

on correlating which with ($B-\Sigma Fb$) scores he found no regular agreement. With Yale students he repeated Halvorsen's graphological experiment, but he failed to find any relationship between introversives and an upright or back-sloping angle of script, and extratensives and a forward-sloping angle. The author concludes that the varied investigations discussed are obscured by an almost complete disregard for scientific standards. There seems to be a moderate relationship between colour-form dominance and cyclothyme-schizothyme temperament, and a more distant relationship with Jung's extraversion-introversion, with Kretschmer's pyknic-asthenic constitutional types, with Jaensch's integrate-disintegrate eidetic types, and with Gross's primary-secondary function perseveration types.

Section F: Children seem to give a smaller proportion of G responses, a lower F %, and a higher T % than adults. Rorschach states that children are, in general, ambi-equal in *Erlebnistypus*, whereas the author finds them to be mainly co-ative, with a slight inclination to extratension. There is no reliable evidence of sex differences. Similarities between the Rorschach responses of sisters may be due, not to heredity, but to the influence of similar upbringing.

JOHN D. W. PEARCE.

Concerning School Psychologists. (*Psychol. Clinic*, vol. xxii, p. 41, March-May, 1933.) Anderson, R. G.

The appointment of school psychologists will be of little avail unless there is co-operation between the psychologist and the teacher. Teachers require adjustment no less than do their pupils. Teachers are most concerned over problems which represent transgression of their authority and infraction of school discipline. The more training in psychology a teacher has had, the more ready will he or she be to seek assistance from the school psychologist. The psychologist must not be regarded as a "feeder" for special classes. The introduction of group tests has caused much testing to fall into the hands of inadequately trained persons, who are limited to attaching a label (often erroneous) to a child; the result has been to produce a limited conception of the contribution which the psychologist can make to school problems. It is an interpretation rather than a diagnosis which is wanted; and the testing of intelligence, although essential, is not sufficient. Emotional and social factors are of the greatest moment.

M. HAMBLIN SMITH.

Sleep and Retention. (*Psychol. Bulletin*, vol. xxx, p. 415, June, 1933.) Van Ormer, E. B.

The usual amount (about eight hours) of daily sleep favours retention of nonsense syllables. The advantage of sleep is not so great after four hours. Retention of nonsense syllables after 24 hours was better when the learning had occurred just before retiring. Retention of any verbal material is better after four or eight hours of sleep than after the same periods of waking. Assuming that a possible decrease in the learning efficiency is over-balanced by the better retention following sleep, the advantage of night study is evident. Forgetting is a function of the kinds and conditions of interpolated experience and of the nature and degree of the shift in stimulation, not of the period of disuse. In spite of cases of unusual recall of childhood acquisitions, there is no evidence for the extreme view that anything once learned is never forgotten. The unqualified statement that the rate of forgetting diminishes with time is hardly correct. The explanation that forgetting is produced by the physiological law of atrophy through disuse is far from complete.

M. HAMBLIN SMITH.

Special Disability in Spelling. (*Journ. Neur. Inst. N.Y.*, vol. i, p. 159, June, 1931.) Orton, S. T.

The author first states his view that many spelling disabilities arise from imperfect acquisition of unilateral dominance in the language function, and that spelling defects are rare apart from similar trouble with regard to reading.

The author considers that inability to correlate and recall visual, auditory and kinæsthetic engrams is probably the cause of the failure to establish the fixed associations needed for correct spelling. Faulty spelling is often found in certain families in association with left-handedness, reading disability and speech disorders. This lends support to the theory noted above. Various specific types of spelling defect are analysed and discussed, and their origin explained.

Tests for discovering certain types of spelling difficulties are given, also a short description of methods of restraining.

J. L. FAULL.

Psychological Weapons in Animal Fight. (*Character and Personality*, vol. ii, p. 3, Sept., 1933.) Hingston, R. W. G.

This article gives an extremely interesting account of the meaning of animal colour and adornment, showing the possession of two distinct colour schemes by most living creatures. There is first the dull scheme, which harmonizes with surroundings, and is the cloak of concealment; and secondly, the bright scheme, colourful, awe-inspiring and often beautiful, used in attack and display of power. Thus is established a correlation between the physiological and psychological aspects of instinct. When an animal is alarmed, one of two reactions occurs; fear, with concealment or flight; or anger, with attack; and an appropriate colour scheme is demonstrated for each reaction. It is pointed out that axillary hair occurs only in the human creature, and is explained as part of the attack-decorative scheme. So-called "courtship" behaviour of animals is shown to be an erroneous conception, if thought to be analogous to human courtship. In animals courtship behaviour is really "erotic behaviour", and is a hostile demonstration calculated to outdo rivals.

F. H. HEALEY.

Recent Research on Animal Behaviour. (*Character and Personality*, vol. ii, p. 74, Sept., 1933.) Zuckerman, S.

This paper consists of two distinct parts. The first part is a *résumé* of the monograph of Wiesner and Sheard, *Maternal Behaviour in the Rat*. The view is taken that the gonadotropic factors of pregnancy urine, and of the anterior lobe of the pituitary, are identical, and the statement is made that in primates œstrin is secreted in large quantities during pregnancy. The retrieving response in the maternal rat was specially studied.

The second part is a *résumé* of Bingham's monograph, *Gorillas in a Native Habitat*. This investigator found that the gorilla is a frugivorous social animal, spending most of its time on the ground, and that this animal sleeps just where and how he likes, being little concerned about the so-called "nest" or "hut" buildings. He failed to solve various vexed questions, such as relating to the marital life of the gorilla, but the author showed that a naturalistic study of the gorilla can be carried out scientifically.

F. H. HEALEY.

The Problem of Relative and Absolute Transfer of Discrimination. (*Journ. Comp. Psychol.*, vol. xvi, p. 199, Oct., 1933.) Gundlach, R. H., and Herington, G. B.

The "relative transfer of discrimination", reported by many observers, does not necessarily involve either the "transposition of structures", or any vague glimmerings of relational judgments and concepts. Until investigators use stimulus values selected in terms of the human or animal subject's threshold for discrimination, all theorizing as to the nature of the processes in these situations is idle.

M. HAMBLIN SMITH.

Colour Vision and Colour Preference in the Albino Rat. (*Journ. Comp. Psychol.*, vol. xv, p. 373, June, 1933.) Walton, W. E.

The white rat possesses some preference for greens and blues. It is not certain whether this is an acquired or a native preference, but it is significant that human subjects prefer the same colours. Coloured lights may be discriminated by white