days. No one could quite understand how this happened but there were those who said that Colgate College was now the largest prospective consumer of water and electric power and that Frank Harris owned a majority interest in the water works and the public utility which supplied the town with electricity. They said that it was natural to expect the majority stockholder to want to be on good terms with the President of a corporation that is going to be his most important client. Subsequent events made, of course, another interpretation more likely.

The celebration was supposed to last all day. The speeches in the morning, a short recess for luncheon and more speeches in the afternoon, up to about five o'clock. There was a cocktail party scheduled at that time in the house of the President to which the board of trustees, a number of distinguished guests and a half dozen members of the staff of the college had been invited.

Frank Harris spent the day, as was his duty, listening to the speeches. Most of the speakers were University presidents. Harris had no particular liking for this breed. He once said that the professional of University President resembled in every respect the oldest profession, except that it is less pleasurable.

The keynote speaker of the day was the President of one of the oldest of our eastern colleges. This college was originally well endowed and one of the best of the nation. But now, as most of the other private colleges, it was short of funds and its President spent most of his time and attention on a fund raising campaign.

The title of the keynote speech was Science and Religion. The speaker started out by quoting what others had said on the subject and he quoted among them, Albert Einstein, who said that "Science without Religion is lame and that Religion without Science is blind." After that he began to talk about God and the free nations. He

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The speech of the president who welcome the guests was very short. He explained, that because the great accelerator is supported by funds from the Army, Navy and the Atomic Energy Commission, only visitors who have clearance from the F. B. I., Maval Intelligence and Army Intelligence could be permitted to enter the interior of the great accelerator building. Because none of the members of the board of trustees had such triple clearance and few of the guests, the college was forced to decide to its regret that no visitors will be allowed in the building. Arrangements have been made for a reception however, on the roof garden which later will serve recreation for the staff when weather permits.

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praised the virtues of the United States to which he described as a God fearing nation. He deplored the moral weaknesses of our allies and he condemned as evil, all potential enemies. The speaker, before he became a university president, had been assistant Secretary in the State Department and he talked about God as if God were an employee of the State Department, one we can trust to do his duty. He assured his audience that members of all Governments, before they make any major political decision, invariably pray to God for guidance. He suggested that our scientists would do well to do likewise before they undertake any important experiment. Harris was a deeply religious man and he intensely disliked listening to a politician forging Gods signature to his plans but he sat dutifully thru the speech, applauded when it ended, and sat thru the rest of the speeches, which -- if less obnoxious were no less boring.

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He implied that the policies of the free nations were guided by God and must therefore in the end turn out to be victorious.

He said that we must uphold academic freedom, but that academic freedom has its limitations and that no matter which he permitted to claim the perfection of academic freedom, if he publicly denied the existence of God and thereby giving aid and comfort to our enemies as well as endangering the good public relations of his university.

The last speaker was president of one of our eastern universities, spoke about the importance of the study of humanities and our culture. He expressed deep regret that the best men in the division of humanities of his university find it impossible to live on their salaries and have resigned in order to take more lucrative positions. The reminaing men would have left also, he explained, if it had not happily occurred to him to suggest to them to take examinations as librarians. This, he said, enabled him to employ all of them, giving a 15% salary raise in the new ten million dollars library built in the style of colonial williamsburg from a fund generously donated to the university by John D. Rockefeller, Jr. Whether because he didn't like colonial Williamsburg or perhaps just because he thought enough was enough, Marris rose at this point from his seat and sneaked out of the hall. He walked thru the back towards the house of the president. It was also deserted but drinks and sandwiches were laid out on the terrace all prepared, awaiting the guests arrival. Harris poured himself a drink and looked forward to an hours peace and quiet. He had hardly finished his drink when a young man walked up the steps to the terrace. It was three o'clock. A young instructor in Physics whom Harris had known from his childhood. He had been obviously invited, not because of his scientific eminence but because his father was a member of the board of trustees. "How do you like the new building?" It is ugly enough to look scientific, isn't it?" "It looks like a tombstone," said Fred. It may be it is a tombstone of science." "What do you mean?" "Because it houses the largest _____ in the United States and is the tenth that has been built in the past five years. After this there is no need for another one, nor could one be manned if it were built. We have now enough such machines in existence to keep possibly all the physicists who will graduate in the next ten years. I will start physicists that quickly become the slaves of these machines. One of them will have a chance to follow up a hunch if it means doing experiments for three and five years and risk failure in return for a chance to find something really important. This machine is here in the tomb stone will probably be in charge of the research committee and all experiments. To run the machine for one day it costs about \$2,000. No committee will invest several thousand dollars in a young man's hunch. What experiments should be done will presumably be decided by majority vote.

Experiments will be scheduled six months or a year in advance. No doubt the machine will be screwed up to yield higher and higher energies. No doubt every time we go to higher energies, some new particle will be discovered. But this is not the kind of physics I like and I am not even sure that this is physics. Moreover—He said, everything done by the machine will be secret. Those who work with it will be ancious to keep their security clearance.

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Talking around the luncheon table at the faculty club they dropped all controversial subjects as hot potatoes and will furtively look around their shoulder to see who is sitting at the next table, before saying anything that could be misconstured if misunderstood.

"I am playing with the idea to quit physics and to take up Anthropology. I have taked to father about it just yesterday. Next to me Fred, said Harris, I have known you for a long time. I want you to promise me not to do anything rash. Manuel is a reasonable man, give him a chance to show you what he will do with this tombstone of science. Maybe there will be some life upon the tombstone. Give him six months or a year and if you don't like what is going on, then in God's name, go into Anthropology."

"I used to think he was reasonable said Clark until he embarked on this project of his but I can't leave here anyway for another year until my girl finishes college."

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For the first three months Colgate College went to great efforts to engage
eminent scientists to work with the giant machine. But, even though they offered
offer
high salaries, one/after another was turned down. Then something rather miraculous
happened. Frank Manuel invited for over a weekend, twenty-five eminent scientists.

No one knew what he told them, but evidently he offered some sort of package, and
twenty-four out of the twenty-five accepted the position. There were, among them,
men from Harvard, M. I. T., Princeton, Yale, The California I stitute of Technology.

It was surprising that they were willing to go. One thing was obvious they didn't go
there for the sake of Colgate College. They went there for the sake of each others
company. If there was more to it, no one knew what it was.

For the first five years of its operation not a single paper was published from the tombstone of science and other universities began to point the finger at this enterprise. It was rumored that they paid high salaries, \$15,000 a year or more, and it burned out that one of the men would spend over a year big game hunting in Africa and another spent nine months writing his memoirs on top a mountain in Switzerland. But, of the thirty members of the staff, Certainly no more than five could be accused of loafing. The rest were officially working hard under the tomb stone. Since their work was supposed to be secret, no one could openly accuse them for not publishing. In addition to the army, the navy and the atomic energy commission, the National Science Society and the foundation for infantile paralysis supported the work under the tomb stone with large contributions. The first paper that came out concerning the prevention and cure of rheumatic fever and was awarded, a year later, the Nobel price for medicine. Six further Nobel prizes were awarded for work that came out of the tomb stone, in the following four years.

There were many requests from other universities both in the United States and abroad for permission to visit this laboratory but, because of the security regulations these requests could not be granted.

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There was further trouble when it turned out that it was impossible to get
Security clearance for four out of these twenty-four men. This could be a very
serious problem if it could not be solved. But, after another three months from
some miraculous source all these men received their clearance from all three agencies
involved.

Shortly before, Senator Mc Carthy received and honorary degree from the college and spent a few days on the campus. There were rumors that he had a hand in obtaining the clearances and there were those who suspected President Manuel of having indulged in some sort of blackmail or another. There is no reason to believe that any of these rumors had any foundation in fact.

Cyclotron.

on the 9th anniversary of the opening of the tomb stone, the President approached the Carnegie Foundation, the Rockefeller Foundation and the Ford Foundation with a request of taking over the support of the research under the tomb stone. He pointed out that the record of the past nine years proved that the work deserved public support as evidenced by the seven Nobel prizes which had been awarded, but couldn't claim to be useful in the sense of providing new methods of mass destruction, and therefore it would not be fair to appeal for the continued support of the Government. He invited a representative of these foundations, together with a number of distinguished scientists from other Universities to a small conference. He also called for a press conference to follow this meeting in which he promised that the secrets of the giant Cosmocyclotron would be disclosed to the extend as it is possible to do so within the limits of national security.

When his guests assembled, the President addressed them as follows: "Gentlemen, he said, I have promised to the press, to disclose later on today the secret of the giant Cosmocyclotron and there is no reason why I shouldn't show you as much confidence as I am going to show the gentlemen of the press. The secret of the Cosmocyclotron, which is housed in the tomb stone, is that there is no such machine housed there at all. The \$3,000,000.00 provided by the Government, went into a revolving fund for charity research purposes and the one-half million dollars which we receive each year for water and electricity was used to pay the salaries of twenty-five senior research workers. When we embarked on this enterprise we took one risk and only one, that we shall not be able to recruit the minds who were needed for the job we set out to do. At first we met indeed with reverses, but then when we invited twenty-five men whom we had carefully picked because they have shown, in the past originality and devotion to research and who were also selected with a view be being congenial to each other. We gathered these men on the campus and explained to them what we wanted. We told them that we did not want them to work on problems that will yield publishable results in the forceable results. We wanted them to be guided by their pleasures and by their hunches. We offered them a good salary for life with the freedom to do as they damned please, here or elsewhere, according to their whim. We told them we had no objection if some of them spent their life doing nothing but basking in the California sunshine. If this is what they felt they wanted to do.

We explained to the opposition in this way. We have picked twenty-five men whom, on the base of their past records, we expected to devote the rest of their lives to research because of their inner compulsion to do so. We did not want any of them to pursue any line of research in order to maintain a semblance of activity if they didn't feel that they could put their heart into it. We told them that we knew that some of the twenty-five will make use of the freedom that we offered them to enjoy life without doing anything useful. But, we know that this will be the exception, rather than the rule. A man who would rather loaf than work is good riddance. If he follows his inclination that way he does not take elaborate space from others and doesn't clutter up the scientific magazines with insignificant papers. If he goes away to loaf, he also saves us money, for a man who loafs in all frankness, costs us only his salary, where a man who keeps up a semblance of research in the laboratory costs us on the average of five times as much. We told them that we didn't expect them to leave their distinguised universities for the sake of this one undistinguished college but we thought that they would enjoy each others company. We offered them a position en bloc and pointed out that if our offer was accepted as a member of a college which we regarded as one of the most distinguished colleges of America, we told them that our offer and their acceptance was conditional and became validated only if at least twenty of the twenty-five will accept.

As you know twenty-four of the twenty-five have accepted and you also know we ran into some difficulty with Security clearance for about half of them. But, we were able to work on this difficulty within a short period. The scientific achievement of those working in the tomb stone is a matter of public record. In addition, over 1,000 secret reports are submitted to the Government. Whether the contribution contained in these is not sufficiently valuable to warrant our asking the Government that these reports shall be de-classified.

Of the twenty-four senior men who joined up, nine years ago, four must be conceded as lost from a point of view of scientific achievement. We shall continue to pay their salary as long as they live no matter where they choose to set up their residence. Of these four, two cannot be counted a total loss. One of them published a most valuable treatise on the question of what political systems other than parliamentarian form of Democracy, which would be suitable for the Government in overly populated, or undeveloped where the majority of the population can neither read or write.

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The question of how our desire to have such countries governed as a Democracy could be implemented. We could run into the troubles with the Parliamentarian form of Democracy as experienced in such countries.

The other published a book on World Government, which has as its main phases the following thought: "Where there is little doubt that the world will be under one Government before this century is over, it is difficult to see how countries like Russia and the United States or even England and the United States, could possibly agree on the question of how the laws should be made.

Instead of writing for a constitution essentially devoted to this question, he therefore proposes that we should try to reach agreement not on how the world laws should be made, but rather, what the laws should be. Admittedly, since other countries laws will have to be changed by world conditions don't change very fast and if we can agree on laws acceptable to us today, there is no need why they should be changed for one generation at least.

We must not be mislead, he pointed out, by the spectacle of Congress passing new laws all the time. Making laws, is of course, habit forming and once we got bad into the/habit of making laws, we just keep on making them until we have an inflation of laws which exceeds even the laws of our monetary system.

World constitution which sets forth the world laws is, of course, more difficult to write than a world constitution which merely prescribes how laws should be made, but on the other hand it should be easier to live under.

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Cyclotron.

The first re-action to this disclosure was one of enthusiastic praise, but there were also voices who raised objection. This lead to a hearing in Congress. Some member of the Congressional committee accused President Manuel and Harris of defrauding the Government. It was, in fact, brought out in evidence that large bills for the consumption of water and electricity had been presented by the college to the Government, for re-imbursement. In order to collect one half million dollars a year which the Army and Navy had agreed to pay for water and electricity. For a time it looked like the committee would transmit the testimony to the Department of Justice and if it had done so, no doubt Manuel and Harris would have been indicted. Whether they could have been indicted of fraud is rather doubtful, however. A representative of the treasury had testified that the water works and the public utilities supplying electricity to the town had actually paid income tax on income from water consumption and electric power, for which they had submitted bills but which they never received. The money paid by the Army and Navy, paid to the college, which was not spent for water and electricity was fully spent for salaries and every body benefitted except the treasury and nobody was damaged except the companies of Fred Harris. It was difficult to see how conviction could have been obtained. In spite of that, things might have gone badly for Harris and Manuel if another Congressial committee had not begun investigating the efficiency of Government expenditure for research. There was brought out facts that Government had spent over two hundred millions for basic research, out of which only one half million went to the tomb stone. Yet, 60% of all research achievements that were listed as note worthy came from the tomb stone.

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When the College embarked on this enterprise, it took one serious risk, the risk that we shall not be able to recruit minds with the rare qualities of imagination, resourcefullness and devotion. It is these qualities which are responsible for the rapid progress of science that was achieved in the first bull for all fire and not many who possess them. Even though the afformation of this century, and there are not many who possess them. Even though we made good offers to a number of such men, none of our offers were accepted and him wantedly knowledge that we will not be able to do the job which weset out it. Then me changed wanted our whate appround Finally we realized that we shall have to do something rather unpresidented. Having carefully picked 25 men whose past record had shown originality and devotion all of homest to have on to research, we invited them to a closed conference on the Campus and we laid before
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When the guests assembled, they were addressed by the President and this is what he said to them.

"I have promised to discuss at a press conference tonight the secret of the giant Cosmo Cyclonne which is housed under the Tombstone. The secret consists of the simple fact that there is no such machine housed there at all. The twenty-five million dollars originally put up by the Government, the College invested in Government Bonds and these Bonds together with their accumulated interest will be turned over to the Government. The one million dollars a year which the College received from the Government to cover the cost of water and electricity which this giant machine was supposed to consume went to pay the salaries of the research expenses of twenty staff members.

When the College embarked on this enterprise, it took one serious risk, the risk that we shall not be able to recruit minds with the rare qualities of imagination, resourcefullness and devotion. It is these qualities which are responsible for the rapid progress of science that was achieved in the first quarter of this century, and there are not many who possess them. Even though we made good offers to a number of such men, none of our offers were accepted and for a little while it looked that we will not be able to do the job which weset out to do. Finally we realized that we shall have to do something rather unpresidented. Having carefully picked 25 men whose past record had shown originality and devotion to research, we invited them to a closed conference on the Campus and we laid before them the following plan. We are not proposing to build a giant machine and propose to return the funds ear-marked for this purpose to the Government. We propose to consider ourselves instead as trustees of the one million dollars which the Government makes available to us every year and want to spend it in a manner in which it will be most beneficial for the progress of sciencewithin the Tombstone or, if desirable, outside of it. "aving picked 25 men, who on the base of their best record, may expect to devote the rest of their lives to research not because of the expectation of any reward but rather because of their inner compulsion to do so. We want to create a most favorable climate in which these men can follow through their inclinations. We want to support the work of these men not on the base of projects which they may submit and on which some committee has to passbut each man for himself shall be the soverign judge of the research products to which he will devote

and like of he is midling ho put our he is entople For this reason, we propose that every staff member shall receive twenty-five thousand dollars a year. It is up to him to decide how much of this sum he wants to use for himself and how much he wants to spend on his research. But for every thousand dollars which he himself will spend on his research, we his count button we have will be the trust town dollars the man shall put up four thousand dollars to match, up to the total of fourty thousand Unuld that is, If the staff member decides to live on fifteen thousand dollars and to use ten thousand dollars of this yearly allotment for his research, we shall supplement this with an additional allowance of fourty thousand dollars for his for research so that he will have a total of 50 thousand dollars at his disposal to spend in any manner he plans. Since we consider ourselves merely as trustees of million dollars which we shall yearly receive from the Government, we do not wish to put any restriction on the staff members, where they went to do their research. We are going to offer them, it is true, spacious laboratories which will include in addition to the originally planned space, 100,000 square feet which was to want to improes originally reserved for the giant machine. We have to offer them beautiful scenery lands pleasant climate and land and enterprise and essertations and a pleasant climate and last not least they will enjoy, if they stay (each other's congenial company But if any of them prefer at any time to shift his activities to the compous of shall In all probability they should be free to do so. It is difficult to so any University, would refuse to accept them, since they are not only in possession of a salary but will bring along with them also depending on how much of their own salary they wish to sacrifice, a research fund up to fifty thousand dollars a year they might to be militaine any where. Naturally the University might snitch off perhaps ten thousand dollars under the guise overhead but even so, there were instruct thousand dollars that they may actually this much shall live them and please for their research and presumably if they went to some other University and please all they probably plus a university which has they would pick one which has equipment suitable for their research plans the some of the say 2, 3 or 5 of them, want to undertake some research working as a team, they could have between them one hundred thousand, one hundred fifty thousand up to or two hundred fifty thousand dollars respectively. No need for them grants to foundations of the Government where some committee of experts would have to pass their proposal and where the principle of safety-first frequently prevails.

We explained that we do not want any of them to pursue any line of research merely in order to maintain a semblance of activity. We wanted them to pursue the line of research of their own choosing and one into which they can put their heart

his time. For this reason, we propose that every staff member shall receive twenty-five thousand dollars a year. It is up to him to decide how much of this sum he wants to use for himself and how much he wants to spend on his research. But for every thousand dollars which he himself will spend on his research, we shall put up four thousand dollars to match, up to the total of fourty thousand dollars: that is, if the staff member decides to live on fifteen thousand dollars and to use ten thousand dollars of this yearly allotment for his research, we shall supplement this with an additional allowance of fourty thousand dollars for his research so that he will have a total of 50 thousand dollars at his disposal to spend in any manner he plans. Since we consider ourselves merely as trustees of the million dollars which we shall yearly receive from the Government, we do not wish to put any restriction on the staff members, where they want to do their research. We are going to offer them, it is true, spacious laboratories which will include in addition to the originally planned space, 100,000 square feet which was originally reserved for the giant machine. We have to offer them beautiful scenery and a pleasant climate and last not least they will enjoy, if they stay, each other's congenial company but if any of them prefer at any time to shift his activities to any other University, they should be free to do so. It is difficult to say that any University would refuse to accept them since they are not only in possession of a salary but will bring along with them also depending on how much of their own salary they wish to sacrifice, a research fund up to fifty thousand dollars a year. Naturally the University might snitch off perhaps ten thousand dollars under the guise of overhead but even so, there remains fourty thousand dollars that they may actually spend a year for their research and presumably if they went to some other University they would pick one which has equipment suitable for their research plans.

If some of them, say 2, 3 or 5 of them, want to undertake some research working as a team, they could have between them one hundred thousand, one hundred fifty thousand or two hundred fifty thousand dollars respectively. No need for them to apply for grants to foundations of the Government where some committee of experts would have to pass their proposal and where the principle of safety-first frequently prevails.

We explained that we do not want any of them to pursue any line of research merely in order to maintain assemblance of activity. We wanted them to pursue the line of research of their own choosing and one into which they can put their heart and if anyone of them chose to do nothing he was perfectly free frankly to loaf and use up for his personal expenses (the full twenty-five thousand dollars a year and the for thruly to penses.

We told them that we knew that some of them would do just this but we would also know that this would be an exception rather than a rule.

Those who would rather loaf than work we would consider good ridance. At least he doesn't take away laboratory space from others and he doesn't clutter up the scientific magazines with insignificant papers. A man who keeps up a semblance of activity without doing anything really valuable would cost us sixty-five thousand dollars a year but a man who frankly loafs will cost us only his salary i.e. twenty-five thousand dollars a year.

We told them we wanted to remove as much as possible any moral obligation which any of them may feel to produce results and we would much prefer to see them follow up their hunches and have a small chance for a major discovery then to see them go after more modest goals for the sake of greater certainty of obtaining publishable results.

We asked them to think it over and to talk it over with each other. We told them that we hoped by the end of the week most of them would have accepted our offer in principles with the understanding that their acceptance would become official if at least 200 of the AB have accepted in principle.

As you perhaps know, of the 10, 26 accepted. Looking back after these ten years 24 we may see we have every reason to be proud of the record. Of the 24 who accepted, 10, 25 devoted these ten years to the physical sciences and biology. Of the remaining annulus of these fields and 2 are frankly loafing. Of the 25 whose activities remained confined to science, 3 have stayed with us and 5 elected to go to work at other Universities.

The 2 who are frankly loafing cost us only twenty-five thousand dollars a year and we shall continue to pay their salaries for as long as they live. We consider this a small price to pay for having offered addistinguished men an opportunity to follow freely their inclinations.

Of the 2 men who drifted out of science in the narrow sense of the word such have themselves concerned himself with a question which I personnally consider to be important lef me sur a few words allung flips; and urgent for our society.) All of us here in the United States would like to see

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We asked them to think it over and to talk it over with each other. We told them that we hoped by the end of the week most of them would have accepted our offer in principles with the understanding that their acceptance would become official if at least 20 of the 25 have accepted in principle.

As you perhaps know, of the 25, 24 accepted. Looking back after these ten years we may see we have every reason to be proud of the record. Of the 24 who accepted, 20 devoted these ten years to the physical sciences and biology. Of the remaining 4, 2 made valuable contributions to our society outside of these fields and 2 are frankly loafing. Of the 20 whose activities remained confined to science, 15 have stayed with us and 5 elected to go to work at other Universities.

The 2 who are frankly loafing cost us only twenty-five thousand dollars a year and we shall continue to pay their salaties for as long as they live. We consider this a small price to pay for having offered 24 distinguished men an opportunity to follow freely their inclinations.

Of the 2 men who drifted out of stience in the narrow sense of the word each has merely concerned himself with a question which I personnally consider to be important and urgent for our society. All of us here in the United States would like to see

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the undeveloped and over-populated areas of the world which are undergoing social revolution governed as a democracy. But the parliment reform of democracy which proved so successful in England and the United States, doesn't appear to be suitable for these areas of the world where the majority of the population can neither read nor write. What political systems can we devise for men of these areas which with one end satisfy the requirements of freedom, justice and the conscience of those who are governed.

This is a problem to which one of the men who left science as now devoted seven out of the past ten years of his life.

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This was a great day for Colgate University celebrating the opening of the Accelerator Building. It was a great day for its President Frank Manuel. The Accelerator Building housed the great Cosmocyclotron which was built at the cost of three million dollars provided as, you would expect, by the Army and Navy. None of the other smaller comparable in size to Colgate had any Cosmoclytron, least of all the largest of all such machines.

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this sunny day we drove out to the campus of the college which was located twenty miles from the center of the town, to take part in the celebration of the opening of the great Accelerator Building. This building housed the great Cosmocyclotron, the largest Accelerator in the United States built to date. It was built at the cost of three million dollars, which came as you would expect from the Army and Navy.

Two years earlier when the project was first presented by the President of the College to the board of trustees by the young President of the college Frank Manuel, Harris, as well as the other members of the board of trustees, all of whom were solid citizens of the state voiced misgivings about the magnitude of the project.

In favor of the President was the fact that the cost of the building of the form the Army and Navy. In a undertook to Manuel had been able to wangle a contract from the Army and Navy. They undertook to reimburse the University up to tone half million dollars a year to cover the cost of water and electricity which the Cyclotron would consume as soon as it was fully operating. There were no provisions made in this contract for the salary of the scientists who were supposed to operate the giant machine. No scientists of standing could be hired by the college without being given tenure that his college would have to guarantee their salaries until they reach retirement age.

if it were to follow sound business principles to guarantee salaries for such long periods of time.

presidency of the college was his first experience in administration. He was picked by Harris and showed by Marris to other members of the board. Harris took a liking to

than anything else was Manuelis frank admission of the young man that he decided to become an administrator when he realized that he could not have made the grade as a scientist.

From time on for a number of years, Harris and Manuel were very close to each other. But, about six months preceeding the date when Manuel brought his big project before the board of trustees, Harris and Manuel began to take opposite sides on almost The latter port of any issue that came before the board. During those six months it evolved that some six members of the board invariably lined up with the President, when another six back one of supported Harris right or wrong. The four remaining members played politics, throwing the vote sometimes to Harris and sometimes to Manuel without any discernible regard for the merits of the case. Yet, for a while the tone of the meetings remained gentle-(moder) the welds manly and Harris and Manuel kept on addressing each other in a manner which was friendly 1 Lehruge Fred Milles This came to an end when Frank Manuel presented his big proat least on the surface. ject to the board.

If you will read the minutes of that memorable meeting, you will see that when the meeting opened practically all the board members expressed some concern about the financial responsibility that the project would involve for the college Some were more violent in stressing this point of power. A recess was called and when the meeting convened, Manuel gave an important speech in which he stressed the great service that the college would render to pational defense by the embarking of this project. He also expressed his firm conviction that within five years the project would solve the problem of cancer by utilizing the high energy particles produced by the giant machine. Most of the members of the board were well about fifty years of age and knew well enough what Manuel did not fail to stress, that everyone of them had one chance in four to die of cancer will within the next twenty-five years.

Whether it was due to this consideration to Manuel's eloquence or to the drinks had been the board that were served to them during the preceding recess, seement the members of the board began to take a more friendly attitude towards the President's project.

Even so, it was apparent that the President's proposal would be defeated after a vote had been taken at a time when Manuel finished his speech. And it is pretty certain that the project would have been defeated had not Frank Harris arisen at this moment and made a speech.

It seemed likely that the project world down

In this speech he attacked the project with unprecedented violence and ill temper. Even though it seemed to all those present that the project would be defeated if it were put a vote then and there. We to the time when Frank Harris rose to speak ith unprecedented violence and ill temper, he attacked the project. He questioned Manuel's sincerity and accused him of thinking of his own glory only without regard to the welfare of the college and expressed doubt of the soundness of mind of any member of the board who would vote for the project. Immediately afterwards the project was put up flor vote at the motion of the President and was carried by a small majority. It was generally expected that Frank Harris would resign as chairman of the board but he did nothing of the sort. As a matter of fact the relationship between Harris and Manuel began to improve again and pretty soon thereafter they were as close to each other as they had been in the early days. No one could quite understand how this pointed out Hollas happened but there were those who said that Colgate College was now the largest prospective consumer of water and electric power and that Frank Harris owned a majority interest in the water works and the public utility which supplied the town with elecof these Corporately. to them it seemed They said that it was natural to expect the majority stockholder to want tricity. - a collect o to be on good terms with the President of globaparation that is going to be his most important client Subsequent events made of course another interpretation more likely. The celebration was supposed to last all day: The speeches in the morning, a short recess for luncheon and more speeches in the afternoon, up to about five o'clock. There was a cocktail party scheduled at that time in the house of the President to which the board of trustees, a number of distinguished guests and a half dozen members

of the staff of the college had been invited.

The keynote speaker of the day was the President of one of the oldest of our wastern colleges. This college was originally well endowed and one of the best of the mation. But now, as most of the other private colleges, it was short of funds and its President spent most of his time and attention on a fund raising campaign.

The title of the keynote speech was Science and Religion. The speaker started out by quoting what others had said on the subject and he quoted among them, Albert Einstein, who said that "Science without Religion is lame and that Religion without Science is blind." After that he began to talk about God and the free nations. He

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The speech of the president who welcome the guests was not short. He explained, that because the great accelerator is supported by funds from the Army, Navy and the Atomic Energy Commission, only visitors who have clearance from the F. B. I., Naval Intelligence and Army Intelligence could be permitted to enter the interior of the great accelerator building. Because none of the members of the board of trustees had such triple clearance and few of the guests, the college was forced to decide to its regret that no visitors will be allowed in the building. Arrangements have been made for a reception however, on the roof garden which later will serve recreation for the staff when weather permits.

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Praised the virtues of the United States to which he described as a God fearing nation,

He deplored the moral weaknesses of our allies and he condemned as evil, all potential

enemies. The speaker, before he became a university president, had been assistant

Secretary in the State Department and he talked about God as if God were an employee

of the State Department, one we can trust to do his duty. He assured his audience

that members of all Governments, before they make any major political decision, In
wariably pray to God for guidance. He suggested that our scientists would do well to

do likewise before they undertake any important experiment. Harris was a deeply religious man and he intensely disliked listening to a politician forging Gods signature

to his plans but he sat dutifully thru the speech, applauded when it ended, and sat

thru the rest of the speeches, which -- if less obnoxious were no less boring.

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He implied that the policies of the free nations were guided by God and must therefore in the end turn out to be victorious. (to lasking at purpe 3)

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He said that we must uphold academic freedom, but that academic freedom has its limitations and that no matter which he permitted to claim the perfection of academic freedom, if he publicly denied the existence of God and thereby giving aid and comfort to our enemies as well as endangering the good public relations of his university.

another one Cyclotron January 2, 1954. The last speaker was president of one of our eastern universities, spoke about the importance of the study of humanities and our culture. He expressed deep regret that the best men in the division of humanities of his university find it impossible to live on their salaries and have resigned in order to take more lucrative positions. Derlass had unt the Barrol of Thurshees to suggest to them to take examinations as librarians. This he said enabled from the fraud a knypy white will be pradless. of them, giving a 15% salary raise on the new ten million dollar library built in the style of colonial Williamsburg from a fund generously donated the form to the university by John D. Rockefeller, Jr. Whether because he didn't like colonial all smagning menties of the humanities dept Williamsburg or perhaps just because he thought enough was enough, Hatris rose at this as the morans at a XI, paise in subry and Mrs all accepted. point from his seat and speaked out of the hall. He walked thru the back towards the he house house of the president. It was also deserted but drinks and sandwiches were laid out on the terrace all property awaiting the guests arrival. Harris poured himself a drink and looked forward to an hours peace and quiet. He had hardly finished his mymas drink when a young man walked up the steps to the terrace. It was three o'clock young instructor in Physics whom Harris had known from his childhood. He had been obviously invited, not because of his scientific eminence but because his father was a member of the board of trustees. "How do you like the new building?" WIt is ugly "It looks like a tombstone," said Fred enough to look scientific, isn't it?" may be it is a tombstone, of Science." "What of and blumos "What do you mean?" on Cyclotran) anodune of this type in the United States, and is the tenth that has been built in the past five years. After this there is no need for another one, nor could one be manned if it were built. We have now enough such machines in existence to keep possibly all the physicists who will graduate in the next ten years. I will start physicists that quickly become the slaves of these machines. One of them will have a chance to follow up a hunch if it means doing experiments for three and five years and risk failure in return for a chance to find something really important. This machine is here in the tomb stone will probably be in charge of the research committee and all experiments. To run the machine for one day it costs about \$2,000. No committee

Experiments will be scheduled six months or a year in advance. No doubt the machine will be screwed up to yield higher and higher energies. No doubt every time we go to higher energies, some new particle will be discovered. But this is not the kind of physics I like and I am not even sure that this is physics. Moreover—he said, everything done by the machine will be secret. Those who work with it will be anxious to keep their security clearance.

will invest several thousand dollars in a young man's hunch. What experiments should

be done will presumably be decided by majority vote.

Page 2.

"I am playing with the idea to quit physics and to take up Anthropology. I have talked to father about it just yesterday. Next to me find, said Harris, I have known you for a long time. I want you to promise me not to do anything rash. I have known reasonable man, give him a chance to show you what he will do with this tombstone of science Maybe there will be some life upon the tombstone. Give him six months or a year and if you don't like what is going on, then in God's name, go into Anthropology."

pology."

"I used to think he was reasonable said Clark until he embarked on this project of his, but I can't leave here anyway for another year until my girt finishes college."

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eminent scientists to work with the giant machine. But, even though they offered offer high salaries, one/after another was turned down. Then something rather miraculous happened. Frank Manuel invited for over a weekend, twenty-five eminent scientists.

No one knew what he told them, but evidently he offered some sort of package, and twenty-four out of the twenty-five accepted the position. There were, among them, men from Harvard, M. I. T., Princeton, Yale the California I stitute of Technology. We surprising that they were willing to go. One thing was obvious they didn't go there for the sale of Songate College. They went there for the sake of each others company. If there was more to it, no one knew what it was.

For the first five years of its operation not a single paper was published from the tombstone of soience and other universities began to point the singer at this enterprise. It was rumbred that they paid high salaries, \$15,000 a year or more, and boot it turned out that one of the men would spend over a year big game hunting in Africa and another spent nine months writing his memoirs on top a mountain in Switzerland. But, of the thirty members of the staff, dertainly no more than five could be accused during present and work of the forme of loafing. The rest were officially working hard under the tomb stone. Since their work was supposed to be secret, no one could party accesse them for not publishing. anythong in home years In addition to the army, the Mavy and the atomic energy Commission, the National Science Society and the foundation for infantile paralysis supported the work under of tren moderates are paper the tomb stone with large contributions. The first paper that came out concerning the prevention and cure of pheumatic fever and was awarded, a year later, the Nobel a molden proposabler propos price for medicine. Six further Nobel prizes were awarded for work that came out of the tomb stone, in the following four years.

There were many requests from other universities both in the United States and abroad for permission to visit this laboratory but, because of the Security regulations these requests could not be granted.

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Security clearance for four out of these twenty-four men. This could be a very serious problem if it could not be solved. But, after another three months from from some miraculous source all these men received their clearance from all three agencies involved.

Shortly before. Senator Mc Carthy received and honorary degree from the college and spent a few days on the campus. There were rumors that he had a hand in obtaining the clearances and there were those who suspected President Manuel of having indulged in some sort of blackmail or another. There is no reason to believe that any foundation in fact.

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