

LETTERS

Ballistic electrons

To cite this article: M J Kelly 1986 *Phys. Bull.* **37** 322

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LETTERS

Letters to the Editor should be *as short as possible* and *Physics Bulletin* reserves the right to shorten letters if space demands.

Contracts of employment

In the recent correspondence on this subject in *Physics Bulletin*, and in particular the letter from Dr McArdle (June issue p244), a number of interesting points have been raised.

(i) Dr McArdle describes a twelve-month appointment as temporary and a five-year appointment as permanent. Where does he draw the dividing line, bearing in mind that many, perhaps most, physicists in industry are employed on contracts which can be terminated on one or three months' notice? (ii) Dr McArdle applied for another post and, if the terms of appointment had suited him, would presumably have expected to be able to leave his 'permanent' employment at relatively short notice to take up the new job. Why should he expect an employer to undertake to employ him for, say, five years or more if he himself is not prepared to undertake to serve that employer for the same period of time? In practice, most contracts of employment are heavily weighted against the employer; most employees expect to have the benefits of long-term contracts without being prepared to accept reciprocal obligations.

(iii) It would, I think, be interesting to include in the next salary survey a question or questions on terms of employment.

A E De Barr June 1986
Macclesfield, Cheshire

Competitiveness of industry

I am writing to add a comment to the hurriedly prepared Submission to the Select Committee on Science and Technology Subcommittee 1, Civil R and D, published in the May 1986 issue of *Physics Bulletin* (p207).

One of the most damaging and gravest results of UK industry's preoccupation with defence R and D is the effect the consequent neglect of market orientated innovation has on the competitiveness of our industry. Because the R and D policy, and consequently

product policy, of much of our industry is so strongly orientated towards defence (as was remarked in the submission) the independent, market orientated innovation policy is largely absent. The prevailing opinion has been that highly sophisticated defence R and D keeps you in the forefront of technology, and thus MOD funds also support R and D towards product innovation with high technology, ultimately for civil applications. This is totally wrong because it has distorted product policies so they are not competitive, and we have lost out on our international rivals.

I think that this positive disincentive to be internationally civil-market competitive in our product policy has resulted from the mistaken defence orientated R and D attitude. Thus the deadly (in all senses) influence of the MOD on UK innovation policy is one of the most serious causes of our relative decline.

K Hoselitz June 1986
Honorary Visiting Fellow, Science Policy Research Unit, University of Sussex

Cooperation or competition?

The message from the Rt Hon Peter Morrison, Minister of State for Employment, shows very little understanding of the economics of ordinary people (*Physics Bulletin* May 1986 p212). He demands greater share ownership, as if people who cannot afford to save and invest (60% of the economically active members of the public) can afford to gamble with their livelihood. Enforced share ownership is not progress.

The surge in the number of small businesses shows just how ignorant people are of what is needed to be a businessman. Such folk have to work with borrowed capital, giving employment to advisers, solicitors and accountants. Graduates are wary of becoming involved in industry in this way and prefer the much bigger rewards of business and the professions.

The links between universities and industry can only be established if the former provide the research and pre-development, unhampered by government financial restrictions, and private industry is in a position to develop and bring products to the market. Students need to be freed from financial

worries to give of their best, without any guarantee that projects will be successful. The access to university education must not depend on ability to pay.

One last thought: the 60% of managers and executives satisfied with their station in life know only too well why they do not wish to gamble, preferring security of employment. Without a change in the government's attitude from competition to cooperation, there will be no increase in the activity of industry.

Ulrich Pick
Croydon

June 1986

Ballistic electrons

The May 1986 issue of *Physics Bulletin* (p201) contains a commissioned article describing in some detail the latest IBM work on ballistic electron transport in hot electron transistor/spectrometer structures. I am surprised that the house journal of The Institute of Physics has to go abroad for this when there are Institute members in teams at both GEC and Philips working on the same and related phenomena. This field is not without its scientific controversy, and results from Bell, Fujitsu, Cornell and the two UK laboratories deserve exposure on the same footing.

M J Kelly June 1986
GEC Research, Wembley, Middx

Nuclear energy

There appears to me to be a considerable lack of public concern and interest in this country with regard to the consequences of nuclear power. Physicists could play a very helpful role in informing the general public about this issue.

In Bavaria, for example, where there was heavy fall-out after the Chernobyl nuclear accident, university physicists featured prominently in informing and educating the general public on the radiation levels present. These scientists independently monitored and published data on radiation levels – something their government did not do.

Meanwhile, we in the UK were told by our government and its agencies that there is no danger from Chernobyl. Subsequently it transpires that, for example, lambs contain unacceptably high levels of radioactive caesium; we are now left with the suspicion that