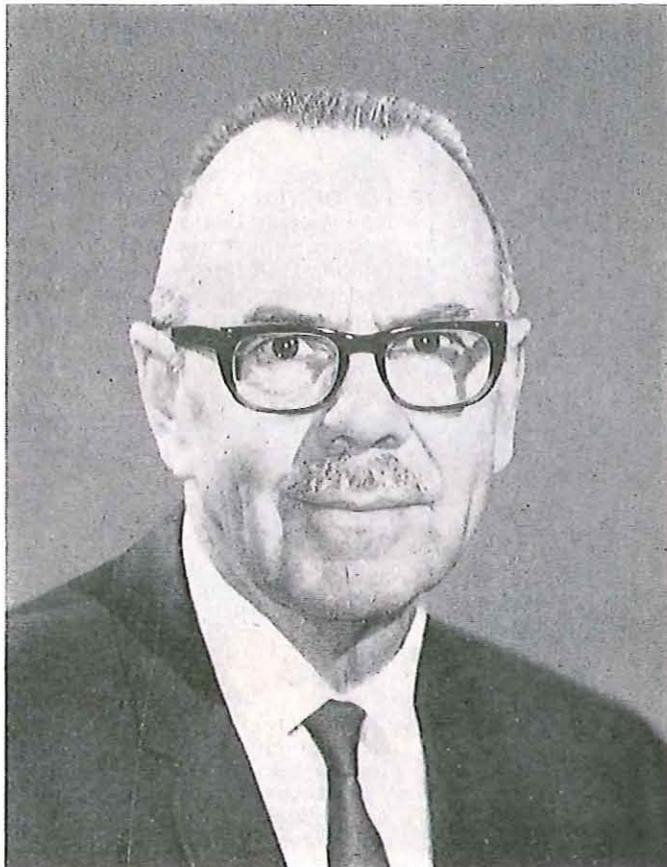


society communications



Lifelong Learning

WILLIAM L. HOLLADAY
President ASHRAE

BENJAMIN FRANKLIN once devised a formula for the attainment of moral perfection. He listed 13 virtues, beginning with Temperance: "Eat not to dullness; drink not to elevation" and ending with Humility: "Imitate Jesus and Socrates." I quote Mr. Franklin:

"My intention being to acquire the *habitude* of all these virtues, I judg'd it would be well not to distract my attention by attempting the whole at once, but to fix on one of them at a time; and, when I should be master of that, then to proceed to another, and so on, till I should have

W. L. Holladay is Chairman of the Board, Holladay, Eggett & Helin, Engineers & Consultants, Los Angeles, Calif.

gone thro' the thirteen; and, as the previous acquisition of some might facilitate the acquisition of certain others, I arranged them with that in view . . ."

By the way, few of you may know that one of ASHRAE's predecessors, ASH&VE, named Franklin as "patron saint" of this Society. At its Semiannual Meeting in June 1927, ASH&VE honored him as a heating and ventilating engineer: ". . . he was the first to invent a device that would consume and take care of smoke and, while all the world slept at night with their windows closed, he was the first to advocate opening them."

Benjamin Franklin also said that if he worked hard at one virtue

for a week, and then turned his attention to the next for a second week, some of the "habitude" might be left over from the first week, and in time he might attain his objective of satisfactory performance in all the virtues. But, now, I wish to draw parallels between Franklin's quest for virtues and the objectives of ASHRAE during the last few years. In 1966, Past President, the late Lincoln Bouillon brought to this office a commitment to increase our membership. Past President William L. McGrath gave a memorable address at ASHRAE's 1967 Semiannual Meeting in Detroit on the manpower problem, stressing the importance of Membership, our first virtue, but urging our attention upon the second

virtue: Manpower . . . the need to add to our industry half a million people in the next ten years. We hope that ASHRAE will recruit into membership its fair share of this number.

A year ago in Minneapolis, immediate Past President P. N. Vinther, while continuing to emphasize Membership and Manpower, took Education as the theme of his administration. And so we have a third virtue on which to fix our attention.

I will direct you to a fourth virtue, Lifelong Learning, a happy phrase borrowed from the University of California at Los Angeles (UCLA) publications. I refer to the obligation each of us has to continue educating oneself, keeping abreast of an ever-advancing technology.

How can one educate himself? There is a four-fold way.

First, listen to your fellow engineers. Many believe that 80% of what we know comes through our ears. At our national meetings, in the technical sessions, symposiums and forums, able men who have studied and researched their specialties are giving freely the distillation of their work, ready to defend their theses in the give-and-take of friendly argument. And in the halls and lobbies of meeting hotels, countless other discussions and confrontations are going on, the exchange of theories, methods, problem solutions. This information exchange is repeated at chapter and regional meetings throughout the United States and Canada.

The second way is to study. This is much harder, but sometimes nothing else will suffice. The lawyer researching the case books, the doctor poring over a list of symptoms, have their parallel in the engineer trying, for example, to work out the rather tortuous cooling load calculations in ASHRAE HANDBOOK OF FUNDA-

MENTALS. A necessary adjunct to study is problem-solving. You cannot learn science or mathematics or engineering by just memorizing facts and theories; you must try them, see how they fit, learn their usefulness and their limitations.

A third way is to go back to school. While this may not be possible in all cases, many high schools and colleges are ready to teach hundreds of subjects and skills. Often, night classes have more adults registered than young people in daytime curricula. Certain schools and colleges offer courses in thermodynamics, or heat transfer, or duct layout. If this is not true in your area, you may be able to encourage educational faculties to conduct the kind of engineering courses you and others desire. The Engineers Council for Professional Development (ECPD) is devoting a large part of its program to "The Continuing Education of Engineers," setting up, for example, plans to make the Master's degree more flexible and more adaptable to the needs of engineers in industry. If you wish to go back to school, the path is much easier than it was a few years ago.

Let me add a corollary: you may go back to school not only to learn, but to teach. Schools need teachers in our skills, and many of us have "learned our trade" in a very real sense by trying to teach it to others.

If you find that you do not have time to attend formal classes, it is possible to continue your education by correspondence courses. Instead of the stimulus of class discussion, one must substitute the dreariness of labor and the loneliness of thought. But the thousands of graduates of the International Correspondence Schools (ICS) and their counterparts prove that, with determination and patience, this method can work.

A fourth way, of course, is membership and active participation in ASHRAE. Merely belonging to an organization is not enough; it is one thing to absorb knowledge through osmosis, another to learn and impart information by serving on national committees, contributing technical papers, working with students; and playing an active role in your local chapter . . . which by the way should be an important adjunct to your community life.

This, then, is the four-fold way to Lifelong Learning. And how we need it! No one who has suffered in an "air-conditioned" restaurant, with a draft blowing down his neck, or who has tried to keep his wits clear in a conference room full of smoke, will deny that we need to do a better job. There is nothing wrong with air conditioning, I am convinced, except the way it is sometimes done.

Maybe, like the farmer who already knew how to farm twice as well as he was doing, we do know better. I hope this is not the case; I prefer to believe that we need to know more about the skills of our art.

It is not by accident that the ceremony of graduation is called Commencement; it is indeed a beginning, a commitment to Lifelong Learning. This commitment cannot be assigned to committees, although ASHRAE's Education Committee is asked to direct its attention to the opportunities for continuing one's education. It must be a personal objective. Each of us must ask: do I want to keep up-to-date in a changing world; do I, by continued application and study, wish to make the contributions of which I am capable?

The decision is a personal one, and no one but you will ever know how you have chosen.