

## PROCEEDINGS OF THE NUTRITION SOCIETY

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### SYMPOSIUM ON 'STRATEGY FOR NUTRITION RESEARCH'

#### Introductory remarks

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In opening this symposium on 'Strategy for nutrition research' I wished to make a few remarks of a general nature about research before focusing your attention on the main and narrower theme of nutrition research.

#### *What is research?*

A dictionary is often a useful source of a succinct definition. Webster defines research as 'Careful or critical inquiry or examination in seeking facts or principles; diligent investigation in order to ascertain something'. Research is an activity which leads to the increase of knowledge. Turning again to the dictionary Webster defines knowledge as 'The act or state of knowing; clear perception of fact, truth or duty'. There are those who claim that some research topics are destructive and therefore should not be allowed. Two examples of such subjects are atomic physics leading to the production of nuclear weapons and genetic engineering leading to the transfer between organisms of inherited material. However, it is not the research *per se* which is destructive, but the way in which the knowledge, arising from research, is used. This distinction raises the interesting dilemma as to whether it is, in the long term, desirable to prevent the research to reveal knowledge which may be used to the detriment of humanity or whether it is better to try to use knowledge more wisely. In some cases, the possible outcome of research is not known in advance and a judgement on its desirability is not possible. Any curb on the subjects which are legitimate areas for research is likely to be an inhibition to the evolution of man, and therefore undesirable.

#### *Why do we engage in research?*

There are probably several answers to this question but two seem to be particularly outstanding. First, man has an inherent curiosity about himself and about the world in which he lives. Undoubtedly there are people who gain personal satisfaction from engaging in research, increasing knowledge and having a fuller

understanding of their own situation, irrespective of the wider effects of their own activities. This is surely a perfectly reasonable use of some human resources though how many is very difficult to determine. The more affluent the country, the more of this type of activity it can afford. Second, there are individuals and groups of people as organizations or societies who wish to undertake research in order to increase knowledge so that the way of life of people in general is improved in technical, economic, social and even spiritual aspects. Again this is surely a reasonable aspiration. The more knowledge available, the better can man solve his problems and cope with any eventuality which may emerge. The sheer volume of knowledge itself may create problems of storage, of assimilation, of understanding, of correct retrieval and of correct application. None of these difficulties are a sufficient deterrent to the continuation of research but the extent of the research activity and the priority with which problems should be investigated has given rise to much recent debate.

*Is it of any value to define categories of research?*

In the last ten years there has been a good deal of sterile consideration about the definition of different kinds of research and about the distinctions between research, development and extension. This consideration has been mostly in relation to the publicly financed sector of research. The effort which has gone into attempting to define basic, applied, strategic and tactical research arose largely from the need to allocate the national and public resources for research in a way which was thought most beneficial to the population as a whole. At one time not so many decades ago there was little discussion about the category of research to be undertaken. It was the reputation of the research worker and the appeal of the problem which were the main determinants in attracting financial support. This situation prevailed until well after the Second World War. As the number of proposals for research, and of research workers seeking funds increased, the cost of individual research proposals escalated. As society become more aware of the effects, both good and bad, of the use of the knowledge arising from research, so the concern of the general public and of government to debate much more fully the allocation of monies to research has mounted. The increasing mismatch between the money available for research and the amount of research which research workers want to do, and the argument as to who should decide which research proposals should be funded have been the main reasons for categorizing research. It is perhaps too soon, since the Rothschild Report of 1971 and the Government White Paper of 1972 which gave effect to the Rothschild proposals, to judge what effects, if any, have resulted from the attempt in the UK to move research resources from problems which, if solved, are forecast to have little if any immediate benefit to society (so called basic research) to problems which, if solved, are forecast to have immediate benefit to society (so called applied research). At the time of the report there was much debate defining research categories, but it had little to commend it and had little relevance to the more important issues. These are: which problems should be treated and in what order of priority; what level of

resources should be available for research; and who should be responsible for making the decisions about research?

*How and by whom are the subjects for research to be chosen?*

In making decisions between alternative problems for research there is always the temptation to try and make the choice on the basis of some simple quantitative formula such as a cost-benefit analysis including some estimate of the probability of success. It is inevitable that problems, for which it is difficult to estimate the cost or the probability of success or for which there is no apparent benefit likely to arise from their solution, are likely to seem unattractive to the providers of research funds. Nevertheless history should be sufficient proof that some of the most influential and valuable additions to knowledge can arise from research for which the benefit was very difficult to assess in advance of the research being done. Some research resources must therefore be spent on supporting able research workers to investigate subjects which interest them and for which the benefit of research cannot necessarily be assessed. The problem then arises as to how much of the research resources to devote to able research workers with freedom to investigate and how much to devote to research for which the probability and size of benefit can be assessed. This is a long standing problem and though various answers have been proposed there is probably no one solution which is appropriate for different circumstances and occasions.

Another matter of long standing debate is the extent to which workers should determine the level and allocation of research resources and the extent to which all interests in society and government should have authority to determine these matters. As public support for research has increased so the public through government have sought to express its views on these matters. There are undoubtedly some scientists who argue that they and they alone should decide these matters. However, there are more who seek to find some means of incorporating the public view into the decision making process. It may be that in seeking ways to find sensible methods for allowing the public to voice its opinion on all sorts of decisions about science, a good deal of time and resources are wasted. Undoubtedly there is a tendency in the UK to design systems in which accountability to the public is built in beforehand, in an attempt to prevent misuse of resources, to such an extent that there is wasteful bureaucracy. The public should have an opportunity to voice its opinion on research matters, but in the process the research worker and the research director should not be so constrained as to be stifled of initiative and interest. These difficulties might be easier to resolve if the decision making process is considered at three related levels. These are first, the decisions about the total level of support for research including some indication of the apportionment to the main subject headings, second the accountability by research managers for the use of funds allocated and third the consequences for society of new knowledge as a result of research. For each of these levels scientists must communicate with non-scientists, but the means of communication should be different. Clearly scientists have most authority to make

decisions at the second level but they have a duty to advise others in society so that decisions at the other two levels can be made by national government procedures. Up to the present time the scientist and the non-scientist have found communication on levels one and three difficult and even for some subjects almost completely lacking. New ways of stimulating debate and of making decisions about very expensive, very technical and very influential research subjects need to be developed.

One subject on which the public have a considerable individual and direct interest is nutrition research. Animal nutrition is of interest because it affects the food we eat and the pets we keep (and the British have a concern for their pets which on occasions appears to exceed their concern for their children). Human nutrition with such a close relationship to health and life expectancy also arouses considerable public passion. The public are also watchful of the way the research worker uses animals and humans for research purposes and this interest is likely to become even more close and constraining. Quite clearly nutrition research is not a subject from which the public interest will be or should be excluded. However, the professionals in nutrition need to take the initiative and stimulate a continuing informed debate about many important nutritional issues. There is a tendency for professional scientists to shy away from public discussion of sensitive and contentious issues. Perhaps they fear being misconstrued, misquoted and misjudged if they debate openly the implication of their work. The dangers are real enough but the risks must be faced if the public and government are to be informed and to make sensible judgements. The Nutrition Society may not be an appropriate vehicle for a dialogue about nutrition with public and government but such a vehicle is required.

The dialogue should be not only about nutrition *per se* but also about the interactions with food, with health and with farming. The fruits of research, namely the increase in knowledge must be put to good use by society and to do that society has to be informed by the professional scientist. At present I think that society is not adequately informed about science nor, more specifically, nutrition. The fault is not society's but the scientists', for being insular.

#### REFERENCES

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