

# Biosocial Bases of Criminal Behavior

Sarnoff Mednick  
& Karl O. Christiansen

. . . Learning of law-abiding behavior • Crime  
and Behavioral Epidemiology • Criminality among  
twins • Psychopaths, Criminality and Alcoholism in  
adoptees • Criminality among XYY and XXY men  
• Physiological factors in asocial behavior • Life  
factors predictive of criminality . . .

# *Biosocial Bases of Criminal Behavior*

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## **Foreword**

*by Marvin E. Wolfgang*

In recent years there has been a revival of interest in genetic, physiological, endocrinological factors associated with various kinds of human behavior. Part of the reason is that new, more sophisticated and technologically fascinating research tools are now available for measuring the relationship between these factors and behavior. Because crime is contained within analysis of deviant behavior, and because statistically significant differences in biologically related problems are found to be associated with records of criminality, the studies contained in this volume require special attention.

This is not a cyclical return to biosociality, not a revival of Lombroso, Hooten, Schlapp and Smith or Sheldon. The studies reported here are new and exciting, buttressed by control groups and experimental analyses. Psychopathy, schizophrenia, adoption and twin studies acquire, by their accumulation, a thrust that is unmistakably of importance to the social research community.

Moreover, the reliability and validity of the Danish recordkeeping system are almost beyond criticism. The criminal registry office in Denmark is probably the most thorough, comprehensive and accurate in the Western world. The editors of this volume are among the most respected students of social psychology and sociological criminology.

The late Karl Otto Christiansen had the attribute of integrity of research shared by few of his colleagues. Sarnoff Mednick is known to students on both sides of the Atlantic as an erudite scholar of psychology and criminology.

The studies reported here are, if not unique, most uncommon. There is no research I know of in any other country to match them. Both positivistic and the "new" or radical criminology, as well as the concerns in socialist countries will find these researches relevant. The research is apolitical and based on the best canons of science. Sociological criminology welcomes these multi- and interdisciplinary researches that embrace our understanding of criminality and criminals.

Finally, it should be said that no nefarious genetic or biological interpretations should be made from the studies reported here. These are genuinely scientific designs and analyses that should be incorporated into the domain of erudite scholarship. The authors employ proper caution and care in presenting their findings that may challenge some previous positions but should be added to the normally cumulative writing of science that seeks to define, describe and analyze major variables in the biographies and behaviors of persons who have been known to deviate from statistical and legal-moral norms.

## ***Dedication***

On May 22, 1976, soon after this book was completed, Karl Otto Christiansen died of a heart attack in Minneapolis. He was at the University of Minnesota lecturing in criminology.

Karl Otto was one of the world's truly distinguished criminologists. He helped shape policy and direction for almost every important international, European, and Scandinavian decision-making organization in the field of criminology. He was *the* senior Scandinavian criminologist; he was the first to introduce sociological thinking into Scandinavian criminology.

It is a tragedy that he did not live to see the completion of his massive and definitive study of criminality among Danish twins. His report on this work forms Chapters 4 and 5. The project is continuing in accordance with his plans.

He was a beloved man. His quick, quiet sense of humor required alertness and perceptiveness for full appreciation. He placed human welfare, honesty and objectiv-

ity above all else. When conservative elements of the Danish Government cited rampant criminality as grounds for closing down a Copenhagen community of independent souls (Christiania), Karl Otto, using police statistics, publically reported that criminality was actually lower in Christiania than in the remainder of Copenhagen. He drily attributed a recent crime increase in Christiania to the bad influence of the surrounding community. His debunking statement helped Christiania to survive (at least to date).

This book is dedicated to his memory.

S. A. M.  
June 28, 1976  
Copenhagen

## **Preface**

Experiential and biological factors have competed for the attention of investigators involved in what Hirschi and Rudisill have called "The Great American Search" for the "Causes of Crime." Early in the second decade of this century environmentalism began to displace the dominant nineteenth century genetic and biological explanations of the behavior of man. Criminology was not exempt from this new influence. Charles Goring's research in 1913 dramatically rejected Lombroso's "atavistic physical type" theory of crime. Goring's work coincided with and contributed to a wave of environmentalism; it has since been Exhibit A in the case against biology. Social organization, social influence, and social experience became, and are currently, the dominant explanations of the causes of crime. Any theory with biological implications was rapidly associated with the almost poetically evil name of Lombroso and regarded with suspicion.

The criminal justice systems of the Western world have until recently been organized with reference to the nineteenth century biological theories. The social-causation theorists' criticisms have caused society to reform criminal justice systems. These changes have been made both on the basis of elementary human kindness and in the belief that they would reduce levels of criminality and recidivism. Criminality and re-



civism have not been reduced. It is likely that this "failure" will tend to produce a shift of emphasis of researchers in this field away from reliance on pure social causation. But it has been shown that the old biological theories do not have the explanatory power to replace current social theories.

This book recommends a consideration of the interaction of biological and social forces in producing criminality. Casual perusal of this volume may alarm social causation theorists because of our rather firm findings of the importance of genetic and physiological factors in crime. On the other hand, the geneticists may be disturbed by the fact that these findings are so dependent on social variables for the salience of their expression. For example:

1. Genetic factors are linked with the origins of crime; closer inspection of the data reveals, however, that the power of the genetic factors in explaining crime is rather weak in the lower classes and relatively great in the middle classes.

2. A good deal of the work in this volume discusses autonomic nervous system variables. These variables have been shown to explain important amounts of variance in crime. Here again, analyses of the manner in which family and social class interact with physiology sharpen the explanatory power of both.

As in the case of genetic factors, physiological variables have good explanatory power in the middle classes, but little in the lower classes. The relative failure of genetic and physiological variables in these classes suggests that economic and social deprivation are more critical in explaining crime in the lower classes. The middle-class criminal seems to be more genetically and physiologically predisposed.

It is curious that in order to see the action of social forces with more precision we must first account for the variance attributable to genetic and physiological factors. In order to better understand the operation of biological factors we must first control social variables. We hope this volume can serve to illustrate this method of analysis of sociobiological interplay.

Sarnoff A. Mednick  
June 29, 1976  
Copenhagen, Denmark

## Acknowledgments

A variety of Danish institutions and agencies have, until now, good naturedly cooperated with what must have been an irritating number of questions, requests for information, and other extraordinary inquiries from the Institut. The responses they have provided have formed most of the data for the research described in this volume.

Professor Erik Strömngren, Dr. Annelise Dupont, and fru E. Torp have been extremely helpful in providing the cooperation of the Demographic Institute of Risskov. The Ministry of Justice has been very helpful in encouraging our work. Mr. G. Ekelund of the *Rigsregistratur* has facilitated access to the National Police Register. The *Folkeregister* has been instrumental in locating our populations. The Ministry of Religion has been of great help for the "chromosome" study (Chapter 10) in permitting us to establish our population on the basis of their church birth registers. Mr. Harry Hansen of the Rigshospitalet church birth register was particularly helpful in this connection. Professor Mogens Hauge of the Danish Twin Register has worked closely with Karl Otto in planning and executing the twin study. I should like to thank him for his continuing support and assistance since Karl Otto's death.

I know that Ruth Christiansen was heavily involved working with Karl Otto on his part of this volume; he would have wished to thank her for her help. I thank her for her continued and valued friendship.

My wife, Birgitte, has influenced the design and interpretation of these research projects. Her advice has been especially important in the formation of conclusions from these findings.

Fini Schulsinger has been a wise advisor and coworker on the psychiatric and social aspects of criminal behavior. His cooperation has been critical to the progress of this work.

Annalise Kongstad has been Karl Otto's chief assistant for the twin study. Her independent and highly responsible efforts have been instrumental in producing the results reported in Chapter 5.

Jane Passant, our administrative editor, did everything from helping to select the title to organizing the index. In the midst of typing and retyping chapters, she translated Chapter 4 from the original Danish. She organized and conducted correspondence with authors and publishers. She helped with determination of the style of the presentations. She has earned the gratitude of the two editors and all the coauthors.

Lis Kirkegaard-Sørensen and Barry Hutchings, who have been with the Institut many years, were early supporters of our interest in asocial behavior.

To the other fellow authors of the book I wish to extend a special "thank you" on behalf of myself and Karl O. Christiansen.

Sarnoff A. Mednick  
Copenhagen  
September 1, 1976

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The adoption studies were all made possible by contracts between the United States Public Health Service and the Psykologisk Institut, which produced the original adoption files. These were compiled by Kety, Rosenthal, Wender, and Schulsinger (1968) for their studies of the

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