## DISCUSSION ON DEPARTMENTAL ORGANIZATION

C. C. Addison (University of Nottingham, U.K.)-Professor Hammond makes an interesting point which is probably the most truly international problem to be made during this Conference. Many university problems result from the fact that decisions are made by senior faculty members who are no longer keenly interested in that particular area. A university professor combines three duties, each of which could well be full-time jobs (say) in Industry, viz. teaching, administration and research. I believe that by age 50 most professors know full well which of these three areas is of most interest, but they continue with all three because the system gives them no alternative. It may be that more senior fellowships should be available which professors could take at around the age of 50 . Young faculty members would then get the authority they merit and their senior colleagues could concentrate on the areas of endeavour to which they can still make major contributions.
C. Eaborn (University of Sussex, Brighton, U.K.)-It was my experience in helping to begin a chemistry department at a wholly new university that the youngest members of faculty were the most conservative. On the whole the pressure for reform came from the older, more senior members.

Secondly, at the University of Sussex a few years ago we called in a leading American firm of business consultants to advise on the administrative structure of the university. On their advice, a structure was created in which within each School of Studies the most junior member of faculty has as much power as the most senior professor in the major decisions of policy, including the distribution of resources as well as definition of the curriculum, these decisions being taken at meetings of all members of faculty within a School. The students are also strongly represented in discussions at all levels. The firm of business consultants describe this structure as 'Participative Management', so that we had 'participation' well before the revolutionary students took it up as a slogan. I suggest that Professor Hammond should persuade his university to call in a leading American firm of business consultants!
H. Zollinger (ETH-Zürich)-Professor Hammond emphasized that there is no general answer to the 'senescence problem'. A basis for possible solutions seems to be a case study made by a professional consulting organization for management and planning. Although such organizations have a lot of experience in analysing industrial research organizations of all sizes, little is known about case studies of university departments and university research and teaching groups. Based on a graduate seminar course in research planning and management organized for my group of graduate students, my students, post doctoral and myself (a group of about 25 chemists) decided mutually to have such a case study made by the Institute of Economic and Operatives Research of ETH. This case study is in progress at this time. As far as my students and I can see at this intermediate moment, the study will definitely supply objective analytical data
for improvements in our organization, in the educational and research programme planning and the realization of these programmes.
R. J. Gillespie (McMaster University, Hamilton, Ontario)—In my experience the younger faculty are usually considerably more conservative than the older faculty, at least in the general area of chemical education. There is a reason for this. The young man has a vested interest in the system as it exists. He wishes to succeed in the system and to rise to the top and he is not so interested in taking time to change the system and perhaps lessening his chances of getting to the top. The older man whose position is secure and whose reputation is made is in a position to experiment, to introduce innovations in curricula and in methods of presentation, and, if he wishes, to move to a whole new area of chemistry in his research. I do not agree, therefore, that 'older' professors should necessarily be retired to enable the younger man to develop his new ideas. One would hope that a department can be organized in such a manner that both 'young' and 'old' can make their contributions together.

