ments (with enrollments of freshman engineers) should like their own majors to have their general physics in the freshman year as the engineers have theirs; for this gives three years instead of two for the completion of the major physics courses. But in so doing we effectively cut off the statistically predictable and significant group of students who could take a physics course by accident (or as a physical science requirement), find that it was stimulating and interesting and that it aroused talents the student may have failed to appreciate or understand, and then decide to major in physics.

As our curriculum shifts toward the preparation of potential graduate students, not only do we lose in the numbers of students we enroll, but society loses in the physics majors from a less pressured curriculum who have, in the past, brought their training to bear in other fields such as engineering, law, medicine, business and teaching.

Mrs Ellis concludes her article by observing that our educational system is not as tightly structured as some European systems so that physics dropouts (from college physics major programs) can find other academic major fields, and she speaks of such flexibility as being a great asset to our system. It seems that perhaps we are not as flexible as we should be. In physics we should be concerned not only with the dropouts from our major programs who can be counted, interviewed and evaluated but also about the absence of the drop-ins who can not be identified individually but whose absence can only be inferred as the cause of an unknown part of our enrollment decline. The statistical significance of this group might be evaluated if one could survey physicists today to find what fraction made their decision to major in physics before entering college and what fraction during their freshman, sophomore (or later) years, and to find out what factors were influential in steering today's physicists into physics.

I believe that the facts warrant a study of a new (or 15-year-old depending on one's point of view) college physics curricular program that would have general physics, algebra, trigonometry and analytic geometry as prerequisites, which (with its calculus and differential equations) could be completed in the student's fifth through eighth semesters without having the onus of being regarded as second class. It should be a good terminal program, and perhaps it could be followed by a one-year master-of-arts program that would bring its better students up to the ever rising admission levels of the better graduate schools. Such a program might be called a physics major in the conventional sense, whereas today's programs might perhaps be regarded as honors physics major programs.

If our programs today exclude the physics drop-ins, then our system may be more rigid and inflexible than we recognize.

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Superconducting semiconductor

Minko Balkanski's review of the September ferroelectricity conference at the General Motors Research Laboratories (PHYSICS TODAY, February, page 87) contained two remarks that particularly caught my attention. The first was William Cochran's discussion of the simple ferroelectric transition that occurs in GeTe, and the second was Bernd Matthias's comment that ferroelectricity and superconductivity seem to be entirely mutually exclusive. I would like to point out that GeTe is not only the first diatomic ferroelectric but has also achieved a certain reputation as the first known superconducting semiconductor.[1]

Reference

1. R. A. Hein, J. W. Gibson, R. Mazelsky, R. C. Miller, J. K. Hulm, Phys. Rev. Letters 12, 320 (1964).

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Fiddling with fiddles

Several years ago I made a violin for my daughter, following the results and recommendations of Frederick A. Saunders and Carleen Maley Hutchins, who wrote "Founding a Family of Fiddles" in your February issue. The