

A Century of Ability Testing

Robert M. Thorndike

Western Washington University

with **David F. Lohman**

The University of Iowa



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To ELT, RLT, and EST,
each of whom has served as
an inspiration for me in many ways

Preface

There are many reviews of the several revisions of the Binet-type scales. Reviews of the earlier revisions are available in a number of other places, including Freeman (1962) and various editions of the measurement texts by Anastasi and Cronbach. Although it is too soon to render a verdict on the most recent revision of the Stanford-Binet, a comprehensive comparison of the Fourth Edition with its predecessors is available in Sattler (1988). The purpose of this book is not to present a detailed account of the Stanford-Binet, or any other intelligence test. Instead, at the request of The Riverside Publishing Company, I set out to trace some of the historical forces that shaped the development of the measurement of intelligence, in particular as it has been defined by the Stanford-Binet.

For the last 25 years, which roughly spans my career in psychology, psychological testing has been under more or less continual attack, often for events that took place in quite a different time and climate. Because members of my family have been involved in the measurement of human abilities and other characteristics almost from the beginning of the enterprise, they have been part of the conflict. The research that went into this little book has at times taken the form of a personal voyage of discovery into my past. I found out many things about E. L. Thorndike, my grandfather, that I had not known, and on occasion I tried to bring an element of familial perspective into the narrative. But more than anything, this book tries to understand and explain the course of development of the measurement of intelligence within the changing context of the times.

Many of the prominent figures of the early phases of the testing movement in the United States have been portrayed by some recent writers as heartless fiends whose only goal in life was to persecute the less fortunate. It would be hard to distort their motives more. These were men and occasionally women who went about their business with the best of scientific intentions in an era when many people expected science to solve all the world's problems within the next few years. They were not completely successful, but that was not for lack of effort. And, as the record of psychometrics in educational, industrial, and military affairs will attest, tests have been successfully used to reduce bias and improve efficiency in meaningful ways. That bias and prejudice may still exist and may enter into the use of tests is more a function of the society as a whole than it is of the testing movement.

There are several areas of controversy that I have tried to avoid or on which I have withheld judgment. In this book I do not take any position on the fundamental nature of intelligence. At some points I note that the evidence or a

popular theory seems to be heading in one direction or another, but it is not my intent to define intelligence or to take sides on such issues as the heritability of intelligence.

Tests merely provide operational definitions of intelligence; they do not reveal anything more basic about it. They are systematic ways of collecting samples of behavior which may be compared to other samples of behavior. When proper precautions have been taken, certain kinds of conclusions or predictions may be justified based on observed regularities. As is always the case when dealing with individual differences among human beings, those predictions or conclusions may be in error to a greater or lesser degree. With the exception of some of the new research on cognitive science and intelligence, which David Lohman has summarized well in chapter 6, testing is a correlational enterprise, and causal inferences are hazardous at best. Of course, some explanations account for observed relationships better than others do, but theories of intelligence are generally descriptive rather than deductive.

The book is divided into six chapters that cover periods of varying duration and themes of varying scope. The first chapter sets the stage and attempts to show how Binet's discovery was a logical outgrowth of his own inventiveness and persistence and the intellectual direction of the times. Methods to measure intelligence were about to be discovered, and Binet was the right man in the right place at the right time. Chapter 2 describes the work going on in the United States and England between 1900 and the start of World War I, including the development of the first Stanford revision of Binet's scale. Chapter 3 covers events surrounding the war and some of the controversies that publications from the army testing program created. Chapter 4 gives a brief review of some of the arguments about the nature of intelligence that made the journals of the period so interesting. The debates that centered on Spearman's two-factor theory of intelligence take center stage, along with the development of factor analysis. This chapter ends with the 1937 revision of the Stanford-Binet and the introduction of the Wechsler scales.

The first four chapters cover the first 50 years of ability testing, while chapter 5 covers the next 50. This rather uneven distribution of coverage is due to an equally uneven rate of development. As Oscar Buros observed in reviewing his 50 years of activity in the field, not much of note has happened in the development of psychological measurement in this later period. World War II, the development of test batteries, introduction of the third and fourth revisions of the Stanford-Binet, and the developing concern about bias in tests and testing practices form this chapter. Finally, David Lohman presents in chapter 6 a brief overview of the most recent developments in the search to understand what intelligent behavior involves and how it can be understood. This chapter reviews

the links between tests and the rapidly developing field of cognitive psychology or cognitive science. As Dr. Lohman points out, the cognitive revolution in psychology has returned intelligence to a central role in the study of human behavior, and this renewed interest and fresh perspective may well result in significant advances in both the theory and measurement of intelligence in the future.

I would like to express my thanks to The Riverside Publishing Company for suggesting this project to me. It is something I had in the back of my mind to undertake sometime, but their encouragement made sometime now and they gave me free rein to develop the topic as I saw fit. They also introduced me to Dave Lohman, who brought his very considerable knowledge of the fields of cognitive psychology and testing to the book in the form of chapter 6. I would also like to thank Western Washington University, which provided professional leave for me to work on this book and the facilities for me to finish it. A special thank you also goes out to Dr. Lloyd M. Dunn who donated a copy of Terman's personal copy of the Kite translation of Binet's major papers. His gift to Western's library arrived while I was in the middle of the research, and I fell on the book immediately. Dr. John Richardson of Western's Sociology Department and my father, Robert L. Thorndike, both read late drafts of the manuscript and offered valuable corrections and suggestions. My colleagues in the Psychology Department at Western have been willing to listen to my endless "discoveries" and to give me moral support; and, my wife Elva has once again born the inevitable and unenviable burden of reading (and correcting) my efforts with patience, skill, and grace, all the while tolerating the artist's temperament. This book has been fun for me to write, and I hope it will be enjoyable for others to read.

Robert M. Thorndike
Bellingham, Washington
June 1989

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