

revolving discs, after the method of Plateau. The relative position of the red and blue bands varies with the direction of rotation. Splitting of light also appears when a triangular faced mirror is made to rotate in the path of the light.

Separation of the incident light varies with the source. A wide degree of separation has been observed when a light divider, consisting of a disc 60 cm in diameter, perforated at the periphery with 60 narrow radial slits, is rotated at a constant speed. Under these conditions "blue" light from the lamp appears to be broken up into a comparatively wide pale blue band and a narrow dark band either dark brown or maroon. Light from the "green" lamp is divided into yellow-green and pale blue bands of nearly equal width. Light from the "daylight" lamp is clearly divisible into orange red and greenish-blue bands, which spread further into merging bands discernible as purple-blue-green-yellow-orange and red.

There are several conceivable explanations for the apparent separation of light into its component parts. These possibilities include accounts based either upon subjective or psychological factors or upon objective physical phenomena. In the former instance the apparent splitting might be attributed to a variation in the threshold of stimulation of the end organs of the eye by alternating light as in Benham top wherein alternate black and white stimuli give rise to the sensation of color. Obviously this possibility might be tested by color photography. Since a color pattern comparable to the one described has been reproduced on a Dufa film by exposure for 30 minutes to light reflected from the rotating wheel of an electric clock the phenomena can not be explained upon a subjective basis and it is necessary to consider objective physical factors.

These chromogenic phenomena do not appear when moving objects are illuminated by light from ordinary incandescent lamps or in sunlight.

This leaves the nature of the light produced by the fluorescent lamps as a possible basis for the phenomena. The mechanism of operation of the lamp suggests the possibility that there are differences in

the time intervals of emission of light of various wave-lengths. It may be assumed that the mercury discharge appears first, and this in turn stimulates or activates the fluorescent coating. Characteristic wave-lengths of the latter are then emitted. This cycle of color emission is repeated for each electrical cycle. Moving objects merely provide an optical means of separating these alternate flashes. Under ordinary conditions the rapidity of the flashes obscures the presence of the rapidly alternating production of colors. High-speed color photography synchronized to the various parts of the cycle could definitely determine the correctness or incorrectness of this view. In the absence of facilities for making this direct test an alternative trial mimicing the postulated conditions was carried out. A disc with alternate red and blue segments was rotated while illuminated by light from an incandescent lamp. When viewed through a slit in a second stationary disc a composite of the red and blue appeared. When the "analyzing" disc was rotated alternate flashes of red and blue were evident. While lacking a crucial test, the foregoing considerations make it appear that alternate flashes of light of various wave-lengths is the most probable explanation for the apparent splitting of the light of fluorescent lamps into component colors by moving objects.

C. WESLER SCULL  
CHARLES G. GROSSCUP  
E. G. WITTING

ABINGTON MEMORIAL HOSPITAL,  
ABINGTON, PA.

#### BIOGRAPHY OF DR. WILLIAM H. PARK

I AM at work upon a biography of Dr. William Hallock Park, the late director of the New York City Board of Health Laboratories. Any assistance rendered, in the form of the loan of letters, anecdotes or other memorabilia, will be gratefully received, and due acknowledgment given. Reasonably prompt return of letters, etc., is insured.

WADE W. OLIVER  
THE WILLIAM HALLOCK PARK LABORATORY,  
BUREAU OF LABORATORIES,  
NEW YORK, N. Y.

## QUOTATIONS

### THE END OF "DISCOVERY"

WITH this issue *Discovery* has to end. It began at the end of the last war, and endured with some vicissitudes until April, 1938, when it was renovated by the Syndics of the Cambridge University Press. Now, after two years in its new form and six months of another war, they have reluctantly decided that it must end.

It seems a pity. To any of us who have been concerned with the editorial side of *Discovery*, it is a personal loss to see it go; and we believe that will be true of a good many readers. But it is no use repining. Perhaps, after this war, *Discovery* will be started again, or something like it will. The only service which we can perform, while the end of *Discovery* is fresh in our minds, is to put down one or two reflections for the benefit of our possible successors.