irradiated P^+ cultures did not give rise to recombinants.

The differential lethal effect of ultra-violet light on P^+ and P^- strains shows that recombinants arise from the P^- parent, which probably functions as a gene-acceptor. P^+ strain appears to be a gene-donor, the viability of which is not essential for the expression of the recombinants.

A similar situation is now well recognized in *Escherichia coli*[2,3] in which it was first demonstrated by the differential effect of streptomycin[4] on F^+ and F^- strains. The streptomycin method was not suitable for *V. cholerae*, as it resulted in a marked reduction in recombination-rate. Nevertheless, a significant number of recombinants could be obtained when P^+ strains were treated with streptomycin and crossed with P^- cultures and none at all if P^- strains were treated with streptomycin and crossed with P^+ cultures. Full details of this work will be published elsewhere.

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Histocompatible Colour Mutant from *CBA/Lab* Strain of Mice

The progeny from a breeding pair of *CBA/Lab* mice, a strain which is propagated by brother × sister mating, were found to have grey agouti coats in contrast to the usual wild-type agouti of the strain.

These '*CBA* grey' mice when mated together produced similar 'grey' mice among their progeny (that is, the 'grey' character behaved as if it were determined by a recessive gene), and it was thought to be of interest to test the original strain and its mutant for histocompatibility.

The results are shown in the photographs of skin grafts from normal *CBA* and mutant animals on a *CBA* mouse (Fig. 1) and on a mutant *CBA* mouse (Fig. 2) indicate histocompatibility between the two lines. A similar compatibility to skin grafting between a *CBA* mutant *p* (pink eye) and its host was found by Fraser and Clayton[1]. In a later communication given in the Institute of Animal Genetics Research Report 1955–1957, Mrs. Clayton refers to antigenic differences between these two types.

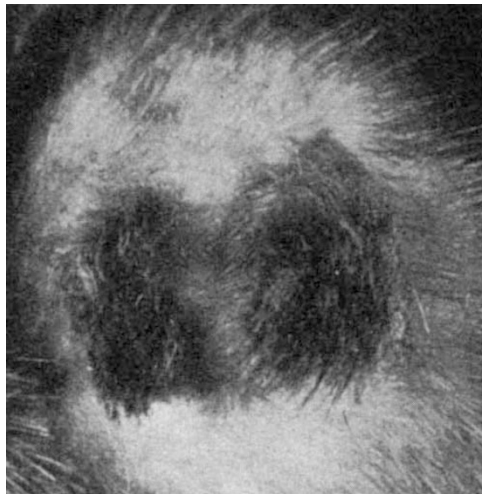

Fig. 1

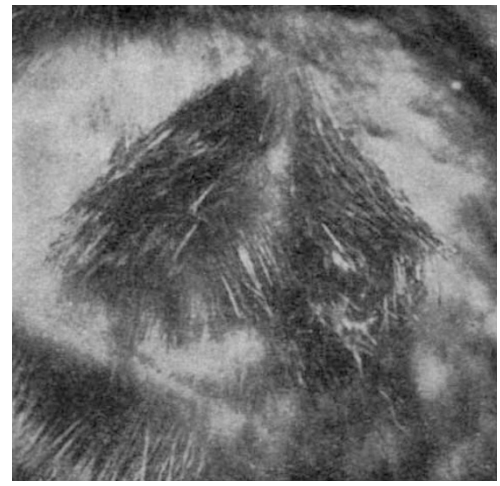

Fig. 2

Preliminary tests by Dr. Mary Lyon of the Radiobiological Research Unit, Harwell, to determine the gene that our mutant carries have shown that grey is not the same as or allelic with genes *a*, *b*, c^{ch}, *d*, *pa* or *p* (pink eye). This does not necessarily mean that it is a new mutant, and further tests are progressing

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PSYCHOLOGY

Theory of the Visual Threshold

Gregory[1] and Cane and Gregory[2] have put forward a theoretical equation for the brightness increment threshold considered as a statistical discrimination. For a given frequency of detection they propose that:

$$\frac{[(r + \Delta r) - r] - C}{\sqrt{\left(\frac{1}{A_1} + \frac{1}{A_2}\right) V}} = \text{const.} \qquad (1)$$

where $(r + \Delta r)$, r, are the mean neural pulse-rates associated with the intensities $(I + \Delta I)$, I, and V is the variance of these rates. C is a constant necessary to account for the occurrence of fewer than 50 per cent false positives. Its implication, as stated by Gregory, is that "some fixed difference between impulse rates is required before discrimination is established, this difference being independent of the intensity I".

This equation can be regarded as an adaptation of Thurstone's[3] law of comparative judgment, case 3, for answers of 'yes' or 'no' in place of comparisons. The term:

$$\sqrt{\left(\frac{1}{A_1} + \frac{1}{A_2}\right) V}$$