

Comments and Communications

How Does the Ivy Grow?

AT COMMENCEMENTS and "homecomings," when college students and visiting grads return to their ivy-covered colleges, the question is occasionally asked: "How does the ivy manage to cover buildings with uniform coats of bright greenery?" To answer this question, I measured the rate of growth of a single shoot of ivy growing on the east window of a Harvard house. The following data were recorded between June 8, 1950, and June 12, 1950. Measurements were made with a millimeter rule at 12-hr intervals.

Date	Shoot length (cm)	Growth (cm)
6/8	2.0	—
6/9	6.5	4.5
6/9	10.5	4.0
6/10	13.8	3.3
6/10 (rain)	18.0	4.2
6/11	21.5	3.5
6/11	23.0	1.5
6/12	25.0	2.0

Thus, for a typical 12-hr period, the rate averaged 0.375 cm/hr during the first 2 days of recorded growth and approximately half this rate during the last 2 days of recorded growth. These incidental observations may help to explain the phenomenal rate at which ivy covers buildings. At an approximate rate of 0.5 mm/min, one can practically see it grow.

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Training Leaders in Science and Religion

Two recent studies have designated liberal arts colleges as the most fruitful source of American scientists (1). This position of leadership can hardly be ascribed to the research interests of these institutions, for only 13 liberal arts colleges of the first 50 institutions listed by Knapp and Goodrich published any research in the *Journal of the American Chemical Society* during the 15-year period 1927-41 (2). The colleges represented in this leading research journal totaled only 217 pages in the decade and a half.

A more significant relation is to be found in the high percentage of church-related colleges among the institutions leading in the training of scientists. Seven of the first 10 on the list of Knapp and Goodrich are church-related, and 24 of the 50 are listed by *The College Blue Book* (3) as church-controlled. Ten of the 14 leading colleges in Lewis' list (Table 4) are church-related.

Denominational colleges have long been recognized as the most fruitful training ground for religious leaders. Their position of distinction in the training

of leaders in science is only now coming to light through these studies on the origins of American scientists. For those who are baffled by this unique relationship of religion and science a statement credited to the late Max Planck may provide food for thought (4): "Religion and natural science do not exclude each other, as many contemporaries of ours would believe or fear; they mutually supplement and condition each other."

References

1. KNAPP, R. H., and GOODRICH, H. B. *Science*, **113**, 543 (1951); LEWIS, H. F. *J. Chem. Education*, **28**, 104 (1951).
2. SAMPEY, J. R. *J. Higher Education*, **20**, (4), 208 (1949).
3. HURT, H. W., and HURT, H. *College Blue Book*, Vol. V. New York: (1947).
4. The Faith of Great Scientists, *Am. Weekly* (1950).

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Gantt to the Rescue!

DEAR MR. MONEYED MAN:

I deeply sympathize with your state of mind (*Science*, **113**, 333 [1951]), although I do not agree with you as to the facts. I am ready to spring to your relief without an instant's hesitation. I have the secret whereby your name can go down in fame, and the next generation will not even take the trouble to discriminate between you and Faraday and Keats.

Before I state my plan for relieving you of both your fameless state and your money, I beg the opportunity to correct some of your facts. It is true that a few European streets may be named for Helmholtz, Curie, and Pavlov, but what about the universities named for the moneyed men? Who was Johns Hopkins? Who was Duke? Who was Phipps? Who was Rockefeller? Who was Carnegie? Who was or is Du Pont? Who was Vanderbilt? Who was Smith? (Not the man with the long whiskers and the cough?) Who was Vassar? ("Brewer and Merchant.") Not one of them a scientist, but all suppliers of names and lucre to needy institutes. And who were Wells (Wells, Fargo), Bowdoin, Morgan (J. P.), Eastman, Ford, Diamond Jim Brady, etc. etc., *ad infinitum*?

In view of the stiff competition your colleagues have given you, naturally you feel discouraged. But wait a moment, do not become downhearted—the offer I am about to make you will quicken your step, make your heart throb, your face flush, and shake you in a way that was never done for poor, ailing, dreamy, drug-store Keats, Shakespeare, Galileo, or Newton. I have an immediate plan guaranteed to give you the fame that your brethren, mentioned above, have received, I am sure that they were once in your position, casting about frantically for some way to outdo the scientists—and they certainly have accomplished it.

Now, our laboratory is very much in need of a name like yours with big money. We will take part of the