



Security, secrecy, and conformity may be desirable in certain connections, but do they make a country stronger—or weaker?

THE SOURCES OF NATIONAL STRENGTH

by ROBERT M. HUTCHINS

YOU MAY KNOW that story about Constable, the 18th Century English painter, who left a note on the back step for the milkman which read, "Dear Sir: In future please leave the water and milk in separate containers."

I feel that there is a certain—I won't say incompatibility—but some lack of communication between you and me due to the difference in our education. Nevertheless, it gives me the greatest pleasure to be here tonight; this is the very first alumni I have ever addressed from whom I was not seeking to raise money. In a way, I regret this, because you are the only alumni I have ever addressed who *had* any.

When everything is said and done, though, I do feel at home here—and not merely because we are neighbors. (For four years I have lived four blocks away from the Institute.) It is your athletic record that makes me feel at home. I can only say that if I had had a football team like yours at Chicago I would not have bothered to abolish it.

I don't know that you realize how glad we are that the Institute is in Pasadena. The Institute is the one, and perhaps the only one, of the institutions here with which I am acquainted that has insisted on quality and has maintained the quality on which it has insisted in the last quarter of a century under the greatest possible pressure.

There is another educational institution in the com-

munity. It is now offering—I am happy to tell you—one unit of credit toward the Bachelor's Degree for a course in rest. This gives you some idea why I am glad that Caltech is in Pasadena.

What is going to happen is that we are going to have courses in elementary, intermediate and advanced rest, and then, of course—because all of the courses have to be taught by professors, and these professors have to have a PhD in the subject—we shall shortly have Doctors of Philosophy in Rest.

It is easy to understand why courses in listening are given at this other educational institution, but last week a new course was announced that seriously alarmed me—a course in selling free enterprise, for which (and this is what I object to) only a *half* unit of credit is given. You can get twice as much credit for resting as you can for selling free enterprise.

I am a little confused, I must admit, about the smog matter. I have the impression that half of you are trying to get rid of smog and the other half are making it. That probably accounts for the air of Afghanistanism that one can detect in this gathering. Afghanistanism, as you know, is the practice of referring always to some remote country, place, person or problem when there is something that ought to be taken care of near at home that is very acute. So you say to a professor at Caltech, "What about smog?" and he says, "Have you heard about the crisis in Afghanistan?"

Transcribed from a recording of Dr. Hutchins' talk to the Caltech alumni at the Alumni Seminar dinner in Pasadena, April 16, 1955.

I want you to know that this attitude is not appreciated. The four blocks between here and my house are practically impenetrable, and the half of you who are working to clear the smog up should clear it up, or the other half should stop making it. This takes care of Pasadena; we now pass to California.

I am glad that the California Institute of Technology is in California. This is the land of the oath. If you want anything in California, you have to take an oath before you can get it. This oath specifies that you have not nor have you ever been. I would like to tell you *what* it specifies that you have not nor have you ever been, but that would take too long.

Before you get a driver's license you will have to take an oath which says: I am not nor have I ever been. And if you don't believe that there are laws pending to that effect in Sacramento, you just don't know what is going on in this state.

Security on the campus

This is the land of the California Senate Committee on Un-American Activities, the counsel of which is a man by the name of Combs. Mr. Combs lately testified before the Subcommittee on Security of the U.S. Senate. He testified that he had welded a chain of security officers on 11 campuses in California that are busily engaged in spying on faculty members and students of those institutions. He also announced, to the evident-sympathetic ears of those who were present, that he had arranged a system of clearing faculty members; if you wanted to be a teacher in a California college, you had to clear with him. As a result, one hundred or more—he wasn't quite sure, but he knew it was at least a hundred—had been fired, and a hundred or more had failed of appointment.

Mr. Combs indicated further that he was keeping a careful watch on the curriculums of the higher institutions of learning in this great state. He referred—and his reference seemed to cause obvious alarm among those who were listening—to certain changes which had been effected in the curriculum of a great California university. (Although they had been subterraneously made, they had not escaped his notice.) He said that the title of a course in public speaking at this California university had been changed to "Speech" and that the books had been changed from Kipling, Robert Louis Stevenson and Masefield to John Stuart Mill.

Now the subversive character of these alterations may not be obvious to you, but they were clear to Mr. Combs and to the California Un-American Activities Committee, and also to the Senate committee as well.

We now pass to the Pacific Coast. I am glad that the California Institute of Technology is on the Pacific Coast because Robert Oppenheimer was not competent to lecture on physics at the University of Washington. If Robert Oppenheimer is not competent to lecture on physics at the University of Washington, I don't know who is. Therefore, the faculty of physics—if there is

one at the University of Washington—should be at once disbanded, or it should be announced that the test of competence is no longer applied. The reason that I am glad that the California Institute of Technology is on the Pacific Coast is that the California Institute of Technology applies the test of competence to the members of its staff.

I am also glad that the California Institute of Technology is in the United States because we are in the midst of considerable confusion about the sources of our national strength. The sources of our national strength are supposed to be security, secrecy and conformity. It occurs to me that nobody gets into Caltech unless he has the I.Q. of a genius, and nobody can graduate—well, I don't know *what* he has to have to graduate. He probably has to marry a genius to graduate.

Therefore I am sure that it is clear to you that security, secrecy and conformity may be desirable in certain connections, but they do not and cannot constitute the sources of our national strength. In the first place, these are purely negative ideas. They result from a negative psychological condition. This is the condition of being scared.

Far be it from me, before such a distinguished scientific audience, to try to tell you anything on my own. I will quote to you from scientific authorities; I will quote to you from the Board of Directors of the American Association for the Advancement of Science. To think that this Board was ever able to agree on anything is sensational in itself, but to have them agree on a series of highly controversial subjects shows that they are almost qualified for entrance to, if not graduation from, Caltech.

Security risks and secrets

In the first place, the Board of Directors of the AAAS says, "Everybody is a security risk." It follows that if you take the idea of security to its logical limit, you will never employ anybody. The question, therefore—says the Board of Directors of the AAAS—is not how we can avoid leaks, but how we can best aid national progress. The question is not how we can minimize our losses, but how we can maximize our gains. As to secrecy, the Board of Directors of the AAAS really lets itself go. On this subject the Board says, "There is no such thing as a permanent, scientific secret."

The first question I suppose we should ask is: Has the security system really strengthened the country? It would appear to be that the loss of Robert Oppenheimer and Ed Condon alone would suffice to give the answer. Why should we weaken the country by refusing to employ competent people?

Not long ago I was at dinner with the senior faculty members of the University of Birmingham in England. Across the table sat a professor—he was, of course, a scientist—who was a member of the executive committee of the Communist Party of Great Britain. I inquired

of the vice-chancellor, and of various professional characters in the vicinity, what the effect of having this dangerous Red in their midst was, and, after they had succeeded in identifying him by this description, they said there wasn't any effect at all—that he was a very good scientist. It is, of course, clear to you that no American university—no *great* American university, at least; we can't tell what a poor university would do, but no university that would attract public attention—would employ this man.

I call your attention to the great principle that now guides the actions of our country in these matters. It is the principle of irrelevance. It is not contended any longer that the charges that are made have any bearing on the quality of the work that is done. Even at Harvard they don't say: What was the effect of this man's teaching on the innocent minds of the students? They don't ask whether it had any effect at all. The question at Harvard is not: What is this man teaching? Is he any good at his work? The question at Harvard is: What did he belong to? Did he lie about it? Or did he refuse to answer questions on that subject?

In Los Angeles, New York, Philadelphia, no effort is made to show that the school teacher is bad for the pupils. In cases where such evidence was offered to show that the teacher was *good* for the pupils, it was indignantly rejected as impertinent. When there is no obvious reason for getting rid of a teacher, and the question is, "How can we do it?", the answer is simple. They ask the teacher about her political affiliations. The teacher declines to answer. She is then held to be insubordinate, and she is fired. Surely it cannot be insubordination to refuse to answer illegitimate questions. No question can be legitimate about the activities of the teacher which has no bearing on his or her work.

Textbooks

Let's go back to California for a minute. In this great state there is a textbook commission and it announced the other day that it was sitting on 23 books—just about enough to go around. It has to figure whether these books can be let loose in the school rooms of California, and Dr. C. C. Trillingham, who, in addition to having the honor of being a member of this commission, is distinguished by being the Los Angeles County Superintendent of Schools, made the following statement: "If the author of any one of these books is aligned with the Communists, we don't want his book. We don't want his book even if there is no Red propaganda in it."

In other words, he said: "We are opposed to people who are said to be associated with people who are said to have ideas, even if they themselves have never expressed them."

I have some news for you from Washington. There are several government departments in Washington which have now set up guidance clinics for their employees. These guidance clinics tell you how *not* to look

like a security risk. (This is no laughing matter; this is serious.) Of course, there is no difference between looking like a security risk and *being* a security risk, so really what they are trying to tell you is how not to *be* a security risk.

How about the Bill of Rights—and the 6th Amendment? The 6th Amendment provides that the defendant in a criminal case shall be informed of the nature and cause of the accusation against him, shall be confronted with the witnesses against him, have compulsory process for obtaining witnesses in his favor, and have the assistance of counsel. But in a security case, a man's career may be sacrificed to rumor.

The 5th Amendment

Or take the 5th Amendment. The 5th Amendment, as everybody knows, provides that, in any criminal case, the defendant cannot be compelled to be a witness against himself, and the courts extend this to Congressional investigations. All over the country, if a man invokes the 5th Amendment, this is taken to be a confession of guilt. Actually, the 5th Amendment is nothing but the extension of the presumption of innocence. Why should a man convict himself out of his own mouth instead of compelling the prosecution to establish the charges that are brought against him? All that the 5th Amendment means is, "Prove it."

Now we come to secrecy. Secrecy brings us to the nature of education and research. There used to be a saying in Chicago—where everybody talks wildly—that the atomic bomb would not have been built if the secrecy regulations had been literally observed. And the reason, of course, is that even when you are making an atomic bomb, you have to talk to somebody about it, or you won't make any headway. Learning proceeds by discussion, and discovery takes place as a result of discussion. Except under unusual circumstances, secrecy can do nothing but thwart the scientific progress of the country that insists on it.

Now, since learning proceeds by discussion, it is important to present different points of view on important subjects. The great educational crime is indoctrination. This is why I object to the half unit of credit for being sold the free enterprise system. It is not the object of education to sell anybody *anything*—certainly not the slogans of the National Association of Manufacturers, or Americans for Democratic Action, or the Republican or the Democratic Party. The aim of education is to learn for yourself, and the claim of academic freedom is based on the necessity that the teacher feel free to discuss all points of view, or education cannot take place.

I think that in this part of the world particularly, a misconception of education is rampant. I sometimes think that our fundamental trouble in California is our conception of what the university professor is. I think the general conception is that the teacher of today is the nursemaid of yesterday. You know—our children

become a nuisance around the house at about the age of six; it is not proper for us to allow them to go to work until they are about 22; so what are we going to do with them in the meantime? The Civilian Conservation Corps has been abolished—and anyway, that was a Roosevelt idea. Fortunately, there is the educational system. This is the answer to all our problems! We will put our children in the educational system and we will keep them there until the age of 22.

You may say: What are they going to do there? But what difference does that make? It will keep them out of trouble. You know—they will get to know people—to know one another—and you might teach them a few vocational ideas—but the main thing is that they will be relatively harmlessly occupied during a period when we do not know how to cope with them.

Education—or accommodation

This, of course, is not a system of education; this is a system of accommodation. And the role of a teacher in this system of accommodation is clear. The teacher is in a position analogous to that—let us say—of baby sitter. You might call the university professor, then, an adolescent sitter.

Now, this conception of education is, I am sure, quite foreign, and I hope quite shocking to you. After all, you went to Caltech. But I assure you that this system exists potentially in many places, and it exists actually in some. The aim of this educational system is not to educate, but to accommodate. The effects upon the status and the function of the professor, the effects upon academic freedom, are immediately clear.

For example, not long ago I met a very distinguished physician; it was during the fight about the loyalty oath at the University of California. He was from Los Angeles; I was from San Marino. We immediately got into an argument about the loyalty oath in California. He said to me, "Mr. Hutchins, if we are going to hire these people"—referring to the faculty of the University of California, which is almost as studded with Nobel prize winners as that of Caltech—"If we are going to hire these people to look after our children, we are entitled to know what their political opinions are."

This is adolescent sitting. If we are going to hire these people to sit with our children, we are entitled to know what their opinions are. Well, I suppose we are. Far be it from me to deny a mother the right to cross-examine a baby sitter about her political opinions. But this is not my conception of what a university professor is. My conception of a professor at a university is that he is engaged in independent thought and criticism, and that his role in education is to help young people to think for themselves.

Think for a moment of what is going on. The other

day a judge went to conduct a seminar in a law school. The judge said, "Now, that we are all here together in the privacy of these four walls, we can discuss the administration of justice in Washington as it is at present, and I want to be sure that every one of you speaks up and expresses himself candidly. Let us pull no punches; let us really get down to business here and let us see if we can understand—"

"Just a minute, just a minute," said a boy sitting on the back seat. "Not a bit of it, your honor," he said. "You're not going to catch me that way," he said. "I am not going to express my opinions fully and frankly in this class. How do I know who is sitting here and what effect it might have on my career?"

At the YWCA at UCLA for many years legal groups of all kinds have traditionally held their meetings. But it is observed over there now that students do not attend the meetings of unpopular groups, and under cross-examination it develops that the reason they don't is that they believe that somebody will mark them down, and they may be marked for life.

It would appear, then, that if we take discussion, argument, and the expression of different points of view as the only way of learning anything—the only way of making any progress in science—security and secrecy and conformity have the effect of actually weakening the country.

As for security, laws that forbid espionage and sabotage would appear sufficient. As to secrecy, you can find no place for it in a country that wants to make scientific progress. Conformity is in the last degree undemocratic and un-American.

The true sources of strength

The strength of a country depends on the character and intelligence of its people, and it is to these ends—the character and intelligence of the people—that the educational system is directed. To the strength of a country, scientific skill and technical knowledge are indispensable, but as you will see, they are not enough. Neither science nor technology can tell us how to use the power that they give us. It is through the other 25 percent that you learn at Caltech—the other 25 percent of the curriculum—that you learn, if you can, how to control and use the power that technology gives us. It is through the extra-curriculum activities that Hallett Smith has built up around the other 75 percent of the curriculum that you come to understand the role of science and technology in society.

It is through reflection—through what we have to call the humanities and social sciences, as the engineer and scientist see them, that you become at last more than scientists and engineers, that you become what you *have* become—citizens and men.