

administration and organization must rest upon solid and detailed historical studies. If we are to understand why things are as they are, historical analysis is essential, and for this a brief historical account is a quite insufficient substitute. We must show how and why the past is important and why it is still with us. Second, the analysis of a social institution, such as a university, must refer very closely to the sociological structure of a country (the class structure) as well as to its economic needs in relation to its financial capacity to bear the cost of extended tertiary education. Here sociological and historical analyses complement each other. Third, administrative practices and structure should not be evaluated or measured against general criteria such as those listed by Penrose, but rather by considering the ways in which they make it possible to handle specific problems. A few examples of the latter may be mentioned: Are students being admitted to tertiary education in numbers sufficient to satisfy needs? Is talent being wasted? Are children of poor parents being kept out? Are students being allocated in the best way among institutions and faculties? Are the staff given sufficient freedom to apportion their time wisely among research, committee work, and teaching? Are promising students given sufficient stimulus? Are funds sufficient to match needs? The question that has to be asked in each case is: In what ways do administrative and organizational forms help or hinder the solution of problems of this kind? Such criteria are more significant than those which concern chiefly general issues like the training of elites or whether there exists a unified and comprehensive authority within an institution. These, too, have their importance, of course, but at another and less practical level.

These criticisms should not dissuade any one from studying Penrose's book, so full of wisdom and so evidently the fruit of ripe experience. We have reason to be grateful for what is, in a sense, a pioneer effort which should act as a stimulus to others. We need many enquiries of this kind, dealing with the tertiary systems both of industrialized and of underdeveloped countries. All those who are concerned with the formation and formulation of university policy owe a debt of gratitude to Penrose for the careful and painstaking work he has done.

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Miscellaneous Publications

(Inquiries concerning these publications should be addressed, not to Science, but to the publisher or agency sponsoring the publication.)

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