

and vessels. It may further be pointed out that no real progress was made in the study of the development of starch grains until Meyer began at the morphological end and proved that the layering was not due to any recondite physical or chemical causes as previously asserted, but rather to alternations of night and day. Such examples could be multiplied indefinitely.

It is an interesting feature of the study of religions that converts are always the most bitter assailants of the views they once held. Extremely good illustrations of this principle can be supplied from the ranks of the morphologists, who in recent years by reason of faith or expediency have turned to physiology or genetics. The set of the biological tide has however again turned towards morphology and in the near future we are likely to have abstruse problems, both genetical and physiological, receive needed light from this quarter. Nor has the fundamental biological study of the origin of species passed, as was predicted years ago, from the field to the laboratory. The field is still much more important. Experiments *in vitro*, whether in glassware or greenhouses, need to be interpreted in the clearer atmosphere of the world outside. This situation was doubtless in Professor Conklin's mind when he recently called attention to the relatively slight evolutionary results, flowing from the huge experimental activities of the past twenty years.

E. C. JEFFREY

COLORED HEARING

THE following incident seems to have several points of interest:

FULTON (aged three years, 11 months, listening to the phonograph): "Daddy, I think soft music is yellow."

DR. P. (his father, a distinguished chemist): "Yellow? And what color is loud music?"

FULTON: "Well, it is black."

DR. P.: "And what is blue music like?"

FULTON: "Blue music is loud, but not so loud as black music."

DR. P.: "Tell me, why is soft music yellow?"

FULTON (after thinking a moment): "Well, when you mark with yellow crayon on paper, you can't see it very well, but when you mark with black, you can."

Dr. P. had read an article in *SCIENCE* about

colored hearing and explains his interest in his son's remark by the fact that it seemed to suggest a possible hypothesis as to the origin of such phenomena. The first point to notice, therefore, seems to be that there is a distinct value in such a journal as *SCIENCE* with its appeal to scientific men of all complexions.

For there are certain regions in which the psychologist as well as the biologist is in much the position of the astronomer, of having to wait for phenomena to occur under non-experimental conditions. Even if colored hearing could be experimentally induced, we should have little guarantee that it is the same as that "normally" possessed by many persons. It would be unduly tedious for psychology to have to wait for such evidence to be collected solely by psychologists from the observation of their own children, even were they as a class far more fecund than is the case.

The suggestion of the incident is, of course, that such associations between sounds and colors might be gradually strengthened while the connecting link dropped out of sight. Dr. P. is carefully avoiding any suggestion to the child and, at a later date, an attempt will be made to see whether the association has developed or has disappeared.

Have other readers of *SCIENCE* relevant observations?

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ACETONE IN TISSUE WORK

I WAS much interested in Professor F. M. McFarland's note (*SCIENCE*, July 14, 1922) on the use of acetone in place of alcohol in preparing paraffin sections for microscopic examination. Essentially the same method has been used in the laboratory of the CLINIC for about two years. Merck's acetone, U.S.P., is used. The steps in staining the slides are passing them through a series of Coplin jars as follows: two of xylene, two of acetone, one of water, one of hematoxylin, one of distilled water, one of tap water, one of acetone, one of acetone saturated with eosin, and two of xylene. The results appear quite as satisfactory as when alcohol is used in passing to and from water. State and federal regulations and restrictions for obtaining alcohol together with the high internal revenue tax make its use

almost prohibitive. In calling attention to the suitability, if not superiority, of acetone as a decolorizer in Gram's method of staining bacteria I briefly referred to the suitability of acetone in the process of staining sections (*Journal of the American Medical Association*, Volume 75, page 1017, October 9, 1920). Of course the well-known use of acetone in dehydrating preparatory to embedding is also employed.

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WEALTH AND BENEFACTIONS

Now comes Dr. Pritchett with the hint that accumulated wealth can not even be *given away* to the benefit of the public. And the question is—what ground is left on which to defend large fortunes? Socialists have always declared against them. The one defense which they have never quite gotten round is that wealth makes benefactions possible and supports the public good in a way that this could not be done—or *would* not be done—by small contributions or general assessment. Millions of curses on the octopus have been checked by the thought that—perhaps, after all— . . . considering the universities— . . . and then there's the science of medicine— . . . and then to think of art— . . . and after all we do need *philanthropists*— . . . Without such thoughts as these, who would defend the poor rich man? Mr. Pritchett does not tell us whether he will or not. The evident gloom of spirit in which he writes shows that he is groping after truth (not a bad thing to grope after). It might even indicate a fear that when the truth is found it may be disagreeable. It surely would be if it told us that our standard argument for great fortunes is mere *buncum*.

But this question just now is before scientific men. How will they handle it? Presumably if the accepted solution proves false others will be tested. At least the problem will be analyzed. What are the alternatives? If money can not safely be given away in large sums, how about small sums? The corrupting effect might thus be distributed so that no one man or institution would suffer so much. As an extreme supposition the whole fortune might be turned into the public treasury and every man's tax bill decreased accordingly.

Of course, the fortune might be left to one or more heirs (presumably incapable of corruption). In this case the fund might either endow a permanent aristocracy or the problem might be solved by the wasting of the money. Neither of these solutions would find many champions among thoughtful men.

To suggest that the rich man should give away his own income or accumulations does not help. Mr. Pritchett's report does not assume that the injury done by gifts is in any way determined by their immediate source.

The one remaining choice would seem to be to manage a very lucrative business in such a way that profits shall be distributed as earned among all concerned and even shared with the public by reducing prices when their size becomes unseemly. This, of course, is rank labor unionism and has been answered a thousand times by men of good "business judgment" who are accumulating fortunes. It is only mentioned here to complete the list of possible solutions.

The writer of this modest inquiry finds himself groping among these possible alternatives for a solution that is better than the one employed hitherto. He would like to see some incomes, now derived from *private taxation*, reduced to the point that ledger accounts could be published without scandal, but beyond that his fear of socialism almost makes him willing to incur the risks of injury which attend the acceptance for his own institution of a share of that embarrassing money of which Mr. Pritchett writes, rather than see our rich men rush into "untried experiments."

Meantime, he wishes to say that the above paragraphs are not written in jest. The difficulties suggested in Mr. Pritchett's report may be more real than we like to admit, and in that case the alternative solutions must be faced. What if Mr. Pritchett and the socialists were both right?

MODEST INQUIRER

QUOTATIONS

RESEARCH AND TEACHING

I HAVE recently been reading the programs of the meetings of representative American learned societies and it is astonishing to find the rapidly growing numbers of the com-