## THE PROFESSOR AND HIS PUBLIC

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THE NATIONAL WELFARE REQUIRES THAT SCIENTISTS BE SUFFICIENTLY WELL REGARDED TO EXERT THEIR PROPER INFLUENCE UPON THOSE ASPECTS OF PUBLIC POLICY IN WHICH THEY ARE EXPERT

The public relations of a college or university are commonly regarded as one of the major responsibilities of its president. Only if they are reasonably good can he hope to obtain from denors or legislators the stream of funds necessary to keep it going. Its reputation is further guarded by its vicariously "athletic alumni," who compete with the alumni of rival institutions for high school athletes and see to it that the football coach is fired if his team loses too many games. Students seldom seem to have any particular effect upon public relations, either for good or for ill, because the young people of all institutions are pretty much alike, and attract critical attention only occasionally, as when the adolescent male, stimulated, in the spring of the year, by his hormones, seeks such satisfaction as he can find in the possession of a piece of some girl's underwear. I suppose we should not be too censorious toward such self-expression, because it does not seem to be inconsistent with certain principles of contemporary education.

But it is not the president, the alumni, nor the students who, so far as I have been able to observe, chiefly determine the public relations of the institution; it is its faculty. Their minds, characters, and performances are subject to the inspection of students and public, quick to see any faults which reduce a professor to the size of an ordinary mortal.

Now most professors are able to see a relation between public opinion and faculty salaries, and there are few who disregard it for the sheer joy of thumbing their noses at society. We prefer an occasional raise in salary, and, also, we like to be well thought of. But there is another, more important reason for him to strive for good public relations. He has an indispensable service to render to the public, which is to push back the bounds of ignorance, superstition, and prejudice that circumscribe mankind; to lead in the search for truth; to test all ideas and discoveries by the severe standards of mature scholarship; to pass on through his students to society at large not only his findings but also his critical and analytical methods.

This is a vital service, because mankind, even in this relatively enlightened and civilized age, is but slightly touched by science. "Science fiction" is read more avidly than science facts. Pseudoscientific terms and jargon are used in advertising, when, one would think, the true facts could serve quite as well. Now the brand of scap or toothpaste one uses is hardly a matter of crucial imprtance, but gullibility is, and people who buy a patent medicine on the testimony of a user inspired by its alcohol content cannot be counted upon to analyze critically the assertions of partisan politicians, economic evangelists, or pacifists of the Soviet brand. The attitude of mind that is responsible for our achievements in science and engineering could save mankind from countless mistakes if it were more widely applied.

The national welfare requires also that scientists be sufficiently well regarded to exert their proper influence upon those aspects of public policy in which they are expert. But it is all too evident that academic men do not command any such attention. The public attitude is illustrated by the uncomplimentary connotation of the term, "the academic mind." Few scientists and engineers are elected or appointed to office on the level of policy making. Our national government is dominated by lawyers comparatively ignorant of science and technology.

I suggest three general means are available to professors for improving the public relations of universities. I include nothing in the nature of mere propaganda. The real truth about professors cannot be concealed as easily as it can in the case of detorgents and toothpastes. We must rely strictly upon whatever merits we actually possess.

#### Begin in the Classroom

The first is for the professor to gain the respect of his immediate public, the thousands of students who, during the course of his career, attend his classes. One has only to recall his own student days, or consult his own children during theirs, to realize that teachers who win great respect are in the minority. The majority make no strong impression, one way or the other. But each of us can recall a few who were excellent, and others who were deadly dull, or incompetent, or pedantic, or inaudible or illegible. The public relations of a university are not helped by a professor who goes to class unprepared; or who does not take the trouble to fill the room with his voice; or whose lectures do nothing for his students that another man's book would not do better; or who has so little enthusiasm for his subject that it could not possibly be contagious. The acid test is to be found in the mature judgment of graduates as they lock back and reappraise their undergraduate reactions, asking themselves, "What influence did that man have upon my mind and character?" There can be no more effective basis for good public relations than a favorable answer to this question.

Secondly, the public should be given a clearer idea of the way in which the scholar goes about his work. Publicity should not be limited to mere statement of end results, the things and gadgets, the "better living through chemistry." The possibility of wiser living by aid of scientific thinking should be suggested. We should tell the stories of discovery. The chemist should not be represented as a sort of wizard, who makes plastics, vitamins, pesticides, cosmetics, and perfumes with sex appeal, but as a regular fellow who has fruitful ways of working which others might profitably copy. We often read that "science" has discovered this or that, although, actually the discovery was made not by "science," but by a scientist. It is elementary journalism that people want, not just the end result, but the story, with its human interest. There is no drama in a picture of the South Pole, but there is drama in the struggles of Shackelton and Ammundsen to reach it.

I tried out this theory not long ago, with encouraging results, in my only experience as a televisor. I was asked to perform on the program "Science in Action," managed by the California Academy of Sciences. I chose "The Story of Helium," which begins with the discovery of a new element, by Lockyer, in the sun, the last place a practically minded man would look in order to discover a profitable mine. The story developed through its discovery upon the earth, its use in attaining low temperatures, its identification as the first element to realize the dream of the alchemists, its eventual applications in balloons and deep diving. We had motion pictures of the corona, and of the burning Zeppelin, Geissler tubes and spectral charts. I blew soap bubbles with breath with hydrogen, and with helium. I squirted sodawater into a glass and described the effect of bubbles of nitrogen formed in the body if a diver ascends too rapidly. I told how I came to hit upon the substitution of helium for nitrogen to create an artificail "air" for divers. We had navy divers with a helium suit; and we barked with helium in our mouths. I stressed my moral that this all stemmed from pure, unpractical, scientific curiousity. The next day I learned that the children in at least one family had turned me on in preference to "Cisco Kid," (some compliment:) and in the market where I shop every clerk called out on catching sight of me, "O, Prof. Hildebrand, I saw you last night on television!" One of them was simply overwhelmed, he said, "Well, Frof. Hildebrand, I know your name, but I didn't know what a famous man you are, gosh!" The point was that the whole story was one of men at work, using their knowledge, their common sense, and appropriate instruments, but no magic wands.

## In or Out of the Classroom

My third point is that a professor suffers in public esteem if he fails to display in his nonprofessional activities the same sense of moral and intellectual responsibliity that he exercises in his professional work. He is subject to temptations to forget this obligation. One of these is to endorse a campaign or to join an organization with whose stated aims he is in sympathy but without making the investigation necessary to ascertain whether the noble objective is not mere bait for suckers. Any man of ordinary intelligence should have become alorted by now to the doublebarreled objective, such as the "League against War and Fascism," or a meeting for "Peace," but strictly on Soviet terms. I quote on this subject some words of my once close associate, Prof. William Y. Elliott, of Harvard University. "When academic people sign irresponsibly and without inquiry manifestos, one after another, (issued) by organizations that they don't know the slightest thing about--is that really responsible action for people who enjoy the prerogatives that we do?" That sort of conduct implies a degree of irresponsibility or gullibility sufficient to raise a doubt about the supposed superiority of the academic mind.

#### Stay Within Bounds

Another temptation to which a professor is subject is to allow his sense of authority to overflow the bounds of his specialty. We have all known of scientists who do not hesitate to make confident pronouncements on such complex matters as economics, religion, or statecraft. Scholars whose habit of mind is primarily deductive seem particularly subject to this temptation. They have richly imaginative minds, and are able to set up brilliant hypotheses, which, however, they leave to more plodding, inductively minded experimentalists to test. If a man can set up a brilliant, plausible hypothesis about, say, cosmic rays, why not also one about how Stalin would behave if we would only say the right things to him? What they overlook is that Stalin is far more complex and unpredictable than a cosmic ray. If predictions about a cosmic ray can be wrong--they have been -- the chance is slim that Stalin's behavior can be predicted by deduction from any simple hypothesis, however plausible it may seem to one who has had comparatively little experience with human beings. Royce Bryer, of the editorial staff of the San Francisco Chronicle, in commenting upon a pronouncement by a certain scientist on a matter of statecraft, wrote, "Now without derogation it may be suggested that physicists are not experts in politics, which, shall we say, is the study of mass human behavior. If you want a high-level expert there you should seek such a one as Abraham Lincoln, who wouldn't understand what Dr. Einstein is talking about, but knew what to expect of people under stress." Mr. Bryer then proceeded to tear apart the political program advocated by the physicist.

In uttering this caution against speaking in a tone of professorial authority concerning subjects upon which one is no authority, I am not criticizing the advocacy of opinions upon any subjects of public interest, but only insisting that in such cases the scholar should climb down from the professorial rostrum, and not talk as if his knowledge about molecules made him a better judge of candidates.

The case was well stated by A. V. Hill, of Cambridge University, Bull. Atomic Scientists, page 371, 1951, in part, as follows:

I do not believe that there is such a thing as "the scientific mind." Most scientists are quite ordinary folk, with ordinary human virtues, weaknesses, and emotions. A few of the most eminent ones indeed are people of superlative general ability, who could have done many things well; a few are freaks, with a freakish capacity and intuition in their special fields, but an extreme naivete in general affairs. . . The great majority of scientists are between these groups, with much the same distribution of moral and intellectual characteristics as other educated people. By and in their scientific work they have developed the habit of critical

examination, but this does not save them from wishful thinking in ordinary affairs, or sometimes from misrepresentation (even occasionally from treachery and falsehood) when their emotions or political prepossessions are strongly enough involved. . . . I would urge that scientific people do not get an exaggerated idea of their importance or of their moral superiority, but regard themselves as citizens who have the same moral obligations of honesty, kindness, courage, and tolerance as others. They have no more right to insulate themselves from the common affairs of life, or the common obligations of citizenship, than have other people. If they have political aspirations, or a mission to improve mankind, let them follow these as citizens, not claiming scientific fame or notoriety as justification for public pronouncements on unrelated matters. The integrity and prestige of science are common property and must not be exploited for selfish ends. And scientists should be implored to remember that, however accurate their scientific facts, their moral judgments may conceivably be wrong.

It is quite proper, of course, for any citizen to advocate any worthy cause that appeals to him, or to work for the election of the candidate whom he regards as best qualified, but a "chemists' committee for the re-election of Sen. Doakes" would be quite another thing. What qualifications have chemists as such to advise other citizens regarding the competence of the senator? No one except the members of the committee of chemists themselves would be under any such delusion. During the last presidential campaign, I received some printed advice over the names of a selfconstituted committee of scientists as to the candidate best qualified to go to Moscow and bring back peace. My reaction was, "Who are you to be telling me?"

# A Chemistry Professor Is Not Expected to Lecture on Theology

In the foregoing, I have talked about letting one's sense of professional authority get out of bounds. A related error is the reverse of this, namely, to bring within professional bounds matters which do not belong there. A professor of chemistry is not expected to lecture to his class on economics or theology. The members of a scientific advisory committee to a branch of the government are not acting properly if they let their technical advice be clouded by their individual political or social theories. They were not appointed as experts in those fields. This is a subtle temptation and anyone can easily yield to it if he is not on guard.

But this vory doctrine of separation brings another temptation, namely, to believe that a professor should be judged only on the basis of his competence as a scholar and classroom teacher of his specialty, and that outside the classroom he is free to do or say anything or to take part in any movement that is not actually illegal. According to this doctrine, a teacher of mathematics should suffer no loss of academic respectability if he should become, say, an editor of a journal of astrology, or a member of the Ku Klux Klan, or even a member of a world-wide movement devoted to the destruction of all intellectual, economic, and political freedom. That was essentially the position taken in 1947 by "Committee A" of the American Association of University Professors, when it announced, "However subversive international communism may be, and however subversive the leaders of the Communist party in the United States may be, it does not follow that all those who join or support the Communist party do so with subversive intent or that as individuals they are subversive." In other words, one must not conclude that the man is a knave, he may be merely a fool! But is that all right for a professor? It is equivalent to saying that one cannot know whether a man who joins and supports the Ku Klux Klan approves of its cowardly acts of terrorism. The committee objected to what is called "guilt by association," but it failed to distinguish between two very different kinds, the one, imputed to a man on the ground that an organization to which he once belonged has become secretly infiltrated by a Communist, the other, an association deliberately entered into by the man himself in the face of the full knowledge now available of what the Communist conspiracy has done, wherever it has gained power, to every kind of freedom, including

academic freedom. Committee A was silent regarding the responsibilities of the professor, with the result, I think, of causing great harm to the cause of true academic freedom. The public will not accept the claim that "academic freedom" exempts a man from responsibility to be a decent citizen, or that it confers a peculiar right to support an organization subservient to an unfriendly foreign power.

I am not condoning the irresponsible branding of teachers as subversive, or the imposition of special loyalty eaths, or the unfair treatment of men who are independent, but not disloyal. I have vigorously defended colleagues so attacked, even to the extent of bringing down a torrent of abuse upon my own head. But academic men would be far less subject to such attacks if the public were to hear from them less about their rights and more about their responsibilities. The best way to maintain essential rights is not go go about asserting them at every opportunity, but to exercise them quietly, responsibly, and with polite regard for the views, feelings, and even the prejudices of others. A man riding on the back platform of a streetcar asked the conductor if he could smoke; the latter answered, "Now that you have asked me, you can't."

The American Association of University Professors would do well, I am sure, to abandon the position taken by the "Committee A" of 1947, a position which, incidentally, was overwhelmingly repudiated by the Academic Sonate of the University of California, and to substitute the principle stated by its distinguished founder, Prof. A. O. Lovejoy, (American Scholar, page 332, 1949), in part as follows:

It will perhaps be objected that the exclusion of Communist teachers would itself be a restriction upon freedom of opinion and of teaching--viz., of the opinion and teaching that intellectual freedom should be abolished in and outside of universities; and that it is self-contradictory to argue for the restriction of freedom in the name of freedom. The objection has a specious air of logicality, but it is in fact an absurdity. The believer in the indispensability of freedom, whether academic or political, is not thereby committed to the conclusion that it is his duty to facilitate its destruction, by placing its enemies in strategic positions of power, prestige, or influence. Those enemies often argue in just this fashion: we (they sometimes are frank enough to tell us) will--if or insofar as we have the power-- put an end to the freedom in which you believe; and you, just because you believe in it, can in consistency do nothing (except talk, so long as you are allowed to talk) to stop us.

But the conception of freedom is not one which implies the legitimacy and inevitability of its own suizide. It is, on the contrary, a conception which, so to say, defines the limit of its own applicability; what it implies is that there is one kind of freedom which is inadmissible--the freedom to destroy freedom. The defender of liberty of thought and speech is not morally bound to enter the fight with both hands tied behind his back. And those who would deny such freedom to others, if they could, have no moral or logical basis for the claim to enjoy the freedom which they would deny.

Professor Lovejcy does not, of course, approve of the summary dismissal of a man without a trial. He would ask the following questions:

(1) Are you aware that the political program of the Communist Party is the setting-up of a one-party dictatorship, and that, wherever it has attained power, it has established such a dictatorship, in which both academic and political freedom are suppressed? (2) Do you reject this program and will you publicly declare that you reject it? (3) Do you also reject the teaching of Lenin (still to be found in current party publications) that a party member should, when it will serve the interest of the movement, resort to "any ruse, cunning, unlawful method, evasion, and concealment of the truth"? (4) If you reject these features of Communist doctrine and

practice, are you willing to give proof that you do so by resigning from the party?"

# Difficult to Get the Truth

These are fair questions to ask a professor who is known to be a member of the Communist party. But the problem does not end there, because it is nearly impossible to find out whether a suspect is actually a member, or even a sympathizer, of that tight organization, and we must protect each other against the attacks of those self-appointed watch-dogs of patriotism now abroad in the land who irresponsibly pin red labels on anyone whom they wish to destroy. They attack persons whose only offense is intellectual independence, the very antithesis of the complete subservience to dogma and disciplino required by the Communists. But it is vitally important to differentiate between these two extreme types of academic men. and the only persons competent to do it are the members of the academic profession themselves, who can base their judgment, not upon doubtful evidence of party membership, but upon scholarship, character, and devotion to the high ideals of the profession. We surely have a right to expect a professor to be not only a competent specialist but also to share in the "hostility to every form of tyranny over the mind of man" voiced by Thomas Jefferson, and that should include a willingness to recognize such tyranny whether it be nazi, fascist, communist, or any other. This is our responsibility. It is not a pleasant task. One would prefer to escape it, asking "Am I my brother's keeper?" But if it is left to outsiders the distinction is not likely to be made and those independent critics of social institutions among us who are one of the glories of a true university could be silenced. Our most effective way of dealing with men who swallow dogma of any sort is not through purges or trials, but by a most careful and critical scrutiny of their qualifications at the various stages of promotion, and by the effect of professional othical standards which bring down the contempt of his colleagues upon anyone who does not measure up to his responsibilities as a scholar and as a citizen. For controlling conduct, mores are more potent than laws.

The unjust suspicion so often directed against good men, in these times of political and international tension, is a cause for grave concern, and all our wisdom is needed to counteract it. One's impulse is to become indignant and to give an irresponsible accuser "a piece of one's mind." But this may sometimes deserve the comment uttered by a man who was watching a bull butting away at a stump; "I admire your courage but damn your judgment." I have occasionally felt this way about the performance of a professor. The now famous controversy over loyalty oath and tenure at the University of California began in a certain atmosphere of reasonableness on both sides, and could have been resolved, had calmness, patience, and effort at mutual understanding been permitted to operate. But this was not to be. Under the stress of emotion, the Academic Senate scon ceased to be a dignified, deliberative body, and took on the aspect of a political party convention, with booing of opponents and applause timed to outdo that of the other side. Regent meetings became just as emotional and bitter. On the eve of a critical conference between committees of Regents and Senate, a young faculty orator presented at a meeting of the Senate a resolution lecturing the Regents on their duties. It was voted down, but its supporters waited till 7:00 P.M., when most of the faculty had gone home to dinner, reintroduced it with minor changes, and secured its passage. As anyone experienced in human relations could have anticipated, the atmosphere at the ensuing Regent-Faculty conference was not conducive to accord. That way of preparing an adversary to agree with you is an example of the "extreme naiveté" in human relations exhibited by some academic men. referred to by Prof. Hill., Whenever a man feels the urge to give someone "a piece of his mind," as we all occasionally do, he might be wise to get his speech out of his system in private, before a mirror, with full gesticulations, and then soberly ask himself, "what am I really trying to accomplish, and is this the way to do it?" Failure of many parties, on both sides of our controversy, to take such a sober view, plunged us into an emotional debauch from which our great institution has but slowly and painfully omergod. The good cause of the faculty was damaged by the fact that

some of its members furnished part of the very material which could be used against it. It is to be hoped that other faculties will profit by our experience.

I have presented several means available to academic men for promoting good public relations. But I wish to make it clear that I present these not as means to an end, but as worthy ends in themselves, principles of good conduct which belong in the ethics of our profession. My father was fond of a saying that "Happiness is a shy little nymph; pursue her and she flees from you, but do your duty and she comes to you." I believe that wise men have found this to be true, and not only with respect to happiness but even more with respect to the confidence and esteem of others.