trated in certain periods in different localities, is not absolutely restricted to those times. Records have now been received of the birth of grey seal pups on various parts of the British coast in every month of the year except February. No doubt the gap will be filled in due course.

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Undergraduate Academic Record of Fellows of the Royal Society

IN a previous communication[1] concerning the problem of the selection of students for scientific research, the use of F.R.S.'s as a criterion group of research ability was described, and the proportion of degree classes gained within this group was reported. Such results could give no precise idea of the relation between degree class and research ability unless compared with the results gained by the research population from which the F.R.S.'s emerged. The data necessary for such a comparison have now been collected, and are given in Tables 1 and 2. Only one part of the F.R.S. population has been used for the purpose of this comparison, namely, those who graduated from Cambridge during the period 1920–39. In gathering a representative sample of the research population at Cambridge during the same period, each F.R.S. was matched as closely as possible with a research student of the same sex, who read the same subject, who graduated in the same year,

Table 1. CAMBRIDGE TRIPOS RESULTS FOR PART 1 AND PART 2

Class		Cambridge 1920–39	
Part 1	Part 2	F.R.S.	Non-F.R.S.
1	1	(50) 54·9%	(60) 65·9%
2 or 3	1	(8) 8·8%	(6) 6·6%
1	2 or 3	(10) 11·0%	(8) 8·8%
2 or 3	2 or 3	(7) 7·7%	(8) 8·8%
1		(12) 13·2%	(6) 6·6%
2 or 3		(4) 4·4%	(3) 3·3%

Table 2. RESULTS AND FACULTIES OF LAST TRIPOS TAKEN

Class	Cambridge 1920–39					
	F.R.S.			Non-F.R.S.		
	Nat. Sci.	Maths.	Mech. Sci.	Nat. Sci.	Maths.	Mech. Sci.
1	(44) 48·3%	(19) 20·9%	(7) 7·7%	(45) 49·4%	(21) 23·1%	(6) 6·6%
2	(15) 16·5%	(3) 3·3%	(1) 1·1%	(15) 16·5%	(1) 1·1%	(3) 3·3%
3	(1) 1·1%	(—) —	(1) 1·1%	(—) —	( ) —	(—) —

and who has not yet become a Fellow of the Royal Society. Apart from these requirements the sampling for the non-F.R.S. group was random. The Tripos results for both groups are set out side by side in Table 1, the figures in brackets representing the totals on which the percentages are based. Table 2 shows the results for both groups in the last Tripos examination taken, classified in terms of the faculty to which each individual belonged.

It will be seen that the proportion of degree classes for the two groups are remarkably similar, both before and after they are broken down into faculties. Owing both to the size of the groups and the degree of similarity between them, it is statistically most unlikely that a significant difference in the proportions is disguised in this case by inadequate sampling.

If these results are accepted as approximately accurate, it is clear that the difference in the proportion of degree classes found among Cambridge F.R.S.'s and that found among the normal undergraduate population can now be explained entirely as an effect of using degree class as a criterion for the selection of research students. In other words, this evidence indicates that the reason there are relatively few F.R.S.'s with second- and third-class degrees as compared with students as a whole, is not that students with poor degrees necessarily lack potential research ability, but rather that they are rarely given the opportunity to display it.

The most obvious of the difficulties facing any attempt to test the validity of a selection method is that there is no way of assessing the potential ability of those candidates who were rejected. Any conclusions about such potential abilities must therefore take the form of an inference, dependent on evidence internal to the group which the method accepts. Despite this limitation, two inferences do seem at least provisionally to be justified by the present evidence. They are as follows.

(1) During the period 1920–39, a scientific research student at Cambridge with a second-class degree had the same chance of becoming a Fellow of the Royal Society as had a research student with a first-class degree. Or, more generally, once selected for research, by whatever criteria, a Cambridge student's degree class was irrelevant to his research ability.

(2) During the period 1920–39, the class of a Cambridge student's degree was irrelevant to his potential research ability, whether he happened to be selected for research or not.

Against the second inference it might be argued that in spite of the two F.R.S.'s with third-class degrees, the evidence does not exclude the possibility of a sizeable correlation between degree class and research ability among students with unusually poor degrees. Although degree class is predictively useless in dealing with candidates for research with firsts and seconds, it might nevertheless still have a limited predictive use in dealing with candidates with thirds.

Unavoidably the validity of such inferences as these varies in inverse proportion to their relevance to the original problem; and although, considered separately, this and other more tenuous objections may appear somewhat slight, their accumulative effect on the second inference could well be considerable. However, in view of the clear-cut nature of the present evidence, it would be surprising if even the less justified of these inferences proves eventually to be substantially untrue.

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[1] Gross, C., and Hudson, L., *Nature*, **182**, 787 (1958).