THE SPATIAL CHILD

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By

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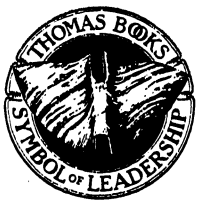

CHARLES C THOMAS • PUBLISHER
Springfield • Illinois • U.S.A.

Published and Distributed Throughout the World by

CHARLES C THOMAS • PUBLISHER
2600 South First Street
Springfield, Illinois 62717, U.S.A.

ISBN 0-398-04821-5 (hard)
ISBN 0-398-06096-7 (paper)
Library of Congress Catalog Card Number: 83-386

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Printed in the United States of America
CU-R-1

Library of Congress Cataloging in Publication Data

Dixon, John Philo.
The spatial child.

Bibliography: p.
Includes index.
1. Gifted children--Education. 2. Space perception.
I. Title.
LC3993.2.D48 1983 371.95'2 83-386
ISBN 0-398-04821-5.—ISBN 0-398-06096-7 (pbk)

To Jane
For all the encouragement

To Steven and Bonnie
For being so special

He was last in the lowermost class but one. . . . Dull boys were now and then put over him in form.

From

Isaac Newton: A Biography

by Louis Trenchard More

There was no possibility of his passing an examination in any subject but drawing, no possibility at all.

From

Picasso: A Biography

by Patrick O'Brian

He seemed to be genuinely retarded. His dictation was riddled with crass spelling-mistakes. He never succeeded in learning Latin like the others, and his mathematics were non-existent.

From

Rodin

by Bernard Champigneulle

When Hermann Einstein asked his son's headmaster what profession his son should adopt, the answer was simply: "It doesn't matter; he'll never make a success of anything."

From

Einstein: The Life And Times

by Ronald W. Clark

PREFACE

RESEARCH on the nature of spatial ability has come such a long way in the last century that one would expect it to have considerable impact on the way educators understand giftedness in children. Yet, with few exceptions, when one looks at the spectrum of programs for gifted children, one senses that the accumulated knowledge on spatial ability has been given little if any consideration and has no impact on the planning of these programs. This book has been written for the purpose of addressing this shortcoming. Spatial ability is one of the primary ways in which giftedness is manifested in many children. We can hardly move forward in our understanding of giftedness until we have focused on the implications of this.

It is also my purpose to take up one particularly sticky issue with regard to spatial ability. Outstanding spatial ability often manifests itself in children who are mediocre, sometimes debilitated, in other important academic skills — most often in language skills. The cases of persons of historical genius who had a natural inclination toward spatial ability, but a deficiency in other academic skills, are so striking that they suggest we should more often than not look for spatial genius to be unrelated to more conspicuous academic skills. It should be considered an embarrassment to the weak conceptions of giftedness that prevail among educators that persons like Albert Einstein, Pablo Picasso, Auguste Rodin, Isaac Newton, and Niels Bohr would not fit with them.

This is a difficult issue indeed. It implies a direction completely contrary to the traditions from which the field of gifted education has emerged. Most children are labeled gifted either because they have distinguished themselves in standard school performance or because they have received a high score on a test of general intelligence or general creativity. The problem is that many children who possess great potential will not manifest their abilities in a standard academic way or on a test of general abilities. Their abilities are specialized in ways not amenable to recognition in the usual school

setting. These children are rarely included in programs for the gifted or properly served when included. This is perhaps more the case with spatial ability than with any other area. Hopefully, a reading of this book will be convincing on this point.

In the attempt to make this case, I have had to roam a broad and varied territory; biographies, educational psychology, cognitive psychology, testing theories, the mathematics of factor analysis, neurology and neuropsychology, developmental psychology, learning theories, personality theories and research, education for the gifted, creativity research, and gestalt psychology. Few people achieve expertise in more than one of these fields. One roams the broad territory with considerable trepidation. It would have been more secure to work with a more circumscribed topic, or, to put it in Einstein's beautiful words of metaphoric derision, it might have been safer to "take a board of wood, look for its thinnest part, and drill a great number of holes where drilling is easy." However, gaining wisdom concerning a problem often requires approaching the problem from a variety of perspectives. One hopes the wisdom gained outweighs any deficiencies in dealing with the expanse of knowledge.

JPD

ACKNOWLEDGMENTS

FORTUNATELY I have been helped by others who have come this way before me, most notably British psychologist I. MacFarlane Smith and also American learning disabilities specialist Alexander Bannatyne. Those who have provided and shared information valuable to this book are Sunny Chang, E. Paul Torrance, Richard Sullivan, Abraham Tannenbaum, Linda Dubin, Lucile Beckman, Gene Glass, Sue Baum, Frances Karnes, Joan Hickey, Lee Walker, Sandra Black, Barbara Ryan, Jane Weber, Betty Peterson, Mary Fussell, Frances Bennett, Jean Blanning, Mogens Jensen, Walter Jones, Rosa Quezada, and Jack Gillette. Those who have given generously of their time in making this book possible are Mary Laycock, Peter and Catherine Jackson, and Patricia Moore. To Joe Renzulli must go both the blame and the thanks for getting me involved in such a fascinating field of study. Thanks also go to my colleagues at the Center For Theatre Techniques, Mary Hunter Wolf, Sharyn Esdaile, Sue Hill, Lynn Niro, and Keith Cunningham, for their patience while I was preoccupied with this task. While completing the manuscript, I have appreciated the interest and encouragement of Payne Thomas of Charles C Thomas, Publisher.

A special thanks to my mother for forbearance in helping me learn to read — without which writing would have been impossible. Finally, it is most important to say that my wife Jane was a partner in this effort from the inception of the book. Her encouragement and editorial assistance at every stage of the writing kept the book on track. If the book is readable, it is due to her efforts and willingness to take valuable time from her work at Yale University.

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