Editorial: The Journal–why and what for

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One of the main aims of having a guest writing on the Editor's page in the *Journal* is presumably to allow him to present some new ideas on an important subject in an informal way and to have them emerge in print much more quickly than would be the normal case with papers which have to be refined, refereed, perhaps recycled before acceptance and then queued with others before publication. If there is such an aim, on this occasion it will largely be frustrated. The chosen topic, the *Journal* itself, is certainly important, but the particular guest on this occasion is almost a lodger—if not a member of the family; I have been involved with the Editorial Board from its earliest days and if there were any new ideas for the *Journal* that I wanted to express, they could only be ones precluded from implementation by the disapproval of my colleagues on the Board or by their cost. For the same reason, the reader cannot expect a tirade against what the *Journal* is and what it has been. If such passion had been felt and ignored by the rest of the Board it would have been effectively expressed by resigning; but there has been no cause for that sort of histrionics. So, in this editorial there will be no bombs thrown, even though the achievement of the *Journal* may not have been sufficiently spectacular to merit lighting fireworks in celebration. However, I believe that there has been steady progress over the years and that the major decisions about the direction of the *Journal* have been broadly correct.

However, in times of severe financial stress—and we all know that the Society has not been exempted from rising costs and new claims on its funds—all activities need to be examined carefully. Fortunately, on the purely financial side, the *Journal* emerges well after some firm words about what costs are relevant and what are not, but even so, a little look backward, forward and around can be worthwhile for its technical content and standards.

From its beginning *The Computer Journal* has been one of the class called 'learned journals'. It is true that at a glance, the first few issues do not seem quite as learned as the present ones. In the mid-fifties there was much less computing done than there is now, there were less people doing it, and they knew a lot less than both they and other members know now; of course they may well have known a much greater proportion of what computing there was to know in those days than any of us do today by a similar criterion. The Society now has many more members than it had when the *Journal* started. Among them are the Society's founders, their knowledge reinforced by long experience; others have joined, having gained a shorter experience but often of a much more sophisticated nature than was possible in the earliest days, while others have undergone formal training of a type unknown in the 1950s. All these follow as consequences from the development of computing in both its theory and its range of applications; it is a development to which the Society as a whole has contributed and in which the *Journal* has played a part. Just what that part has been is impossible to identify precisely but some aspects of it can surely be described.

The mere existence of a learned journal as a principal publication of a Society serves as evidence that that Society regards the advancement and dissemination of knowledge of its subject as one of its prime objects. In case this seems too grandiose a design, it is worth contemplating just what a Society might become if it does not adopt such an object. It would be limiting itself to practising the state of the art and would provide no forum for those who wish to describe something new or some better way of doing something old. If the general attitude does not discourage those individuals from making their original contributions, it will certainly force their attentions in some other direction, namely to some other Society which does publish a learned journal. Of course, some might feel that this would not matter, but I am sure that this is wrong. If the people who are innovative, enquiring and energetic are inhibited by the constraints placed upon them by a Society, they will seek to escape from that Society. Brain drains can happen on a small scale as well as on a large one; their effects are just as serious within a limited area.

Of course, it is not only the 'pure' research workers (if any there be) who would be affected; the bulk of the membership whose tasks prevent them from devoting the time needed to produce original work and to report it in print, would be isolated both from the new ideas and those who have evolved them. One of the more common of the complaints about the *Journal* that I have had reported to me, although never heard at first hand, is that so little of it is intelligible to any particular member of the Society. If this complaint really ever is made, I wonder if it is realised that the statement could hardly be challenged by anyone! It is regarded as quite normal and acceptable even by those who are supposed to be the most knowledgeable computer scientists. In the Computing Laboratory at the University of Newcastle, I have colleagues who are very active in their own investigations, as well as teaching certain other topics up to degree level, yet they would regard it as quite normal that the detailed work of specialists in other areas of computing science is almost unintelligible to them. What they would hope to understand, would be the general direction of the work in that particular speciality, to have an inkling of the importance of the results obtained, and to be able to detect when some new results have implications for their own particular researches. This emphasises two facets of our *Journal*. First, the importance to everyone of a clear, readable and informative summary at the head of the paper. This serves, with the paper's title, to say roughly what is going on, in what subject, where and who is doing it. The second point, and quite as important, serves to determine the coverage of the *Journal*. Given the nature of our Society, it seems to me that if there is just one *Journal*, then it ought to attempt to cover the range of interests of the Society's members; a restriction to a more narrow field would not be appropriate, and certainly any choice of such field would be divisive—fission, perhaps with explosion and destruction. It does mean that at times there is a delicate balancing act to be done to obtain an acceptable set of papers in an issue and, at some times, a paper treating a topic in a certain way however excellent in quality has to be rejected.

One field where conscious policy decision was taken is numerical analysis; if papers in this area do not contain a substantial part concerned with the implementation of methods on a computer and similar matters, they are likely to be turned away with the suggestion that they will be more suitable for another journal. Again, this is a decision which I believe is a correct one for our *Journal* and our Society; although numerical analysis *can* be studied solely as a branch of mathematics, it is also a subject of great importance to a considerable number of persons using computers, who are interested in computing and