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Correspondence

Sir,

Lord Halsbury has brought to my attention the publication of the book *Innovating for Failure*, by Dr John Hendry.

I became aware that Hendry was researching the history of the early British computer industry from a letter he wrote me on 20 November 1984. I offered to meet him but this offer was not taken up. I have discussed the book with a number of the main players in the events described, including Professor J. F. Coales, H. J. Crawley and B. B. Swann, in addition to a number of programmers and engineers who worked on the Elliott Brothers and Ferranti projects. Some feel that the account presented, considered as a large canvas, a business history, is 'true and fair'. One view expressed is that insufficient praise is given to Lord Halsbury for his success in providing backing for the 401 and then for Pegasus.

Had Halsbury not given this support and had he not imposed the views of Christopher Strachey on the Pegasus order code (Hendry pontificates that the views of a firm's experts should prevail rather than those of the expert in the sponsoring agency), Kenneth Flamm in *Creating the Computer* could not have written (p. 145), 'The Pegasus was especially important. Besides providing the foundation for the most significant computers produced by Ferranti, and later, ICL, it had a great international impact on computer design'.

The author's strength is in his analysis of the effectiveness or otherwise of 'Innovation Policy'. He is weak on technical detail, sometimes glaringly. For example on page 101 he states: 'the Pegasus central computer seems to have been working by early 1956 but there was still no drum for it, as in the midst of their arguments neither side had gotten down to developing it'.

This statement is fallacious. It has been interesting to investigate how it came to be made.

As to the facts, the first IEE Convention on Digital Computing was held at Savoy Place in April 1956. A group of three papers was presented, one on the Pegasus drum store by I. W. Merry and B. G. Maudsley, one on the Design Philosophy of Pegasus by W. S. Elliott, C. E. Owen, C. H. Devonald and B. G. Maudsley, and a third on the Sonic Delay Line Store by J. W. Fairclough. 'Regular computing for a few months', by the first Pegasus, was reported in the published *Proceedings*. Those who have the slightest technical knowledge of Pegasus are aware that the drum was not a 'backing' store but an integral part of the computer, without which there could have been no 'regular computing'. Formal hand-over of the working machine from engineers to sales staff was on 13 March 1956. On that date H. M. (Hugh) Ross was called to the computer by Hugh Devonald and Ian Merry, and told 'it's all yours'. Hugh Ross has a diary note for that day 'Noon – Pegasus handed over to Users'.

Collateral evidence is provided by a joint first editor of *The Computer Journal*, Mr Harold Gearing, who prepared a table in July 1956 showing the 'completion date' of Pegasus as April 1956. To the uninformed the author's statement contributes to the entertainment value of the book, helping to make it 'a good read'. But it is disinformation. Of the two sources for his statement which Hendry cites (note 55, chapter 8), Swann's *History of the Ferranti Computer Department* says 'the original Pegasus came into full operation in June 1956', and Swann has no recollection of discussing, at his two meetings with Hendry, any question of 'contention' between the London Computer Laboratory and Manchester delaying drum production. After these meetings Swann heard nothing from Hendry for two years, saw no draft and thought the project had gone on the 'back burner'. When Swann re-established contact with Hendry at Cranfield, no further information, and certainly no draft, was forthcoming.

The other reference by Hendry (also note 55), in support of his strange statement is to a personal aide memoire written in 1957 by Halsbury ('Some Thoughts on Ferranti'), from which comments on the Pollard/Elliott contention are quoted verbatim but not enquired into. I am grateful to H. J. Crawley, who has just read 'Some Thoughts' very carefully, for pointing out that Hendry has misinterpreted Halsbury. Halsbury says there was contention as to whether the drum should be designed in the London Computer Laboratory or by the Manchester engineers. He does *not* say that this contention took place in 1956 or that it was contributory to contract delay, or that there was not a drum in 'early 1956'. I am aware that Hendry submitted successive drafts of the book to Crawley and to 'NRDC' (Mr Tanner at BTG) and that in reading the draft H. J. Crawley reacted that if, as cited, Swann as well as Halsbury were the sources, Hendry's statement need not be questioned. Unfortunately no drafts were submitted to Swann or to any engineer who had been working on Pegasus development or any programmer who had been writing programs for it.

Hendry would have done well to note the clear and explicit statement by Swann and not to misread the one by Halsbury, and he would have done better still to go to the technical literature; indeed one would have thought he would have done so while consulting the NRDC archives then housed at the IEE.

There are several other technical points on which Hendry is wrong. It is regrettable that his selection of the 46 people on whose information and draft-reading he relied was not sufficiently well chosen or he did not get the draft read critically by actual participants. Hugh Ross was one of those who urged Hendry to change the thrust of some of the chapters, but to no avail. Another conclusion would be that Hendry was happy to produce an entertaining account at the expense of accuracy.

I hope, Sir, that future historians will not perpetuate Dr Hendry's errors, and that in his future writings he will make wiser and perhaps wider choice of sources.

Yours faithfully

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