

cooling incident to convection which, in turn, is maintained by warming below and cooling above, the warming by absorption and conduction, the cooling by radiation.

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U. S. WEATHER BUREAU

CONCERNING AUTHORITY AND THE SCIENTIFIC METHOD

I HAVE received the following letter from the dean of the University of Mississippi School of Medicine, dated March 2, 1926:

Dear Professor Linton:—

I notice in your address as retiring vice-president of section F—Zoology—American Association for the Advancement of Science, which is reported on p. 199 of *SCIENCE* for February 19, you make the following statement: "If the timorous defenders of authority at Baylor, Denison, Mercer Universities, and the Universities of Mississippi and Tennessee found the professors whom they recently dismissed guilty of showing Professor More, or any one else an amoeba with. . . ."

In so far as the University of Mississippi is concerned, I am glad to advise that no one has been dismissed in the last thirty-five years for any such reason as you give. I haven't investigated any farther back than this. I shall be glad if you will make this correction in *SCIENCE*.

Yours very truly,
J. O. CRIDER, Dean

Upon looking up the letter from which I had quoted from memory when writing the paragraph in question, later referring to it simply to see that I had the names of the institutions as they were named therein, I find that it reads thus (names of the professors being omitted in this copy):

Among those who are said to have been the victims of this anti-evolution movement, are Dr. ———, Professor of Zoology, University of Mississippi; Dr. ———, Professor of Sociology, Baylor University, Waco, Texas; Dr. ———, Professor of Zoology, Denison University, Granville, Ohio; Professor ———, University of Tennessee.

The letter was dated October 21, 1924. The name of Mercer University was my own contribution to the list. My habitual inclination, when fully awake to the possible importance of the occasion, is to pluck feathers from the wings of passing rumor, rather than to assist her on her devastating flight. It is therefore with a chastened spirit that I note in this instance the unpleasant fact that I have apparently, but I can assure Dean Crider, quite unintentionally, added a feather to her pinions, seeing that my words are "the professors whom they recently dismissed";

whereas my authority, for all except the Mercer case, uses the phrase: "Among those who are said to have been the victims, etc."

If I had had it in mind to discuss that disagreeable topic, the dismissal of college and university professors, I should, of course, have been careful to verify my data. Since my object was a quite different one, I trust that I have made the proper amend.

I am glad to be able to add a further good word for the University of Mississippi. I have a letter, dated March 18, inst., from my friend who was named as the one who was reported to have been dismissed from the University of Mississippi as a result of the anti-evolution movement, from which I quote:

You can make the following statement: During my stay at the University of Mississippi I taught evolution to my classes and as a consequence became aware of considerable criticism of myself for so doing. These criticisms originated outside of university circles. The attitude of the people of Mississippi with whom I came in contact, however, was never hostile and unfriendly in a personal way. I was treated with great courtesy. No official at any time threatened to have me discharged for my teaching. . . . I should add that this popular criticism of me in Mississippi became so strong that it occasioned considerable concern on the part of one of my superiors, though this man never threatened action against me.

If there exists in any minds the belief that demonstrated truths concerning the operations of nature have been withheld from the students at the University of Mississippi, I am glad to aid in dispelling that misapprehension.

But back of every silver lining there lowers the inevitable cloud. Thus it has come about that while the correspondence was in progress which supplies the subject-matter of this communication, there appeared the following note in *SCIENCE*, March 5, inst., (p. 253):

The bill to prohibit teaching in tax-supported schools the theory that man "ascended or descended from lower animals" was passed by the Mississippi Senate February 24, 29 to 16, after three hours debate. The bill was passed by the House of Representatives on February 8, by a vote of 76 to 32.

This bill has been signed by the governor of Mississippi and is now a law of the state.

The following extract from an editorial in *Nature*, February 13, ult., is commended to the consideration of those twenty-nine Senators and seventy-six members of the House of Representatives of Mississippi who appear to be of those who "would mould the

modern mind after the pattern of an age unlearned in the interpretation of nature."

The gradual diffusion in the American religious public of more enlightened views about the Bible and the course of history may be trusted, therefore, to make the present attitude a passing one. The very concentration of attention upon the subject must have this effect. By staking their whole position on the verbal inspiration and inerrancy of the Biblical canon, the Fundamentalists will very soon be found to have engineered their own defeat. . . .

It is no longer a struggle between men of science and theologians as such, for the foremost theological teachers of the day are as penetrated by the scientific and historic spirit as any man of science in the ordinary sense of that term. It is in reality a struggle in common against the miserably defective culture of great masses of our population (p. 222).

The Mississippian, March 12, 1926, contains a letter written by Chancellor Alfred Hume, of the University of Mississippi, to Governor Whitfield urging him to veto the anti-evolution bill. The letter is a dignified and able discussion of this anti-science legislation from the point of view of a man who is manifestly, in the highest sense, qualified to testify to the truth which is fundamental to science whether dealing with physical, ethical or religious questions. Following is a brief extract from the letter:

In case the measure to which I refer become a law, quite a number of our faculty will be confronted with a cruel ethical dilemma. Either they will have to evade, disregard, or openly violate the law, or, else, they will have to be guilty of intellectual dishonesty. To any one at all worthy of his position on our faculty both of these courses are unthinkable and intolerable.

It is not a promising outlook which is foreshadowed when the lawmakers of a state turn aside from the leadership of those who know to follow the will-o'-the-wisp of ignorance.

These 105 Mississippi lawgivers might profitably reflect on what a Georgia farmer remarked to a physician acquaintance of mine here in Augusta a few days ago: "Doe, what this country's a sufferin from is ignorance."

I shall close this communication with a bit of personal experience.

During the past four years my home has been in this beautiful southern city. Among my habits, commendable and otherwise, is that of going to church once on Sunday. Such has continued to be my practice here in Augusta. In all the sermons which I have heard since coming here there has been allusion to the present anti-science agitation in but one of them. That was before the Dayton trial took place. The clergyman characterized the then recently en-

acted anti-evolution legislation in Tennessee as the product of "an infantile view of science and a senile view of theology."

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THE MASTER'S DEGREE AND SCIENTIFIC RESEARCH

READERS of SCIENCE may be interested in observing the trend of the encouragement given research in so far as such is a requisite for the granting of the master's degree. The data given in this summary were obtained for the most part from questionnaires sent to all the state universities and other leading institutions and has been supplemented through the study of the catalogues of certain colleges.

Sixty-three institutions in all were considered. Of these, thirty definitely indicate that research is required for the master's thesis in science; two others insist upon it in certain departments only, while nine have no preference between research and other types of material submitted in theses. The remaining ones, while of course accepting research, do not feel it is necessary, and so do not insist upon it. As might be expected, the most extensive association of research with the degree is found in the universities, where twenty-nine institutions require it, as against seven which do not. The theses may or may not involve research at ten of the remaining universities, while eight give no information whatsoever as to the kind of work required in the thesis. Of the ten colleges considered, four favor research for the degree under certain conditions, five do not, while one does not state its attitude.

From the educational standpoint there lie at the bases of these preferences interestingly different conceptions of the significance of the master's degree. Twenty institutions regard it as specific preparation (in the sense of mastering the technique of investigation, etc.) for the Ph.D. degree, five others stating that they regard it as a "little doctorate." On the other hand four as expressly state that they do not regard it in the latter sense, while as many feel in addition that the required intellectual ability to be expressed in the thesis need only be that necessary for the interpretation of facts already known. In this sense, then, "original work" is differentiated from research. More or less allied with the feeling that research need not be allied with the master's degree are the following conceptions of it. Eight consider it a degree for teachers (presumably for secondary schools or smaller colleges); seven merely as an advancement of undergraduate scholarship, or as accomplishing a year of graduate study; four believe it to be the degree for those who can not