

ruin of promising scholars? I, for one, should like to see a much longer list like the foregoing compiled by, let us say, the editor of "American Men of Science." It would be interesting to see the result.

Name	Year of Birth	Year of Call	Age at Call
Gray, Asa	1810	1842	32
LeConte, Joseph	1823	1852	29
Gibbs, J. W.	1839	1871	32
Rowland, H. A.	1848	1876	28
Michelson, A. A.	1852	1883	31
Remsen, I.	1846	1872	26
Brooks, W. K.	1848	1876	28
Gildersleeve, B. L. ..	1831	1856	25
Hale, W. G.	1849	1880	31
Welch, W. H.	1850	1879	29
Osler, W.	1849	1874	25
Wilson, H. V.	1856	1885	29
Thurston, R. H.	1839	1871	32
Walker, F. A.	1840	1873	33
Fisher, I.	1867	1898	31
Sumner, W. G.	1840	1872	32
Giddings, F. H.	1855	1888	33
Clark, J. B.	1847	1877	30
Carver, T. N.	1865	1894	29
Seligman, E. R. A. ..	1861	1891	30
Ely, R.	1854	1881	27
Commons, J. R.	1862	1892	30
Patten, S. N.	1852	1888	36

If "young men should be left alone until they are fully developed before transplanting them" they form a curious biological exception. It is a novel contention that prolonged subordination best prepares for initiative and resourcefulness—for intellectual independence and leadership.

If "scholars are not born, they are made by their environment," some change in environment during their period of greatest growth might possibly prove to be stimulating and broadening—particularly if the change were such as, by offering easier financial conditions, freed their time from, let us say, assisting overworked wives in household duties.

The picture of President Jordan conducting a publicity bureau and "dragging into the limelight young men that it would have been better to leave alone" is enjoyable—their being in the statement just enough of that element of contrast which is the essence of humor.

It is true that President Jordan, at the opening of Stanford, called a group of professors whose ages ranged from 31 to 42 years, all but two of them, however, holding full professorships elsewhere at the time—but I, for one, am unaware of his having ever dragged any one of these, or his subsequent appointees, into the limelight. As for these subsequent appointees, their ages have been about 40, I should estimate, as an average. Stanford has offered no marked exception to the general trend of increasing age at promotion to full professorship.

In conclusion, I would like to say that it is significant to note the discussion called forth by the comparatively trivial question of fellowships, contrasted with the silence on the really vital subject presented in John Jay Chapman's letter to *SCIENCE* last summer. I wish you would reprint that communication now that the season of academic vacation is past.

GUIDO H. MARX

STANFORD UNIVERSITY, CAL.,
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UNIVERSITY FELLOWSHIPS

TO THE EDITOR OF *SCIENCE*: Reading Dr. Patten's criticism of Dr. Jordan's address I must protest against the whole tone of his argument, which seems to be that the inducements offered by the teaching profession are so promising and the chances of rapid promotion so great that they tend to prevent the production of scholars. I wish to give the view of a young man just facing the career of a teacher.

Dr. Patten's statement that "scholars are not born" is open to serious criticism. That they are "made by their environment" is partly true. I would extend this statement to read: "and also unmade by their environment," and this environment is a teaching position at \$1,000 to \$1,500 a year. He does not state how many of the 138 University of Pennsylvania fellows teaching in universities and secondary schools are struggling along on \$1,500 or less trying to pay off debts. He does not state how many of them are unmarried because they can not afford it. I heard a

professor say that a young teacher should not get married, because the profession does not offer a living for two. Is this the price a man must pay for learning? Is it worth while? Does it lead to scholarship?

The assistant professor with a family can not, on \$1,500 a year, get the necessary literature and books, he can not attend meetings at a distance, or travel and gather knowledge and inspiration from others of his kind. Does this lead to scholarship? Is it an inspiration for a university fellow to teach at \$1,000 a year in a secondary school? Does this indicate that the market is not overstocked?

I raise a question as to whether "it is the professor that needs endowment" if we are to produce scholars. One reason there are not more scholars in America is because the entering inducements are not sufficient. Men prepare for the teaching profession and then turn aside for more remunerative work. In the zoological laboratory at Columbia University last year there were five students about ready to come up for the Ph.D. degree. Of these, three signified their intention of abandoning their plans of following the teaching profession. It is the young men who abandon the call of scholarship. They are the ones who need encouragement. It is the getting of more men into the profession that will produce scholars as well as helping those already in it. From the many will come the few real scholars that the nation can produce and these will be the result of heredity as well as of training.

It has been claimed that the greatest intellects in America are among the business men. This may be partly true. If the inducements of the teaching profession had been greater some of these men would, doubtless, be leading scholars to-day.

Dr. Patten's hopes of a promising man are that he will settle down on \$1,500 a year, forgetting that he has a family to provide for, that he needs literature, travel and association with others. I can not forget seeing a university instructor spending his vacation wheeling a wheelbarrow. This is not going to produce scholars. It produces assistant pro-

fessors without enthusiasm or inspiration. The teaching profession is bad enough. Why make it worse?

The idea that "no one should have the title of professor until it was fully earned" is good. But he should be supported while he is attempting to earn it. If this were done more generously than at present more men would make the attempt. Poverty does not offer a smooth road to learning.

C. V. BURKE

STANFORD UNIVERSITY

SCIENTIFIC BOOKS

Human Embryology—Keibel and Mall. Written by C. R. BARDEEN, Wisconsin; H. M. EVANS, Baltimore; W. FELIX, Zurich; C. GROSSER, Prague; F. KEIBEL, Freiburg, i. Br.; F. T. LEWIS, Boston; W. H. LEWIS, Baltimore; J. P. McMURRICH, Toronto; F. P. MALL, Baltimore; C. S. MINOT, Boston; F. PINKUS, Berlin; F. R. SABIN, Baltimore; G. L. STREETER, Michigan; J. TANDLER, Vienna; E. ZUCKERKANDL, Vienna. Edited by FRANZ KEIBEL and FRANKLIN P. MALL. In two volumes. Volume I. 550 pp., with 423 illustrations. Philadelphia and London, J. B. Lippincott Company. 1910.

The publication of this work is worthy of very special notice, for it may well be said to mark an epoch of accomplishment in the study of human embryology, while on the other hand it furnishes exceptionally numerous suggestions of many problems yet to be solved, with the most promising lines of attack.

In the introduction, Professor Keibel brings out vividly, after an excellent historical review, the conditions which led up to the inauguration of the modern study of human embryology by Wm. His. It is fortunate that the great volume of these studies which have been accumulated under this inspiration should now be so fully reviewed and made available by the cooperation of these students of his. The plan of His for an extended exposition of human embryology is thus finally accomplished under the leadership of Keibel and Mall on two sides of the Atlantic.