

Mr. David Piper (at that time Director of the Fitzwilliam Museum) kindly agreed to make an examination. I had rather hoped that he might be able to find an inscription giving the name of the sitter, but in this he was unsuccessful. He wrote: "To the naked eye and under a glass the new inscription appears to be coeval with the rest of the paint. I would think that the picture is Flemish and I see no reason to query the date of 1631 which is in perfect accordance with the costume. The latter suggests a Flemish rather than an English sitter, and I can see no particular reason for this painting having been done in England. This, alas, rules out I fear the identification as *Recorde* . . ."

The painting will, however, continue to add colour and interest to the office of the Head of D.P.M.M.S.

J. W. S. CASSELS

*Department of Pure Mathematics and Mathematical Statistics, 16 Mill Lane, Cambridge CB2 1SB*

## Obituary

### William Vallance Douglas Hodge

The death of Professor Sir William Hodge is a severe loss to mathematics, and will be felt deeply by his many friends. He was born in 1903, and educated at George Watson's College, the University of Edinburgh and the University of Cambridge, where he was Smith's Prizeman in 1927. He married Kathleen Anne Cameron, who gave him exactly the background and atmosphere in which his gifts could develop and flourish. His career from that point onwards reads like a Knight's Tour on an international chess-board (with knighthood in 1959) and can be summarised but briefly.

He gained the Adams Prize in 1937, Fellowship of the Royal Society in 1938 and its Royal Medal in 1959. In 1936 he became Lowndean Professor of Astronomy and Geometry and, in 1958, Master of Pembroke College, Cambridge. He was Physical Secretary of the Royal Society from 1957 to 1965 and a Vice-President of that Society from 1958 to 1965. His international stature was confirmed by his Vice-Presidency of the International Mathematical Union in 1954, followed by Presidency in 1958.

The universities emphasised his achievements, and he was almost a professional Honorary Graduand, with a score of one Ll.D. and five D.Sc.

In a life devoted to creative mathematics (administration) it is hard to see how he could find time for administration (creative mathematics), though I never saw him hurried, and a casual meeting in the street was good for ten minutes at least. It is not surprising, though, that he was unable to take an active part in the matters with which the Mathematical Association is most concerned. Nevertheless he remained keenly interested and,

through his brother-in-law Professor Broadbent, well informed, and it gave him great pleasure to become our President in 1955, when he devoted his considerable concentration upon our affairs and upon the duties of his office.

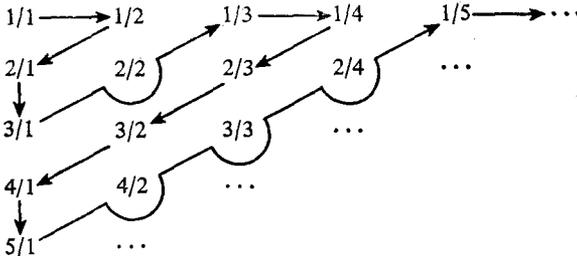
To assess his personal character is harder, since the main feature was utter simplicity. He was good company, shrewd and broadly based, with the Scotsman's gift of narrative (extended where necessary), but entirely unselfconscious. His friendliness was immediate, and he would take endless trouble when help was necessary. There are not many people of his calibre about whom so much can be said in so few words.

E. A. MAXWELL

## Notes

### 60.1 Counting the rationals

The standard method of counting the positive rationals involves tracing a zig-zag path through a rectangular array such as this,



by-passing those rationals which have already appeared in lower terms. This produces the sequence 1/1, 1/2, 2/1, 3/1, 1/3, 1/4, 2/3, 3/2, 4/1, 5/1, 1/5, . . . . Because of the by-passing it is not easy to find a given term in the sequence or to say where a particular rational will occur without actually writing out all the preceding terms. Although this does not invalidate the method it has always seemed to me to be an unfortunate complication, particularly when the idea is met for the first time. So I was pleased with the following alternative method which one of my pupils, John Rickard, produced during a class discussion recently.

Define a 1-1 correspondence between the positive integers ( $\alpha$ ) and the non-zero integers ( $\beta$ ) as follows

$$\begin{matrix} \alpha & 1 & 2 & 3 & 4 & 5 & 6 & \dots & 2i-1 & 2i & \dots \\ \beta & 1 & -1 & 2 & -2 & 3 & -3 & \dots & i & -i & \dots \end{matrix}$$

(or, more briefly, let  $\beta = (-1)^{\alpha+1}[\frac{1}{2}(\alpha + 1)]$ ). We can then produce the sequence  $\{s_n\}$  of all positive rationals using this correspondence.