

Letters

Help from Hibbs

South Pasadena

I am a Caltech fan, a member of the Associates, and a devoted reader of *Engineering and Science*. Your magazine does more for me than any other periodical.

I was especially pleased that you published Dr. Hibbs's recent article on freedom of expression. It is my impression that a great many people have serious doubts about the theory of racial equality although they may be reticent about expressing them. At present the case for the equality theory appears to be based more on policy than on knowledge.

Perhaps Dr. Hibbs's article may be helpful in hastening the time when a strongly based effort will be made to ascertain the facts. The potential long-range benefits of an early, correct understanding seem overwhelming.

VERNON BARRETT

Scientists' Contribution

Pasadena

I rather enjoyed Albert Hibbs's piece on "Inquisition, Repression, and Ridicule." I cannot help but wonder to what extent scientists may contribute to this problem.

I first became aware of this problem, as I subscribe to a couple of military publications that carry technical and historical material; a friend of mine expressed interest, then commented that he was reluctant to subscribe, as he was uncertain that fellow academicians might read political connotations into it.

Be that as it may, it appears Mr. Hibbs is unaware of the precise background of the Oppenheimer case; this is a classic of its kind, to the extent to which it demonstrates how both the military and the academicians can be victimized in the same issue.

Oppenheimer's stand on the H-bomb was not a moral stand, but a militarily sound one.

At this time, only the D-T reaction was known to American scientists, and the adaptation of reactors to produce one pound of tritium would have cost 80 pounds of plutonium. In effect, it would have amounted to throwing away 95 percent of the kilotonnage striking power of the United States. Also, by this time, the Oraloy process was under development, which would have extended fission yields into the megaton range, in any event. This is critical to military projectiles and missiles, in maintaining the sectional density of the warhead, for aerodynamic efficiency.

When Ulam and Teller perfected the approach to the lithium bomb, Oppenheimer immediately announced that if he had known it could be done on the practical scale, he never would have opposed it. The Russians, of course, had perfected the catalyst for the lithium bomb a couple of years before, and thus claim the laurels for testing the first "drop" bomb.

The background on the Oppenheimer hearing is simply this: Oppenheimer gave a speech before the Council on Foreign Relations in New York City, stressing the need to develop tactical hardware to make up for American ground weakness in Europe and forestall Russian activity. Almost instantly, *Fortune* magazine, several editors of which were members of CFR, printed a particularly vicious attack on Oppenheimer and his views.

Don't ask why—I don't know. I do know that Lewis Strauss, the only member of the AEC to strongly support the H-bomb development at that time, was also a member of the Council on Foreign Relations. I am only too aware how a small number of members can impose on the organizations to which they belong, to obtain privileged information to exploit for personal political or social benefit.

The most likely explanation is that some pro-bomb party who attended the meeting had taken off on his own tangent afterward, riling the membership. In short, Oppenheimer had stepped on somebody's personal toes with his speech, and whoever it was made the rounds with a story of his own.

Oppenheimer brought to the military arts the same skill and competence that characterized his scientific work; it was not a coincidence that he justified Leslie Groves's confidence that he would make a good administrator. A military leader is made or broken by the skill and care with which he selects his staff, and Groves was a hot one at that.

Perhaps the greatest tribute to Oppenheimer's foresight here is that it was his, much-criticized, policy, which eventually became the accepted United States policy, leading to the country dropping out of the publicity-seeking megatonnage race, and to its eventual contentment with a militarily credible and realistic nuclear defense posture. Oppenheimer has never been given the credit as a mold of military policy that he deserves; too many people have mythologized his accomplishments, to conform to their political and social platforms.

Oppenheimer advocated the correct method to assure sound defense under the conditions of the times; city-busting was still a theory then, but the threat of the Russian hordes invading Europe was real. One of the most infuriating things about the case is precisely that the policy was adopted without giving its true author the credit for it. Iron hardware is rapidly reaching a degree of perfection that tactical "nukes" may well be viewed as obsolete within the next few years. The advances, indeed, may become so drastic that future generations may wonder why we ever bothered to fool with nuclear explosives in the first place.

But that is just the point. You know how people win a war, because it is visually spectacular; but you don't know how people keep a peace, precisely because it's peaceful, and doesn't attract attention. The perfect weapon is the one you never have to use. That was exactly what Oppenheimer provided. He got his throat cut, because he lived in a time when the most useful hardware didn't have any political or social publicity value.

JAMES J. GLACKIN

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Understanding Mormon

Cambridge, Mass.

Professor Rodman W. Paul, in his article "The Mormons of Yesterday and Today" in the December-January issue of *Engineering and Science*, presents an interesting account of the history of the Latter-Day Saints. I was very impressed with the depth of his understanding of these people, as few people who are not of the LDS faith seem to take time to try to understand the Church and the Saints, but rather rely on rumor and some of the more unreliable accounts written in turn by others who did not take time to find out very much before writing. I was very pleased overall with the article.

Yet, even with his knowledge of the Latter-Day Saints, Professor Paul has treated them as if they were merely a society of men rather than the Church of Jesus Christ. If he is closely acquainted with members of the Church, as his article implies, he almost certainly has been exposed to their personal faith. It was not just in the Church's early days that those joining the Church were required to take the "immense step of literal faith," to believe in the literal divine origin and divine authority of the Church. Although it is perhaps possible to grow up in the Church never questioning its divinity, few if any Latter-Day Saints of my personal acquaintance have managed to remain active in the Church unless at some point they have gained a personal knowledge (yes, knowledge) not only of its divine origin but also of its divine leadership today. The huge time and talent demands placed on an active Latter-Day Saint and the moral challenges that abound in the world insure that a choice must be made. And, my point is, it really is possible for one who really wants to make this choice to have personal and unmistakable divine confirmation of the "truthfulness" of the Church.

Once one is convinced that Joseph Smith and his successors actually act with divine authority and on the basis of real revelation and inspiration from the Lord, once one has learned to rely on that same inspiration and revelation—which does come when needed—on a personal level, then several of Professor Paul's statements about the organization of the Church, about the choice of Church leadership, and about the decisions of that leadership become almost humorous. If they were not misrepresenting things held most sacred, they would be quite funny. As it is, I feel a responsibility to try to fill out the record.

For instance, the priesthood is bestowed only on certain members of the Church because the Lord commanded that it be done that way. Polygamy was instituted and then was stopped because the Lord commanded it. Members of the Church have become more and more involved in the affairs of the world because the Lord commanded it. Sometimes the things the Lord commands make obvious sense, especially with the aid of a little hindsight. But other times the reasons for commandments are not at all obvious. In any case, even when the sense is obvious, the real reason for obeying the dictates of the Church is because they are literally commandments from God.

Professor Paul seems to have totally ignored this viewpoint. His history is written as though made up of observations from a great distance—as if he were watching a culture on another planet through a telescope and writing down all he could see, and, finding that an unknown proportion of events were occurring inside buildings where his telescope could not see, interpolating a whole culture from what he could see. What is the probability that his interpolated history could be accurate? If there are things going on there that simply never enter his mind, he cannot be entirely correct. And if those things are crucial to an understanding of that culture, he will not, no matter how hard he tries, understand it.

Since many things pertaining to the Church which are very sacred are

simply not available to Professor Paul or anyone else who is not a member in good standing, it is not surprising that his history is very secular in its interpretations of the LDS culture. But that does not make his understanding of the Church correct.

So I would like you, Professor Paul, and anyone else who might read this letter, to know that I have personally had given to me by the power of the Lord a real knowledge of the divinity of the Church of Jesus Christ of Latter-Day Saints. And I am sure the Lord will give that same knowledge to anyone who sincerely seeks for it. The Gospel of John quotes Jesus as saying, "If any man will do his will, he shall know of the doctrine, whether it be of God, or whether I speak of myself." I have, and many others have, taken the Lord up on this offer and found that by trying to live the Gospel of Christ as embodied in the Church, it really is possible to have divine confirmation that it is of God. I bear my witness to this simple but beautiful fact in the name of Jesus Christ. Amen.

And perhaps this seems like a funny way for one claiming to be a scientist to talk—but is that not what science is all about, to look for knowledge of things as they really are? To test each bit of new-found data on its own terms to see if it holds up? And then, if it does, to add it to the body of knowledge which makes up one's understanding of reality? And then to try to publish each new conception of reality so that others might have the benefit of one's personal efforts?

I would have to lie to myself and erase knowledge from my mind to change my present course. As a scientist the very idea of ignoring facts pertinent to me, even if they make me change entirely my way of looking at things, is repulsive.

Again, a thank-you to Professor Paul for his article. And a hope that he might be able to see a little of the spiritual side of the Latter-day Saints, as well as the secular side, in the future.

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