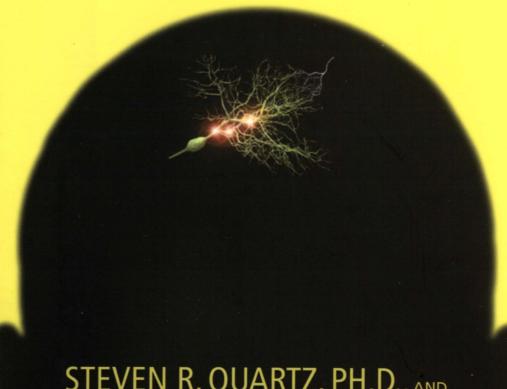
LIARS, Lovers, HEROES

What the **NEW**

Brain Science Reveals About How We Become Who We Are



STEVEN R. QUARTZ, PH.D., AND TERRENCE J. SEJNOWSKI, PH.D.

liars, lovers, and heroes



WILLIAM MORROW

An Imprint of HarperCollinsPublishers

liars, lovers, and heroes

WHAT THE NEW BRAIN SCIENCE REVEALS ABOUT HOW WE BECOME WHO WE ARE

Steven R. Quartz, Ph.D., and Terrence J. Sejnowski, Ph.D.

LIARS, LOVERS, AND HEROES. Copyright © 2002 by Steven R. Quartz, Ph.D., and Terrence J. Sejnowski, Ph.D. All rights reserved. Printed in the United States of America. No part of this book may be used or reproduced in any manner whatsoever without written permission except in the case of brief quotations embodied in critical articles and reviews. For information address HarperCollins Publishers Inc., 10 East 53rd Street, New York, NY 10022.

HarperCollins books may be purchased for educational, business, or sales promotional use. For information please write: Special Markets Department, HarperCollins Publishers Inc., 10 East 53rd Street, New York, NY 10022.

FIRST EDITION

Printed on acid-free paper

Designed by Nicola Ferguson

Library of Congress Cataloging-in-Publication Data

Quartz, Steven.

liars, lovers, and heroes : what the new brain science reveals about how we become who we are $\,$ / Steven Quartz and Terrence Sejnowski.

p. cm.

Includes bibliographical references and index.

ISBN 0-688-16218-5

1. Genetic psychology. 2. Brain—Evolution. I. Sejnowski, Terrence J. (Terrence Joseph) II. Title.

BF701.Q83 2002

612.8'2—dc21

2001026636

For Francis, whose scientific pursuit of big questions has inspired us and whose generous advice has helped guide us

contents

Acknowledgments ix

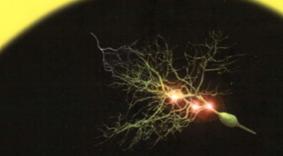
Preface xiii
Our Brains, Ourselves 1
Making Connections 21
How to Make a Human: The 1.6 Percent Solution 32
Life on the Far Shore: Crossing the Mental Rubicon 61
Between Thought and Feeling: The Mystery
of Emotions 88
Becoming You: Genes, Parenting, and Personality 123
Friend, Lover, Citizen: The Mystery of Life Together 148
The Killer Within: From the Solitary Killer to the Killing
Crowd 189
Inside Intelligence: Rethinking What Makes Us Smart 216
The Search for Happiness 252
Afterword: After September 11 278
Notes 285
Index 329

WHAT MAKES US LIARS, LOVERS, AND HEROES? DISCOVER WHAT SCIENCE NOW KNOWS THAT HELPS US UNDERSTAND:

 What successful executives, courageous fighter pilots, and high-rolling gamblers share:
 How the thrill we get from performing under pressure is one key to our survival—and sometimes a path to self-destruction

What governments and cults have in common:
 How our passion for ideas and our ability to work together in groups give rise to the best and worst in human thinking and behavior

Why eyes rove, diets fail, and money burns holes in our pockets:
 How the "wired-in" love of novelty that helps us thrive in
 unpredictable situations causes even rewarding
 pursuits and people to lose their appeal over time



• A new view of why kids kill:

How children's empathic connections are shut down by society's depersonalizing lessons and repeated exposure to images of violent solutions to problems

 Insights on the human paradox—our dual capacity for great love and horrible violence:

How violence flows from hyperarousal of the same brain centers underlying sociality and romantic love

And more

