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*Mental Ability and Higher
Educational Attainment
in the 20th Century*

by Paul Taubman

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University of Pennsylvania*

and Terence Wales

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*A Technical Report Prepared for
The Carnegie Commission on Higher Education*

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*Mental Ability and
Higher Educational Attainment*

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The views expressed are those of the authors.*

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Paul Taubman and Terence Wales

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Foreword

Among the nagging questions about the effectiveness of American higher education are these:

Is the average mental ability level of students being maintained as the system expands?

Do current circumstances affecting accessibility of college and university education to young people still result in any significant loss of talent?

By answering these questions (affirmatively) and by providing empirical evidence to substantiate their findings, the authors of this report of the National Bureau of Economic Research for the Carnegie Commission on Higher Education have rendered a valuable service.

Clark Kerr
Chairman
Carnegie Commission
on Higher Education

March 1972

Foreword

This report is the first in a series of joint publications by the Carnegie Commission on Higher Education and the National Bureau of Economic Research on the subject of returns to higher education. These studies attempt to go beyond measuring only private rewards from higher education by focusing as well on possible social benefits derived from postsecondary schooling.

The present volume, however, differs somewhat in stress from the publications yet to come. This study is, in fact, a by-product of a larger study by Paul Taubman and Terence Wales in which they attempt to measure the effects of ability on earnings and thereby hope to calculate the returns to educational investment.

In this report, Taubman and Wales are concerned with a longstanding debate in educational circles within the United States. Specifically, they examine whether the rapid increase in the number of high school students who have entered colleges and universities in the United States in recent decades has resulted in a deterioration of the academic quality of college students. Although one could wish that more data were available, the authors have used the data developed for their larger study to present what must be considered the best empirical evaluation of this question to date. Taubman and Wales conclude that on the basis of their tests and findings, student quality has not deteriorated in the United States as the student population and percentage of youths matriculating has expanded.

Many aspects and objectives of the recent American experiment with mass higher education may remain in doubt. However, there now seems to be little factual basis for discrediting that experiment on the grounds that in the past it has lowered the ability level of students attending universities and colleges in the United States.

John R. Meyer
President
National Bureau
of Economic Research

March 1972

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Preface and Acknowledgements

Several years ago we began a study of the rate of return to higher education. In such a study we were faced with the difficult though well-known problem that income differences by educational level in census data arise partly because the more educated are also brighter. There are a number of ways to overcome the "ability" problem. One such method, which we examined early in the study, was based on the proposition that the relationship between mental ability and education may have shifted for people born in different time intervals.

We started with an assumption that around 1920, high school graduates were no different from those who went to college, but that over time those who went to college became progressively more able. Several people objected that they would expect the exact opposite, with an ability differential greatest for the oldest cohort. To resolve this issue, we decided the simplest thing to do would be to read some histories of higher education to find out the facts in the case. Since changes in the education-ability relationship would be important to many questions and disciplines, we expected that the answer would be readily available. To our surprise, we found little written explicitly on the subject. However it soon became apparent that the necessary information to answer the questions was scattered over a wide number of seemingly unrelated studies.

It is perhaps worth noting that the original method we were exploring did not pan out. This monograph, therefore, reports on the attempt of two economists to extract from noneconomic data some historical relationships that are of primary concern to noneconomists and of secondary concern to economists. We have tried to aid noneconomists by foregoing technical jargon and using English, but the attempt has not always been successful.

This study has benefited from many individuals and groups. Included are, of course, the many scholars listed in the text who over the years conducted well-designed studies and published extensive details on their findings. Since many of the sources are rather obscure, the study would

never have come to fruition without the extensive collection in the Penniman Library at the University of Pennsylvania and the Interlibrary lending service.

We wish to thank Dael Wolfle and the late Alfred Conrad, Robert Michael and Finis Welch of the NBER staff reading committee, and Margaret Gordon of the Carnegie Commission for helpful comments. Thanks are also due to the NBER Director's Reading Committee of Erwin Canham, Lazare Teper, and Lloyd Reynolds, as well as to Boris Shiskin and Emilio Collado, whose comments helped to improve the substance and style of the manuscript. We wish to thank Marc Freiman, Peter Gottschalk, and Janet Young for their research assistance, Gnomi Schrift Gouldin and Sidney Hollister, who edited the paper, and H. Irving Forman, who drew the charts. This study was aided by funds from the Carnegie Commission on Higher Education and by general funds of the National Bureau.

Paul Taubman
Terence Wales