

mental, a body of growing and inductive knowledge. The mediating body of ideas is taken to be a detached and self-sufficient system of absolute truths." In the case of the moral ideal, on the other hand, no rules of consistency are presented. "Instead of a body of relational contents, there is an attitude of will, a motive of personal choice, a movement of determination of the self upon a practical problem which allows alternative solutions" (p. 136). "In the one, *the end is lost in the means; in the other; the means is lost in the end. Each thus attains its normal (!) ideal*" (p. 133).

On such a tragic ending as this we may well be thankful to have the author ring down the painted curtain of "Pancalism."

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DISCUSSION

NOTE ON A CASE OF CHROMÆSTHESIA

The following data are submitted in order to add to the evidence already offered by Galton, Calkins, Pierce, Claparède, Dresslar and others in regard to the permanence of the association in cases of synæsthesia and to show the effect on the colors of the combination of tones, with special reference to complementary colors.

The subject was a young talented woman musician and composer, who was twenty-three at the time of the first investigation, which was made in January, 1905. A second investigation was conducted seven and a half years after the first. The subject could name the color, in fact could see the color at the mention of the musical note. At times however she also struck the note on the piano. The colors were seen as light similar to the colored illumination of the stage. This differs from the case reported by C. S. Myers<sup>1</sup> in which the subject thought rather than saw the colors. The color was the same as to hue for a given tone in all parts of the scale. It changed, however, as to luminosity, being bright in the higher and dark in the lower register. In this respect there is also a difference from Myers's subject, who saw different colors with a change in pitch. The phenomenon has been present as far back as the subject can remember. She began to play the piano shortly before the age of three and distinctly remembers seeing the colors then.

Some of the associations are as follows:

1905	1912
c.....red	red
db.....purple	lavendar
d.....violet	violet
eb.....soft blue	thick blue
e.....golden yellow	sunlight
f.....pink	pink, apple blossoms
f#.....green blue	blue green
g <sup>b</sup> .....greener blue	greener blue
g.....clear blue	clear sky blue
a.....cold yellow	clear yellow, hard, not warm
bb.....orange	verges on orange
b.....very brilliant coppery	very brilliant coppery

<sup>1</sup>"A Case of Synæsthesia," *Brit. Jour. of Psych.*, 4, 1911, pp. 228-238.

It will be seen that there is almost perfect agreement between the two investigations. The subject assured me that she had never given any thought to the investigation in the interim.

In December, 1913, investigations were made in regard to the combination of tones. When those tones were chosen which corresponded rather closely to the complementary colors the results were as follows: c (red) and f# (green blue) gave a very indefinite light verging on gray. Red came up at times. G (clear blue) and a (cold yellow) called forth a hazy mist like the other only this time yellow and blue came up at times. The subject upon being questioned expressed total ignorance of the properties of complementary colors. That the fusion is not complete is not surprising when one recalls the fact that in musical fusion the separate notes can be heard as well as the resulting chord.

In chords such as for example c e g the color of the fundamental predominates. In fact in all triads it is the color of the fundamental note which prevails. In dissonances the colors are paler, as if there was a veil over them. In the altered chords no one color predominates. There is no fusion, the different colors flashing up more or less together. The dominant seventh and ninth are not so hazy. They take on the color of the fundamental note, but the other colors keep coming up.

In conclusion it may be stated that the subject did not have any other form of synæsthesia, which fact seems to disprove Myers's statement that "it is probable for the full development of synæsthesia a strong tendency to a certain kind of association is requisite." Myers's subject formed associations between colors and words, the days of the week, etc. A comparison of the two cases seems to indicate that the chromæsthesia here recorded is entirely of physiological origin, while Myers's case started perhaps from some physiological predisposition and developed through chance associations. A third type of associations frequently reported and one to which the term synæsthesia should not be applied is where the associations are entirely the result of the experience of the individual, in most instances through the mediation of feeling tone.

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## BOOKS RECEIVED

- HUNT, E. L. *Diagnostic Symptoms in Nervous Diseases.* Phila. & London: Saunders, 1914. Pp. 229. \$1.50 net.
- DERCUM, F. X. *A Clinical Manual of Mental Diseases.* Phila. & London: Saunders, 1914. Pp. 425. \$3 net.
- COFFIN, J. H. *The Socialized Conscience.* Baltimore: Warwick & York, 1913. Pp. viii + 247.
- BLONDEL, C. *La Conscience morbide, Essai de psycho-pathologie générale.* Paris: Alcan, 1914. Pp. 336.
- KLEINPETER, H. *Vorträge zur Einführung in die Psychologie.* Leipzig: Barth, 1914. Pp. vi + 435. M. 6.60; M. 7.50 geb.
- FISKE, E. W. *An Elementary Study of the Brain.* New York: Macmillan, 1913. Pp. vii + 133.

## NOTES AND NEWS

ARTHUR HENRY PIERCE, professor of psychology at Smith College and editor of the *PSYCHOLOGICAL BULLETIN* died on February 20 after a short illness. His colleagues on the editorial board of the *REVIEW PUBLICATIONS* are deeply sensible of the loss sustained by these magazines and American psychology generally. Dr. Pierce was an efficient and tactful collaborator, and a man of unusually charming personality.

ABOUT 30 pictures of psychologists have been procured by Dr. E. A. Kirkpatrick of Fitchburg, Mass., in accordance with the plans suggested in the *BULLETIN* some months ago.

PROFESSOR THOMAS H. HAINES, of Ohio State University, who is on leave of absence, is conducting the courses in psychology at Smith College during the present semester.

THE New York Branch of the American Psychological Association held its mid-year meeting at Princeton on February 23.