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# A Tribute from Education and Research

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THE records of the University of Wisconsin show that Dr. Hammer was a student in its College of Agriculture during the period of 1904-1908, receiving his bachelor's degree in the latter year, and that he was a member of its staff for the next 4 years. In 1912 Dr. Buchanan came to the campus, searching for a man to do research and instructional work in dairy bacteriology. We were glad to recommend Dr. Hammer to his consideration. The result is a matter of history. The issuance of this volume in commemoration of the 25 years of service to the State College of Iowa is evidence of a successful record, successful in every respect, bringing well-deserved honor to him, to his college and to his state. Wisconsin urges its claim to some small fraction of the honor.

Schools exert varying kinds of influences on their students; they supply varying types of contacts; they arouse varying interests and create varying aspirations. If one admits that Dr. Hammer's record reflects in some degree the impress the University made on him, it is content with its work.

One's memory does not recreate with any degree of clarity the pictures of 25 years ago. I cannot recall the specifications demanded by Dr. Buchanan. I am certain that he emphasized the need of ability in investigational work, and I am sure our recommendation was based on our judgment that Dr. Hammer would do research work. Such demands the qualifications of curiosity, of continued self-education and of judgment. If one has not curiosity concerning "what makes the wheels go round," he will never try to find out why they do. He will be satisfied with the explanation of his day. If the mechanism is as complicated as the one our cosmos provides, he will need to be a student all his life. His efforts will need be confined to a tiny zone of nature. He will know that the processes

active in other zones will influence those in his sphere of interest. Thus, he must, in order to do effective work, keep abreast of the advances in other fields. Adult education is no new thing in scientific research. His selection of the questions he would like to answer reflects his judgment. The field should bring abundant material to his hand, which is really saying that his research work should be on subjects which are of significance to his region and to his clientele. The long list of published papers given in this book is firsthand proof of curiosity, of continued education, of industry and of judgment, because they all refer to dairy bacteriology and primarily to butter, the chief dairy product of Iowa.

It is not needful that I should attempt to measure the extent to which Dr. Hammer's work has revealed the biological and chemical processes significant in butter, nor to indicate the practical importance of his findings. The work has been done because he wished to do it. The State of Iowa gave him the opportunity. It certainly has and will continue to receive a great return on its investment.

Every individual is immortal through the impress he makes on other individuals. Shakespeare expresses, in his sixth sonnet, the role of the parent. The role of the teacher is a similar one, many fold magnified. The worker in the creative arts and the worker in scientific research create their impress in a more evident and in a more continuing way. Two thousand years ago Horace wrote, "As long as the Pontiff climbs the Capitol with the silent Vestal by his side, I shall be famed and far beyond the boundaries of Rome I shall travel far, Barbarians unknown my name shall know." The influence of the research worker is certain to endure and be evident to those who follow, for he cuts the steps on which they rest to cut still others in order to obtain a position from which a broader and truer view of nature can be seen.

Some one has said that intelligence is adaptation to the environment. In order to adapt ourselves to nature, we must know the processes thereof. The research man is the agency that slowly reveals to us the intricate relations that exist in every field. He is, therefore, the prime factor in increasing intelligence. As a friend, a teacher and a colleague of Dr. Hammer, I congratulate him on his aid in helping us to be more intelligent.