of further ergonomic and planning factors. It may also be possible to undertake some actual "design-by-computer"; for example, the placing of columns and beams to achieve an adequate or even an optimal structure.

Conclusion

Computer systems can be constructed which offer a very useful service to an architect designing in a modular, component-based building system. Experience with the demonstration system showed that architects would welcome this assistance.

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Book Review

Computer Augmentation of Human Reasoning, edited by Margo A. Sass and William D. Wilkinson, 1965; 235 pages. (London: *Macmillan*, 40s.).

Inevitably this volume will tend to be regarded as a sequel to *Computers and Thought* (reviewed here in October 1964). Neither book suffers by the comparison, the obvious differences stem from the welcome advance in the subject and consequent shifts of viewpoint and emphasis amongst those contributing to that advance.

The book includes eight prepared papers, a "keynote speech" and a verbatim record of a final panel discussion on Potential Implementation. Both the speech and the discussion could well have been subjected to some editing before publication, the former in particular is printed as a string of ill-matched jocularities whose sheer ineptitude is offensive in the company of the excellent, prepared papers. The panel discussion could do with the excision of the noise inevitable in extempore delivery.

The eight papers range from theoretical consideration of heuristic problem solving to implementation systems and hardware. The occasion for their presentation was a symposium held in June 1964 and sponsored by the *US Office of Naval Research* and the *Bunker–Ramo Corporation*. Two of the contributors came from industry, the others from academic bodies, despite which the emphasis throughout is on currently practical implementation.

The panel discussion is noteworthy for the contributions of Jordan J. Baruch, a consultant, who throughout draws on his experience in the implementation of a hospital medical information system for illustrations of both systems procedures and user reaction. The other panellists concentrated more on the financing and management of research in this area than on actual implementation experience, an emphasis that illuminates economic desiderata and considerations, as well as user requirements, to some effect.

The book is concluded with a bibliography of some 400 items relevant to the theme of the symposium.

The general impression left by the work presented is that the development of central processors and mass storage is sufficiently far advanced to enable us to plan effective aids to human reasoning. What is not clear is that we have sufficient grasp of the nature of our own requirements and activities to implement these computer aids, and in a European context that we have good and cheap enough communications facilities to enable potential users to have adequate access to the information systems.

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