To the Editor of the *Mathematical Gazette*

DEAR SIR,

The division sign ÷ and the proportionality sign : are in common use in schools, in school text-books and in school examination papers, while the solidus / is little used. On the other hand the solidus is in general use in the wider mathematical world whereas the division and proportionality signs are rare. I can see no good reason for this difference, and I suggest that the division and proportionality signs should be replaced by the solidus in school work. Can it seriously be asserted that the beginner would find it more difficult to comprehend

$$8\tfrac{1}{3}/3\tfrac{1}{3}, \qquad AB/AC = BD/DC$$

than

$$8\tfrac{1}{3} \div 3\tfrac{1}{3}, \qquad AB{:}AC{::}BD{:}DC?$$

One advantage of the solidus is that it enables the printer to print a literal fraction in the line of text without disturbing the spacing of the lines. Its use in school text-books would materially improve the appearance and reduce the cost.

Yours etc., F. C. POWELL

To the Editor of the *Mathematical Gazette*

DEAR SIR,

While the real part of the dinner served to members of the 1959 Annual Conference held in Southampton will doubtless live in the memories of the diners, I agree that the imaginary part is worthy of more permanent record and wider distribution. I should be sorry, however, to see thus permanently recorded an even more purely imaginary attribution of authorship, which I must—reluctantly!—disclaim. It was after my talk on Plaited Polyhedra that an elegantly constructed Scotch Terrier (woven, perhaps rather than plaited, of strips of cardboard) was found outside the room of Dr. Maxwell, who promptly christened it Fidohedron so I was suspected of that also—again incorrectly So we are left with two mysteries; but the fun that the occurrences provoked was all part of the extremely happy atmosphere that pervaded the Conference throughout.

Yours etc., A. R. PARGETER

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DEAR SIR,

For some time I have been dissatisfied with the treatment of machines as found in many current textbooks. We frequently find definitions like these following which are quoted from a widely used

https://doi.org/10.2307/3608529 Published online by Cambridge University Press

textbook of mechanics of advanced level standard:

"The ratio of the distance moved by the effort P to that moved by the weight W is called the Velocity Ratio."

"The efficiency of a machine is measured by the ratio

$$\frac{\text{Useful work done by the machine}}{\text{Work supplied to the machine}}\text{''}$$

I admit that the phrase "in the same time", which surely ought to be added to both these definitions, is an almost self-evident addition, but it is hardly good teaching practice to furnish our pupils with incomplete definitions. In addition the question arises why the ratio of two distances is called Velocity Ratio.

I should be interested to know, whether any member can see serious objections to the following treatment which avoids the difficulties mentioned above and in which the quantities concerned are defined for any instant.

"The Velocity Ratio of a machine is the ratio of velocity of the effort to that of the load."

"The Efficiency of a machine is the ratio of the useful power obtained from the machine to that supplied to it."

Together with the relation

$$\text{Power} = \text{Force} \times \text{Velocity}$$

the relation between efficiency, velocity ratio and mechanical advantage is easily obtained, the mechanical advantage being defined in the usual way It may be desirable to use speed instead of velocity in the first definition to avoid difficulties connected with the difference in direction of the velocities.

Yours etc., H. GEBERT

1941. "Compass and ruler are the only permissible tools in classical geometry But geometry is the only language which enables man to understand the working of the divine mind. Therefore figures which cannot be constructed by compass and ruler—such as the septagon, the 11, 13 or 17-sided polygons—are somehow unclean, because they defy the intellect."—Arthur Koestler, *The Sleepwalkers*, p. 390. [Per Mr. G. N Copley.]

1942. No doubt there was a certain justification for the classical mathematical problem about the logs and the elephant's task, in which the solver was permitted to "neglect the weight of the elephant," but no practical end was possible until the weight of the elephant was brought in. In our social and political discussions there are neglected elephants everywhere. We are all in a state of "flustered dogmatism" because of the unacknowledged presence of these exasperating animals.

H. G. Wells, The Anatomy of Frustration, 1936, p. 84. [Per Prof. E. H. Neville.]