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letters

deal with acts of violence has now grown to a majority of all schools. Violence occurs now in every kind of school, not just slum schools. On the other hand, the "extensive security force" referred to is usually found only in the slum schools. In most schools the security force consists of an assistant principal occasionally walking the halls or at best a full-time but largely untrained hall monitor.

Another thing Feldman neglected to mention is that due to the relatively low enrollment in physics, even in some of the largest schools the physics teacher will be asked to teach other subjects to fill out the schedule. Usually the other subject will be mathematics, chemistry or physical science. However, I taught more biology than physics during my high-school career, and one of my associates was responsible for journalism and agriculture courses in addition to physics and chemistry.

The greatest wrong impression was the statement that a teacher's day was 6 hours 20 minutes and included five 40-minute class periods. Forty-minute classes are the exception; the typical teacher will spend a far greater proportion of the school day in the classroom than the slightly over 50% that Feldman implied. Six hours and 40 minutes may be close to the average mandated day, the time the teacher is required to be in the school building. However, nearly all the time spent in preparing classes, correcting papers and providing extra assistance to students has to fall outside the mandated day, which is almost entirely taken up with classroom and other duties. A dedicated teacher can easily put in 60-hour-plus weeks. Even undedicated teachers, who unfortunately are increasing in number, will generally have to put in 40- to 50-hour weeks just to survive. A college professor can get by without putting any effort into his teaching as long as his research is good—the quality of teaching at most prestigious universities proves this. In the public schools, however, where research, if it exists at all, is usually viewed as only an interesting hobby, the teacher must provide at least minimal quality teaching, and this requires time. Any teacher who works only the mandated day won't last long. If the students don't run him or her out, the parents and principal will.

So I would advise any university physicist considering high-school teaching to study the situation far more deeply than Feldman's comment. Otherwise the physicist will be in for a very rude awakening, probably as early as the first day of school or perhaps even while looking for a high-school job. Many systems will not even seriously consider refugees from the university ranks. Their academic background is so advanced in their specialty that they have little concept of what can

be given on a high-school level. At the same time this specialty is usually so limited that they may be unqualified in some areas of physics, let alone other subjects they might be assigned. They are also almost totally untrained and inexperienced in dealing with unruly, unmotivated students. They come with university-bred ideas about academic freedom and the lack of value of quality teaching and, worst of all, they cost more than the beginning teacher with an undergraduate teaching degree. These are formidable handicaps in getting a job in most schools.

ROGER L. BURKHART

Gaithersburg, Maryland

2/8/80

THE AUTHOR COMMENTS: I would like to reply to several of Roger Burkhardt's remarks:

▶ Violence is still uncommon in most schools.

▶ Extensive time and efforts for new high-school teachers is indeed required. With experience the amount of preparation time is reduced.

▶ Currently most high-school and college teachers give mainly introductory courses, and both do little research that sees print. The quality of teaching is an input in almost all tenure decisions on all levels—except perhaps in graduate schools.

▶ PhD's do command a small salary differential. The majority of the better school systems are willing to pay that premium because it is a small percentage of the total school budget and a large prestige item to the school system.

ROBERT E. FELDMAN

2/25/80

Flushing, N.Y.

Einstein and McCarthy

In his Guest Comment (December, page 9) Lawrence Cranberg discusses aspects of Albert Einstein's involvement in the investigations of the McCarthy era. Several persons besides William Frauenglass, whom Cranberg mentions, communicated with Einstein about their appearances before investigating committees. Some of the exchanges were quite dramatic.

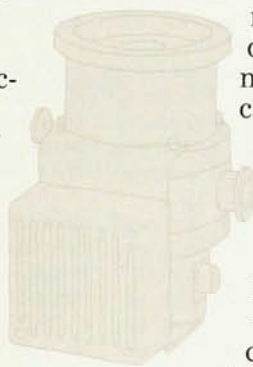
The following notable testimony demonstrates the impact of Einstein's views. On 16 December 1953 Albert Shadowitz appeared before the United States Senate Permanent Subcommittee on Investigations of the Committee on Government Operations. The hearing dealt with the subject of subversion and espionage in the Army Signal Corps. The chairman of the subcommittee, Senator Joseph R. McCarthy, presided. The following excerpts are from the dialogue between McCarthy and Shadowitz whose testimony was given under oath.

"The Chairman. . . were you a member of the Communist Party?"

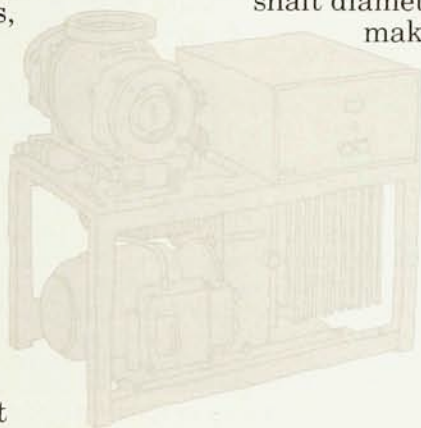
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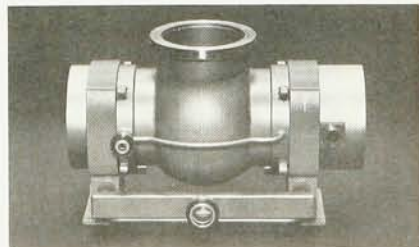
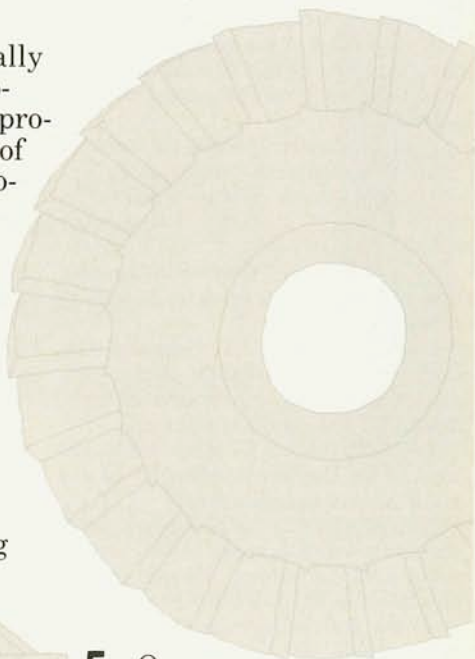
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"Mr. Shadowitz. In answer to this question, I am going to follow completely the course of action advised by Dr. Albert Einstein, both to every one in general and by personal consultation to me in particular. I refuse to answer this question because it is in violation of the first amendment. I will refuse to answer any question which invades my rights to think as I please or which violates my guarantees of free speech and association. In addition, I specifically wish to object to the jurisdiction of the committee and to deny the right of this committee to ask any questions of me concerning political association."

"The Chairman. You are not invoking the fifth amendment, I understand."

"Mr. Shadowitz. I refuse to answer ... on the basis ... of the first amendment."

"The Chairman. Who other than your lawyer advised you on how to answer questions?"

"Mr. Shadowitz. I discussed this matter personally with Dr. Albert Einstein at Princeton, and he advised me to do exactly as I am doing right now."

"The Chairman. In other words, you went to Dr. Einstein and he advised you not to answer the questions?"

"Mr. Shadowitz. He advised me not to cooperate with this or any other committee of a similar nature. He said that on any question involving my personal beliefs, my policies, my associations with other people, my reading, my writing, I should refuse to answer on the basis that it is a violation of the first amendment, that I should not invoke the fifth amendment, that on questions involving espionage I should refuse to answer this committee on the grounds that they do not have the jurisdiction to ask these questions of me, but should then voluntarily on my own make a statement concerning the very questions asked, and this is the plan I propose to follow."

"Mr. Chairman. You mean Dr. Einstein advised you not to tell whether you were a Communist or not when you were working on classified work; is that correct?"

"Mr. Shadowitz. ... Dr. Einstein did not ask me whether I am a Communist, did not ask me whether I was a spy. All he knew was that I had been subpoenaed by this committee."

"The Chairman. Well, I am just trying to find out who gave you this advice. Is it correct that Dr. Einstein advised you not to tell the committee whether or not you were a Communist when you were working on classified Government work?"

"Mr. Shadowitz. Not in so many words. He told me more or less about as I have indicated in my previous statement."

"The Chairman. I would suggest that

if you do not want to spend considerable time in jail, that you advise with your lawyer rather than Mr. Einstein. But you have a perfect right to advise with whoever you want to."

"Mr. Shadowitz. I have secured what I believe to be competent legal advice. I feel perfectly secure."

"The Chairman. One of the things that you Communists are doing which is a great favor to this country, you will remove yourselves from circulation by convictions for contempt of the committee, and I have no objection at all to your walking straight into the door of a jail if you want to do it."

"Mr. Shadowitz. Undoubtedly, Senator, you are a smarter man than I am, but I still insist that I have the right to get my legal advice and my commonsense from whatever source I see fit, and I choose to seek mine from people other than you."

"The Chairman. In other words, you never discussed any classified material with Hyman; is that correct?"

"Mr. Shadowitz. ... after personal consultation with Dr. Albert Einstein, and with his full agreement and approval, I wish to object specifically to the jurisdiction of the committee and to deny the right of this committee to ask any questions of me concerning espionage. I, nevertheless, voluntarily state that I have never engaged in espionage, that I have no personal knowledge of anyone else having engaged in espionage, and that I have no information whatsoever on this subject for the committee. This answer is given without in any respect waiving my objections to the jurisdiction of the committee."

"The Chairman. ... were you accused ... because of your Communist activities?"

"Mr. Shadowitz. I refuse to answer that question on the basis that it is a violation of my rights under the first amendment."

"The Chairman. ... your case will be first submitted to the full Committee on Government Operations and then to the Senate, with a request that you be recommended for contempt. I assume the Senate will go along with that, and at which time your cases will be submitted to a grand jury."

Einstein was apparently content with this testimony, because he wrote Shadowitz about one month later to the effect that he believed that the latter was "acting very efficiently, not only for yourself but also for the public interest." Einstein went on to stress that he wanted "strictly to avoid ... the impression that I am functioning as a kind of political organizer. It has to be clear that I am restricting myself to having publicly and clearly stated my conviction." Shadowitz responded, "... I not only understand you completely, but I am also in agreement with you. You have my word that

I will not involve you in my case in any way in the future ..."

Einstein's "plumber" statement, quoted by Cranberg, was part of a letter to the editor of *The Reporter* magazine in October 1954. It began with, "You have asked me what I thought about your articles concerning the situation of the scientists in America. Instead of trying to analyze the problem, I may express my feelings in a short remark: If I would be a young man again, ..."

The letter to Taub from Einstein clarifies the meaning of this statement to some extent. Three additional short communications to correspondents may offer further insight into Einstein's intent and feelings.

15 November 1954: "My love and respect for science have not diminished a bit. My intention was only to remind the people to defend their political rights and the Constitution."

15 November 1954: "I thank you sincerely and joyfully for your excellent letter. It is the most enlightened one I have received so far on the occasion of this, my little escapade."

26 March 1955: "what I wanted to say is this: Under the prevailing circumstances, I would not like to have to earn my living in a profession where my constitutional rights as a citizen are not being respected."

The range and depth of Einstein's feelings and beliefs are evident in these poignant remarks.

[I am grateful to Otto Nathan, Trustee of the Estate of Albert Einstein, for permission to have access to the nonscientific papers and correspondence of Albert Einstein. Nathan has read my draft manuscript and has written me that he believes that the explanation given on pages 613 and 614 of *Einstein on Peace*, edited by O. Nathan and H. Norden (Schocken Books, New York, 1968), "is a valid interpretation of Einstein's letter" to the editor of *The Reporter*. I am grateful to Nathan for this communication.]

KENNETH FOX

The University of Tennessee
Knoxville, Tennessee

2/19/80

Corrections

March 1980, page 160—in the editorial by Herman Feshbach, four lines from the end of the first column the words "effective gesture" should read "ineffective gesture."

March 1980, page 53—David L. Dexter joined the University of Rochester in 1952, not 1958, and he received his PhD from the University of Wisconsin, not Michigan State University. □