ning and was followed by an address by W. G. Theisinger, director of welding research, Lukens Steel Company, on "The Science of Making Steel and Steel Defense Products." This lecture was illustrated by colored moving pictures taken in the mills of the Lukens Steel Company.

At the business meeting on Saturday the following officers were elected: *President,* E. A. Vuilleumier, Dickinson College, Carlisle; *President-elect,* Charles E. Mohr, the Academy of Natural Sciences, Philadelphia; *Vice-presidents,* Marcus H. Green, Albright College, Reading, and Thomas H. Knepp, Everett High School; *Secretary-Treasurer,* V. Earl Light, Lebanon Valley College, Annville; *Editor,* Robert T. Hance, Duquesne University, Pittsburgh; *Press Secretary,* Lawrence Whitcomb, Lehigh University, Bethlehem; *Junior Academy Adviser,* Karl F. Oerlein, State Teachers College, California.

It was decided that the summer meeting in 1941 would be held at Bedford, Pa., on August 8 and 9, the 1942 spring meeting at State Teachers College, Edinboro, Pa., on April 3 and 4, and the 1943 spring meeting at Beaver College, Jenkintown.

LAWRENCE WHITCOMB,
Press Secretary

THE IOWA ACADEMY OF SCIENCE

THE fifty-fifth annual meeting of the Iowa Academy of Science was held at Simpson College, Indianola, Iowa, on April 25 and 26, with 260 registered members and visitors attending.

A symposium, "Recent Advances in Genetics," with President Charles Carter, of Parsons College, presiding, took the place of the customary Friday morning presidential address. The three topics discussed and the leaders were as follows: "Theoretical Genetics," E. W. Timm, Iowa State College; "Applied Plant Genetics," I. J. Johnson, Iowa State College; "Applied Animal Genetics," J. L. Lush, Iowa State College; "Human Genetics," K. A. Stiles, Coe College. A joint symposium with the Iowa Medical Society, "Virus Diseases," was held on Friday afternoon, with J. W. Gowen, of Iowa State College, in the chair. The topics and leaders were as follows: "The Chemistry of Plant Viruses," C. G. Vinson, University of Missouri; "Experimental Leukosis," C. D. Lee, Iowa State College; "Viruses Affecting the Respiratory Tract of Man," W. M. Hale, Iowa City. The Friday evening dinner address, "Simultaneity and Originality in Human Thought," by Professor George Glockler, of the State University of Iowa, presented a thought-provoking viewpoint to about 180 diners. The annual academy address on Friday night was delivered by C. R. Keyes, of Cornell College. The Iowa audience was quite surprised to learn of the archeological possibilities in the state.

The academy likewise met in 9 sections for the presentation of 141 papers of special interest. The science teaching section held a symposium, "Tests and Measurements in Science." The leaders were D. B. Stuit, State University of Iowa; S. M. Dietz, Iowa State College; and P. E. Kambly, University High School, Iowa City.

Iowa Wesleyan College, Mt. Pleasant, Iowa, will be the host of the academy in 1942. The officers and section chairmen for the new year are as follows: *President,* Roy A. Nelson, Cornell College; *Vice-president,* C. W. Lantz, Iowa State Teachers College; *Secretary-Treasurer,* E. R. Becker, Ames, Iowa; *Editor,* L. R. Wilson, Coe College; botany and bacteriology, M. L. Grant, Iowa State Teachers College; chemistry, general and physical, H. H. Rowley, State University of Iowa; chemistry, organic and biological, Henry Gilman, Iowa State College; geology, L. W. Wood, Iowa State Highway Commission; mathematics, Orlando Kreider, Iowa Falls Junior College; physics, C. O. Gale, Grinnell College; psychology, M. T. Henderson, Grinnell College; science teaching, S. M. Dietz, Iowa State College; zoology, J. A. Adams, Grinnell College.

E. R. BECKER

AMES, IOWA

REPORTS

REPORT OF THE COMMITTEE ON CLASSIFICATION OF MILITARY PERSONNEL ADVISORY TO THE ADJUTANT GENERAL'S OFFICE[1]

THE Committee on Classification of Military Personnel held its first meeting at the National Research Council on May 24, 1940. Subsequent meetings were held on August 9, December 9 and February 23 and 24, 1941. In addition, there has been much individual conference and correspondence with officials in the War Department.

The problems with which the committee has dealt have arisen mainly out of the work of the Personnel Research Section in the Personnel Bureau of the Adjutant General's Office. This section is responsible for developing aids to correct classification of officers and men with respect to their abilities and skills, educational background, civilian and military experience, intellectual capacity, personal qualifications, special aptitudes and indicated best Army usefulness.

[1] Submitted to the Division of Anthropology and Psychology of the National Research Council, April 26, 1941.

The advice of the committee was first sought with respect to plans initiated by the War Department during the winter and spring of 1940 for developing a good classification test for use when recruits and trainees first report to reception centers, a test with which to sift the new arrivals into a few broad groupings with respect to their ability to learn quickly the duties and responsibilities of a soldier. Preparation of such an instrument was placed first on the priority list by Brigadier General (then Colonel) Wm. C. Rose, who mentioned other less pressing problems likely to require the attention of the committee later, including methods of selecting men for training as officers; simplification of officer efficiency reporting; improvement of standardized occupational interviews and tests of proficiency in a trade; and supplementary tests of aptitudes for work which calls for mechanical ingenuity or other special talents. He stated that a preliminary plan had already been made for preparing a classification test which would be reliable, practicable, feasible to administer and useful as a rough indication of trainability.

Captain M. W. Richardson presented the plan which described the purpose of the tests, stated the assumptions which controlled in selection of content, described its mechanical aspects and outlined in detail the successive steps necessary in construction, tryout, item analysis, revision, testing of a large population of troops in order to construct scales and norms, preparation of complete instructions for administration and for use of the scores, training of officers in giving and interpreting the test, and a follow-up check of the validity of the test as an indicator of military usefulness or of subsequent progress made by the recruit in training schools.

The committee recognized that such a test would sometimes have to be administered by people with but little experience in examining, and not by professional psychometrists. The emphasis should be, then, on measuring power, not speed, so that small errors in timing would make little difference in the score. A test rather steeply graded in difficulty from very easy to fairly hard was indicated. Other precautions approved by committee members were that the test should be readily scored by hand, as well as by machine; that it ought not to have an esoteric or puzzle-like appearance, but should appeal to both officers and men as a sensible practical test so that they would take it seriously and have some confidence in the fairness and worthwhileness of the scores. This meant that it must be free from ludicrous items, and items that look childish, schoolish, bookish or otherwise out of place in a test taken by mature men who may or may not have done much reading and writing since their school days.

As to the units in which performance in the test should be expressed, a suggestion offered by Captain Richardson was instantly endorsed, namely, that no use whatever be made of "mental age" units or I.Q.'s or school-grade equivalents; and that efforts be made to discourage any one from attempting to equate scores on this adult test with scores on tests scaled in units of mental age or other inappropriate, misleading and easily misunderstood terms. Instead, it was agreed to endorse the scaling and calibration of the test in units of standard deviation from the average performance of a representative population sample of adult males of military age.

It was deemed advisable to build a test in spiral-omnibus form, with an ample fore-exercise, making use of arithmetical items, verbal items and space items. It was agreed, however, that the test should yield only a single score because of the relative unreliability of part-scores when used for individual diagnosis.

The recommendations of the committee were followed. One form of the General Classification Test, as it is called, was ready for use at Reception Centers when they began to operate in November, and an alternate form, somewhat improved, has since been issued. Army Grades and Standard Scores on this test are now recorded on the Qualification Cards of upwards of a million inductees and enlisted men and are in daily use as aids to personnel officers in classifying and re-classifying men, making initial assignments, balancing units and selecting men for Army training schools or for special duties.

Meanwhile, other instruments for measuring individual differences have been constructed and put to use, including a Non-Language Test, Literacy Tests, a Clerical Aptitudes Test and a Mechanical Aptitudes battery. Follow-up studies are in progress, to enhance the usefulness of such data by providing officers with expectancy tables, critical scores and preferred ranges for the most common types of special training courses. During the construction and validation of these instruments, the advice of the committee has been followed.

The committee's suggestions were also sought with reference to plans for selection and training of personnel officers and personnel technician officers (military psychologists). Recommendations made at the meeting on February 24 have now been approved by the War Department and in the near future will be put in effect, whereby the gateway to such a career will be open to a limited number of professionally and personally qualified selectees who want to fit themselves for one of these army specialties. The plan in brief is as follows:

A training program has been outlined for which approximately 25 psychologists (selectees) will be chosen every three months. The men will be picked

from among the applicants who have the desired professional background and who are deemed to excel in the personal qualities and stamina indicative of success as an Army officer. Selection will be made during the thirteen weeks in which the selectee is getting his basic military training. He will then enter on a period of four or five months of apprenticeship or interneship, assisting classification officers and examiners in the work of interviewing, examining, trade-testing and classifying recruits, filling requisitions, following up the performance of soldiers who seem to need re-classifying or transfer, and the like. Attendance at a central four-weeks school will be provided for during this interneship period, after which the selectees will take the regular three-months course in an officers' training school. If successful here, he will be commissioned in the Officers' Reserve Corps (Adjutant General's Section) and immediately thereafter will have a year of active duty as a personnel technician officer.

It is anticipated that some qualified selectees who are interested in personnel work but who for personal reasons do not wish to commit themselves for a period of two years will nevertheless find their best Army usefulness during a considerable part of their year of selective service training in duties connected with some phase of the Army's personnel program. Some, with superior ability as leaders, will prefer to spend their year in training and duty with combat troops.

In the field of officer classification, studies and recommendations have been made looking toward improvement of the Officers' Efficiency Report. Procedures to be followed in selecting candidates for admission to Officers' Training Schools are also being developed. Several examinations are now in preparation: for Warrant Officers, at the high-school level; and at the college level, for applicants to Officers' Training Schools and for National Guard and Reserve Officers on active duty who want commissions in the Regular Army.

Grateful acknowledgment is made to psychologists who have been generous with their help, including F. L. Wells, of Harvard; R. A. Brotemarkle, of the University of Pennsylvania; R. M. Bellows, of the University of Maryland; Ben D. Wood, of the Cooperative Test Service; R. M. Yerkes, of Yale; E. L. Thorndike and Irving Lorge, of Columbia; Walter Dill Scott, of Northwestern; E. K. Strong, Jr., of Stanford; C. S. Yoakum, of Michigan, and many others.

These are trying days. America may be only arming so that we shall not be attacked during the years ahead; or we may be attacked in the not distant future. In either event, the profession of psychology is shouldering at least a part of its appropriate load. The Committee on Classification of Military Personnel assures the Adjutant General of the Army, Major General E. S. Adams, and the National Research Council of its readiness to carry on.

Respectfully submitted,

C. C. BRIGHAM
H. E. GARRETT
L. J. O'ROURKE
M. W. RICHARDSON
C. L. SHARTLE
L. L. THURSTONE
W. V. BINGHAM, *Chairman*
Committee on Classification of Military Personnel

SPECIAL ARTICLES

EFFECT OF LOCAL EDEMA AND INFLAMMATION IN THE SKIN OF THE MOUSE ON THE PROGRESSION OF HERPES VIRUS

HERPES virus, when injected intracutaneously into the abdominal wall[1] or applied by needle puncture to the skin of the tail,[2] induces in the white mouse an ascending myelitis. Hindlimb paralysis is first noted on about the eighth day, followed within 24 to 48 hours by quadriplegia and finally prostration and death. As will be shown in this preliminary report, certain chemicals, introduced into a cutaneous area prior to its exposure to the virus, have an enhancing or retarding effect on the development of this clinical syndrome.

Albino mice, Rockefeller Institute strain, about 30 days old, were used. Four groups of materials were injected subcutaneously into the tails near the base as a preparatory treatment. The materials were: (*a*) hypertonic solutions of inorganic salts (5 per cent. and 10 per cent. NaCl, 10 per cent. NH_4Cl, 14 per cent. NaH_2PO_4, 7 per cent. Na_2SO_4, 16 per cent. KI) or 20 per cent. dextrose; (*b*) isotonic .85 per cent. NaCl, 1.71 per cent. KI, normal rabbit serum or hypotonic distilled water, and (*c*) an irritant, turpentine-ether-olive oil in equal parts. 0.1 cc of one of the substances was injected and at varying intervals thereafter, a superficial skin abrasion was produced at the same site, covering an area of about 7×3 mm. A broth suspension of brain and cord infected with the HF strain of herpes virus was then applied to the entire abraded area and gently rubbed in by means of the shank of the needle.

Table I shows the results obtained in a typical ex-

[1] H. B. Andervont, *Jour. Infect. Dis.*, 44: 383, 1929; *ibid.*, 45: 366, 1929.

[2] F. O. Holmes, personal communication.