M A L P R O J E C T I O N O F T H E S P A T I A L P O I N T

complement to the more fundamental problem indicated in part (ii) of the scheme, which we suggest should remain under the immediate control of the Committee, namely, experimental research on the conditions of illumination desirable on physiological and psychological grounds.

Owing to existing economic conditions, we are precluded from dealing with these questions at the present time, but we hope that every effort may be made to secure the continuance of our work as soon as circumstances allow.

We wish cordially to thank our two Secretaries, Mr. J. W. T. Walsh and Mr. H. C. Weston, for their services during our inquiry. Our thanks are also due to the Industrial Fatigue Research Board for placing Mr. Weston's services at our disposal.

We are, Sir, Your obedient Servants,

C. DAMPIER WHETHAM (Chairman).
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ABSTRACTS

I.—MALPROJECTION OF THE SPATIAL POINT

Wiseman, E. S.—Cerebral malprojection of the spatial point due to unconscious habit. Amer. Jl. of Physiological Optics, January, 1922.

The author introduces his subject by pointing out that in a small percentage of exophorias a "fusion check" will reveal a homonymous, rather than the customary crossed, diplopia.

He briefly records two cases of his own, which illustrate this fact.
The first was that of a woman suffering from about 12 Δ of exophoria, and 3 Δ of hyperphoria, associated with weak adduction power. Despite a noticeable divergence of one eye under the red glass test, the revealed diplopia was homonymous in type. Exercises to improve adduction materially lessened the exophoria, and produced a diplopia alternating, but tending to remain crossed, within a few weeks.

The second case was that of a man with about 30 Δ of exophoria. He exhibited homonymous diplopia with the red glass, which became crossed within a month of commencing muscle exercises.

The author then proceeds to locate the "fault of the condition." He excludes the retina, as each eye functioned normally when used singly, or in conjunction, for distant vision; the external geniculate body, which is only a neuronal relay station in the passage of the visual fibres destined for the cortex; the thalamus and anterior quadrigeminal body, the former being related to the reflex movements of visual origin, and the latter to automatic movements of visual origin; and, finally, the terminations of the optic nerve fibres in the cortex, which may be regarded as a definite negative of the retina.

He concludes, therefore, that the fault must lie in the psychical sphere in the cortex.

He assumes the transference of vision from the physical to the psychical field to be accomplished by vibrations, and that each visual fibre has its own cell connection, two cells from corresponding points in each retina lying side by side, and vibrating simultaneously in binocular single vision.

Should a divergence tend to occur, he then argues that a severance between corresponding points must occur, if diplopia is to be avoided, and the mind may then wilfully recognize a relationship between two non-corresponding points.

To explain, therefore, the type of revealed diplopia in the cases under discussion, he thinks that the almost constant vibration of those peripheral nerve fibres in the diverging eye which lie in the direct line of vision, compels the mind, for the sake of harmony, to suppress all other points of the visual field and ignoring the true spatial significance, to interpret their vibrations as corresponding to those produced by the macular fibres in the straight eye.

EUPHAN MAXWELL.
II.—BILATERAL PARESIS OF THE EXTERNAL RECTI IN TABES

Cantonnet, A.—Bilateral paresis of the external rectus muscle in tabes. (La double parésie des droits externes dans le tabes.) Arch. d’Obhtal., June, 1922.

The frequency of paresis of the sixth nerve in tabes (especially in the pre-ataxic stage) is well known. In a short article Cantonnet draws attention to the importance of simultaneous paresis of the two external recti as an early symptom of tabes. He expresses the opinion that this condition is extremely rare apart from tabes, and asks if it may not have a diagnostic value approaching that of the Argyll Robertson pupillary phenomenon. Eight such cases—9 males, 1 female—have come under his observation in little more than a year. How is the apparent selective action of the virus on the sixth nerve to be explained? Cantonnet hazards the following hypothesis:—The superficial position of the eminentia teres containing the nucleus of the sixth pair is well known. This nerve is the most readily affected when ocular paralysis follows the intra-rachidian injection of cocain; it is also attacked in diabetes, and it seems probable that cerebro-spinal fluid containing toxic substances may act prejudicially on this nucleus more readily than on others which are not in equal proximity to the ependyma, the ventricular fluid, and the aqueduct of Sylvius. Does this occur in syphilis? We know that syphilitic vasculitis has a predilection for the pia mater; if it be affected would not this nucleus be more prone to attack than those more deeply placed? Anatomical investigation alone will confirm or rebut this hypothesis.

J. B. LAWFORD.

III.—REMEDIES

(1) Van Lint (Brussels).—Intramuscular injections of milk associated with intravenous injections of neosalvarsan in the treatment of parenchymatous keratitis. (Injections intramusculaires de lait, associées aux injections intra-veineuses de néosalvarsan dans le traitement de la kératite parenchymateuse.) La Clin. Ophtal., April, 1922.

(1) Van Lint, after speaking of syphilitic interstitial keratitis as the test case or touch stone in the treatment of syphilis, tells of his own views and theory as to the success he has had with a combined treatment consisting in the simultaneous use of neo-
salvarsan and milk, the former being given intravenously, and the latter intramuscularly. The results in the three cases tested was undoubtedly superior to any other treatment yet tried. Van Lint expresses his theory thus:—"I was of opinion, founding upon theoretical notions—probably incorrect—that for a maximum effect it was necessary that the organism should be impregnated with salvarsan at the moment of the reaction caused by milk. I said to myself that when salvarsan is injected a large portion of this, acting as antigen, is destroyed by the humoral and cellular reactions of the organism, and that only a minimal amount is available as a spirillicide. On the other hand, an injection of 5 cubic centimetres of milk causes a much more intense reaction of the organism than the usual dose of salvarsan. Under these circumstances may one not suppose that at the moment when the tissues are in defence against the milk antigen the organism is hardly influenced by the salvarsan (ne peut on pas supposer qu’au moment où les tissus se défendent contre l’antigène lait l’organisme n’est guerre influencé par le salvarsan). The latter thus escapes the reaction of the organism and is free to exert its toxic action on the treponema of syphilis. Hence the greater effect of the arsenic, equivalent to that of a higher dose.” It is obvious that we have here a positive suggestion for the treatment of a rebellious disease that is well worth consideration.

Ernest Thomson.

(2) Dimitry.—Chromium sulphate, a valuable therapeutic agent in eye pathology. The Medical Standard, January, 1922.

(2) Dimitry has found chromium sulphate of considerable use in some eye cases. In a woman, aged 52 years, who had lost the left eye from pemphigus of the conjunctiva 8 grains of chromium sulphate were given every 4 hours, and within a few days improvement was noted. Recurrence was successfully treated by the same drug. In a case of severe herpes zoster ophthalmicus hot paraffin was applied to the eruption and chromium sulphate was given every 4 hours in 16 grain doses internally. Dimitry also found that chromium sulphate internally did much good in keratitis dendritica and malarial keratitis. Chromium sulphate was also used with success in blepharitis in phlyctenular and chronic forms of conjunctivitis. In a case of "Descemetitis" with vitreous opacities "Descemetitis" again cleared up well.

S. S.