

consequence of what appears to have been a chronic disease of the eyes, the poet lost his sight at the early age of about 32 or 34 years, and that he, once at least, styles himself a downright blind man, in his Hymn to Delian Apollo, ver. 169-73, which derives no mean authenticity from being so pointedly quoted by Thucydides, III., 104, and which runs thus:—

... ὀπίσθε κέν τις ἐπιχθονίων ἀνθρώπων ἐγθᾶδ' ἀνείρηται ξείνιος ταλαπείριος ἑλθὼν· ὠ κούραι, τίς δ' ὕμιν ἀνὴρ ἤδιστος αἰδῶν ἐσθ' ἔδε κωλείται, καὶ τέφ' ἑτέρπεσθε μέλιστα; ὑμεῖς δ' εἴ μάλ' αἰ παῖσαι ὑποκρίσασθ' εὐφήμων· τυφλὸς ἀνὴρ, οἰκεί δὲ Χίῳ ἐνι παιπαλοέσση, τοῦ πᾶσαι μετόπισθεν ἀριστεύουσιν αἰδαί.

If some day an earthborn man, a wayfaring stranger, Asks you the name of whom best you like of all the minstrels you know, Whose songs are, oh lasses, the most delightful to you, Oh, then, unanimously, surely, you answer: It is the blind man who dwells in the rocky island of Chios, His songs are to us by far the sweetest of all.

I need not add, as a further argument, that Homer frequently was alluded to as the blind and humpbacked man, ὁ κυφὸς καὶ τυφλὸς ἀνὴρ,¹ and it seems to me trifling to qualify, or mitigate, the racy juxtaposition of the two epithets.

To what extent colour hallucinations, so frequent in connection with certain forms of blindness, may possibly have impaired the poet's imaginative faculties with regard to the varying hues and shades of colour, it would be for the present, from want, for obvious reasons, of similar observations, difficult to settle. However, I cannot but think that what by some so recently has been called Homer's colour-blindness may be the natural consequence, on the one hand, of the increasing dimness of his recollections as well as owing to these optical hallucinations, and finally, to the defective chromatic terminology of his time. The following are some of the Greek and Latin authors who, together with Herodotus, aver and enlarge upon the blindness of Homer:—Plutarch, Vita Hom. 12; Thucyd., III. 104; Pausan., II. 33. 3; III. 4. 33; Lycophron, Cassandra, 422; Aristot., Orat., L. p. 703; Cicero, Tuscul, V. 39.

I refrain from discussing the question whether, from a physiological point of view, such a profound functional perturbation as is involved in the term of colour-blindness, viz., deficiency in the perception of any plurality of colours in the spectrum, would not seem to be symptomatic of most momentous organic disturbances in the nervous apparatus of the eye, generally conducive to the most hopeless forms of blindness.

Scientific Club J. HERSCHEL

IN reading Mr. Pole's article on Homer's sensations of colour, there is one point which seemed to me to call for explanation. Mr. Pole says that in the solar spectrum he sees only two colours, blue and yellow, and that the red space appears to him yellow. From this one would naturally infer that the whole of the spectrum visible to ordinary persons is visible to him also, but that it presents only these two colours, which graduate into one another without any break, and that the green space appears as yellow. And with a colour-blind person who has allowed me to test his capabilities, I found this actually to be the case. But later on Mr. Pole says that pure red and pure green appear to him not yellow but grey. I would wish, then, to ask Mr. Pole whether the spectrum presents to his vision, in place of the green, a neutral space or an interval of darkness? In other words, have the rays of that particular refrangibility no action at all upon his retina, or is it that they have no action peculiar to

¹ The very word of "ὄμηρος" signified "blind" in the vernacular idiom of Κῦμη, or Cumæ, one of the Æolian colonies in Asia Minor, where he lived for some time, and, as will be shown anon, accidentally came by the name of Homer, his original name being Melesigenes, from his happening to be born on the banks of the small river Meles, which flows by Smyrna and runs into the Smyrnan sinus.

One day, pointing out how much of the poet's glory was certain to redound to their own city's glory, if the poet could be induced to settle among them, it was proposed to the people of Cumæ to provide "during his lifetime" for his wants, at the public expense, when somebody explained that such a resolution would be tantamount to inviting all sorts of blind, ὄμηροι, and useless, people to their city, whereupon the proposal dropped. But it seems that, henceforth, the poet went by the name of Homer:—

"ὄμηρος ἐπεκράτησε τῷ Μελησιγενεῖ ἀπὸ τῆς συμφορῆς; οἱ γὰρ Κυμαῖοι τοῖς τυφλοῖς ὄμηρους λέγουσιν. ὥστε πρότερον ὀνομαζόμενον αὐτοῦ Μελησιγενέος, τοῦτο γενέσθαι τοῦνομα ὄμηρος.

Herodot. Halic., vita Hom., 2, 13.

themselves, but simply produce the general effect of light? In either case the phenomenon seems more anomalous than if he saw all colours as colours, though he could only class them under two heads. To take a familiar analogy, it is as if a man should be perfectly able to distinguish the pitch of notes at either end of the scale, but the notes between should either not affect the auditory nerve at all, or should affect it simply as noise.

Pembroke College, Oxford FRANK PODMORE

Anthropometry

AS I have stated in the preface that my object in publishing my "Manual of Anthropometry" is to invite criticism with a view to perfecting the anthropometrical chart which it contains, and which forms its chief feature, I may be excused for referring to the notice of the work which appears in NATURE, vol. xix. p. 29. The reviewer objects to the large number of measurements given in the chart, but he has overlooked my statement that many of them are of a secondary character, and that I leave the student liberty to select the measurements which best suit his purpose, requiring only of him that they shall be made and recorded in a uniform manner, and thus become the common property of statisticians. Anthropometry can make no progress as a science, so long as observers are at liberty to make the same nominal measurement of the body in four or five different ways, as is the case, for instance, with chest-girths.

I may add that my manual was not written for the three or four individuals in this country who have mastered the "theory of human proportions" as a mathematical curiosity, but for army surgeons, busy medical men, schoolmasters, and others who are much more concerned with actual facts than theories of probabilities.

Bolton Row, W. CHARLES ROBERTS

Divisibility of Electric Light

IN all communications on this subject in NATURE and elsewhere, the division of light is considered only with reference to parallel circuits, and this naturally causes great loss of light by the law that heating is proportional to the square of the current. But in electric circuits their resistance has always to be considered; and if two lamps are taken parallel, only half the resistance of the one lamp is obtained, and such resistance can be obtained by taking two parallel circuits of two lamps in series in each; the light obtained then is one quarter in each lamp, as half the current is flowing through each circuit, and as four quarters make a whole, no loss of light is caused by division in such a method of one current to any number of lamps. There are certainly practical difficulties in the way of burning lamps in series, though these are greatly diminished if incandescent wire is used as the light-emitting source. However, there is no inherent reason why the electric light should be wasteful in division, as is described by Mr. Trant.

F. JACOB

Verification of Pervouchine's Statements regarding the Divisibility of Certain Numbers

THE statements of Pervouchine, reported in some recent numbers of NATURE, are equivalent to the following:—That the 2¹⁰ power of 16 is less by 1 than some multiple of 7 × 2¹⁴ + 1; and the 2²¹ power of 16 is less by 1 than some multiple of 5 × 2²⁵ + 1.

Let r_n be the remainder after dividing the 2ⁿ power of 16 by one of the above divisors. Then since the 2ⁿ⁺¹ power of 16 is the square of the 2ⁿ power, r_{n+1} differs from the square of r_n by a multiple of the divisor; or r_{n+1} is the remainder arising from the division of the square of r_n.

Use for the work the scale whose radix is 16. In this scale the above divisors are

I 12 0 0 I and 10 0 0 0 0 0 I.

In the first case, calculating on the plan indicated, we find the remainders.

r ₈ = -	5	2	4	9	
r ₄ = -	I	11	6	4	13
r ₅ = -		5	9	10	6
r ₆ = -		15	10	4	13
r ₇ = -		I	0	10	15
r ₈ = -	I	10	8	15	15
r ₉ = -		14	5	2	11
r ₁₀ = -					I