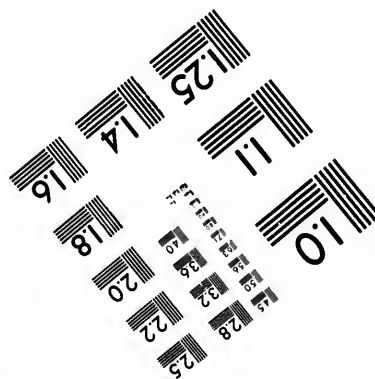
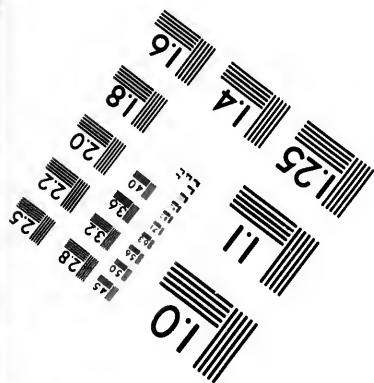
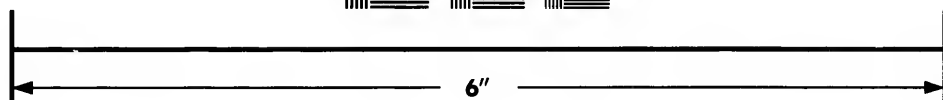
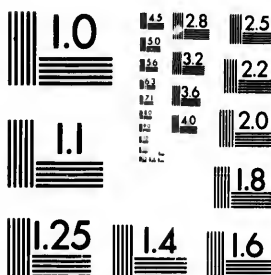


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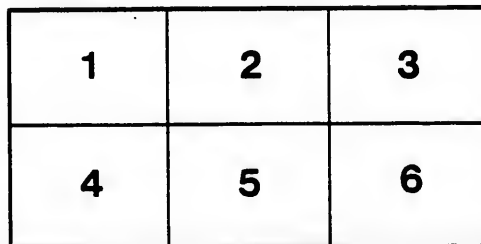
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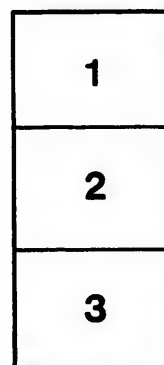
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The Methods Employed in Examining the Eyes for the Detection of Hysteria

Presented to the Section on Neurology and Medical Jurisprudence, at the Forty-ninth Annual Meeting of the American Medical Association held at Denver, Colo., June 7-10, 1898.

BY CASEY A. WOOD, M.D.
CHICAGO.

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THE METHODS EMPLOYED IN EXAMINING THE EYES FOR THE DETECTION OF HYSTERIA.

BY CASEY A. WOOD, M.D.

Although much has been written regarding the value of the ocular signs and symptoms of hysteria in the diagnosis of that disease, I believe there is good reason for returning to several matters in this connection that seem to me of vital importance, especially as I do not think sufficient stress is commonly laid upon the means by which one must arrive at diagnostic conclusions.

My own belief, after a somewhat extended acquaintance with this disease is, that, if one were to make a special study of that organ that most uniformly exhibits the evidence of hysteria, the eye would afford the most information, even more emphatically than the skin or the mucous membranes. On the other hand, anomalies of the general sensibility are probably more easily detected by the average individual (who methodically searches for them) than are ocular defects. But as the scientific observer omits no examination that will assist him in arriving at proper conclusions in diagnosis, prognosis or therapy, I enter a plea for a more thorough and more general use of certain methods employed by the ophthalmologist in detecting the presence of ocular hysteria as one manifest of the general neurosis.

First of all, then, what are the commonest ocular manifestations of hysteria, what the most reliable means for their detection, and how may errors in examination be avoided? I need hardly say that

some acquaintance with the use of the ophthalmoscope is of great value in the diagnosis of ocular lesions, and in investigating the subject one should be certain that there are no alterations in the interior of the eye to account for the visual disturbances. It is not fitting that I should point out the value of ophthalmoscopic examinations to the trained neurologist; I do not very well see how he can dispense with them. Should he be unable to examine the background of the eye with the mirror he should, in all events, seek a report upon the condition of the fundus at the hands of some confrère expert in ophthalmic work. As is the case with other organs of the body, there are absolutely no tissue alterations to be found in any part of the eye, due to the presence of hysteria. A negative report upon the fundus condition is therefore, a *sine qua non* in examining a suspected hysterope.

ANOMALIES OF ACCOMMODATION.

Taking one age with another, the commonest ophthalmic sign of hysteria is a defect in the focusing power of the eye—anomalies of accommodation. For various reasons these conditions have been called *hysteria*, *insufficiency of accommodation*, *ciliary paresis*, *paralysis*, *painful accommodation*, *nervous astigmatism*, *opia*, etc. The patient complains of the usual symptoms of asthenopia—pain in the eyes and forehead when attempting to read or do any other near work, blurring of print, photophobia, frequent winking, etc. These cases are rarely permanently relieved by glasses or by an exclusive local treatment of the eye. If there is a defect in the range of accommodation, the so-called paresis of accommodation is nearly always in the form of a true hysteric contracture of the ciliary muscle—the motor power by which the eye is focused for various distances. The nearest point at which the eye can accommodate itself for the distinct seeing of small objects varies with the age of the individual. As you are well aware, this point is very close to the eye in childhood, remote from it in

se of the ophthalmologist in the diagnosis of ocular lesions subject one should be able to examine the interior of the eye for all disturbances. It points out the value of the trained neurologist who can dispense with the aid of a specialist able to examine the interior of the eye by means of a mirror he should at least be able to determine the condition of the fundus of the eye. An expert in that branch of medicine, the organs of the body, must be able to detect alterations to be found in the presence of hysteria. The fundus condition is a very important factor in examining a suspected

age. On the other hand, every eye has a certain range of accommodation; that is, there is a certain space within which small objects can be distinctly seen, and when the eye is normal, or when the refraction is rendered normal by distance glasses, this range is singularly and wonderfully constant in individuals of the same age, and I believe that the neurologist who is on the lookout for deviations from the normal accommodations will obtain assistance in diagnosis by bearing this fact in mind. For all practical purposes, however, one may ignore the extent of this accommodative range and confine one's attention to the nearest point of distinct vision, that is almost always affected in hysteria, that is to say, is usually too near or too far away from the eye of the hysterope. The following table indicates the proper distance, and it is a very easy thing to determine any deviation:

Age.	Nearest point of distinct vision.
10	7 cm.
15	8 "
20	10 "
25	11.7 "
30	14 cm.
35	18 "
40	22 "
45	28.6 "
50	40.5 "

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An eye that is under the influence of hysteria acts either as if it were under the influence of pilocarpin or atropin; the patient is able to read fine print either abnormally near or sees small objects most distinctly farther away than he should.

In practice, all that it is necessary to do is to have the distant vision; if abnormal, corrected by glasses and then ask the suspected individual to read the finest diamond print, held as near to the eye as possible. The patient, with his back to a good light, is asked to read a portion of a page of this print, at the normal distance from the eye, as shown by the table. If he continues to read it when brought a couple of centimeters or more nearer, or if he cannot read un-

less it is removed farther away than the normal distance, a defect of accommodation is certainly present. I recommend this as one of the most satisfactory and most easily applied of all the tests. As in other forms of spasm or paralysis of accommodation, the condition may often be relieved by glasses. It often happens that a young subject must be treated as if he were sixty years of age, requiring a strong convex glass for reading at the normal distance or a concave glass for street wear. In both instances a few drops of a 1 per cent. solution of atropia will disclose the true refraction, often unmasking the hysteric character of the defect.

DEFECTS IN THE FIELD OF VISION.

As every neurologist knows, defects in the field of vision constitute some of the commonest signs of disease of the ocular apparatus, and that they are of paramount importance, while a knowledge of their peculiarities is of great value in determining the presence of hysteria. For purposes of comparison I show two perimeter charts: one of the normal and the other furnished by a hysterope under my care. The predominant peculiarity of an hysteric anomaly of the visual field is, that while in every other disease (except hysteria) where peripheral limitations occur the color field is affected *pari passu*, or in a greater proportion than the field for white. In non-hysterical diseases perception of color is often entirely lost, yet fairly large areas susceptible to visual sensation from a white disc remain. In hysteric amblyopia the field for colors is of greater extent or is less affected proportionately than the field for white objects, *the reverse of that which obtains in other nervous affections*. Even where the field for white is still the largest it can usually be shown (when there is no perimetric defect) that the visual field for red is larger than that for blue, and measurements for these colors should always be made in doubtful cases. On the best examples of this reversal of the color

insist upon a certain form of examination. Hysteria is essentially a fatigue neurosis and in the use of a subjective test like the perimeter one may easily obtain evidence that is quite misleading. In other words, mapping out the limits of the field of vision in a hysterope requires more time and patience than is generally given to it. In my opinion, all uncomplicated cases of hysteric defect show a concentric contraction and a fairly uniform boundary of the visual field. In the case whose field I show you there were, when it was first measured, several apparently reentrant angles but these disappeared when the patient was allowed to close her eyes and rest for an instant every thirty seconds during the examination. I do not think that hand perimeters, or objects simply held in front of the face, should be used in examining hysteric patients. A stationary perimeter, accurately adjusted should always be employed and the suspected hysteric should remove the chin from the rest and close her eyes frequently during the examination. Moreover, only one eye should be examined at a sitting and control tests must be repeatedly made. I have often had an opportunity to observe the necessity for taking these precautions, and am convinced that improper conclusions may readily be drawn from the usual method of examination.

MONOCULAR DIPLOPIA OR POLYPOPIA

is a curious hysteric phenomenon, probably the result of ciliary spasm. When care is taken not to suggest it to the patient, it may be developed in many hysterics. I say developed, because, like defects in the field of vision, the patient is usually unconscious of the double vision, as such. It commonly presents itself to him or her as part of the visual defect and the manner in which the examination is carried out is of great importance. A test should be made in both a lighted and darkened room. In the former, one eye being covered, a white match is held vertically three or four inches in front of the uncovered eye. As in

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slowly moved from its first position to a point three or four feet away, the patient is asked how many matches he sees. In most cases the match will present a double image when held quite near the face; the images approach each other and become confused as they are removed, to again separate more and more until the meter distance is reached. The match is again, from this point, gradually brought close to the eye, when the same phenomena, but in reverse order, will be manifest. The second eye is similarly exam-ined and, finally, the room is darkened and a further (control) test is made with a small candle flame. Sometimes three or more images (polyopia) are observed and it is usually possible to exclude one or more of these by interposing a card, so as to cover various segments of pupillary area during examination.

A few words about *pupillary anomalies* in hysteric subjects, because there is much confusion on this point. As a rule, when either or both pupils are unusually contracted or unusually expanded the ordinary reflexes are preserved, that is, they *contract* when light is thrown upon them and when suddenly asked to fix a near object, and they expand when light is withdrawn or when the patient is told to gaze into the far distance. This is, or ought to be, a very simple matter, but in cases of hysteric amblyopia some care should be observed in making the examinations. The patient should be seated facing a half-lighted window; the unclosed eyes are completely covered with a black cloth and he is told to look, and to continue to look, as if gazing upon a distant object which has been previously pointed out to him. In thirty seconds the cover should be suddenly removed and the contractions of the pupils, or its absence, noted. The reflex contraction of the pupils for convergence or accommodation should be tested in a light as dim as is consistent with the observer's ability to see the patient's pupils. Having been told to look at an object across the room for half a minute, he is now asked to quickly fix the end of the finger held four inches from the

patient's face. By means of these simple but effective devices one may often avoid the mistake of concluding that he has to deal with a pupil that does not respond to the reflexes mentioned.

I need not remind you that in hysteric amblyopia we frequently find *macropsia* and *micropsia*. Usually the patient complains of this strange symptom, probably due to irregular contracture of the ciliary muscles, but it is often worth while to test for it. A lighted candle is held before each eye of the patient at distances of one, four and ten feet, and he is asked whether it gets longer or smaller in size. Note is made of his answer and the experiment repeated the next day or two.

A very common and, in my opinion, characteristic eye-sign in hysteria is spasm of the orbicularis, so-called blepharospasm. When this is unilateral it is accompanied by photophobia, or spasm of accommodation, it is almost invariably hysteric, and I believe that the majority of the spasms of the orbicularis of this character, whether in the form of blinking or constant winking of the eyes, or where the spasm is much more marked and involves the facial muscles.

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