

de considérer la force, irréprochable peut-être en mathématiques, est cependant inadmissible en métaphysique et même en physique . . . le mouvement, même uniforme et rectiligne, est toujours, et à chaque instant, un changement réel. Or, tout changement réel demande une cause en activité." Einstein's theory takes up less than one-sixteenth of the book, and it is dismissed (p. 321) as "une conception purement mathématique, . . . mais qu'il serait au moins téméraire de regarder comme un décalque de la réalité." It is no doubt very difficult for philosophers whose training has been mainly literary to master mathematical and scientific conceptions, but until they do so their views on the nature of space are not likely to have much value. H. T. H. PRAGGIO.

CORRESPONDENCE.

TO THE EDITOR OF THE *Mathematical Gazette*.

Sir,—May I make an appeal through you to the authors on whom we depend for text-books and collections of examples? Can they be persuaded to exclude that worst of educational snares, the question to which a right answer results from using a totally wicked method? Here is a case in point:

Solve
$$\frac{bx}{a} - \frac{d}{c} = \frac{a}{b} - \frac{cx}{d}.$$

"Clear of fractions," says the boy, and multiplies one side by ac and the other by bd ;

$$\begin{aligned} \therefore bcx - ad &= ad - bcx; \\ \therefore x &= \frac{ad}{bc}. \end{aligned}$$

The tragedy of this answer is that it is right, and its rightness confirms the boy in his belief that multiplying one side of an equation by ac and the other by bd is a good practical method, though schoolmasters may urge against it their purely academic objections.

Again consider this:

Simplify
$$\frac{y-z}{yz} + \frac{z-x}{zx} + \frac{x-y}{xy}.$$

"Take the L.C.M.," says the boy. ("Taking" the L.C.M. is a wonderful charm; what you do with it when "taken" matters nothing.)

$$\begin{aligned} \frac{y-z}{yz} + \frac{z-x}{zx} + \frac{x-y}{xy} &= x(y-z) + y(z-x) + z(x-y) \\ &= 0. \text{ Ans. (Right).} \end{aligned}$$

In vain I may (and do) tear out handfuls of my hair and protest with purple passion that he has no right to multiply the thing by xyz . He knows better than that: "Got the answer right, but the old man wouldn't give me any marks because I didn't do it his beastly way." And deeper down in him, not formulated but very real and potent, is the logical inference, "This Mathematics is as arbitrary stuff as Latin Verbs. The masters make the rules; that's what they are for: but they have no more to do with practical common sense than the Mathematics they teach."—Yours faithfully,

Eton College, 18th June, 1922.

W. HOPE-JONES.

PERSONAL NOTES.

The Governors of the Central Foundation Schools of London have appointed as Headmaster of their Boys' School, Cowper Street, E.C., Mr. N. M. Gibbins, M.A.(Camb.), in place of Mr. H. G. Abel, who is now Headmaster of St. Olave's Grammar School.