These criticisms just voiced are in the spirit of doubt and inquiry. I render homage to Doctor Kempf as a brilliant investigator in probably the most complex problem in all medicine.

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DOCTOR KEMPF (Closing).—Doctor Mehrtens and Doctor Schaller both call attention to the importance of mentation (idea, belief) in producing affective changes and changes in postural tensions. There is much evidence to show that mentation in relation to environmental situations influences affectivity and postural tensions. In this paper I wish to bring out how postural tensions are intrinsic to the reflex efferent-afferent-efferent circuit, and how such circuits are compounded through integrative associations into higher unities or postural attitudes having definite characterological significance.

It is common experience that any idea, as such, has little weight in everyday life until affective reactions occur and attitude changes occur. Then we react according to the affectivity and the attitude. For instance, the association of secondary ideas to the initial idea may be flight, or fight, or indifference, or amusement, or chagrin—according to the affectivity and attitude. At one time we may be amused at the bathtub situation and at another quite exasperated. Through learning to read the language of postural attitudes we learn to understand the deeper affective and characterological make-up of the patient and ourselves in particular kinds of situations, especially in personal relations.

I wish to express my appreciation of the important co-determinants of human behavior which Doctor Mehrtens and Doctor Schaller each so interestingly added for consideration in relation to the influence of postural tensions. I regret that the length of the paper prevents me from discussing the James-Lange theory of the origin of emotions. I am preparing for publication a theory of the continuity of the stream of autonomic-affective pressure, its origin, nature, and function, in which a full discussion of states of its emotional variation to cerebral and environmental influences as well as metabolic or internal influences will be brought out.

THE MENTAL HYGIENE SURVEY OF CALIFORNIA*

PART II

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PROBLEMS RELATED TO THE MENTALLY DEFICIENT AND BACKWARD

A PROBLEM that confronts each community is the development and utilization of adequate facilities to assist as many persons as possible to adjust themselves to whatever they are capable of doing. Each community, therefore, has a large responsibility in the field of the mentally deficient. The state's function begins with the remaining group, who indicate through their behavior that they are not making a satisfactory adjustment and also with that vegetative type that presents mainly a custodial problem. The most important factor in adjusting these intellectually retarded and deficient persons is the public school. A partial survey carried out by the State Department of Education revealed that 13,617 mentally retarded children were in the public schools and that 5710 of this number had an intelligence quotient below 70. Approximately 90 per cent of the mentally retarded can be adapted to community life in activities consistent with their abilities. In order to adequately cope with this problem, it is necessary to recognize those pupils early who are mentally retarded and whose low intelligence level interferes with their adjustment in the average classroom. Every school system having more than ten such children should provide a specially trained teacher for this group. Larger communities should develop their work in special centers modeled after those now in operation in Los Angeles and San Francisco. Small communities will needs depend upon traveling clinics or assistance provided by the State Department of Education. State aid up to 50 per cent of the cost should be available to those communities whose finances are inadequate to permit them to develop special class work.

The principle of complete state care of the mentally deficient should be continued, and counties should be relieved of those charges in need of institutional care. At least 1000 additional beds are indicated at this time to provide facilities for those children obviously in need of institutional care. The two State Homes, at the time of the survey, cared for 2812 patients; of these, 325 were in one institution and 2487 in the other. The larger home cared for its charges at a per capita cost of sixty-eight cents a day, making it impossible to provide an adequate educational program and allowing only bare custodial care. The per capita allowance for these institutions should be at least one dollar a day.

A separate institution should be provided for the care and treatment of the 1037 epileptic patients now scattered throughout all the state institutions.

MENTAL PROBLEMS OF DELINQUENCY

Programs developed for the understanding and treatment of juvenile and adult delinquency, both in the communities and in the institutions, should be based upon the established psychological fact that behavior, expressing itself as delinquency, has meaning to the individual and so has reason for existing. Treatment, therefore, should have as its primary objective the understanding and removal of the underlying causes of the behavior so expressed. This approach provides the best means of changing the delinquent person to one with normal behavior. The modification of behavior through punishment becomes a method of decreasing importance as it is replaced by the clinical and mental hygiene approach. The following recommendations are made to give this primary objective a more effective application:

1. Curtailment of the scope of the Juvenile Court with the elimination (1) of all dependency cases except those needing court orders for their

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Editor's Note.—See, also, a preliminary report on the California State Mental Hygiene Survey in December 1930 California and Western Medicine, page 872.

protection, and (2) of a large number of the less serious delinquency cases.

2. The development in every community of better facilities in schools, clinics and social agencies to deal with early delinquency problems on a case work basis in close coöperation with the courts. The court work should be reserved for the more serious cases.

3. Raising the standards of training of probation officers and lessening their case loads to permit good treatment work.

4. More psychiatric and clinical facilities in courts for careful examinations and for the planning of treatment.

5. Extension of referee work and training of referees in social case work, particularly in fields related to the problems of childhood.

6. Continuation and extension of state supervision of parole.

7. More carefully planned admission policies of detention homes, which should be used more extensively for clinical studies of children who cannot be kept in their own homes.

CORRECTIONAL INSTITUTIONS IN CALIFORNIA

The essential purpose of the three state institutions for juvenile delinquents is to deal with the more difficult and unstable children who have not responded well to the efforts of the community to treat them. No child should be sent to a correctional school when there is a reasonable possibility of adaptation in the community without commitment. The fundamental purpose of these schools should be to deal with the difficult children and to provide a clinical, educational program suited to their individual needs. There should be a more extensive development of psychological and psychiatric clinical facilities. A more elastic program is needed to take care of the so-called "psychopathic delinquent." For the development of this program, additional units are needed. Such expansion appears to be sounder and more feasible than the development of a special institution. Vocational programs in these schools should be expanded with trained vocational instructors. Disciplinary authority should be centered in the disciplinarian or assistant superintendent and the company officers should be relieved of the responsibility for fixing discipline except in the case of very minor offenses. More trained parole workers are needed for follow-up and closer supervision of the children on parole. There should be a revision of salary schedules to allow the institutions to keep their trained personnel, thereby raising the educational and cultural standards of the staffs. One of the three schools has established a high standard of educational work and mental hygiene program that compares favorably with the best correctional institutions of the United States. On February 1, 1930, the combined population of the three schools was 1125 and the combined number on parole and placement was 1244.

ADULT PROBATION—PRISONS—PAROLE

Any county having twenty-five or more adults on probation should expand the adult probation work, through setting up separate organizations and employing full-time persons for this work. State aid should be possible for the smaller counties that are willing to meet adequate standards of training but do not have finances to carry the burden unaided. Probation work should be more extensively used in the lower courts.

Adequate psychiatric services should be developed in the state prisons to bring about better classification and segregation of prisoners, particularly those who are psychotic. Psychotic prisoners should be transferred to the state hospitals as rapidly as possible.

The proposed new institution for male first offenders should be planned and developed by a group including the best trained persons in the state. Otherwise this institution will be just another prison and will serve no constructive purpose.

The new "prison" for women will need the constructive guidance of trained persons to make possible the development of a program of industry and clinical activity suitable for this group, but now completely lacking.

Parole work in the two adult prisons should be placed on a professional basis, with the employment of a full-time paid group of trained professional persons to study and select prisoners suitable and ready for parole. More trained parole officers should be provided to supervise them after leaving prison. Idleness in the overcrowded prisons for men is a problem of enormous importance from the standpoint of mental hygiene.

FACILITIES IN PUBLIC SCHOOLS FOR DEALING WITH VARIOUS TYPES OF MENTAL HYGIENE PROBLEMS

The principle of compulsory education has made the school the center of the social and educational life of most children in every community. Through its operations the schools have had to deal with children of every type presenting every kind of problem. The school becomes the logical center of constructive mental hygiene activities of the community. To meet this responsibility the school should develop and extend facilities for study and treatment. Clinics utilizing the services of psychiatrists, psychologists, and trained social case workers should be developed wherever possible. As a part of the clinical program, it is recommended that schools proceed in the development of visiting teacher work. A visiting teacher is the trained social case worker assigned to the study and treatment of the various types of adjustment problems in school children. In the smaller communities, traveling mental hygiene clinics should be utilized. The work in speech correction should be extended. Problems associated with attendance are mental hygiene problems to be approached in the same manner as other behavior problems. Since the school must deal with children of varying abilities, the principle of differentiated curricula should be accepted and extended. The vocational guidance work should be developed with trained persons in charge. The use of teachers with special training

as counselors should be closely related to the development of visiting teacher work. Special educational facilities for the physically handicapped should be extended to meet the mental health needs of this group. The disciplinary philosophy of the school personnel should be influenced more by the mental hygiene principle which stresses the need to understand rather than to condemn and punish. The more restricted use of such methods as corporal punishment, threatening, lecturing, etc., will follow when more educators are motivated by the spirit of mental hygiene.

PSYCHIATRIC AND PSYCHOLOGICAL FACILITIES IN CALIFORNIA

The development of psychiatric clinics for adults and children is an important factor in any community program. Such clinics should offer an opportunity for early diagnosis and treatment. Here rests one of the best approaches for good preventive work. The principal objective of these clinics should be treatment over as long a period as is indicated. They should have the opportunity of dealing with mental conditions and behavior problems in their early stages, when treatment can be most effective. Child-guidance clinics have developed as the most effective way of pooling the professional techniques of psychiatrists, psychologists, and psychiatric social workers in studying and treating the problems of childhood. The courts will need psychiatric facilities of their own for the study and treatment of those persons for whom they are responsible. Traveling mental hygiene clinics organized by the Bureau of Juvenile Research and the various state hospitals should be extended to give better psychiatric service to the smaller communities. The out-patient clinics of the larger hospitals should all include psychiatric clinics for both children and adults. A portion of the service of these clinics needs to be diagnostic, but in so far as possible the emphasis on treatment should be greatly extended. There is a marked shortage of clinics for the treatment of adult psychiatric problems. Psychiatrists should be attached to gastro-intestinal, gynecological, and genito-urinary clinics by reason of the larger number of psychopathic patients attending those clinics.

TRAINING OF PROFESSIONAL GROUPS IN PSYCHIATRY AND MENTAL HYGIENE

Technical and clinical aspects of mental hygiene require a well trained professional group, particularly in the fields of medicine, mental nursing, psychology, social work, and teaching. Programs for their training will play an important rôle in determining the quality of mental hygiene work in the state. Psychiatry should be a major subject in the medical schools so as to insure for the physician a broad understanding of human behavior and its deviations. The medical student, in addition to having an understanding of the conventional phases of mental pathology, should have an adequate understanding of the nature and treatment of psychoneurotic conditions, behavior problems of childhood and the social and emotional dislocations incident to family life. The relation of emotional problems to other medical and surgical conditions should be stressed. Sufficient clinical work should be provided to allow each student to have a personal contact with psychiatric problems. Courses in psychiatry and mental nursing should be in the curriculum of every nurses' training school. Those nurses entering public health work need to be better oriented in the field of mental hygiene. It is particularly needed by those nurses planning to become school nurses. Teachers need to be given a technical understanding of personality growth in order that they may have a broader conception of their own influences on the mental growth of the child and a better understanding of the common problems of children that arise in the classroom. There are no facilities in California for the training of the visiting teacher, who is the social case worker in the schools. The training of social workers in the principles of modern psychiatry and mental hygiene should form an important part of their training program. They should be trained to give students better genetic understanding of personality growth, emotional and psychological bases of family maladjustments and more understanding of the basic reasons for the common types of difficulties that are referred to social and health agencies. More social agencies are needed with higher standards of case work.

THE STATE DEPARTMENT OF INSTITUTIONS

The state government annually spends millions of dollars in various activities that are closely related to the field of mental hygiene. The type of organization and the degree of professional skill available to the state departments are of great importance for the guidance and administration of this work. The State Department of Institutions has administrative responsibility for the six state hospitals, the state narcotic hospital, the two institutions for mental defectives, the three correctional schools for juvenile delinquents, and the state institutions for the deaf, dumb and blind. The department has brought about some very desirable improvements which have paved the way to the next important step in organization. The state institutions need a continuity in administrative policy without interruption each time the state administration changes. To bring about such continuity it would aid greatly if the State Department of Institutions could be under the control of a nonpartisan board of directors, appointed by the Governor for a period of six years with retirement of two members every second year. This board should be allowed to submit several names to the Governor for consideration as director, whose continuance in office should depend upon his ability to conduct a continuously constructive and progressive program. Qualifications for the director should be set high and he should be one whose training and ability would enable him to assume leadership, not only with the clinical staff of the Department of Institutions, but also with the clinical staffs of the various institutions for which the department is responsible. The Department of Institutions has large clinical responsibilities

which include some of the most intricate problems confronting modern psychiatry and education. If this department is to give the support and guidance that these problems demand, the staff must include well-trained specialists in the various phases of institutional work. The director, therefore, should have the assistance of a clinical director of state hospitals, a chief psychiatric social worker, a state supervisor of parole work in the correctional institutions, a director of educational programs and occupational therapy, a state dietitian, and a state statistician. Salaries should be sufficiently remunerative to attract well qualified persons to these positions.

THE STATE DEPARTMENT OF SOCIAL WELFARE

The State Department of Social Welfare was created in 1927 to take over the functions of the State Board of Charities and Corrections and certain other activities previously assigned to the State Board of Control. The activities of this department of the state government bring it closely in touch with the social welfare work of the state that is being done by private and public agencies. Some of the specific responsibilities of this department are: supervision of the work related to the care and support of the dependent child and administration of the state aid which is given for dependent children in orphanages, foster homes, or in their own homes. The work with dependent children includes the administration and supervision of the adoption law. The department is responsible for the supervision of all adult and juvenile probation work being done in the state. It has supervision of all the support being given to the needy blind and the needy aged. It is also the clearing house for statistics of various phases of social welfare work and includes the supervision of all county jails, county hospitals, county welfare departments, and county almshouses. It has the right to visit and report on the work of the state institutions, including the prisons. The policy has been to work with all the social agencies in the cities and counties, to assist them in forming standards and of guiding them to more effective work in the various fields of social welfare. The objective has been to bring as many agencies as possible to a standard of work that should enable the department to turn over to such agencies the actual administrative work. In this way the department has become a positive educational force and not merely an investigatory body. When the department was created in 1927, provision was made for a social welfare board of six members appointed by the Governor for a term of four years. The powers of the board should include the right to submit to the Governor several names for consideration for the post of director. The director should be a trained person who can assume leadership in the social welfare program of the state. The State Department of Social Welfare needs the continuity of policy and staff which should come when the director and the technical staff carry over from one state administration to another.

NEED FOR A PSYCHIATRIC INSTITUTE IN CALIFORNIA

California needs a well organized and adequately staffed psychiatric institute, which should form the scientific and intellectual center of all psychiatric and mental hygiene activities of the state. This institute should be organized as a department of the State Department of Institutions and at the same time should be an integral part of the state university. The joint relationship would insure a close affiliation with all the state institutions and should provide a definite responsibility for developing their clinical programs. Connection with the university would give the institute a definite part in the training programs of physicians, teachers, social workers and others, and would be the means of stimulating research. The state university needs to have this connection with the mental hygiene activities of the state. *The establishment of this institute is one of the most important needs that the state has in developing its mental hygiene program.* The professional staff of the State Department of Institutions should constitute part of the staff of the institute and should have appointments on the faculty of the state university.

NEED FOR A STATE-WIDE SOCIETY

The survey has revealed that there is a great deal of interest throughout the state in all phases of social welfare and mental hygiene work, but that no adequate channel exists through which this interest can be expressed. There is the need for an organization that will be able to organize and extend activities throughout the state such as to further legislation, to elevate the standards of care and treatment in institutions, to formulate and carry through an adequate program for the care and treatment of children, to stimulate better clinical facilities in schools and communities and a variety of other important activities. One of the most important recommendations growing out of this survey is that there should be organized a state-wide society, somewhat similar to the State Charities Aid Society of New York and the Public Charities Association of Pennsylvania, nonpolitical in character, supported by private contributions, carrying through from one state administration to another and working with all the social and health activities of the state departments as well as with the public and private social and health agencies of the various communities. This organization should be primarily educational in scope. It should be concerned largely with fact-finding and fact-distributing. Such an organization would not duplicate any other activity that is now going on. It would supplement the work of the State Conference of Social Work and would have a close relation to parent-teacher organizations, taxpayers' associations, the League of Women Voters, and all other organizations that are state-wide in their scope and interested in the social and financial implications of human maladjustment. It should have a budget of at least $25,000 a year with a full-time director and a few well trained

assistants. It should have a board of directors representative of prominent and professional people in all sections of the state. The organization of groups in many communities should thus be insured, around which would revolve the educational activities in fields related to mental hygiene and social welfare. Through the payment of dues it should be possible to maintain financial support. A mental hygiene division could be developed into one of the strongest sections of the organization.

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REFERENCES

1. Journal of the American Medical Association, Vol. 96, No. 13 (March 28), 1931.
2. Preliminary Reports of the White House Conference on Child Health and Protection, Mental Hygiene Bulletin, Vol. 9, Nos. 1 and 2 (Jan.-Feb.), 1931.
3. The California State Mental Hygiene Survey, Glenn Myers, M. D., California and West. Med., Vol. 33, No. 6 (December), 1930.

FEMALE SEX HORMONES AND MENSTRUATION*

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RECENT developments in the recognition of various hormones concerned with the physiology of the female sex organs have served to open a fertile field for investigation. Although a great deal yet remains obscure, marked progress has been made and it would seem that one may anticipate for the near future an important advance in our understanding of the functional disturbances of menstruation. The following brief review presents some of the more outstanding observations that have been recorded, and an attempt is made to demonstrate the interrelationship between the hormones of the ovaries and the anterior hypophysis, the application of animal studies to the human, and the importance of recent discoveries in the treatment of menstrual disorders.

THE MENSTRUAL CYCLE

Menstruation has always been a subject of great interest to mankind, but it is only within a comparatively few years that there has been any realization of the significance of this process and the anatomic changes which accompany it. For this we are indebted to the epoch-making histologic investigations of Hitschmann and Adler, R. Schroeder, R. Meyer, and others, who demonstrated the existence of a definite recurring cycle of events in the ovary and in the endometrium. All work on "sex hormones" must be construed in keeping with these anatomical transformations and seek to explain the mechanism by which they are brought about.

The normal menstrual cycle takes approximately twenty-eight days to run its course and it is customary for clinical purposes to regard the day of onset of menstruation as the first day of the cycle. On the fourth or fifth day, that is immediately after the termination of the menses, are found definite processes in ovaries and endometrium. In one of the ovaries a primordial follicle is developing and maturing into a graafian follicle, and the endometrium, which was left with but a thin basal layer, is proliferating and increasing in depth with the formation of a superficial functional layer. At about the fourteenth day the graafian follicle has reached its maximum stage of development so that it ruptures and the ovum escapes to be taken up by a ciliary current and carried down the fallopian tube to the uterus. The ruptured follicle then undergoes a complete transformation to become a *corpus luteum,* and this is accompanied with a set of characteristic changes in the histology of the endometrium. Before ovulation occurs the glands of the functional layer are straight with a clearly outlined lumen, the individual cells of a low columnar type, and the stroma dense and made up of spindle-shaped connective tissue cells. With the development of the corpus luteum, however, the endometrial glands assume an altogether different appearance; they become markedly swollen and tortuous, the lumen irregular, and they are filled with a secretion of mucus. The stroma has also changed in that it is edematous, laden with glycogen, coursed with numerous dilated blood vessels, and the individual cells have hypertrophied and assumed a polygonal shape so that they have become identical with the "decidual cells" of pregnancy.

One of two things may now occur. If conception has taken place, the fertilized ovum embeds itself in the endometrium which has been prepared for its reception, and the fully developed yellow body in the ovary continues its existence as the "corpus luteum of pregnancy." If, however, pregnancy does not occur, a series of degenerative changes set in. The corpus luteum begins to regress, and the tissues of the endometrium undergo necrosis. As this progresses the surface mucosa is cast off, blood vessels are torn across, and the hemorrhage of menstruation ensues. The desquamation takes about three days for its completion, and finally the whole cavity of the uterus remains covered with but the thin basal layer. A new primordial follicle is now launched forth on its career, the endometrium again begins to proliferate, and the same series of changes is repeated during the succeeding four weeks.

THE HORMONE FACTORS OF MENSTRUATION

It has long been recognized clinically that there is a vital intercommunication between the various glands of internal secretion. This is also true in regard to the ductless glands which are responsible for menstruation, and this fact must be constantly kept in mind. Although such distant structures as the thyroid and the adrenal must play some part, little is understood as to their exact rôle and in this short review their influence must be overlooked. The attention of recent investigators has been directed mainly to the effects

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