

## THE SUPPLY/DEMAND IMBALANCE

I can think of no phrase today more loaded semantically, economically, and psychologically than "supply and demand" when applied to scientists and engineers. For it is indeed a tragic environment that cannot accommodate fruitfully its academic pipeline of talent and brainpower.

Yet it would be unfair to indict the environment or to seek a scapegoat, as some tend to do. There are many reasons for the imbalance between the supply of and demand for technical and technological manpower. Finding reasons, however, does nothing for those whose talents, training, and education are not being utilized. And, in a very large measure, our first responsibility should be to generate a demand for unutilized and underutilized manpower. On the other hand, finding reasons, honestly and factually, and really understanding them in terms of political and social activities, may help us to avoid repeating the past as memory fades into the future.

Not knowing the facts has been one of our basic weaknesses. Even today, as we painfully witness the imbalance between supply and demand, we have no valid data on these two important factors that govern our economic life. What are the market researchers and statisticians doing that is more important, even to their economic future? I find it difficult to imagine a government contract or grant that would be more relevant to the well being of the nation than one that gives us the facts on supply and demand of our academic products. We have already witnessed thousands of 1970, then 1971, graduates thrown into the over-supplied and low-demand market, swollen by experienced scientists and engineers dislocated from what they thought were secure professions. But all we know so far is what we hear from each other and those facts that have been gathered by the ACS, and which are the most reliable I have yet seen.

It is to our credit that the ACS has a capable staff that really wants to know the effect of the economic structure on its members. Dr. R. E. Maizell, chairman of the Division of Chemical Literature, and I merely mentioned to Mr. David A. H. Roethel the desirability of knowing the economic facts on literature chemists for action to be taken. Consequently, members of the Division of Chemical Literature will have received or will be receiving shortly a questionnaire designed to gather meaningful data on our employment situation. It is important that everyone receiving the questionnaire responds to it promptly. The results will be published in this Journal as soon as possible.

Getting real employment facts is actually a difficult task, and their interpretation requires an insight that most amateurs lack. There has always been a rather high degree of employment mobility and also a rather high degree of mission mobility among scientists and engineers. Furthermore, job requirements for and the knowledge, skill, and experience of scientists and engineers are extremely multi-variant. Because science and technology are rapidly changing, and often changing in unanticipated directions, the demand for yesterday's knowledge, skills, and experiences can disappear. Obsolescence or nonrelevancy of individuals is avoided only by each individual's professional awareness. All of these factors compound the current economic problem.

Consider for the moment the variety of knowledge, skills, and experiences among literature chemists in writing, editing, indexing, abstracting, translating, designing information systems, computer programming, literature searching, solving chemical problems, correlating chemical data, etc. These constitute a broad spectrum, and each has enjoyed or suffered a variable demand over the past 20 or so years. But, at the same time, the demand has been buffered by the professional status of the literature chemist vis-à-vis his ability and motivation to attain a reasonable relevancy with new chemistry.

There is a strong tendency among some of us to rationalize the current supply/demand imbalance with over-simplifications, and to blame it all on something or someone close at hand. One of the sad effects of this situation is the ease with which it has been converted to political capital at the expense of ACS staff and elected officers.

That professionalism and the supply/demand imbalance have become emotional issues in the forthcoming election for ACS President-Elect is a challenge to the professional responsibility of each member. I hope the challenge will be met with intelligence, not emotion; with votes for, not against; with knowledge of what each candidate has done and is capable of doing, not promises for the future and incriminations of the past.

One thing is certain: the outcome of the election will in no way change the supply/demand imbalance, but will affect our professionalism by the degree of professionalism inherent in the victor.

HERMAN SKOLNIK