

The University as Market

Academia in Anarchy. An Economic Diagnosis. JAMES M. BUCHANAN and NICOS E. DEVLETGLOU. Basic Books, New York, 1970. xvi + 192 pp. \$5.95.

Subtitled "An Economic Diagnosis," this little volume by two professors of economics purports to provide a different look at the embattled university in a troubled society. The utility and the deficiencies of the book are to be found in economics as a tool of analysis for a complex subject.

Essentially this is a study in economic theory. As such it is divided into two almost unrelated parts, the first a critique of university structure from an economic point of view, the second an attempt at economic analysis of student violence. There is little in the way of empirical data to substantiate the hypotheses presented, and there is almost no reference to political, social, and psychological factors in the university role. It is presumed throughout that university people, like other people, are motivated primarily, if not exclusively, by a concern for economic gain and loss.

In the first part of the book, the authors find the structure and operation of the university deficient because of the unique economic status of the university. They see the university as comprising three elements: (i) the student, who consumes a service but does not pay for it; (ii) the faculty, who produce a service but do not sell it; and (iii) the public, who provide the funds for the service but do not control it. These ideas are intriguing, but they require much more extensive analysis in a broader context than is provided here before we can decide whether or not they advance our understanding of the university as a social institution and whether or not they have operational utility.

In the second part, the authors seem to be suggesting that student violence arose because as an economic institution the university was indifferent to student interests. Presumably these interests might have been better served by a free market in student instruction. They also suggest that violence will increase as the economic rewards of such violence are increased and the economic costs are reduced. A chapter on the "strategy of violence" is the one excursion into social psychology. Its relevance in its context, not to men-

tion its validity, is difficult to perceive.

The authors conclude with two propositions: the external cost of university chaos will be a declining public willingness to provide financial support for the university, and new universities will emerge founded upon consumer choice. Once again the ideas are intriguing. But I wouldn't want to place any bets that the ideas will result in action. No doubt ideas do have power, but social institutions respond to a complex of social forces in which ideas are as apt to appear as *ex post facto* rationalization as they are to emerge as *a priori* causation.

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A Topic in Genetics

Population Genetics and Evolution. LAWRENCE E. METTLER and THOMAS G. GREGG. Prentice-Hall, Englewood Cliffs, N.J., 1969. xii + 212 pp., illus. Cloth, \$6.95; paper, \$3.95. Prentice-Hall Foundations of Modern Genetics Series.

This book belongs to a series designed for the bright advanced undergraduate. It attempts to summarize a subject area encompassing population genetics, microevolution, and speciation. These last two subjects the authors evidently equate with the "evolution" in the book's title.

The mathematical theory is elementary, dealing mostly with one locus and two alleles. Sometimes derivations are given and sometimes a formula is simply presented. The population genetic theory of polygenic inheritance is not discussed. Nonmathematical theory receives considerable discussion, including the effects of disruptive selection, the Ludwig effect and multiple niche selection, H. L. Carson's ideas on selection in central versus peripheral parts of a species range, canalization and homeostasis, interdemec selection, and others. At least seven different selection modes are mentioned: stabilizing, normalizing, disruptive, linear, directional, balancing, and progressive.

The selection of experimental and observational data is well balanced. For example, studies on chromosomal polymorphisms, polymorphisms in snails, industrial melanism, mimetic polymorphism, *Drosophila* chromosomal load, and allozyme polymorphisms are included.

In total, then, the book is an up-to-date and accurate representation of the elementary facts and theories of this field. This has the unfortunate aspect of reproducing some of the shortcomings of the field, which include occasional excesses of terminology and the use of this terminology in the construction of elaborate theory which is not always well defined. One example may be found on pages 164-65, where the Ludwig effect, disruptive selection, and niche diversity in central versus peripheral parts of the species range are combined in such a way that the result is not entirely clear. Another is a rather obscure discussion of the "adaptive norm" on pages 146-47.

Also characteristic of the field is the authors' frequent lapse into teleological language. For example, they write on page 177 that genetic variability is restricted for a "reason" and on page 147 that variability is "for purposes of long term survival." The unfortunate result of this kind of literary license is to reinforce the teleological views that student readers bring to the subject.

Finally, it appears that the authors' enthusiasm to include as much of the field as possible and still make their discussion intuitively understandable has resulted in a rather high mistake level. There are numerous examples of the use of terms without definition, and there are dubious statements such as, "We could cite numerous examples in which the heterozygote can be shown to be superior in fitness to either homozygote" (p. 152), or misleading ones such as, "In [population] cages in which the initial value of F is high, the frequency falls and when it is low, it increases. The adaptive value of F depends on its frequency" (p. 166, fig. 7.13). This passage leads the reader to the incorrect conclusion that convergence on an equilibrium is, in itself, evidence for frequency-dependence of fitness.

In spite of the various faults of execution, it is clear that the basic concept of the book is an excellent one. This is an active and exciting field (evolutionary population genetics?), and most certainly should be presented in compact form for the readership of this series. It is this reviewer's opinion that a carefully revised second edition will precisely fill this need.

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