5.F.6



Only from the FIREside, in the comfortable fascination of

the dancing flames, comes real welcome, real heart-warming companionship, real glowing warmth. Only in the FIREside is there real social 'heart.' You would regret a home without a FIREside - without a heart. now for a B & B chimney: the simplest, lightest, cheapest, the easiest and quickest to erect. See how this Broadline B & B chimney could be even the design-feature of your new home!

> B & B chimneys are in 3 styles: Broad-line (flue-blocks 37" x 14"); Standard (flue-blocks 20" x 16"); and Range.



Ask at any reputable bardware store, or write or ring B & B Concrete Co. Ltd., Crowburst St., Newmarket, Auckland

GIVE YOUR HOUSE AN AIR OF REFINEMENT In your toilet and bathroom the hygienic fragrance of Parador keeps the air fresh and sweet. It is a refinement desired by every house-proud woman and appreciated by her friends. From chemists and stores. PARADOR

AIR FRESHENER DEODORANT

- HANGS OR STANDS ANYWHERE

Research in the University

ON July 5, the topic for "Question Mark" was "Are We Spending Enough on Research?" During the discussion same references were made to the attitude of the University of New Zealand, especially by Dr. C. P. McMeekan, Superintendent of the Ruakura Animal Research Station. The article printed below is substantially a reply to these comments. It has been written by PROFESSOR S. N. SLATER, of the Department of Chemistry at Victoria University College.

a recent broadcast from the Auckland studios of a discussion on problems connected with research, in which the speakers were able to contribute a nicelyvaried commentary. It seemed to me unfortunate, however, in view of the turn the discussion took, that the University had no direct spokesman, although one speaker (Mr. Broker, I think) kindly said a little in its defence. It was just that there was no one to catch the ball and throw it back. The chief criticism came from Dr. Mc-Meekan, who delivered a broadside whose shots spattered a goodly area of this target, the University of New Zealand, or rather "the Universities"---the Colleges which do the actual teaching.

As the Superintendent of Ruakura Animal Research Station, Dr. Mc-Meekan is rightly concerned with research directed towards the clear benefit of mankind. But in stating that research should be supported only if it is likely to benefit mankind he is surely replacing an ivory tower by a very gloomy dungeon. The difficulty, of course, is that, even accepting this proposition, there remains the task of predicting the future applications (of possible benefit to mankind) of knowledge not yet obtained. It would seem to me that the compromise we have adopted in New Zealand, as in many other countries, of setting up some research organisations whose work is directed towards specific ends, of patent benefit to humanity, and of allowing others, particularly the University, to study whatever a disciplined intellectual intellectual curiosity may dictate, is surely the wise one. The many ultimately "useful" discoveries made through unfettered research testify to its value, even by Dr. McMeekan's criterion. An example which springs to my mind is that of the discovery of the inert gases, including helium and neon, which today play such an important part in chemical and physical theory and their applications to the benefit of mankind. Their discovery followed on Rayleigh's study of the differences in densities of specimens nitrogen obtained from various sources. What support would such a programme receive from a committee authorised to distribute research monies only to investigations likely to "benefit the way of life of everybody"? However, this particular statement was not made in criticism of the University. although it is clearly a matter of vital interest to it, and in any case the alternatives provided of research-onapproval and research-by-choice are so clearly differentiated that it becomes largely a matter of personal philosophy.

When the speakers came to the questions of the University's part in teaching, research, and the community, more subtle matters were debated. There was

LISTENED with interest to clearly a dissatisfaction with things as they stand and the following charges were made:

1. The University has set itself against outside co-operation in research.
2. The University may not be devoting enough attention to training in applied

science.
3. The University is divorced from reality in its teaching, and moreover, gives training in fields which this country does

training in helds which this country does not want.

4. The University has lost research because it has not been interested in it.

5. The University has not made its graduates aware of the opportunities offering in New Zealand.

Now the University and its constituent Colleges occasionally settle matters of policy in connection with research, but only rarely. It is to the individual teachers, generally speaking, that we must look in trying to decide what actually happens in the University. Nos. 1 and 2 of the black list are policy decisions, although the words used by Dr. McMeekan carry implications at variance with the spirit and practice of the University. Research in the University is intimately bound up with the training of advanced students, and the highest degree normally taken, the Ph.D., is awarded for work done under the immediate supervision of a teacher. It is the University's responsibility to see that this final training in research is adequate, and to assess the quality of the student's work. Moreover, it is part and parcel of the teacher's life to have the stimulus of working with such students. It is not surprising, therefore, that the supervision of research for degrees is reserved entirely to the appointed teachers, who alone can be made responsible to the University. The Colleges do appoint outside authorities as Honorary Lecturers, and have occasionally made use of their services in the direction of research inside the Colleges. In their private research, University teachers have been pleased to seek the advice and assistance of workers outside the University, and in my own department there is at the moment a member of the staff of one of the Government agricultural laboratories who is writing a thesis on a subject specifically suggested by his Director. In a completely different field, I recently heard two historians, one inside and one outside the University, discussing possible occasions on which material being sifted by the latter might form the subject of study by the former and his students.

The place of applied science in the University is difficult to define. Such professional courses as Engineering (including Chemical and Mining Engineering). Home Science, and Agriculture might qualify for this description, and the University offers special courses in Applied Chemistry and Radio Physics. The University's stand on the emphasis in its teaching for the non-professional degrees has always been that it must make its students acquainted with the fundamentals of their subjects and then, having given them a broad training, leave them to learn the tricks of the many trades later. The pattern of the

N.Z. LISTENER, AUGUST 13, 1954.