U.S. Department of Justice
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National Institute of Justice

National Institute of Justice

Research Report

Breaking the Cycle:
Predicting and Preventing Crime

A collaboration of the National Institute of Justice, the Harvard School of Public Health, and the John D. and Catherine T. MacArthur Foundation

About the National Institute of Justice

The National Institute of Justice, a component of the Office of Justice Programs, is the research and development agency of the U.S. Department of Justice. NIJ was established to prevent and reduce crime and to improve the criminal justice system. Specific mandates established by Congress in the Omnibus Crime Control and Safe Streets Act of 1968, as amended, and the Anti-Drug Abuse Act of 1988 direct the National Institute of Justice to:

- *Sponsor special projects and research and development programs* that will improve and strengthen the criminal justice system and reduce or prevent crime.
- *Conduct national demonstration projects* that employ innovative or promising approaches for improving criminal justice.
- *Develop new technologies* to fight crime and improve criminal justice.
- *Evaluate the effectiveness of criminal justice programs* and identify programs that promise to be successful if continued or repeated.
- *Recommend actions* that can be taken by Federal, State, and local governments as well as private organizations to improve criminal justice.
- *Carry out research on criminal behavior.*
- *Develop new methods of crime prevention* and reduction of crime and delinquency.

The National Institute of Justice has a long history of accomplishments, including the following:

- Basic research on career criminals that led to development of special police and prosecutor units to deal with repeat offenders.
- Research that confirmed the link between drugs and crime.
- The research and development program that resulted in the creation of police body armor that has meant the difference between life and death to hundreds of police officers.
- Pioneering scientific advances such as the research and development of DNA analysis to positively identify suspects and eliminate the innocent from suspicion.
- The evaluation of innovative justice programs to determine what works, including drug enforcement, community policing, community anti-drug initiatives, prosecution of complex drug cases, drug testing throughout the criminal justice system, and user accountability programs.
- Creation of a corrections information-sharing system that enables State and local officials to exchange more efficient and cost-effective concepts and techniques for planning, financing, and constructing new prisons and jails.
- Operation of the world's largest criminal justice information clearinghouse, a resource used by State and local officials across the Nation and by criminal justice agencies in foreign countries.

The Institute Director, who is appointed by the President and confirmed by the Senate, establishes the Institute's objectives, guided by the priorities of the Office of Justice Programs, the Department of Justice, and the needs of the criminal justice field. The Institute actively solicits the views of criminal justice professionals to identify their most critical problems. Dedicated to the priorities of Federal, State, and local criminal justice agencies, research and development at the National Institute of Justice continues to search for answers to what works and why in the Nation's war on drugs and crime.

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Felton J. Earls, M.D.
Albert J. Reiss, Jr., Ph.D.

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Preface

To advance our understanding of the causes of criminal activity, the Program on Human Development and Criminal Behavior, now called The Project on Human Development in Chicago Neighborhoods, is committed to examining this problem from both a developmental and an interdisciplinary perspective. It is our conviction that further knowledge in this field requires longitudinal studies of how individuals, families, institutions, and communities evolve together—including their interaction in context over time. The accelerated longitudinal design described in this volume represents our strategy for studying this process from before birth through adulthood.

In planning what we hope will be the major criminologic investigation of this century, a broad spectrum of scholars and technical experts has assisted us. Our group of scientific directors convened a series of workshops that subjected fundamental aspects of current criminologic theory and scientific methods to the scrutiny of scholars from multiple disciplines.

Between January 1990 and December 1992, we met with more than 200 experts in criminology, education, law, psychiatry, psychology, public health, sociology, and statistics in eight workshops. The workshops addressed the role of community, family structure and ethnicity, gender, traumatic stress, health and biomedical influences, social networks, preventive interventions, moral development, and adult development in the origins and pathways of criminal behavior. The proceedings of these workshops, along with details of prior work and scientific references, are available from the Project director.

The purpose of this volume is to distill the scientific language of those documents into a nontechnical version suitable for broad distribution, discussion, and comment. We hope that this monograph will be useful to all persons concerned with crime, violence, and human development—including police chiefs, legislators, fellow researchers, and concerned citizens. We welcome your comments and suggestions in our joint efforts to understand, control, and prevent crime in our Nation.

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Acknowledgments

This volume reflects the work of more than 200 scientists who have contributed to the Project on Human Development in Chicago Neighborhoods, previously known as the Program on Human Development and Criminal Behavior, since its inception in 1988. These include the Project's core scientific and advisory group (listed in appendix 1), workshop participants (listed in appendix 2), and Project staff. We gratefully acknowledge the many ideas they contributed to the study of human development and criminal behavior and their continued support of the Project.

Much of the writing for this volume comes from the capable hands of Patrick Skerret and David Lyons, two topnotch science writers who helped translate technical scientific language into prose suitable for a broader audience. They were assisted by Stephen Buka, Jacqueline McGuire, Joellen Fritsche Talbot, Christy Visher, and Deborah Zarin, who reviewed and edited the final versions.

Financial support for the Project on Human Development in Chicago Neighborhoods is provided by the National Institute of Justice, U.S. Department of Justice, and the John D. and Catherine T. MacArthur Foundation.

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Chapter 1

Introduction

Today, like every other day in the United States this year, 65 persons will be murdered, and 264 women will be raped. In the next hour, 120 persons will be assaulted. In the time it takes to read this paragraph—49 seconds—another person will be robbed. Last year police made more than 14 million arrests. In 1991 the chance of being a victim of a violent crime was 3 percent, and the chance of falling prey to a nonviolent crime was even greater—about 17 percent of households in the United States fell prey to burglary, car theft, or similar crimes. Some neighborhoods are devastated by crime; others are virtually untouched by it.

Since the 1960's, crime* has been rising across the United States, wasting lives, sapping the human spirit, and eroding confidence in our social system. The cost is tremendous—Federal, State, and local criminal justice expenditures now total $60 billion a year, while the cost to victims is more than $100 billion a year.

Numerous solutions have been tried—police foot patrols have been launched in high-crime areas, judges have handed out stiff sentences, jail cells have been built, money has been poured into job training and job creation in depressed neighborhoods, and education and community outreach programs have been organized. Yet the impact on crime rates is uncertain.

No one knows what fuels a rise in crime. Sociologists point to the decay of cities and the destruction of supportive personal networks. Psychologists say it is the development of antisocial personalities and the lack of parental supervision. Biologists suggest that abnormal hormone levels or "miswired" brains may direct an individual toward antisocial activity. Although these theories make sense, they only explain part of the problem, and they fail to answer some crucial questions:

- Who are today's criminals?
- In what ways are they different from law-abiding citizens?
- If few children want to become criminals, why do they grow up to become delinquent adolescents or violent adults?
- How do the majority of people growing up in areas dominated by crime and violence manage to avoid the damaging influences of their environment?

Researchers have searched the woods and seen only the trees; they have tried to study this vast subject by concentrating on small sections. As a result, they have come up with useful, but limited answers.

* The word "crime" covers a multitude of actions, from auto theft and embezzlement to political crimes and murder. Because the Project focuses on common crimes against people and property, in this document the word "crime" refers to these common crimes.

Research studies that observe individuals at a single age or stage collect valuable information about one point in time, but miss crucial developmental transitions between stages.

The need to study criminal development

To date, most studies on the development of antisocial behavior have focused on delinquent adolescents or adult criminals, two obvious but potentially misleading groups. By the time an individual can be tagged with the labels "delinquent" or "criminal," it is too late to observe early influences. Research studies that observe individuals at a single age or stage—for example, infants or preadolescents—collect valuable information about one point in time, but miss crucial developmental transitions between stages.[1]

Three things are certain about persistent criminal behavior:

- It is influenced by a web of factors that may begin before birth.
- It is not an isolated activity, but often one expression of a constellation of behavioral problems such as hyperactivity, attention disorders, overaggressiveness, or weak emotional attachments that appear early in life.
- Children who do not have internal protective mechanisms or a nurturing family cannot master behavioral problems. Instead, behavioral problems tend to intensify during adolescence and early adulthood, possibly leading to delinquent or criminally aggressive behavior.

These certainties imply that the best way to understand crime, and thus be equipped to fight it, is to identify the sources of criminal behavior, its developmental origins and environmental influences. In essence, the challenge is to describe the natural history of criminal and antisocial behavior.[2]

In the public health field, such natural histories are often crucial tools for battling disease, sometimes even before the cause has been discovered. For example, deaths from tuberculosis were reduced by half through improved sanitation and housing before scientists identified the bacteria that cause tuberculosis in the 1880's.

The ideal way to plot the natural history of criminal careers would be to follow all of the children born during the same year in a large city and study them for 30 years. During that time, researchers would chart the mental and physical health, family structure, influence of friends, quality of education, drug and alcohol use, sexual behavior, general condition of the community, and other developmental influences for each child involved in the study.

From this information, statisticians could extract and compare the developmental origins and influences of children who become law-abiding adults with those who follow a criminal path. This information would be invaluable for designing effective anticrime programs or interventions.

Unfortunately, such a definitive study will probably never be launched. Not only would it cost an astronomical amount of money, but sustaining it for 30 years would present major technical and methodological problems.

The Project's prospective, longitudinal approach

A bold new study has been launched to collect crucial data on the origins of crime while avoiding many of the financial and technical hurdles. Using a creative new design, the Project on Human Development in Chicago Neighborhoods (hereafter, the Project) is tracing how criminal behavior develops from birth to age 32 and identifying potential interventions.

Joint sponsorship

The Project is based at the Harvard School of Public Health and is jointly supported by the John D. and Catherine T. MacArthur Foundation and the National Institute of Justice (NIJ), the research arm of the U.S. Department of Justice. The goal of the Project—to generate informed recommendations for prevention and intervention strategies—matches that of the National Institute of Justice.

Created by Congress 25 years ago, NIJ sponsors special projects and research and development programs to devise new strategies to reduce and prevent crime. The goal of all of NIJ's programs is to find out what works and why in the Nation's war on drugs and crime. The Project, with its emphasis on the development of new, effective prevention and intervention strategies, will guide criminal justice professionals, policymakers, and the public in their search for answers to these pressing problems.

Gold standard

The Project follows the "gold standard" for this type of research. It is a prospective, longitudinal study—prospective because individuals are selected for the study at random, not because of previous delinquent or criminal activity; longitudinal because it will follow 11,000 individuals for 8 years.

Several key questions have shaped the Project's design:

- What are the developmental paths in both males and females that lead to early aggression, delinquency, and adult crime?
- How do the individual characteristics of mental and physical health, family relationships, school environment, and type of community interact to contribute to antisocial behavior?
- What persuades some adolescents or adults to turn away from delinquent or criminal activity?
- What distinguishes individuals who progress to more serious stages of antisocial conduct from those who do not?
- At what ages and developmental stages can intervention programs significantly decrease the number of individuals at one antisocial stage who pass on to the next?

An interdisciplinary lens

The Project looks at crime in an entirely new way. Instead of dissecting the problem into small pieces and studying each one separately, it takes an interdisciplinary approach. By integrating ideas, theories, and methods from biology, psychology, sociology, and criminology, researchers will not limit themselves to just one part of the proverbial crime "elephant." And because the Project uses a wide-angle lens, its interdisciplinary design is more likely to generate a broader range of solutions for preventing the development of criminal behavior than has the single discipline approach.

Looking at crime through the lens of development and environment provides both a theoretical and practical perspective. Traditionally, work in this area has been static, studying either individuals or communities at one point in time. As a result, the huge changes that occur during the first 25 years of life have been missed as well as the rapid economic or demographic shifts that can dramatically alter community life.

Variation and change

It is becoming clear that variation and change are key elements in the study of the development of criminal behavior. Just as important is how individuals and their environments interact with one another and shape future behavior. The previous focus on criminals and high-risk communities has not been sufficiently detailed to understand how these relationships operate in real life.

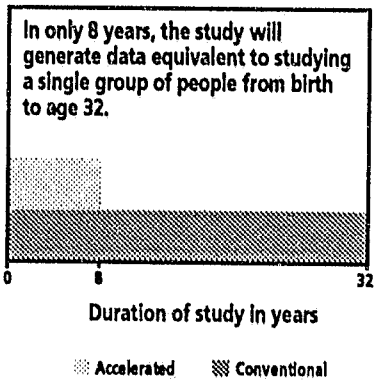
The nested design of the Project makes it possible to collect information on individuals in their families in their communities, which are themselves part of a larger social and political structure. The longitudinal nature of the Project allows researchers to examine what first prompts individuals to engage in antisocial activity,

How do the individual characteristics of mental and physical health, family relationships, school environment, and type of community interact to contribute to antisocial behavior?

Identifying the Elements That Lead to Antisocial Behavior

Crime and violence can vary tremendously between neighboring communities and cities. Even in the most dangerous neighborhoods, the majority of people choose lifestyles or careers that are not criminal or violent. The best way to identify the elements that encourage or discourage antisocial behavior is to study individuals in their communities as both change over time.

Figure 1. Accelerated versus conventional longitudinal study.



what encourages some to continue, and finally what convinces many to stop.

Project planning and design

Although the Project is just beginning to officially collect data, planning began in 1988. The design crafted during those 5 years is a quantum leap forward for behavioral research. It allows investigators to gather more data than any previous project on a scale that has never been used before.[3]

The longitudinal design is accelerated to allow researchers to study human development and the evolution of criminal or antisocial behavior over 32 years of life in just 8 years (figure 1). A total of 11,000 individuals—a balanced mix of males and females—in nine different age groups are being randomly selected and followed for 8 years. The youngest group will be born during the first year of the project; the oldest will be 24 when it begins (figure 2).

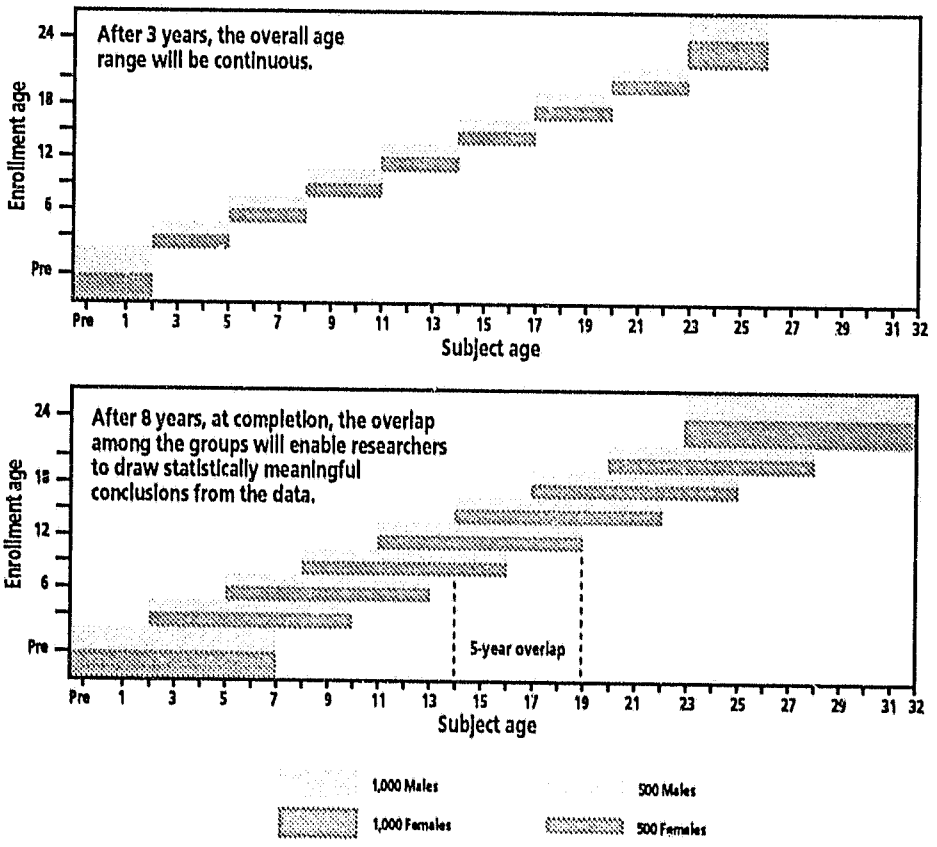
Subjects live in 70 different communities in one city. By the end of the study in 2001, the data will cover 32 years of development. Although each individual will not be observed for 32 years, the 5-year overlap between adjacent groups will allow researchers to make statistically solid conclusions about the entire span.

Value of longitudinal studies

Longitudinal studies are not new. The Framingham Heart Study followed patterns of health in residents of a small Massachusetts town for four decades. In the process, it shaped our understanding of the causes of heart attack and stroke.

This kind of research is virtually the only way to study human developmental stages or to measure the effect of change over

Figure 2. Impact of accelerated longitudinal study.



time. Yet longitudinal studies are conducted infrequently because they must, by nature, continue for many years. Many scientists, research institutions, and funding agencies are reluctant to undertake such extended projects. However, by compressing a 32-year time span into 8 years, the Project will reap the benefits of longitudinal research within a manageable timeframe.

Main areas of study

Between 1993 and 2001, investigators will gather detailed information on each of the 11,000 individuals in the study as well as on their families and communities. The main areas under study include:

Individual differences. What psychological, biomedical, and health characteristics put children at risk for delinquent or criminal behavior? Which characteristics are present at birth? To identify individuals at highest risk, researchers are looking at variables ranging from prenatal drug exposure to hormones to self-image and temperament.

Family influences. A strong relationship exists between poor parenting and the development of conduct disorders or delinquency. But do parents cause such behavior problems? If so, then social programs to improve parenting skills could make a difference. On the other hand, a hyperactive child who is already predisposed to antisocial activity may encourage mothers and fathers to use poor parenting skills.

School influences. Achievement problems during the first years of school characterize some children who later become delinquent. Others have behavior or truancy problems. Some children exhibit all three; some none at all. Can the cause of these problems be traced, and if so, what are the implications for intervention policies? What role do school environment and quality of education play? Which parts of school—such as facilities, disciplinary style, or availability of counselors or mentors—are most easily and effectively modified?

Peer influences. Delinquent boys tend to have delinquent friends, but does this association lead to antisocial behavior? Or is it that antisocial boys are attracted to one another? Many delinquent boys were rejected by their peers in early childhood. Does this rejection have definable causes, and if it were prevented, would later associations be more positive and less antisocial?

Community influences. Two communities with similar demographics may have very different crime rates. Some neighborhoods provide a haven for criminal activity, while others actively repulse it. How do community characteristics—both independently and in conjunction with individual and social variables—influence delinquency and crime? Can strengthening the social environment make an impact on criminal behavior? What difference does it make to remove an individual from a risky environment?

Criminal careers. A small percentage of offenders commit the bulk of predatory crimes. Why, when, and how do individuals begin acting antisocially? Why, when, and how do the majority stop? How often do hyperactivity and conduct disorders in preschoolers lead to juvenile delinquency and crime? Do girls take a different path than boys? Can the developmental paths of a criminal career be identified?

Predictions of dangerousness. A long-term study of delinquency in Philadelphia led to the discovery that 6 to 8 percent of active offenders commit as many as half of all reported crimes.[4] How can these individuals be identified reliably at the earliest age possible? What early intervention programs might improve their prospects? On the other hand, what public policies will best protect communities from criminal activities? What ethical issues must be considered?

Researchers will promptly analyze the data as they collect it to compare the effects of other programs—such as Head Start—and interventions—such as school counseling sessions—that subjects encounter. In addition, interventions may

A Wealth of Information

The Project could potentially collect information on hundreds of aspects of individual, family, and community life. Those that hold the greatest promise include:

Individual

- Personality, temperament, and emotionality.
- Social-psychological processes.
- Cognitive and nervous systems.
- Health and biomedical factors.
- Psychiatric disorders.

Family

- Family relationships and processes.
- Family structure and demographic factors.
- Deviance in families.
- Home physical environment.
- Caregiver characteristics.

Community

- Relationships and social networks.
- Deviance in social networks.
- Racial and ethnic composition.
- School climate.
- Social services.
- Criminal justice system actions.

This information, covering many aspects of human development, can help us to understand the complex interactions among individuals, families, and their environment.

The Project looks at crime in an entirely new way. Instead of dissecting the problem into small pieces and studying each one separately, the Project takes an interdisciplinary approach.

be introduced into the Project after the baseline information is obtained.

Collecting the baseline information will take at least 4 years to allow adjacent age groups to overlap. Interventions, all done as carefully controlled experiments, could range from teaching parents better ways to communicate with their children to making major changes in community life.

Data collection approach

Limits of traditional collection methods. Collecting data on crime and criminals has long posed problems for researchers. Traditionally, information has come from two main sources—official arrest or court records and self-reports.

The problem is that police records reflect a particular point of view and therefore do not always objectively chronicle law-breaking activities. In addition, police reports may reflect racial or economic biases.

But self-reported information can also be misleading. Individuals may exaggerate, deny, or forget about their involvement in criminal activities.

The STORI approach. To minimize the bias of these traditional methods, the Project's strategy is to collect overlapping information from five basic sources:

- Self-reports.
- Tests and examinations.
- Observational procedures.
- Existing Records.
- Informant reports.

Called STORI for short, this multistream approach makes it possible to gather a wide range of data and corroborate information among sources. Although each source provides important data across all the developmental stages, some sources are more appropriate than others at different ages. For example, self-reports from a 3-year-old will not provide much useful information, while informants such as parents and teachers will be less important sources of information about an adolescent.

Navigators routinely use triangulation to pinpoint location. In a way, the STORI approach will allow Project investigators to reliably describe an individual by using a similar method. In addition to ensuring accuracy, the technique reduces the amount of information required from each individual, thus reducing what could be a potentially heavy burden.

Measuring behavior

Antisocial behavior—from its earliest manifestations to its later expressions in adolescence and adulthood—is the key outcome variable the longitudinal study seeks to explain. It is a broad category that includes specifically defined psychiatric disorders and legal problems (commission of particular crimes) as well as disruptive, irresponsible, or destructive behaviors.

Antisocial behavior changes in nature and significance throughout development and across different contexts. Because such behavior, by definition, disrupts or distorts social encounters, the type and severity of responses may significantly influence the likelihood of subsequent antisocial behavior. Such responses are open to the full range of biases that authority figures such as teachers or social workers might have toward persons exhibiting antisocial behavior.

Measurement of behaviors and sanctions requires sensitive methods. As noted previously, the Project's strategy involves a combination of self-report questionnaires, standardized interview protocols, and official records. In conjunction with information about the behavior, researchers will measure the impact of sanctions used by parents, teachers, school officials, police, and courts. Enforced referrals for mental health evaluation and treatment of antisocial behavior will be included in the sanctioning history.

The Project's collaborative approach

Researchers' backgrounds

Given the large scope of the research design, the Project has been guided by a diverse core group of scientists since the beginning. Their backgrounds range from child and adolescent development to statistical analysis to peer and community organization. An even larger group of consultants has been providing expert guidance in scores of other crucial areas.

The Project is led by Director Felton J. (Tony) Earls, professor of human behavior and development at the Harvard School of Public Health—the project's home base—and professor of child psychiatry at Harvard Medical School. He and Codirector Albert J. Reiss, Jr., the William Graham Sumner professor of sociology at Yale University and lecturer in law at Yale University Law School, embody the project's unique approach: to look at both individuals *and* their communities as well as individuals *in* their communities. (The Project's core group of scientists is listed in appendix 1.)

Researchers' collaboration

Since 1988, Project scientists have been reviewing existing thinking on human development and criminal behavior, drafting the preliminary research agenda, and conducting pilot studies to help hone the study design. Once a solid foundation was in place, they invited many more researchers to be part of the planning process. Since early 1990, more than 200 scholars have contributed to the study's theoretical underpinnings and design. A series of workshops and other meetings involving these experts has sharpened the Project's focus and methodology.

These consultations have covered gender issues, community measures, family structure and ethnicity, traumatic stress, health and biomedical measures, adult development, and intervention. At each session, experts from a broad range of disciplines discussed key theoretical and methodological questions. This report describes the issues covered in each consultation as well as the direction the Project's planners decided to take. (Appendix 2 lists the participants of each workshop; published summaries containing more detailed references for all of these topics are available from the Project director.)

Summary

Without question, the Project is the most ambitious study ever attempted to solve the complex puzzle of criminal development. The investment of time and money will be enormous. The rewards will be far greater.

Until the intertwined elements that influence a person to turn toward crime are understood, social policies aimed at reducing this problem will be based on guesswork or politics rather than solid evidence. The Project offers an unprecedented opportunity to gather the information criminal justice professionals, policymakers, and the public need for wise, efficient, effective action.

Notes

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Chapter 2

Community Measures and Criminal Behavior

Every city has neighborhoods where crime and violence seem woven into the fabric of everyday life. New York has the Bronx, Chicago its West Side, Los Angeles its South Central L.A. Are such neighborhoods radically different from relatively crime-free communities? Do communities themselves plant and harvest the seeds of crime?

Decades of sociological research suggest just such a notion—that particular areas generate and transmit criminal behavior regardless of the population living there.[1] However, this does not mean that the role of the individual can be ignored. Adolescents and adults who commit criminal or violent acts are found in even the safest, most stable neighborhoods.

Each individual's attitudes and behavior—prosocial or antisocial—are shaped by that person's personality, family, and community. To date most studies have looked at only one piece of the puzzle at a time. Although they have contributed much to our ideas about how criminal behavior develops, none has led to a single theory that integrates these three major influences.

Research focused on individuals fails to account for how people are shaped by their communities; community studies often ignore individual differences. In addition, community studies tend to look at a brief instant in the life of an area rather than follow how it changes over time.

Why is integration important? Without it, programs to reduce crime will miss the mark by overlooking or ignoring crucial elements. What is needed is a comprehensive study designed to link individual, family, and community influences. The Project on Human Development in Chicago Neighborhoods aims to do exactly that.

How community shapes individuals

The local community touches a person's development in many ways. At its most basic, it provides the physical environment that shapes one's health and sense of well-being. It also provides both formal and informal networks for being with others. These networks include neighbors, schools, businesses, boys and girls clubs, drug treatment programs, and a host of other groups and organizations.

All of these associations structure lives. They model how things are supposed to be done in a local residential area and steer individuals along their developmental paths. A powerful feature of everyday life, they may either help or hinder the inculcation of socially acceptable behavior.[2]

Do communities themselves plant and harvest the seeds of crime?

How Individuals, Families, and Communities Interact To Produce Crime

Antisocial or aggressive behavior, as well as the attitudes that steer people away from crime, develop as individuals and their families interact within a community and its organizations. This interaction among individual, family, and community is illustrated by the following scenario.

Suppose a young man suddenly loses his job.

- An area with few economic opportunities or support networks may encourage him to slide toward crime or at least not actively prevent him from engaging in it.
- An area with economic opportunities and support networks may discourage crime by encouraging employment and providing incentives for it.

In this scenario, a particularly impulsive individual might be easily swayed by criminal opportunities. However, that same person might continue to be law-abiding if he lives in an area with career options and opportunities.

To understand how communities influence human development, variations in cultural and social organization must be linked with positive or negative behavior. This means that the following elements must be analyzed:

- Demographic, ethnic, and class structure.
- Personal, family, and organizational networks.
- Local culture such as immigrant or working class.
- Local institutions such as schools or churches.

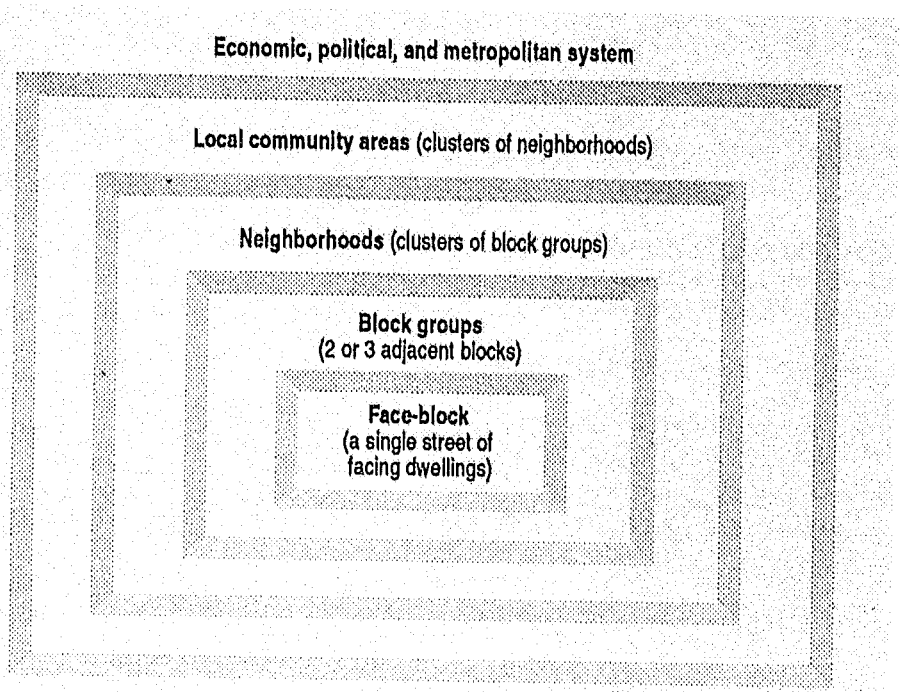
Each of these elements can either push individuals toward aggressive or criminal behavior or help them avoid it. By studying 11,000 children, adolescents, and adults living in 80 neighborhoods, the Project will determine what role community plays and how it is intertwined with individual and family characteristics. This information should result in much more effective community programs that reduce crime in the general population and prevent criminal behavior from developing among the young.

The communities selected for this program of research cover a broad spectrum, ranging from stable neighborhoods with conventional social organization to those characterized by crime, poverty, and family disruption. Choosing only high-crime areas would fail to cover the range of community organization that influences antisocial behavior, especially if different types of neighborhoods produce different types of criminal behaviors. In addition, focusing only on high-crime areas would make it almost impossible to identify community traits that actively or passively work against crime and violence.

Defining community

Painting a portrait of a community takes far more than a thousand words. Communities exist on many levels, from small ones that include a few neighboring families to large ones that cover a square mile or more.

Figure 1. A community is like a set of nested boxes.



These communities are nested like Russian boxes, each one fitting tightly inside a larger one (figure 1). Because an individual's notion of community changes with age—a 3-year-old's may be a few houses large while a teenager's may be measured in square miles—each level must be carefully defined.

The most basic unit is the face-block, those houses or apartments facing each other across a single street. Because this small area often defines the universe for very young children, information about it may yield patterns that influence early development.

Block groups of two or three adjacent city blocks represent a normal zone of adult neighborliness. It is also the area from which children draw their first friends.

Neighborhoods, which are clusters of block groups, traditionally refer to small, socially homogeneous areas defined by interaction patterns and geographic landmarks such as parks, main streets, or railroad tracks.

Local community areas, which encompass several neighborhoods, yield information such as variations in prenatal care that directly affects human development. For example, local communities with high infant mortality and low-birthweight children also have high rates of murder and suicide.

In addition, each community is part of a wider economic, political, and metropolitan system. Looking at the political economy of each place brings into the equation such factors as the distance to good jobs, the availability of public transportation, and the quality of basic services as dictated by citywide political decisions.

Collecting data on each of these different levels allows comparisons within and between similar community strata.

Building on available information

The Project is collecting data from a wide variety of sources, including official records, surveys and interviews, and social observation (figure 2). These sources are described next.

Official records

The U.S. Bureau of the Census is a rich source of data for areas as small as block groups and as large as Standard Metropolitan Statistical Areas. This rich vein of statistics includes population density, number of families headed by a female, income level, and mortality, to name just a few categories of information. Real estate transfers, gas and electricity hookups and disconnects, police and fire logs, and school and hospital emergency room records also provide a wealth of data.

However, official information only describes the skeleton of a community. People bring it to life. Therefore, a large part of the Project is devoted to collecting data from the people who live and work there.

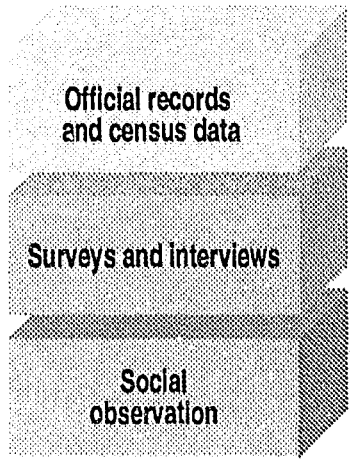
Surveys and interviews

Gathering information from people with inside knowledge of a community as well as those with an overarching sense of it provides a panoramic view of what it is like to live in a particular place. Surveys of randomly selected residents, plus the parents or partners of all 11,000 people enrolled in the study, ask less easily quantified questions:

- Is the neighborhood a friendly or helpful place?
- Do neighbors interact in large or small networks?
- Are gangs a problem?
- How do people make most of their income?

In addition, interviews with key informants—people with specialized knowledge of community life—add a tremendous amount of data about daily life in a community. These people articulate a community's common beliefs and values, clarify its direction and stability, and describe the respect accorded residents. Informants

Figure 2. A three-layered approach is used to collect information on the 80 study neighborhoods.



The communities selected for this program of research cover a broad spectrum, ranging from stable neighborhoods with conventional social organization to those characterized by crime, poverty, and family disruption.

What Is Systematic Social Observation?

According to Albert Reiss, Jr., codirector of the Project, systematic social observation is a process for methodically observing, recording, and quantifying characteristics of social behaviors and their settings as they occur naturally in social environments.[3]

In their systematic social observation of a neighborhood, trained observers in this study look for many indicators of a community's overall health, including the following:

- Types of local businesses.
- Presence of organized drug buying and selling.
- Evidence of graffiti or vandalism.
- Quality of recreational facilities.

include long-time residents, school teachers and administrators, ministers, real estate agents, city planners, local business people, and elected officials. Together, they embody a community's diversity of opinions and practices.

Social observation

The third method being used to collect information about the community is systematic social observation. Trained observers in each community develop a street's-eye picture of the area, including:

- Where people gather and socialize.
- Which formal and informal organizations are active.
- How well the neighborhood is kept up.
- How local businesses operate in the community.
- How the level of gang activity and ethnic tension affects the community.

This information is important because it provides data on the opportunities residents young and old have to participate in neighborhood activities, share experiences, and learn new social roles. Some organizations—such as church or community groups—may help keep individuals away from crime. Others—such as gangs or drug rings—do just the opposite.

Developing community profiles

What happens to this mountain of information? It is boiled down into numerical profiles, one for each locality, that describe the community's housing market, business activity, informal social controls, conforming versus deviant subcultures, and so forth. These standardized profiles make it relatively easy to compare communities on many different levels.

But more important, each individual in the Project's database can be linked to the entire nested set of communities. In this way individuals with similar community influences are grouped together for analysis. The reverse—extracting information about a community by looking for patterns among a group of individuals—is also possible.

Measuring community change

After all the data have been gathered and interpreted, they give a snapshot of a community at a single moment in time. But communities change just as people do—they grow, shrink, stagnate, decay, come back to life, and sometimes even disappear. Although this evolution usually takes place over generations, it can also happen like lightning—for example, when a factory opens or closes or gangs or drugs rapidly infiltrate an area. Because change itself may be as important as specific characteristics, such as poverty or population density, in promoting criminal behavior, change must also be monitored.

Recent research suggests that those communities with moderate-to-high rates of crime or delinquency tend to be in the midst of significant population shifts.[4] It could be that changes in community life stem from new subcultures competing with an established way of life.

Such a dissonant social context tends to undermine the way people conceive of themselves. Although people brought up in such settings may not be destined to engage in antisocial activity, they may be at high risk for it and therefore make good candidates for intervention (see chapter 6 for a discussion of issues of intervention).

Instead of a snapshot, then, the Project is making an 8-year movie. Fortunately, this does not demand re-collecting every piece of data each year. Once the massive amount of baseline information is in hand, surveys midway through and at the end of this program of research are enough to reveal important shifts in population, age, occupation, and so forth. In addition, regular interviews with the 11,000 study subjects and informants as well as repeated observations can also identify important changes in the community.

Obviously, the more often that data are collected, the more likely that subtle but

developmentally important shifts will be detected. And depending upon an individual's age, certain changes may have a major impact or none at all. For example, if a new factory opens in a community or gangs become a potent force, are children, adolescents, and adults affected equally? Or do these events exert a different influence on different age groups, and therefore, is their impact on the development of criminal behavior age-dependent?

Problems collecting data

This ambitious plan to describe 70 communities faces a number of challenges. The first is movement of residents.

In some areas, often those with high crime rates, turnover can be as high as 25 percent each year. This presents two problems:

- High rates of immigration and emigration lead to rapid community change, which may in itself influence criminal behavior.

- High turnover means that some individuals enrolled in the study will move between communities during the 8-year span.

This makes sorting out the community contributions to criminal behavior extremely difficult.

For example, suppose a youth raised in one area moves to another, where he begins to get into trouble with the law. Is this behavior the product of his "birth community," an outgrowth of social influences in the new community, or the result of moving itself? A similar problem applies to those who, at the time of the study, do not live in the neighborhoods where they were born. For this reason, subjects who move will be linked to both their current and former residences in the database.

Those individuals who move out of a study community and into one that has not been analyzed at all present an even more vexing challenge. This could be a community within the same city that was not included in the sample, or one in an entirely different city. Although census and other official data give some sense of the unstudied community, that information lacks the detail needed for careful analysis. Currently, methods are being developed to generate useful community profiles from these official data.

Benefiting the community

In even the most dangerous communities in the country, the majority of residents live reasonably law-abiding lives most of the time.[5] Studies suggest that in most neighborhoods, a minority of residents are responsible for the majority of crime and violence. Locking up or otherwise "treating" these comparative few can only stop the problem for a short time if the forces that encourage people to take up crime or act violently persist. Reducing or—ideally—eliminating these forces, on the other hand, will have a significant, long-term impact.

Research suggests that both public health and public order have their roots in solid personal and community networks combined with a predictable, stable environment.[6] If this is true, then programs that stabilize an area both economically and socially could lead to improved community health and less crime.

Recent research in New York City's South Bronx, for example, shows that urban burnout and the forced migration that followed it reduced the area's population by 20 percent.[7] At the same time, the number of homicides, suicides, and AIDS-related deaths rose; and the relationship between poverty and alcohol abuse appeared to become more tightly linked. Such "urban desertification" is not limited to New York and will be an issue in virtually every large city in the United States—and thus this program of research—during the 1990's.

In the past, community research programs often resembled "parachute studies"—that is, researchers dropped in every now and

Information That Describes a Community

- Health care services (prenatal care, teen pregnancy counseling, early infant care).
- Child support (Head Start, day care).
- Youth recreation (swim teams, basketball games).
- Networks of informal social participation (friends, neighborhood block parties).
- Density of local acquaintanceship (number and quality of social bonds).
- Friendship and kinship ties (proximity of family and friends).
- Parental supervision of youth (family curfew, monitoring of activities).
- Level of social integration (strength of bonds with wider community).

Programs that stabilize an area both economically and socially could lead to improved community health and less crime.

then, collected data, and disappeared. The Project acknowledges the need to build community ties and develop strong relationships with residents. In a way, it could act as an unofficial intervention program. Hiring community members as interviewers, ethnographers, and technicians would create needed jobs in some areas. And appointing a panel of residents from each community to act as local project advisers could facilitate greater community involvement.

Summary

Because communities shape individuals in many different ways, the Project is investing considerable effort in describing the 70 study neighborhoods at a variety of levels. A multilayered approach is being used to collect the necessary information.

Official data collected by Federal, State, and city governments provide the first layer. Though general in nature, these data make a firm foundation for characterizing and comparing communities.

Interviews with and surveys of residents provide the second layer. Key community members—from long-time residents to business people, ministers, politicians, and gang members—will give rich, detailed information about neighborhood life and change.

Finally, researchers are gathering quantifiable data on conditions in the community using a modified version of ethnography called systematic social observation. Trained observers are canvassing neighborhoods looking for quantifiable variables—for example, the number of abandoned or vacant buildings per block, how many people assemble on street corners or in parks, and the proportion of active businesses to empty storefronts.

However, it is not enough to collect these three layers of information just once. One of the hypotheses that the Project is testing is the effect of community change on the development of antisocial behavior. Therefore, community data will be collected a minimum of three times to track changes in the neighborhood.

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Chapter 3

Family Structure and Ethnicity

Suggesting that family plays a preeminent role in shaping an individual's development is hardly revolutionary. "As the twig is bent, so grows the tree," says an old chestnut. Unfortunately, little hard evidence exists linking the crucial influence of the family to the development of criminal behavior, a situation the Project on Human Development in Chicago Neighborhoods intends to remedy.

The family encompasses both the social and physiological aspects of development, providing in some ways an ideal setting to examine different influences. Both the structure and ethnicity of the family appear to play important roles in the development of criminal behavior.

However, until now studies of family structure and ethnicity have not been detailed enough to explain the genesis of aggressive, antisocial, or criminal behavior. Some studies have been epidemiological, providing statistical correlations between family history and crime. Other studies have been retrospective examinations of the criminal records of children whose mothers were institutionalized or received public assistance. Such research lacks detail, telling us little about why a child becomes involved in criminal activity or what family characteristics protect children from criminality. By using sensitive methods that reflect childrearing patterns, the Project is defining more precisely what family structure means and how it affects development.

Defining family by looking at household structure

Developmental psychologists say that children begin the process of socialization within the family. But the term "family" is slippery because it covers—and excludes—a wide range of cohabitation and childrearing arrangements. Thirty years ago, family implied little more than the Cleavers of "Leave It to Beaver" fame—mom, dad, and two children. Not so today. In many neighborhoods (both urban and suburban), single-parent families are the norm. Generally headed by a female, some include a consistent male presence, some a series of males, others none at all.

Historically, studies of the effect of the family on a child's behavior and ability to adjust throughout life compared children from single-parent families with those from two-parent families. Although this approach yields some interesting data, they are too rough to tell much about how and why family members affect a child's development. Rather than focusing on the external appearance of the family—single-parent, two-parent, communal, and so forth—looking at three aspects of

Precursors of Criminal Behavior

Emphasizing the nuclear and extended family as the child's immediate social network will allow the Project to test existing theories that describe how criminal behavior develops. These theories suggest that the following conditions may point a child toward criminal behavior:

- Exposure to discord, conflict, and violence within the household.
- Inadequate care and abuse.
- Exposure to stressful or traumatic events such as multiple foster placements or extended unemployment of a parent.
- Absence of key people—even if they are not caregivers—who could act as role models for the child.

The extended family can also indirectly affect a child by providing a single mother with physical, emotional, or financial support.

household structure relevant to the child's development may prove more fruitful:

Household environment

- With whom does the child live?
- How well do family and household members get along?
- How often do individuals in the household change?

Care providers

- Who takes care of the child by providing nurturance, supervision, and intellectual stimulation?
- Does the care provider live in the household?
- Is the primary care provider a relative or someone from outside the extended family?

Other key figures

- Who else—beyond household members and childcare providers—is important to the child?
- Does the child have access to other members of the extended family such as grandparents, cousins, aunts, or uncles?
- Does a nonresident father influence the child—perhaps serving as a role model?

Learning about the type and extent of interaction a child has with all members of his or her extended family is vital to understanding the relationship between family structure and the development of criminal behavior.

Examining the influence of the extended family

Data from previous longitudinal studies indicate that grandmothers often play an important role in protecting children from developing antisocial behavior.[1] In particular, the grandmother of a child born to a teenage mother is often a more responsive and less punitive caregiver to the infant than the mother may be. Studies also indicate that grandmothers decrease their involvement in caregiving by the time a grandchild reaches adolescence.[2]

The extended family can also indirectly affect a child by providing a single mother with physical, emotional, or financial support. This support may help her cope more easily with the tasks of childrearing or influence the relative level of affluence that the child experiences. For example, the extended family may make it possible for a young mother to improve her education and work situation, both of which provide long-term gains in the standard of living. Finally, this support may improve a mother's mental health, which has important consequences for childrearing.

Other members of an extended family may form adverse relationships with the child, especially stepfathers or boyfriends living in the home. Social service statistics show that these figures are often the source of abuse, and this dynamic needs to be carefully examined.

In addition, the extended family may provide ethnic socialization.[3] An understanding of the family's ethnicity is important for children as they develop their self-concept and identity. It has been suggested that for the African-American child, internalization of ethnic socialization is particularly helpful in adolescence when it may also contribute to academic success.

Examining the quality of foster care and child behavior

Foster care frequently provides an alternative, temporary family environment for children from families in crisis. Sometimes it is effective, sometimes it is not. The nature of the care a child receives, it turns out, may be far more important than the fact that he or she was placed in foster care. In general, it appears that day-to-day parenting and a more global family structure have contrasting effects.

For example, a New York study found that children who remained in stable foster care placements tended to do as well or better than those children who returned to their homes.[4] At the same time, the children who retained some contact with their natural parents while in foster care tended to do best. A separate study of children in the Western United States who were placed in multiple foster homes indicated that while the majority enjoyed well-adjusted and productive lives as young adults, a substantial number were delinquent.[5] It is unclear if multiple placements *cause* antisocial behavior, since this may have predated the foster care. Early physical abuse was also related to delinquency in this study, suggesting that foster placement cannot make up for the effect of poor early parenting. The children in this study who maintained contact with their natural parents had a harder time adjusting to foster care.

Adequate parenting—particularly for children who have been abused by their natural parents—seems to be the key to a well-adjusted adulthood for foster-care children, although this theory has not been tested. Likewise, the influence of the child's behavior as it influences the nature of foster care has not been examined. Increasingly disruptive and difficult behavior typically leads to successive placements. It is possible that the homeless, who often experienced multiple foster care placements as children (figure 1), may have been disruptive children before they ever entered foster care.

Examining single-mother households and delinquency

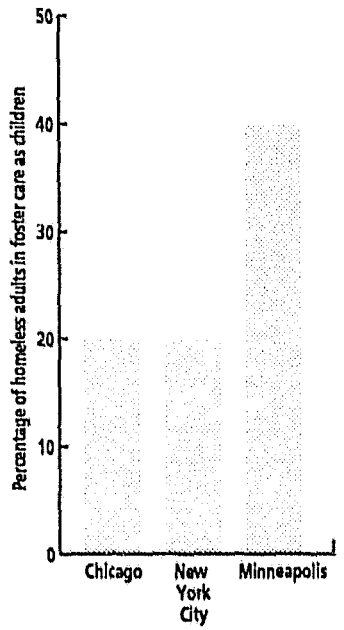
Statistics suggest that, in the United States, boys in families headed by women are at risk for delinquency and criminal behavior, but far less information is available on girls.[6] Two competing theories try to explain the adjustment of children in single-parent households. One focuses on relative deprivation from having only one parent as a role model, the other on family disruption.[7]

Unfortunately, most studies have not separated the effects of the environment from the effects of family structure. For example, in one study designed to examine the effect of community violence, nearly half the children in the sample were the offspring of single mothers. Yet, single mothers often live in neighborhoods with high levels of crime and violence, and no attempt was made to distinguish the effect on the child of a violent community environment from the effect of a single-mother family structure.[8]

Surprisingly, analysis of large data sets such as the National Longitudinal Studies of Youth has found that children in single-parent homes look very much like children from homes with a stepparent.[9] This discovery suggests that the presence of role models of both genders may not be relevant in looking at the delinquency of boys from single-mother households. An alternative explanation for the similarity in the delinquency levels of children from single-mother homes and those from homes with a stepfather present is that the stepchild may be competing with the stepfather for the mother's time and attention. Thus, having a male in the home must be distinguished from his availability as a role model.

The presence of a male role model is likely to be very important, especially in families headed by a single mother. For boys in such families, which are becoming the norm for African-American children, a relationship with a secure male figure seems to help develop self-esteem. One researcher found that black youths who rejected a summer-camp intervention program and the opportunity to be exposed to male role models tended to define themselves as hypermasculine.[10] This tough-guy strategy appears to help them maintain positive self-esteem by defining themselves as dominant figures within their neighborhoods rather than as successful students. Among those boys who accepted the summer camp experience, even the intermittent presence of an involved, caring male in the household

Figure 1. Percentage of homeless individuals who were in foster care as children. Researchers in Minneapolis suggest that the link between foster care and homelessness could be imprisonment. When foster children grow up to become criminals, they appear more likely also to become homeless after release from prison.[11]



Timing Family Interviews

Frequent, open-ended interviews appear to be the best tool for gathering information about children and their families. Timing these interviews to fall immediately after significant family events—such as a parent losing a job, the birth of another child, or the family's going on or off public assistance—would be ideal.

In practice, such events are difficult to track. Computerized links with school systems and juvenile courts might help identify some major events in a child's life—such as when a child drops out of school or is arrested—when an interview would be appropriate.

seemed to influence them to think about black masculinity in a more complex way. Although these data are largely anecdotal, the Project will be able to test this hypothesis by examining homes with and without a caring male who discusses ethnicity with the children.

Methodology

Using interviews and observations

Understanding the nature of family structure—as well as the transitions that structure may undergo—challenges the study design. In previous, more limited research, the best data have come from detailed observations and semistructured interviews to capture the changes in family structure. The open-ended interview was also a useful tool—for example, asking siblings of different ages how they perceived the parenting they had received.

One central problem involves picking informants for the study. Should one person—the mother—be interviewed, or selected family members, or even all family members? Interviewing all family members may yield more detailed information, but it complicates both the collection of data and comparison among children. On the other hand, different family members become more influential to a child's development at different stages, and it would be useful to track these types of changes.

To keep the data collection process manageable, most interviews are taking place on a regular schedule with intervals of no more than 12 months. Interviewers must be skilled at drawing out information about painful events such as sexual or physical abuse. Proper training for interviewers is critical because these types of events tend to be suppressed over time.

One possible variation in data gathering is to obtain detailed information on a small subsection of the survey population. For example, frequent, thorough questioning about criminal behavior could be collected through indepth interviews with and observations of selected individuals. In this way the Project can identify promising hypotheses about family influences on career criminals that can be formally examined with the larger sample.

To test various hypotheses about the influence of family on a child's development of antisocial behavior, the Project is looking at the extended family as well as the absence of key figures. For example, detailed information about criminality and antisocial behavior will cover three generations.

Defining roles and relationships

To look at environmental influences, the roles of various members of the extended family are being established. Relationship to the child (such as aunt, sibling, and grandparent), residence within the home, regularity of contact, and psychological importance of each individual to the child are being assessed.

Researchers expect to identify family members by the role they play in the child's life:

- Some parents might be limited to the function of reproduction—for example, a father who is unknown or absent or a mother whose child is removed from her custody at birth.
- Some fathers or very young mothers might function as playmates to their children.
- Some family members might serve primarily as caretakers—for example, a grandmother who parents a grandchild.
- Some family members might play the role of decisionmaker—for example, determining how often a child sees a physician or where he or she attends school.
- Some family members might serve primarily as role models, with no daily contact with the child. In some instances, the role model might be a product of the child's fantasy of that family member.

Incorporating interviews with fathers and other caregivers

To date, much longitudinal research on child problems has focused largely on mothers as informants and on the interaction between mothers and their children. Studies of fathers, especially low-income fathers, have been scant, and the Project proposes to remedy this gap by interviewing fathers directly about the role they play in their children's daily lives.

Nonetheless, existing studies of mothers and children point the way for incorporating caregivers into longitudinal research. Time after time the quality of mother-child relationships has emerged as a better way to predict a child's intellectual and social competence than information gained about the child in isolation.[12]

But incorporating different caregivers into the Project will be a methodological challenge. For example, many children who are in the primary care of someone other than their biological parents may be placed through informal networks rather than through foster care agencies. Previous experience shows that these placements can be traced through continued positive contact with the family.

Impact of ethnic identity on development

Ethnic identity is one of the more complex factors in a child's development. In many ways it is like gender identity in that both involve concepts of how to behave, what it takes to be accepted and liked by peers, and how to set goals and aspirations. To look at ethnic identity simply as a descriptive variable—essentially pigeonholing subjects by skin color—is not very useful. Far more meaningful is determining what impact it has on individual development.

At some point in a child's life, he or she receives cues about ethnic identity and comes to identify with an ethnic group. But what does that identification imply, and how can it be studied? Because race is so often used as a substitute for other characteristics, it is these other characteristics that the Project will attempt to measure. For example, the Project is measuring income because poverty is often used to explain crime rates. Because group differences in communication patterns are a potential characteristic of ethnic identity, they too are being measured. And because ethnic identity is an indicator of identification, family members are being questioned about their own self-concepts.

Defining ethnic identity

The origins of ethnic identity begin in infancy, and some research suggests that ethnic variability can be detected in the facial and verbal expressions, communication patterns, and values and aspirations of the parents.[13] But even these indicators are variable, and generalizing from the small studies done in limited geographic regions is problematic. Nor is ethnic identity strictly a matter of a legal definition of race or ethnic background. A child—particularly a daughter—born to an African-American father and a white mother may be legally black, but will likely identify more closely with the mother. Moreover, a child of African ancestry from a Caribbean family often has more links with an extended family than a similar child from an African-American family originating in the Southern United States, where paternal lineage may be unknown.

Understanding the social effects of racism

Despite the complexities, the social effects of race and racism cannot be ignored. For example, a recent study of patients with cardiovascular disease showed that black patients received a less thorough workup than whites, regardless of educational attainment or whether the patients had private or public health insurance.[15] A similar study of adolescents admitted to emergency rooms also showed preferential treatment based on race.[16]

Ethnicity and Crime

Researchers have found that minority populations are overrepresented in crime statistics, both as perpetrators and victims. However, it does not follow that race is relevant to the development of criminal activity. A closer look at these statistics suggests alternative explanations.

For example, one common theory used to explain the link between race and crime is poverty. Just as minority youths are overrepresented in crime statistics, they are similarly overrepresented in poverty statistics.

In a study of domestic violence in Atlanta, the discrepancy between mortality rates for blacks and whites disappeared when the data were corrected for females' economic status, suggesting that relative affluence was a more important predictive factor than race. But the factor most closely related to the level of violence in the Atlanta study was density—that is, the number of persons per square foot in a household.[14] This latter finding shows how important it is to study the context in which individuals live.

The underlying causes of the link between race and crime may be poverty, racism, and unemployment, which contribute to free-floating anger.

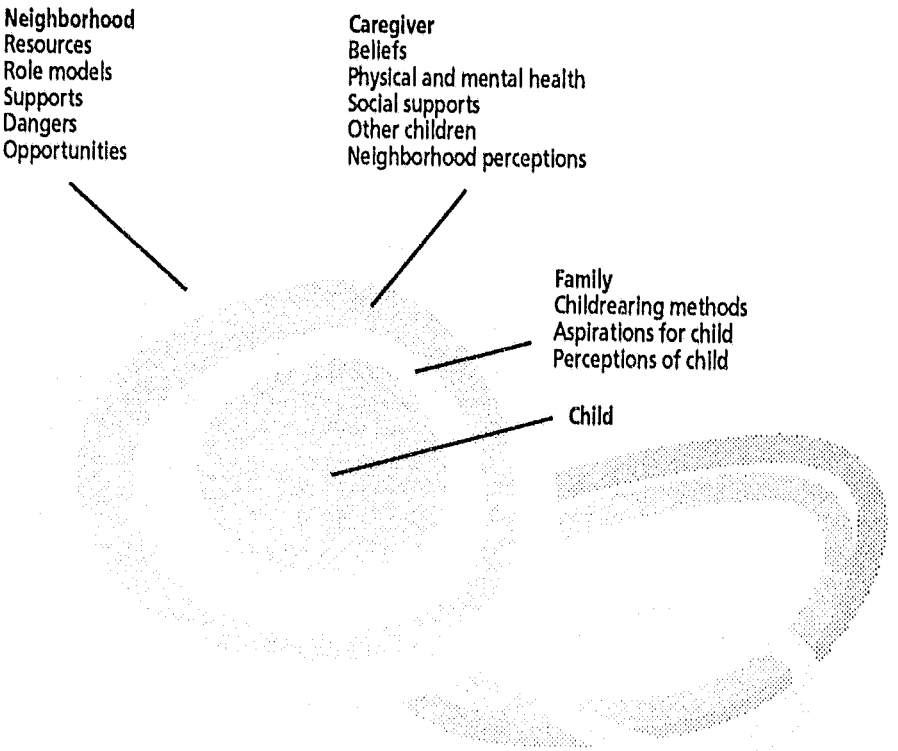
Such social realities have led researchers to acknowledge that the underlying causes of the link between race and crime may be poverty, racism, and unemployment, which then contribute to free-floating anger. The theory suggests that while this anger is not directed at any one individual, it lowers the angry person's threshold for violent behavior.

Linking family and ethnicity with community

Of course, families and minority groups do not exist in a vacuum, and the Project is also examining neighborhood influences (see chapter 2). A pioneering study of high-risk neighborhoods in Philadelphia is developing tools for looking at the relationship between families and neighborhoods and how they influence child development.[17] In particular, this study is trying to determine how parents might modify their childrearing methods to make them more sensitive to the individual characteristics of the child and the neighborhood. This includes studying variations in parental behavior as the child matures and circumstances change.

The child-family-community model is layered like an onion, with each layer creating pressures and exerting demands on the ones on either side (figure 2). On the outside are neighborhood characteristics—resources, role models, supports, dangers, and opportunities. In the next layer are the characteristics of the care giver—beliefs, physical and mental health, quality of social support, experience with other children, and perceptions of the neighborhood. In the next layer are family characteristics—childrearing methods, aspirations for the child, and perceptions of the child's strengths and weaknesses. In the next layer lie the characteristics of the child—keeping in mind that as children mature, they develop their own strategies for dealing with their neighborhood. At the center of the model is the child.

Figure 2. The child-family-community model for the Project is layered like an onion, with each layer creating pressures and exerting demands on the ones on either side.



This model offers useful approaches to collecting data. It also suggests ways to examine which intervention strategies will make the biggest difference for a child and at what level they are most effectively applied. The Philadelphia researchers are using semistructured interviews and questionnaires to gather the bulk of their data, but are balancing the study with more open-ended techniques such as focus groups that assemble parents to talk, for example, about how to improve the neighborhood.

Summary

Clearly, the effects of family structure and ethnic identity on child development are subtle and varied. Most large-scale examinations of the relationship between families and the development of criminal behavior have tried to identify risk factors—in effect, to lay blame. By looking more closely at the behavioral patterns and support networks within the family—as opposed to simple racial or family-structure categories—the Project's researchers hope to uncover factors that protect children as well as those that place them at risk for the development of antisocial or criminal behavior.

Given the complex nature of modern family structure, the Project is mapping individuals within each subject's network based on a family history chart diagraming key relationships within the family. By updating information on this network at each contact, both the range of family members involved in an individual's life and the type of change in those relationships are being revealed. In this way, family structure can be interpreted as a constantly moving stream rather than a stationary pool.

Ethnic identity is being examined at two levels—as a background characteristic of each individual in the Project, but also as an outcome variable. In other words, researchers are seeking to understand to what extent ethnic identity becomes part of a child's or young adult's construction of self-identity.

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Chapter 4

Gender Issues

When most people hear the word crime, they think of murder, burglary, assault, rape, and robbery. In other words, predatory behavior that pits criminal against victim. By and large, these are crimes of aggression overwhelmingly committed by males. But females contribute to criminal and antisocial behavior in several important ways.

First, females commit crimes of their own. However, because female crimes tend to be less predatory, society tends to judge their crimes—sexual misconduct, prostitution, substance abuse, drug-related offenses, and child abuse and neglect—as less serious. Despite the fact that females tend to turn their antisocial inclinations against themselves, their actions have serious implications for others.

Second, it appears that young mothers may socialize their children in ways that encourage youngsters to develop criminal or antisocial tendencies. For example, antisocial behavior in females such as sexual misconduct or substance abuse often leads to a diminished capacity for parenting, which, in turn, fosters child abuse and neglect or family violence. When the children of these women grow up, they too may abuse or neglect their children, continuing the cycle of intergenerational violence. Women who engage in prostitution or illicit drugs may not establish stable relationships. Growing up without a positive male role model, boys develop simplistic notions of masculinity that emphasize aggression and power. As a result, they tend to engage in delinquent and criminal behavior.

In this way, females help to perpetuate the cycle of crime and violence across generations. However, females may also break the cycle of violence by playing a protective role in the family. For these reasons, learning how female antisocial behavior differs from that of males and the long-term effects of both is crucial for understanding the origins of criminal or aggressive behavior.

The importance of including females

In its earliest plans, the Project on Human Development in Chicago Neighborhoods included females in only two of the nine same-age or "cohort" groups. First was the prenatal group, primarily because the gender of unborn children would not be known when subjects were selected. (To ensure selection of an adequate number of males, the sample size was double that of the other age groups.) The second group included all sisters of males in the 12-year-old group.

However, after a 2-day workshop on gender issues, the Project's core group decided to include equal numbers of

Despite the fact that females tend to turn their antisocial inclinations against themselves, their actions have serious implications for others.

Results of Hawaiian Study: Traits of Delinquent Males

A longitudinal study that followed children born on the Hawaiian island of Kauai in 1955 for 32 years found that the most reliable traits for predicting delinquency in boys included the following:

- Disordered caretaking.
- Lack of educational stimulation in the home.
- Reading problems.
- A need for remedial education by age 10.
- Late maturation.
- An unemployed, criminal, or absent father.

In addition, boys appeared to be particularly vulnerable to early childhood learning problems, leading to school failure. A combination of reaching puberty late and lack of a significant male role model also encouraged the persistence of antisocial behavior through adolescence.[1]

males and females in all nine cohorts. Several factors prompted this change:

- Females commit almost as many antisocial acts as males, but because the type of activity in which females become involved is often limited to the realm of sexuality or substance abuse, society tends to label female perpetrators differently than males.
- Because girls and women are socialized against violent or aggressive behavior, a great deal can be learned from those who overcome social pressure and commit violent acts.
- Because women predominate as the primary caregivers in our society, criminals of either gender are usually raised by their mothers or other females.

Gender-specific patterns

Although most long-term studies of child development have focused primarily on mental and physical health, by their very nature they have also gathered a lot of data on behavior, including criminal behavior. In study after study, the same gender-specific patterns of delinquent and criminal activity emerge. Males show more violence toward people and property, while females run afoul of the law most often for sexual offenses (prostitution) and property offenses. In addition, delinquent boys are far more likely to continue criminal activity into adulthood than are girls.

Information gleaned from a number of studies suggests that boys and girls respond differently to developmental and family pressures, calling into some question the nature of the behavior to be examined in the Project. For example, in a study of children in Quebec, girls identified as aggressive or withdrawn in childhood had higher-than-normal rates of psychiatric disturbance and substance abuse than boys.[2] These girls also were more likely to become pregnant in their teen years than other girls. Aggressive or withdrawn boys, on the other hand, often became delinquent or criminal adults.

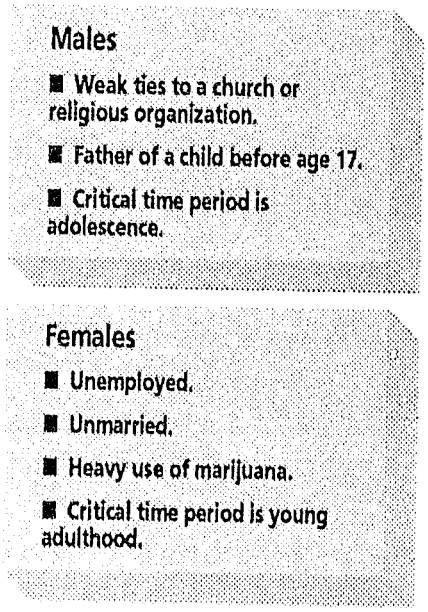
The data from this study show that early aggression or withdrawal in girls may significantly influence their parenting style or ability. Girls who had been rated as withdrawn were found as mothers to be less warm and expressive with their children, traits known to put infants at risk. Girls rated as aggressive tended to have children who were slow to develop.

Origins of drug use

Examining particular patterns of antisocial behavior such as drug use reveals further differences between males and females. A 20-year study of substance abuse and health in Harlem demonstrated that roughly the same proportion of males and females used multiple drugs.[3] But the origins of drug use were very different. For males, the critical period was adolescence, while for females it was young adulthood (figure 1).

In the Harlem study, males with strong ties to a church or religion during adolescence were less likely to abuse drugs, while those who had fathered a child before age 17 were more likely to use them.[4]

Figure 1. Origins of drug use.



However, religious affiliation did not play a protective role for females. For women, the most serious forms of drug abuse—such as addiction to heroin—were associated with being unemployed and unmarried and using marijuana heavily in early adulthood. In effect, women who did not live up to the community social norms and expectations—getting married and working—were more likely to abuse drugs.

The implications of these findings suggest that female antisocial behavior falls outside the traditional definitions of crime more so than male antisocial behavior. Socialization probably plays a role here. In our society girls are typically encouraged to turn negative emotions inward and express anger or dissatisfaction in nonconfrontational ways. In looking at deviant female behavior, it may be important to examine how an individual's behavior conforms with community norms rather than societywide definitions of criminal or delinquent behavior.

It may turn out that the same community and family pressures that prompt males to take up criminal activity lead females more often to depression and self-destructive behavior.

Interactions of hormones and behavior

Different hormones are related to different behaviors in males and females. Such hormones appear to stimulate different responses in the two genders. This disparity suggests that it may be more useful to study the relationship between hormones and behavior within genders, rather than comparing their effects between males and females.

Despite expectations that gonadal hormones would provide a particularly good window on behavior, one nonsexual hormone—cortisol, which is produced by the adrenal cortex—is of great interest in the development of antisocial behavior.[5]

Elevated levels of cortisol seem to be directly related to environmental stress.

From a female's antisocial adolescence to adulthood

Longitudinal studies show that adolescent females who have behavioral problems or exhibit antisocial activity often stop these behaviors before adulthood.[6] However, they also tend to marry antisocial males, suffer broken marriages, and have difficulty with interpersonal adult relationships. Several studies suggest that they develop mental health problems at rates higher than average.[7] Studying the children of such women will yield important information on how antisocial behavior is transmitted in families.

The dropoff in female criminal activity between adolescence and adulthood needs to be examined more closely because statistics may reflect social attitudes and opportunities more than behavior. In the future female crime patterns could be very different than they have been in the past. Some scholars hypothesize that as society reduces sex-role stereotypes, women may begin to express power through violence as they gain greater access to weapons.

Female deviance and cultural issues

To date most studies of crime have concentrated on crimes committed by males, a tradition the Project is not continuing. There are good reasons to examine female crime or deviance to shed light on the larger problem of the development of criminal behavior.

First, female crime is typically less predatory than male crime, and the strongest hypothesis to explain the difference is that females are socialized to be less aggressive and violent. In effect, a female who commits a violent crime has a great deal of social resistance to overcome.

Traits of Delinquent Females

In the same longitudinal study of children born on the Hawaiian island of Kauai in 1955, researchers found that delinquent girls tended to have the following traits:

- A history of minor congenital defects.
- Low developmental scores by age 2.
- A need for mental health services by age 10.
- Earlier-than-average onset of puberty.

Researchers hypothesize that birth defects and slow early development could lead to poor self-esteem, while early sexual development may encourage sexual relationships with older males and conflict with parents.

Second, most subjects in crime studies are poor, minority adolescents with inadequate educations who live in the inner city—people with almost every social reason to commit crime. But female criminal behavior seems to be more closely related to individual differences than to the social milieu. By examining this admittedly small population, some understanding might be reached of how individuals overcome group resistance to criminal behavior.

Third, crime committed by females provides a window on social context and antisocial behavior:

- The opportunity to commit a crime can be highly variable. For example, girls with older boyfriends may have access to drugs that their male peers do not.

- The meaning of antisocial activity varies a great deal by gender. For example, a runaway girl faces far more dangerous physical hazards, including rape, than a runaway boy.

- Family disruption is more consequential for girls than it is for boys. For example, research suggests that girls raised by stepfathers may be at similar risk for antisocial behavior as boys raised by single mothers.[8]

Finally, some correlates of female deviance, especially teenage pregnancy, may serve an adaptive function. Although study after study suggests that early childbearing perpetuates the cycle of poverty and raises the risk factors for children becoming delinquent, pregnancy also provides a teenage girl with a distinct role inside an extended family. In some ways parenting fills a void and provides a series of comprehensible and, to some extent, manageable expectations.

The Helen of Troy Syndrome

One way that females engage in crime may be indirect rather than direct—the so-called Helen of Troy syndrome, in which females instigate criminal acts by their male partners or children.

Based on anecdotal evidence, this role seems to peak during adolescence. Young women may encourage the activity either overtly or covertly.

Summary

A wealth of information from gender and behavior experts convinced the Project's investigators to include girls in equal numbers in all nine cohorts of the accelerated longitudinal design. While this decision increases the size of the project, it also permits a more thorough exploration of both causal and protective factors in the development of crime.

Numerous studies have revealed the same gender-specific patterns.[9] Male antisocial behavior tends to involve violence toward people and property, while females tend to engage in sexual activity, substance abuse, and less serious property crimes, such as shoplifting. Furthermore, boys are much more likely to continue criminal activities into adulthood than are girls. But whether these gender differences are predisposing conditions or consequences of social context is yet to be determined.

Because mothers with criminal records are more likely to raise delinquent or criminal sons, it is important to understand how a mother's antisocial behavior affects her parenting. But equally important are the high-risk mothers whose sons do not become delinquent. What is the relationship between parental antisocial behavior and parenting style? Are there ways to break the cycle of dysfunction?

Previous studies have revealed some fairly optimistic data. For example, the children of mothers who demonstrate self-confidence in coping with stressful life events—such as divorce, unemployment, a death in the family, and so forth—tend not to develop antisocial behavior, even when their fathers have criminal records.[10] The Project is illuminating the mechanisms of this protective factor.

Gathering information on females' direct criminal activities is easier than documenting females' indirect contributions to crime. Much of the data on criminal activity is from official police and social service records as well as interviews and self-reports.

Several studies suggest that the amount of antisocial activity for males and females may be similar if self-reports are used to

tally their incidence. While males are overrepresented in jails and prisons, which would be counted in official crime figures, females are overrepresented in mental health clinics and psychiatric hospitals, which would not be available from such sources.[11] Because the indirect contributions of females to crime are difficult to identify and quantify, careful family and social network analysis (see chapters 2 and 3) are important tools for understanding gender differences in criminal behavior.

The diversity of issues outlined in this chapter indicates the reasons why the Project's researchers expanded the study to include equal numbers of females and males in all the cohorts.

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The children of mothers who demonstrate self-confidence in coping with stressful life events—such as divorce, unemployment, or a death in the family—tend not to develop antisocial behavior.

Chapter 5

Traumatic Stress, Abuse, and Child Development

Complex interactions among an individual's health, stressful life experiences, and social environment keep individuals away from antisocial behavior or push them toward it. From its inception the Project on Human Development in Chicago Neighborhoods has identified such personal factors as an important component of its longitudinal study. Stated simply, the scientific goal of this work is to find aspects of health and personality that contribute to antisocial behavior. Isolating easily measured characteristics that are strongly correlated with aggressive behavior could help identify children at risk before they begin acting out problems. But only the most promising and reliable of these will be included in the Project.

This chapter focuses on the contribution that physical abuse plays in the development of criminal behavior. Of all the personal factors studied by the Project, this is the most complex, making both ethical and legal demands on the study design. Yet, the implications of this work are particularly germane in linking family and community characteristics with individual development.

Defining abuse

People who survive a deadly tornado, witness a parent's murder, or suffer the intimate violation of rape carry emotional scars for a lifetime. So do those who live under the constant threat of physical or sexual abuse. Such instant or extended terrors can lead to psychological changes that researchers are beginning to connect with a bewildering array of behavioral problems. These include conduct disorder, phobias, multiple personality disorder, and violent or criminal activity, to name a few.

Violent trauma can produce a constellation of symptoms. First described and studied in combat veterans, these symptoms earned the name "shell shock" and "battle fatigue." But children and adults who survive earthquakes, kidnaping, assault, and physical or sexual abuse suffer a similar combination of symptoms. These are now called post-traumatic stress disorder, or PTSD.

At first glance, it might appear that few children or young adults experience traumas serious enough to cause PTSD. But consider these statistics:

- The National Committee for the Prevention of Child Abuse estimates that more than 2.5 million children were abused or neglected in the United States in 1991.
- A national prevalence study by David Finklehor and others found that 27 percent of women and 16 percent of men had experienced some form of child sexual victimization, with a median age of 9.6 for girls and 9.9 for boys.[1] These estimates may be low because of underreporting.

Diagnostic Criteria for Post-Traumatic Stress Disorder

According to the Diagnostic and Statistical Manual and Mental Disorders, a person suffering from post-traumatic stress disorder (PTSD) is defined as having the following symptoms.

1. The person has experienced an event that is outside the range of usual human experience and that would be markedly distressing to almost anyone, such as a serious threat to one's life or physical integrity; a serious threat to one's spouse, children, or other close relatives and friends; sudden destruction of one's home or community; or seeing another person who is being or has recently been seriously injured or killed as a result of an accident or physical violence.

2. The traumatic event is persistently reexperienced in at least one of the following ways:

- Recurrent and intrusive distressing recollections of the event; in young children, repetitive play in which themes or aspects of the trauma are expressed.
- Recurrent distressing dreams of the event.
- Sudden acting or feeling as if the traumatic event were recurring, including a sense of reliving the experience, illusions, hallucinations, and dissociative (flashback) episodes.
- Intense psychological distress upon exposure to events that symbolize or resemble an aspect of the traumatic event, including anniversaries of the trauma.

3. Persistent avoidance of stimuli associated with the trauma or numbing of general responsiveness, not present before the trauma, as indicated by at least three of the following:

- Efforts to avoid thoughts or feelings associated with the trauma.
- Efforts to avoid activities or situations that arouse recollections of the trauma.
- Inability to recall an important aspect of the trauma (psychogenic amnesia).
- Markedly diminished interest in significant activities; in young children, loss of recently acquired developmental skills such as toilet training or language skills.
- Feeling of detachment or estrangement from others.
- Restricted range of affect, such as inability to have love feelings.
- Sense of foreshortened future in which a person does not expect to have a career, marriage, children, or a long life.

4. Persistent symptoms of increased arousal, not present before the trauma, as indicated by at least two of the following:

- Difficulty falling or staying asleep.
- Irritability or outbursts of anger.
- Difficulty concentrating.
- Hypervigilance.
- Exaggerated startle response.
- Physiologic reactivity upon exposure to events that symbolize or resemble an aspect of the traumatic event, such as when a woman who was raped in an elevator breaks out in a sweat upon entering any elevator.

5. Duration of the disturbance (symptoms 2, 3, and 4) of at least 1 month.

■ According to the Sheriff's Homicide Division of Los Angeles County, children witness between 10 and 20 percent of the 2,000 murders committed in that area each year.

In most communities, the majority of children grow up without ever witnessing or personally experiencing a traumatic event. In some dangerous neighborhoods, however, the opposite may be true.

Research begun in the 1980's is just starting to establish the relationship between trauma-induced stress and a variety of abnormal behaviors, including a tendency toward aggressive or criminal activity. Unfortunately, most studies have been limited to small sample sizes or restricted populations, making generalizations and theory construction difficult.

The Project on Human Development in Chicago Neighborhoods plans to contribute much to this area. Many of the 11,000 children, adolescents, and young adults randomly selected for the study will have witnessed or been the focus of terrible violence. Others will come face to face with it during the project's 8-year span.

Some of these individuals will temporarily show signs and symptoms of PTSD; some may develop long-term psychological changes. Just as important, many will overcome their fears and successfully deal with potentially overwhelming stress. By identifying the factors that intensify PTSD as well as those that help individuals overcome it, the Project should significantly advance our understanding of trauma and its effects.

But gathering information on the aftermath of violence or abuse presents extraordinary problems. Some individuals repress these events so deeply they cannot recall them. For example, some women who were sexually abused as children only recall the incident after months or years of therapy. Others steadfastly deny traumatic events—though indelibly etched into memory—to protect themselves or a family member.

From the observer's point of view, trauma-related stress can masquerade as a variety of problems that only careful analysis can stitch together into PTSD. To further complicate matters, it appears that boys and girls may respond in different ways to violence and abuse. Moreover, probing these very personal and painful experiences raises tricky ethical issues. To plan on how to deal with these complex demands, the Project's investigators consulted widely with other scientists and practitioners.

Traumatic stress has a range of effects

In the movie *The Deer Hunter*, Robert de Niro plays a Vietnam veteran haunted by his experiences in the war. His character's vivid flashbacks—intense recollections that burst into everyday thoughts—and emotional numbness realistically portray some of the common symptoms of post-traumatic stress disorder.

Nearly identical symptoms are seen in people who lived through the San Francisco earthquake in 1989 or survived a lone gunman's shooting spree at a Texas restaurant in 1991. In fact, the response to these kinds of sudden, shocking events follows a pattern that has been defined and categorized in the Diagnostic and Statistical Manual of Mental Disorders, the bible of mental health and disease. Individuals who have been abused or watched the abuse of others over an extended period of time respond in a similar, though sometimes more pronounced fashion.

Some researchers believe that such persistent and painful memories and the resulting stress may cause physiological changes. Increases in the stress hormone cortisol have been noted in trauma victims, and irregularities in electroencephalogram tracings suggest that brain structures may be altered.

However, not all traumatic events carry the same weight. "Single-blow" events

Children With Post-Traumatic Stress Disorder

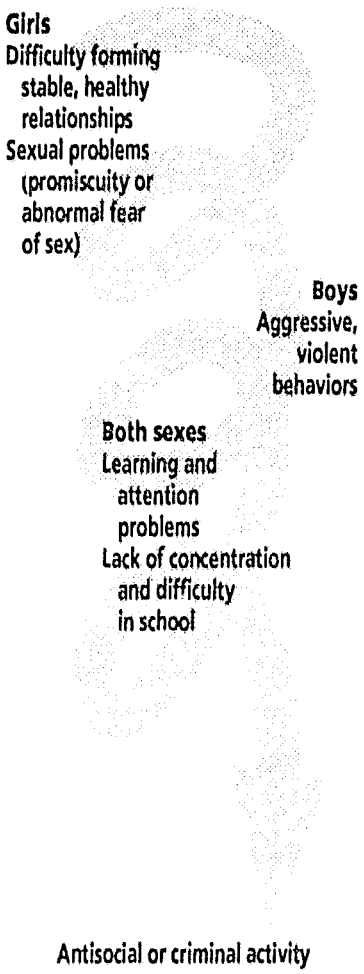
Children with PTSD exhibit most of the classic symptoms, with a few important differences. Instead of the nightmares or flashbacks seen in adults, children tend to keep the memory of a traumatic event alive in special ways:

■ Children who suffer a single, terrible event can re-see the source of their internal terror in exquisite detail at will, often when they are relaxed or bored.

■ Children who suffer prolonged abuse block out part or all of such events, but can reenact them in their play. This repetitive play can ultimately be incorporated into behavioral quirks or problems.

■ Children who are traumatized before age 1 or 2 retain a nonverbal memory of the event, and some incorporate it into their play.

Figure 1. Boys and girls internalize violence and abuse in roughly the same way, but show different symptoms. However, both sexes can have learning problems, leading to difficulty in school. Failure in school can start a negative spiral that turns a youth toward antisocial or criminal activity.



that happen outside the home—such as witnessing a street-corner killing—appear to be the least psychologically destructive. Violence inside the home—such as being raped or watching a sibling murdered—not only damages the individual, but also destroys his or her sense of home as a vital sanctuary.

Long-standing or repeated traumas—usually ongoing physical or sexual abuse—are the worst. To survive these, children resort to massive denial, repression, emotional self-numbing, and identification with the person who causes the pain. This fragile line of mental defense often creates rage, endless sadness, and a persistent absence of feeling. These emotional problems can lead to depression, personality or conduct disorders, attention deficit disorders, or aggression.

Males and females responded differently to trauma

Although males and females may internalize violence and abuse—whether witnessed or experienced—in roughly the same fashion, they express the experience in different ways. Abused girls tend to develop interpersonal problems, such as difficulties forming stable, healthy relationships, and sexual problems such as promiscuity or abnormal fear of sex. Abused boys more commonly adopt aggressive, even violent behaviors.

Both sexes show learning and attention problems that can lead to lack of concentration and difficulty in school. Failure here can start a negative spiral that turns a youth toward antisocial or even criminal activity (figure 1).

Fortunately, not all individuals who experience a horrible, violent event or live with abuse develop PTSD. Many people cope with their fears and grief and somehow put the experience behind them. This so-called resilience probably stems from a variety of sources, including internal—biological—strength and flexibility as well as a caring, supportive network of family members and friends.[2]

Understanding the elements of resilience could be extremely useful and might ultimately be applied to other situations. For example, the same factors that help youths escape PTSD could also be those that steer them away from crime in high-risk areas.

Does a "cycle of violence" exist?

The notion that violence begets violence has emerged from studies on abuse and family assaults over the past 25 years. Called the cycle of violence, this hard-to-test theory suggests that abused children become abusers themselves and that victims of violence become violent adults.

More specifically, the theory indicates that physically abused boys are more likely to grow into physically abusive and violent men than their nonabused counterparts. Physically abused girls tend to become victims of abuse as adults.

Despite its theoretical appeal, transmission of violence across generations is difficult to prove. The definitive experiment—regularly abusing one group of children and comparing their development with a control group of nonabused children—cannot be done in a sane, caring society.

Alternative tests, such as retrospective studies using court records or interviews of subjects about the past, present many problems that make results difficult to validate or generalize. Despite these limitations, researchers are collecting an impressive amount of data that support the cycle of violence idea.

Childhood abuse does not necessarily lead to crime

One recent study in a midwestern county followed the children of parents charged with physical or sexual abuse or neglect between 1967 and 1971.[3] Compared to a

carefully matched control group, abused or neglected children:

- Were arrested for the first time at a younger age.
- Were arrested more often as juveniles and adults.
- Committed a greater number of violent crimes.

However, abused children were no more likely than their nonabused counterparts to continue in a life of crime.

These findings suggest that while childhood abuse or violence can definitely point a youngster toward criminal or violent activity, these events do not cause an individual to maintain that lifestyle.

On the positive side, almost 75 percent of the abused children in this study never ran afoul of the law, compared to 83 percent of the control children. So the road from childhood violence to adult crime or violence is by no means direct.

This study is continuing to follow these children to determine the long-term effects of early child abuse. Preliminary reports from this research suggest that abused children may develop self-directed violence or aggression—such as depression, substance abuse, withdrawal, or suicide—which are more likely to manifest themselves in females.

Personal vulnerabilities are connected to criminal behavior

A 7-year project following male juveniles sent to a Connecticut correctional school shows that childhood abuse alone does not accurately predict whether a boy will develop aggressive or criminal behavior.[4]

Researchers used psychiatric, neurological, physiological, and cognitive tests to identify "intrinsic vulnerabilities"—paranoia, hallucinations, seizures, limbic dysfunction, well-below-normal reading level, or impaired memory, such as an inability to recall four digits backward (figure 2). Extensive interviews with each boy revealed information about childhood and family life, specifically abuse within the home.

Following the release of each boy from the school, researchers tracked their arrest and criminal records:

- All but 6 of the 95 juveniles in the study accumulated an adult criminal record, committing an average of 11 offenses each.
- More than two-thirds of the juveniles were charged with at least one aggressive offense.

Those few individuals in the study who were raised in nonabusive homes and who were also free from intrinsic vulnerabilities rarely went on to commit more crimes. Those with a combination of an abusive family and two or more vulnerabilities were very likely to commit crimes as adults.

Men in the first, low-risk group served an average of 1 day in jail, compared to an average of 982 days for those in the high-risk group. The more vulnerabilities, the more a man was likely to commit an aggressive offense or a felony.

When family violence becomes "normal"

How do family violence and intrinsic vulnerabilities interact to produce violent behavior? On one level, abuse within the family may establish violence as the model for "normal" behavior.

Healthy children resist these models and adopt more socially appropriate behaviors they see in the community or at school, but those with neurological or psychiatric impairments may be more likely to follow the patterns of their early home life. These children could also have more difficulty controlling the rage that abuse often kindles.

But the connection may be even more direct than this. Hyperactive or impulsive children may encourage or invite abuse from parents who have difficulty controlling their own impulses.

Figure 2. Using psychiatric, neurological, physiological, and cognitive tests, researchers identified the "intrinsic vulnerabilities" that predisposed juvenile males to engage in antisocial behavior. Those with a combination of an abusive family and two or more vulnerabilities were very likely to commit crimes as adults.

Intrinsic Vulnerabilities

- Paranoia.
- Hallucinations.
- Seizures.
- Limbic dysfunction.
- Below-normal reading level.
- Impaired memory.

How do family violence and intrinsic vulnerabilities interact to produce violent behavior?

Girls become victims rather than criminals

The relationship between childhood abuse and later adult attitudes may be less clear in females than males. Instead of engaging in aggressive or criminal behavior, both of which can be objectively measured using arrest or criminal records, abused girls may become victims, which is much more difficult to follow or substantiate.

Some studies suggest that women who were physically abused as children tend to associate with men who abuse them and their children.[5] Another hypothesis is that many adult rape victims were raped or abused as children.

Studies of the more subtle effects of early violence and trauma in females is uncovering an alarming array of disorders. In addition to being the target of violence as adults, women abused as children appear to be more prone to depression and multiple personality disorders. They are also more likely to be hospitalized for psychiatric problems than nonabused women.

Recent work sponsored by the National Institute of Mental Health and the W.T. Grant Foundation is striking. Using the Diagnostic Interview for Children and Adolescents, researchers interviewed sexually abused and nonabused girls. Results from this standardized test are used to diagnose depression, obsessive-compulsive disorders, substance abuse, anorexia, and a host of other problems.

Researchers discovered that sexually abused girls had an average of 2.5 diagnoses, compared to slightly more than 1 for nonabused girls.[6] The sexually abused group was also three times more likely to be diagnosed with conduct disorder (28 percent versus 9 percent) and almost nine times more likely to be diagnosed with attention deficit hyperactivity disorder (30 percent versus 4 percent). Finding that almost one-third of the girls had an attention problem was unexpected because this type of disorder is seen far less frequently in girls than boys in the general population.

Abuse has a discernible effect on infants

Intriguing work with another standard test shows it may be possible to see the emotional or behavioral impact of abuse in infants. The Strange Situation test, designed to assess a child's attachment with his or her primary caregiver, records behavior before and after a short, slightly stressful separation.

Most children fall into one of three categories:

- Type A children show little emotion when in the company of their caregiver and avoid him or her in a stressful situation.
- Type B children—the normal or ideal behavior characteristic of a majority of infants—play or share with their caregiver and seek comfort from him or her when distressed.
- Type C children stick close to their caregiver, but resist being comforted by him or her when stressed.

A small percentage of children cannot be placed in either of these categories, prompting the creation of a new one, called Type D. These youngsters, called disorganized or disoriented, have no consistent strategy for coping with the stress of separation. Some head back to the caregiver, then stop, freeze, and grow apprehensive as they return.

In one study, more than 80 percent of a group of maltreated infants were Type D, compared to 20 percent of a matched control group.[7] Abuse-induced fear, coupled with a child's innate need for comfort and attachment, could be the root of these conflicting behaviors.

Consistent, sensitive, and nurturing care helps a child form a secure attachment with his or her primary caregiver. This crucial early connection provides a foundation for later relationships and appears to predict the quality of later interpersonal relations. Secure attachment reduces the likelihood of boys developing behavior problems; a similar connection does not appear to exist in girls.

The Project plans to identify connections between behavior and abuse

Measuring violence, abuse, or post-traumatic stress disorder in a longitudinal project like the Project presents a major challenge. Although people who live through a single-blow trauma tend to remember it in vivid detail, those victimized by long-term abuse commonly repress or deny it. Unconscious denial helps ease the pain of the ordeal by erasing it from memory. When done consciously, denial may be the result of threats from the abuser or a desire to protect him or her.

In the two interview-based studies with delinquent Connecticut boys and sexually abused girls described earlier, researchers found it extremely difficult to get adolescents to talk about family abuse. Neither single questions nor formal questionnaires were enough to obtain this type of information.

Instead, extended discussions with a sensitive, skilled interviewer were needed to break through the wall of denial. Sometimes the breakthrough occurred when the interviewer noticed that a boy or girl was dissociating, or "spacing out," an important sign of traumatic distress. Sometimes a simple question such as "Do you have scars I can't see?" or "Have you ever made your parent go further in punishing you than he or she wanted to?" led the way toward discussion of abuse.

Conducting indepth interviews with all 11,000 individuals selected for the Project will not be possible. Much of the personal information will be collected using questionnaires and surveys, neither of which is the best way to gather data about trauma or abuse.

A more feasible approach would be to identify youths at high risk for experiencing or witnessing abuse during the first 3 or 4 years of the Project. Subsequent indepth interviews with them, combined with neurological and psychological tests, could uncover possible links between early trauma or abuse and the development of criminal or aggressive behavior.

As with other parts of the Project, it makes sense to videotape as many interviews as possible. Over the next decade or so, researchers are likely to develop new methods for extracting information on abuse by observing behavior, body language, and speech. With a videotape library, researchers could apply these new methods to participants in the Project long after the data-gathering phase has ended.

Another way to identify those affected by violence or abuse is to focus on the symptoms they leave behind. These stigmata, as they are called, include dissociation, attention problems, conduct disorders, and a long list of other symptoms. Because these disorders can also arise from other, nontraumatic sources, this approach lacks the specificity needed for confident generalization or theory development.

More important, using the symptoms of PTSD to identify individuals exposed to traumatic events overlooks those who have successfully mastered or worked through the experience. Information from these individuals on special strategies, family and community support, and other important influences can help answer the question at the heart of this work: How do people succeed in overcoming catastrophic experiences?

Do people recover from such events because of their own internal capacity for resilience, or is recovery a function of family, school, or community support?

Do people recover from traumatic events because of their own internal capacity for resilience, or is recovery a function of family, school, or community support?

For example, it may be that physicians, nurses, teachers, ministers, and other professionals play an important role in the recovery process. This longitudinal study will carefully document how the resources naturally available in the community help individuals to overcome traumatic experiences.

The Project confronts ethical issues

Any large-scale study on the relationship between trauma and the development of criminal or aggressive behavior faces serious ethical issues. These issues appear in every aspect of the work, from data collection to potential intervention. They require firm decisions and innovative solutions before the project begins.

Questionnaires and surveys provide standard, straightforward methods for gathering information from thousands of individuals. Including a number of specific, possibly graphic questions would detect whether or not an individual had witnessed or been the victim of sudden or ongoing violence.

For most people interviewed, this barrage of questions would raise unfamiliar, perhaps completely foreign issues. However, sensitizing children to abuse and violence or making them aware of situations that had been previously outside the normal realm of understanding is a serious concern.

If during an interview or a survey session a child or adolescent begins talking about a personal, traumatic experience, weightier issues arise. Even trained mental health professionals find these discussions difficult to conduct. Such conversations must be handled delicately, especially if it is the first time an individual has talked about his or her experience. The Project's interviewers are working closely with psychiatrists, psychologists, and social workers to learn how to handle these situations appropriately.

Finally, a minor's revelation of abuse or neglect carries with it a grave responsibility for the interviewer. In virtually every State, laws require health and human service workers to report suspected cases of child abuse or neglect to the appropriate agency. These requirements put the Project in complicated territory because it is partly an objective observer and partly an active participant. For this reason, establishing a coordinated relationship between the study team and local health and social service authorities is essential.

Summary

Traumatic stress clearly plays an important role in the development of abnormal or antisocial behavior. However, the link between trauma and criminal behavior has yet to be determined. Both the size and duration of the Project will be invaluable in exploring this connection.

Given our limited knowledge, it is impossible to predict how many of the 11,000 individuals selected for the study will show signs of the aftermath of abuse, neglect, or other stressful experiences. And many of those suffering from traumatic stress may not talk about these events in interviews, further reducing the number. Too small a sample size makes it difficult to identify cause and effect or make solid predictions.

To minimize these problems, the Project will proceed cautiously in this area. Researchers will collect information on possible risk factors for trauma, including individual and family history and community data. Every individual involved in the Project will then be briefly assessed for a history of trauma or sexual abuse. After these two steps, those individuals deemed to be at high risk may be evaluated in greater detail. It is also likely that through repeated interviews, study subjects will reveal more and more about themselves, especially in this sensitive area.

The Project cannot act as an invisible, silent partner when it comes to child abuse

and neglect. It is both ethically and morally bound to respond to children who are in danger or who have a negative reaction to the interviews. Researchers will work closely with mental health agencies to develop protocols for responding to the needs of these children.

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Chapter 6

Issues in Intervention

A major goal of the Project on Human Development in Chicago Neighborhoods is to explore the natural history of antisocial and criminal behavior. The Project hopes to provide answers to the following questions:

- How and why do antisocial and criminal behaviors originate?
- What causes some individuals to continue these behaviors?
- How and why do some individuals cease these behaviors while others continue?

To answer these questions, as a longitudinal study, the Project would gather information as unobtrusively as possible. Because such an approach places few demands and has limited influence on the subjects being studied, it is unlikely that the research would change criminal behavior.

On the other hand, the Project provides an opportunity to test various intervention strategies to learn what can work to turn individuals away from antisocial or criminal behavior. Whether or not to intervene, however, also raises serious practical, ethical, and scientific issues for the Project.[1]

The case for intervention

All longitudinal studies have some observer effect. Both the presence of the research staff in the subjects' lives and the beneficial aspects of the Project, such as physical, neurological, and cognitive examinations, will affect the people who are being studied (figure 1). To minimize this effect, data from target communities are being compared to data from communities not under study.

Yet the observer effect influences research results far less than even minor intervention programs. Intervention programs are basically experiments to test specific hypotheses—for example, whether improving the communication skills of parents will result in fewer behavior problems among their children compared to children whose parents do not receive such training.

Both common sense and preliminary studies suggest that such parental training will work, at least in the short run. Likewise, full-service prenatal care to high-risk mothers appears likely to reduce physical and mental impairments in their children—impairments that presumably put them at risk for antisocial behavior.

The Project provides an opportunity to test various intervention strategies.

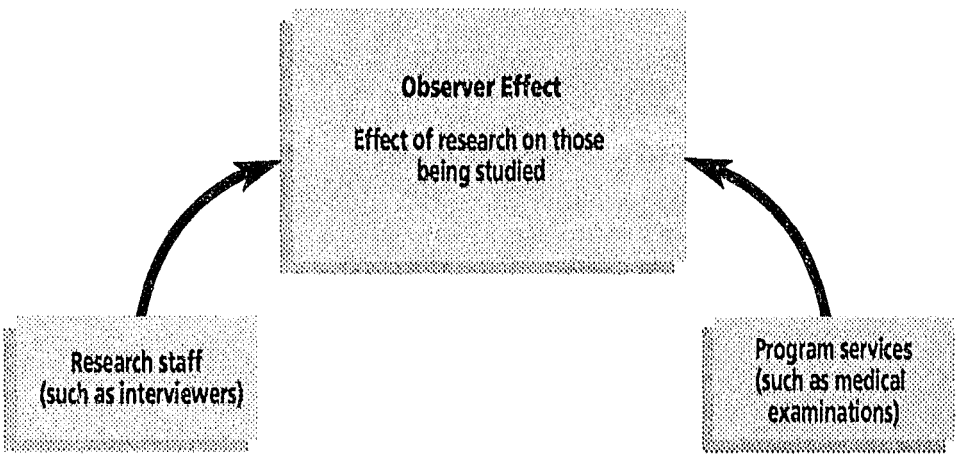


Figure 1. To minimize the observer effect, data from target communities are being compared to data from nonstudy communities.

Scientific help in separating association and causation

Requiring experiments to test such hypotheses is supported by sound scientific reasoning. Experiments can be used to separate association and causation. For example, previous studies have shown that the absence of a male role model in a household puts adolescent boys at greater risk of delinquency. But is the absence of a role model the cause of delinquency, or is it merely associated with households of delinquent boys? To discriminate between association and causation, researchers might enroll a group of such adolescents in a Big Brother program and compare their subsequent behavior with a control group.

Similarly, early reading difficulties have been linked to adolescent delinquency. But do early reading difficulties cause delinquency, or is delinquency caused by a third factor that contributes to both problems? Researchers might develop an experimental tutoring program to improve early reading skills and then compare delinquency data among the improved readers and a similar group not in the tutoring program.

Pragmatic help in developing effective programs

Pragmatic and moral reasons argue for incorporating intervention experiments into the Project. What good does it do to identify the roots of crime if ways to halt the development of antisocial and criminal behavior cannot be identified?

Effective experimentation would help develop practical programs and policies to stop delinquency and crime before they start. Even a handful of successful experiments could create powerful tools to prevent crime.

The case against intervention

On the other hand, introducing any form of intervention into the longitudinal study could conceivably exert such an influence that the natural history will be upset. Are subjects who have been part of an experiment still a valid natural sample, or should the experimental subjects be excluded from the analysis of data?

In a simple experiment involving only a single form of intervention, researchers divide potential subjects into three groups:

those who are ineligible for the intervention, those who are chosen for it, and a control group used as a yardstick against which to measure the intervention. Can the Project reliably weigh the longitudinal findings of the ineligible and control groups against findings from the experimental group? In other words, does incorporating experimentation contaminate the validity of the longitudinal study findings?

Other drawbacks to including an intervention component in the study are more pragmatic. First, experiments are traditionally expensive because they must include large enough groups to provide adequate statistical samples. For this reason, experiments tend to be staff-intensive. Second, experiments can create an additional burden for subjects, who must participate in both the intervention and in the various procedures required to measure the effect of the intervention.

The case for a compromise

Of course, experimentation need not be an either/or proposition. A combined longitudinal-experimental approach can build on the strengths of both models while avoiding their major weaknesses (figure 2).

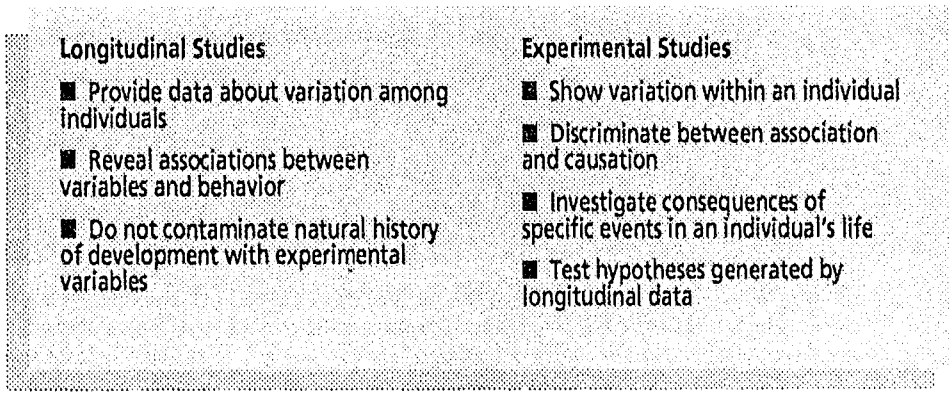
Longitudinal studies are particularly good at describing the natural history of development. As such, they provide a wealth of data about variation among individuals. Experiments, however, show variation within the individual—variation that is presumably the result of the experimental intervention.

The shortcoming of a longitudinal study is that it may be unable to investigate the consequences of specific events in an individual's life, but this shortcoming is precisely the strength of an experimental study.

The Project may have an opportunity to work simultaneously in a second site comparable to that chosen for the longitudinal study. This would allow researchers to apply what they are finding in the natural history sample to generate hypotheses that can be tested on a separate, but comparable experimental population.

But even without a second experimental population, it would be possible to use samples of the longitudinal study population for intervention, assuming the combination is carefully managed. Longitudinal data reveal associations between variables and behavior—for example, between early difficulties in reading and behavior problems. An experimental intervention to tutor children with early reading problems could show whether this type of program had an effect on delinquency.

Figure 2. The Project's combined longitudinal-experimental approach builds on the strengths of both models while avoiding their major weaknesses.



How the Project's accelerated longitudinal design enables intervention experiments

Because no combined, multiyear longitudinal-experimental studies involving interviews of subjects both before and after intervention appear in criminological literature, the Project can break new ground if it incorporates an experimental component into its accelerated longitudinal design.

One of the major strengths of the Project's accelerated longitudinal design is that it offers a way to avoid contaminating natural history data with experimental variables. By selecting cohort groups 3 years apart, the 8-year project will look at circumstances and behavior at each age at least twice—once in the first 3 years with one cohort group, and again 3 years later with the next younger group. This intentional overlap strengthens the statistical data for each age range.

The need is urgent for answers to the all-pervading question, What helps prevent crime?

The overlap also means that, after the first 3 years, data will be available on nearly the complete target age range of prenatal to 32 years. This information can then be used to formulate hypotheses that can be tested by experimental interventions. It can also be used to control for experimentally induced effects that show up during the final 5 years of the Project.

The need is urgent for answers to the all-pervading question, What helps prevent crime? But waiting until the project is 3 years under way before introducing any experimental component has several advantages.

First, a solid longitudinal baseline will bolster the reliability of the experimental data. Second, the longitudinal data will be the most comprehensive ever collected and, therefore, should suggest new hypotheses for testing. Third, complete longitudinal data could be used to establish equivalency between the experimental and control groups before the intervention. Finally, the data could be used to identify delayed effects of an intervention that would normally fall outside the timeframe of an experiment.

Of course, the length of this project—8 years—creates additional problems for experimental design. Although an experiment may be both desirable and feasible at a particular time, it may become less so with the passage of time because theory, methodology, or policy concerns change. Moreover, some subjects of the longitudinal study will undoubtedly relocate to different areas. However, requiring those eligible for an experiment to stay put could bias the results.

These constraints suggest that the researchers must build in the flexibility to include experimental interventions as circumstances permit. The planning group considered previous experimental interventions and analyzed their effectiveness.

What can be learned from previous intervention research?

As noted earlier, until now criminology has lacked the opportunity to combine both longitudinal and experimental studies in one project. There are, however, a few precedents to examine as models.

Cambridge-Somerville youth study

Some experimental research has followed subjects for several years using interviews and searches of official records. Perhaps the most dramatic is the Cambridge-Somerville project, which followed 325 pairs of boys between ages 10 and 15 who had similar family backgrounds, home environments, delinquency-prone histories, and intelligence.[2]

Some boys were assigned to social workers who visited approximately twice a month for 5½ years. The boys also received other services as needed, including tutoring, medical or psychiatric attention, and summer camps. The study, which began during the 1940's, followed these boys along with a group of matched controls for 30 years.

In assessing the subjects as adults, researchers found that by all objective criteria the control group fared better than the intervention group. A search for subgroups that might have benefited from the intervention proved fruitless.

The failure of this barrage of interventions to have the desired outcome has been debated in criminology and sociology for several years. However, it does argue strongly for the need to build better theories and models prior to intervention and to run small-scale interventions side-by-side with longitudinal studies to bolster the development of criminology theory.

Perry Preschool Project

In the Perry Preschool Project, carried out in Michigan, a group of children ages 3 and 4 received a daily preschool program backed up by weekly home visits. Both experimental and control children were then followed to age 19.[3]

Those participating in the early education experience were arrested less often as juveniles, reported less involvement in gang violence, and had fewer arrests as adults. The total number of arrests was lower for those who had been involved in the intervention program, and they had fewer arrests for violence.

Infant Health and Development Program

The Infant Health and Development Program studied 985 low-birthweight infants at 8 sites for 3 years.[4] Interventions included home visits by nurses, attendance at specialized child development centers, and parent group sessions. The children in the experimental group had significantly higher IQ scores than those who had no intervention beyond regular health checks and referral to relevant services.

However, similar results might be hard to sustain in an established program. Experimental demonstrations such as this one tend to attract unusually dedicated and highly motivated staff members who often move after the main research ends. Because it also took much effort for researchers to maintain control of the parents and children involved in the study, the level of effort required for a long-term program may be difficult to achieve.

Ottawa PALS Project

A communitywide intervention was carried out in a publicly funded housing development in Ottawa for children between ages 5 and 15. The focus was on acquiring nonacademic and recreational skills.[5]

Recreation programs were operated in the target public housing development, and children involved in them were compared to a control group living in other public housing developments. Children in the recreation programs showed significantly improved skills, and antisocial activities declined.

However, such community interventions are often difficult to maintain beyond the demonstration stage. In addition, what begins as a compensatory program such as a special playground may be adopted by more affluent families who have better resources for organizing and fundraising. As a result, the children who were originally targeted to receive a compensatory program remain at a comparative disadvantage.

Oregon Social Learning Center school-based intervention

As a result of their longitudinal studies on the family origins of antisocial behavior in children, investigators at the Oregon Social Learning Center implemented a prevention trial.[6] Because they are currently studying children making the transition to elementary and middle school, they chose a school-based universal interven-

Possible Interventions

Research has shown that different types of interventions work best with different age groups.[7] Three age groups in particular offer fertile ground for potential interventions.

Prenatal to age 6

- Language and prereading skills development.
- Social skills training.
- Nutrition.
- Health care.
- Parent training.

Young adolescents

- Academic tutoring.
- Nonacademic skill development.
- Peer-training in how to resist drug, alcohol, and tobacco use.
- Violence prevention programs to control aggression.
- Parent training.
- Parental involvement in the schools.

Young adults

- Treatment interventions for active offenders to prevent relapses, resolve family problems, and control substance abuse.
- Job skills development and training.

tion in which parent training is combined with development of students' conflict resolution skills.

Although the intervention trial is ongoing, results seem to improve when parents are reinforced for staying in regular contact with the school. Also, researchers are discovering that parent training alone is not completely effective in dealing with children's behavior problems in school. Success seems to come when the child receives consistent treatment in both school and home settings.

Classroom interventions in Baltimore

Two successful school-based interventions were conducted in Baltimore that in one case applied peer pressure and social classroom dynamics to reduce aggressive and shy behavior, and in another case treated depressed children with a reading mastery program.[8]

The peer pressure program, known as the Good Behavior Game, reduced aggressive behavior for all but the most difficult children, and to a lesser degree, shyness. The reading mastery program appeared to benefit depressed children at least in the short term, although followup will be necessary to determine long-term significance.

Potential for therapeutic interventions

These examples illustrate how intervention experiments have yet to validate conclusively their working hypotheses. In addition, in recent years the criminological literature has been pessimistic about interventions to reduce recidivism among adolescent and young adult offenders. In part, this stems from problems with earlier work, much of which was marred by a dissonance between what was supposed to have occurred in an intervention and what actually did occur. However, recent developments offer a ray of hope.

The emergence of meta-analysis—the ability to combine mathematically the results of a number of small studies into a larger, more powerful one—has finally given researchers a tool to measure the magnitude of treatment effects in different studies. So far, meta-analysis has revealed that new programs combining social learning, family therapy, and life skills training seem to substantially reduce recidivism.

Three age groups that will be represented in the Project seem particularly useful to examine for potential interventions. These are the prenatal to age-6 group, the young adolescent group, and the young adult group.

Prenatal to age 6

To date, most preschool interventions have been short-term, global, multifaceted interventions that did not focus on specific needs of individual children and their families.[9] However, because individual characteristics appear to be extremely important at this age in the development of antisocial behavior, experimental interventions should be individual in nature. Relevant programs for this group include the following:

- Cognitive stimulation to develop language and prereading skills.
- Social skills training to improve peer relations.
- Good nutrition and health care.
- Training of parents in childrearing practices, especially in the appropriate use of rewards and punishment.

It may also be possible to test innovative programs to teach impulsive and overactive children to be patient with and considerate of the rights of others.

Appropriate intervention for the age-6 cohort could involve both parent training and peer tutoring to prevent early school failure and could be performed as a formal prevention trial with random assignment and blind assessment. It may also be

advisable to study the prenatal cohort through age 15 to see if the intervention reduces the onset of conduct disorders or delinquency during adolescence. This type of followup is particularly important for girls who typically have a later onset of behavioral problems than boys.

Young adolescents

These cohorts, who will be followed from ages 9 to 17 and 12 to 20, offer a critical population for intervention because they are at the ages when antisocial behavior peaks. Based on previous experiments, peer-related interventions appear to be the most powerful.

Several studies have shown that students can be taught to resist peer influence to smoke, drink, or use marijuana.[10] Three types of programs have shown at least short-term success:

- Modeling and guid.d practice.
- Recruitment of same-age peer leaders as a counterbalance to resist undesirable behavior.
- Educational films.

Although limited in scope, these studies suggest methods that might be tested more powerfully in a combined longitudinal-experimental study.

Other possible interventions could include parent management training, which has been shown to be more effective with younger children; skills training to promote social competence; and special tutoring to promote academic competence. Although common sense suggests that both academic and nonacademic skills training would be beneficial, there is currently no objective evidence that they work over the long term.

Young adults

Intervention with this group should probably focus on desistance among active offenders.[11] Any experiment at this age would be a test of the effectiveness of treatment programs rather than a test of prevention programs. Preventive interventions at this point would likely have little effect, since virtually all of those who exhibit criminal behavior will have done so before this age.

One possible intervention could be a program of relapse prevention through continuous case management by an individual or criminal justice agency with the assistance of youthful, enthusiastic outreach workers. The intervention could be either a probation or diversion program, with emphasis on resolving family problems.

Another strategy might be to develop a dynamic social intervention system to treat drug use. This strategy would include:

- Early detection of drug abuse.
- Assessment of the individual to determine what type of intervention program would work for him or her.
- Voluntary or mandatory participation in a selected treatment program and monitoring compliance.

Summary

The potential for interventions to alter the results of this longitudinal study argue against incorporating an experimental component at the outset. Moreover, it appears that initial longitudinal data may generate new theories about influences on the development of antisocial behavior. The resulting hypotheses would be better tested in subsequent intervention experiments.

Integrating experimentation with observation could be a powerful combination. The dialog between longitudinal and experimental researchers should continue, especially between the Project's researchers and those experimenters engaged in long-term work dealing with similar concerns. The Project is examining the possibility of establishing subgroups on methodology and measurement to link longitudinal and experimental researchers.

The initial longitudinal data may generate new theories about influences on the development of antisocial behavior. The resulting hypotheses would be better tested in subsequent field experiments.

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Chapter 7

The Criminal Career: Continuation Versus Termination

Many children who grow up in some of the worst neighborhoods in the country do not become criminals as adults. In fact, the majority of adolescents who engage in delinquent behavior abandon the more serious crimes against people and property once they become adults.

These are encouraging facts, but they point to a quandary in criminology: Despite years of research, no one knows why many delinquent teenagers turn away from criminal activities while a minority continue to commit offenses through adulthood. We know less than we might because most studies of antisocial and criminal behavior have concentrated on how these behaviors develop rather than on how they are sustained or ended. Also, unfortunately, most studies have focused on adolescents or adults, ages when these behaviors have already emerged. A clear understanding of why some youth terminate while others persist in criminal activities would allow society to encourage the former and discourage the latter.

One of the unique features of this Project is that it follows newborns and young children as well as adolescents and adults in its tracing of the developmental pathways to delinquency and criminal activity. Unlike most research, which retrospectively traces the roots of criminal behavior, this study observes the behavior develop. It also examines why most children become law-abiding adults while others become criminals. Furthermore, by simultaneously studying the communities in which the 11,000 individuals involved in the Project live, it examines how individual and community characteristics interact to start, stop, or sustain criminal behavior.

Examining criminal patterns of persistence and desistance

Many adult criminals were antisocial children, but the converse—that antisocial children become adult criminals—does not necessarily apply. In fact, relatively few delinquent children become adult criminals. Something happens in their lives that discourages them from a life of crime. This process, called desistance, commonly occurs during the transition between late adolescence and early adulthood.

On the other hand, for those who persist in criminal careers, only death completely guarantees offenders' desistance from crime. In a more relativistic view, desistance is said to occur if:

- Offenders are diverted from serious crime to more minor violations.
- The individual rate of offending is significantly reduced.
- The time between offenses is significantly increased.

Despite years of research, no one knows why most delinquent teenagers turn away from criminal activities while a minority continue to commit offenses through adulthood.

Measuring a Criminal Career

Four primary characteristics are used to quantify a criminal career:

- Age at onset—Measures the age at which an individual begins delinquent or criminal activity.
- Age at desistance—Measures the age at which an individual ceases to engage in delinquent or criminal activity.
- Frequency—Represents the number of offenses of a particular type (for example, robberies or the entire group of felony offenses) committed by an individual during a given period of time.
- Crime seriousness—Uses a scale to record the seriousness of the crime and examine trends that might reveal an increase or decrease in severity.

The difference between the age of onset and the age at desistance defines the length of a criminal career. Of course, desistance is difficult to measure directly. A reasonable period of time must elapse before researchers can be certain that a gap in offending is not merely a temporary suspension of criminal activity.

To see how a criminal career evolves, researchers also study whether an individual discontinues some types of crime and begins others.

In other words, persistence and desistance are qualified by seriousness of offense, frequency of offending behavior, and length of crime-free periods.

In 1986 the National Academy of Sciences Panel on Criminal Careers indicated that these three basic measures of individual criminal careers can capture their more complex aspects.[1] Using this information, researchers can identify a startup phase when frequency of offenses increases, detect a period when frequency decreases at the end of a career, and determine bursts or lulls in criminal activity in between. In addition, researchers can examine criminal careers for offense specialization and changes in the level of severity and type of offenses committed. They can also consider the role of individual motivation. For example, how important to desistance is the motivation to change, and where does such motivation come from? How important is it for offenders to learn new behaviors?

This model assumes that desistance from crime is a gradual process. Although sudden shifts have been documented, they usually parallel a major life event such as a religious conversion.

To understand how delinquent and criminal offending stops, the Project focuses on known offenders in these age groups to reveal the conditions and mechanisms involved in desistance. Questions about individual patterns of criminal activity and the mix of offenses in a criminal career must be answered:

- Do offenders tend to specialize in types of offenses?
- Do offenders progress from petty crimes to serious and violent felonies?
- How much do offenders vary in the number of years they follow a particular criminal pattern?
- How do periods of offending change—with bursts and lulls, or as gradual declines in activity?
- To what extent do career criminals mix different kinds of crime?

Issues and approaches

One approach to answering these questions is for the Project to gather information on the demographic and social characteristics of chronic offenders, including gender, age, race, family composition, social setting, and individual experiences. The Project is also focusing on the particular factors that lead an individual to persist in or desist from a criminal career. This involves examining a complex mix of psychological, sociological, and health-related factors including:

- The relative influence of health-related factors and early developmental experiences on early criminal activity.
- The later influences of family, school, peers, work, and formation of one's own family.
- The significance of unusual events.
- The role of personal situations and individual attitudes in creating opportunities and inducements for crime.

In undertaking this work, researchers face several methodological challenges. The crucial issues include the following:

- Finding the best way to estimate actual rates of individual offending.
- Ensuring the reliability and validity of the method chosen.

The Project relies first on criminal justice system reports for the basic data on offending careers. Self-reports and interviews with family members supplement official records of delinquent and criminal behavior. Sampling strategies are also being developed to examine the careers of active offenders who escape official detection.

The Project is also examining hypotheses explaining the life course of delinquent and criminal careers based on

current developmental and social theories. However, few theories are firm enough to explain why adolescents or adults cease criminal activity. For the most part, researchers lack the natural history data to generate good hypotheses and theories.

Several hypotheses—covering individual development theory, social control theory, social learning theory, social disorganization theory, network theory, rational choice theory, and deterrence theory—guided planning for the Project (figure 1). Brief overviews of each of these theories are presented next.[2]

Development theory

Conduct disorders and early delinquency are powerful predictors of a career in crime. Both temperamental and developmental deficiencies probably interact with other conditions to explain the early onset of delinquency and might be disproportionately common among adolescents who continue criminal activity into their adult years. For example, characteristics such as a fearless, uninhibited early temperament—when coupled with hyperactivity, impulsiveness, a low IQ, or attention deficit—may lead to early antisocial conduct.

Figure 1. The Project tests hypotheses about criminal behavior drawn from seven major schools of thought.

Individual Development Theory
- Predicts that conduct disorders and early delinquency lead to crime.

Social Control Theory
- Predicts that when the social constraints on antisocial behavior are weakened or absent, delinquent behavior emerges.

Social Learning Theory
- Predicts that those who persist in criminal activity continue to increase the frequency, duration, and intensity of contact with other offenders, while those who desist from crime decrease contact with offenders and increase contact with nonoffenders.

Social Disorganization Theory
- Predicts that crime results when community life becomes disorganized, that is, when high mobility and a heterogeneous population cause a breakdown in conforming controls over criminal conduct.

Network Theory
- Predicts that when network ties are weak, social sanctions against crime will work.

Rational Choice Theory
- Predicts that individuals choose to commit crime when the benefits outweigh the costs of disobeying the law. Crime will decrease when opportunities are limited, benefits are reduced, and costs are increased.

Deterrence Theory
- Predicts that when punishment is swift and certain, incidence of crime is reduced.

Measuring the Costs and Benefits of Crime to the Offender

Social learning theory is being used to look at how consequences reinforce or punish behavior and thus promote or inhibit future conduct. By focusing on environmental or situational factors and their anticipated consequences, this work provides an idea of how well different sanctions affect the development of a criminal career.

Previous studies involving official data and cross-sectional surveys raise questions about the deterrent effect of sanctions. For example, the data on imprisonment are inconclusive. Imprisonment seems to increase criminality for some offenders, but that outcome appears to be less likely when contact with family and friends is maintained.

The longitudinal data gathered in the Project is tracing criminal careers both before and after sanctions have been applied. By focusing on individuals rather than populations, the Project provides an unobscured view of the punitive or gratifying effects of crime. As part of the learning process, the costs and benefits to the offender determine the path of a criminal or noncriminal career.

Previous studies have been forced to sort out retrospectively these temperamental deficiencies from later conditioning. By following individuals from birth through age 32, the Project is gathering this information sequentially.

Social control theory

Often used to explain the development of criminal behavior, social control theory predicts that when the social constraints on antisocial behavior are weakened or absent, delinquent behavior emerges. In this theory the three main bonds or ties that link individuals to socially acceptable behavior are:

- Attachment to others.
- Belief in shared values.
- Involvement in law-abiding activities.

Motivation is generally ignored, and only the strength of social bonds is assessed.

Originally used to study delinquent behavior, this approach can easily be extended to issues of persistence and desistance, especially when individuals are studied with communities. In addition to examining the strength of social ties to parents, peers, and adults and their law-abiding values and beliefs, it also makes sense to look at attachments, criminal role models, and participation in delinquent and criminal networks to document how these change during the life span.

For example, it is generally recognized that a good job and a successful marriage help antisocial individuals create social ties to conventional persons and thus grow away from a life of crime. On the other hand, "successful" career criminals may have fewer conventional social ties and thus may be forced to depend more on criminal associates and lifestyles.

Social learning theory

Individuals learn how to break the law in the same way they learn other types of behavior. A large body of theory, called social learning theory, applies nine key propositions to the development of criminal activity:

- Criminal behavior is learned.
- Criminal behavior is learned by communicating with others.
- Most of this learning occurs in intimate personal groups of family and peers.
- The learning includes motives, drives, attitudes, and rationalizations as well as specific techniques on how to commit crimes.
- Motives and drives stem from interpretations as favorable and unfavorable definitions of obeying and violating laws.
- An individual becomes delinquent because definitions favorable to violating the law overwhelm those favorable to obeying it.
- Associations with different individuals vary in frequency, duration, and intensity.
- The learning process for crime is no different from other areas of adult learning.
- Criminal behavior is not explained by individual needs and social values such as wanting and valuing property because noncriminal behavior expresses the same needs and values.

Social learning theory predicts that those who persist in criminal activity continue to increase the frequency, duration, and intensity of contact with other offenders, while those who desist from crime follow the opposite course. From a research perspective, such a prediction underscores the

need to obtain detailed data on the nature of an individual's associations and how they change over time. This requires extensive, ongoing analysis of the individual's social network and community life.

Social disorganization theory

Social disorganization theory explains that crime results from the disorganization of community life. The high mobility and heterogeneous population found in some urban settings can lead to a breakdown in both formal and informal controls over delinquent and criminal conduct.

Under these conditions, community instability and limited institutional participation prevent a communal consensus on norms, values, and beliefs from developing. Instead, residents encounter cultural conflict, loss of control, and an increase in organized illegal activities.

Numerous studies have established that incarcerated offenders are likely to return to crime if they are released to socially disorganized communities. To date, however, no one has linked community characteristics with the individual effects that make a person likely to engage in criminal behavior, a gap the Project is addressing.

Because so many high-risk communities experience cultural conflict, a clear picture of neighborhood subcultures—including adolescent, delinquent, and criminal—needs to be developed. Social disorganization theory predicts that persistence and desistance will relate to the type and level of involvement that offenders have in these subcultures. After all, these subcultures provide role models and may offer a learning environment for criminal skills along with reinforcing social ties.

Network theory

Network theory shows what types of relationships link different members. More important for the Project, network analysis also explores how people are recruited into criminal careers and how or why they stay in or leave them. Do people become offenders by being recruited into networks and socialized into crime? Or do offenders form groups that make criminal acts easier to perform?

To focus on these issues, the Project is considering the following:

- At what age do individuals enter peer groups?
- At what age and under what conditions are new cliques formed?
- How long does a clique tend to last?
- How are cliques linked in networks or webs of affiliation?
- How instrumental are cliques in teaching members to be delinquent?

Little is known about how members of a population are structured into social networks of relationships by age or gender. For this reason, social maps showing age and gender are being created for all age groups in the Project. Such maps plot human development as individuals move from the small configuration of family and kin mentorships through larger peer networks and into more specialized networks based on work and association ties.

Most young males do not belong to peer groups or networks with constant memberships.[3] Instead, males enter a web of relationships that link cliques and small groups. These webs of affiliation pull individuals into criminal careers in two ways. First, a youth may be recruited into a network or clique either as an initiate into delinquent activity or as a past offender. Second, a youth may be recruited into a network as an accomplice in crime, that is, a co-offender. Intervention policies (see chapter 6) will depend heavily on whether groups are a primary or secondary route for recruiting and

Numerous studies have established that incarcerated offenders are likely to return to crime if they are released to socially disorganized communities.

socializing youths into delinquent conduct. The latter makes co-offending easier for youths who are already delinquent.

Loose links among youthful criminals. Youth with the highest rate of criminal activity tend to be only loosely linked to others within a network (figure 2). These youth are also likely to associate with more than one network, choose different accomplices for each offense, and operate over a large territory. Evidence suggests that these frequent offenders recruit others into delinquency and crime and that they continually search for new accomplices.

The large difference between the genders in the prevalence of crime raises an interesting question: Can the dissimilar social networks of males and females and their distinct webs of relationships account for gender differences in crime rates? The few studies that have focused on this question suggest that female offenders often belong to networks that include males who are also offenders. For example, several studies have shown that female marijuana smokers are more likely to smoke with males than females and more likely to obtain the marijuana from their male friends than from dealers.[4]

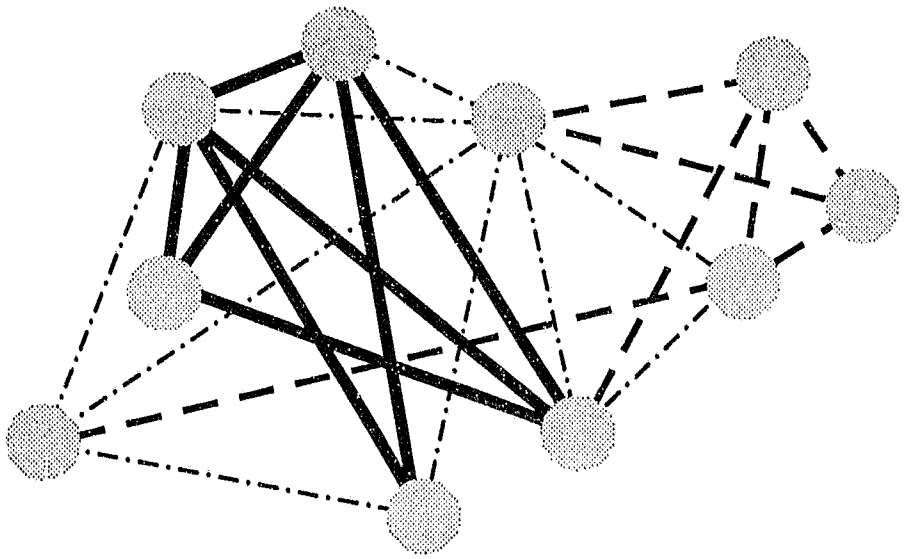
Transitory links among youth who abandon crime. Interestingly, there also appears to be an association between peer relationships and early desistance. In a London study, those who quit offending after age 17 had committed all of their offenses with co-offenders, never alone.[5] The researchers concluded that early desistance was related to the offender's transitory involvement in peer groups; those who showed early desistance usually had abandoned their peer group by age 17.

Little is known about the role of adult peer groups in offending, in part because adult offenders are more likely to commit offenses alone and less likely to be affiliated with a peer group. The Project is clarifying whether adult criminals work alone because those who need co-offenders desist early or because adult offenders learn better how to commit offenses alone.

Changes in status are clearly associated with dropping out of networks. In particular, work, marriage, military service, and changes in residence bring new associations and change an individual's web of relationships. It is not known whether these transitions are the source of desistance or whether desistance leads to adoption of new roles and ties.[6]

Density of ties important. Network density also seems to be a factor in

Figure 2. Network of members of a gang. The lines represent closeness of ties among gang members.



recruitment, continuation, and perhaps desistance. A "dense" group is one with strong ties among its members. Dense groups tend to be closed societies of either prosocial or antisocial activity. Those involved in illegal activities for which strong social sanctions exist—such as drug distribution networks—are usually quite dense. Ironically, the stronger the ties within the group, the less likely it is to open membership to outsiders.

Increases in network density reduce the number of bridges formed among groups. Interventions that break weak ties to groups should have a major impact on the diffusion of criminal activity, leaving it restricted to group members with the strongest ties.

Some evidence suggests that social sanctions work best when ties to a network are weak, particularly with a criminal market activity such as drug dealing.[7] However, sanctions that socially isolate offenders ultimately produce networks with such strong ties that it is nearly impossible for law enforcement to penetrate the structure—as exemplified in the family and kinship structure of organized crime.

Within most tightly bound networks, a leadership structure, no matter how minimal, exists. Experience shows that removing the leader from a dense network has little effect because a successor is almost always available. However, it may be possible to fragment a weak network by removing its leaders.

Rational choice theory

Criminal behavior is more than a response to social pressures or upbringing. It is also a choice.

Why do criminals choose to commit crimes? In the last few years, more and more researchers have been looking at the factors that influence such decisions. Under rational choice theory, offenders are those who calculate as best they can the costs and benefits of a situation, rather than be driven by predisposition.

It is not necessary to see an offender as completely rational in the sense of making the best and most efficient choice from an objective standpoint. They can show "limited rationality" and respond to uncertainty with either rules of thumb that draw on previously established beliefs or on standing decisions that facilitate the exchange of information.

Rational choice theory examines the effectiveness of interventions that restructure conditions so that the availability of crime opportunities is limited, the possible benefits are reduced, and the probable costs of criminal actions are increased. Clearly, this requires understanding the process of criminal decisionmaking.

With its focus on individuals rather than on opportunities for crime, the Project's interview process provides an effective tool for getting clear answers. In interviews, offenders recreate their thought processes about past crime events and discuss how they define crime opportunities.

Deterrence theory

According to deterrence theory, if punishment is swift and certain, it raises the cost of crime to the offender and thus curbs crime. The practice is centuries old and is the mainstay of many cultures' response to crime. How effectively deterrence limits crime and why it works or fails to work have yet to be explained.

Deterrence exists on a number of levels. For example, parents and other adults often informally sanction adolescents for inappropriate or delinquent actions. The police and courts provide more formal sanctions, from warnings to arrest, probation, incarceration, and parole. Recent studies indicate that getting caught and

punished for a first or early offense leads to early desistance from delinquent or criminal activity.[8]

But many questions remain to be answered:

- Is the certainty of punishment more effective than erratic punishment at deterring crime?
- How effective is punishment meted out by parents, and which types work best?
- Do sanctions work better on young offenders than on older, more experienced offenders?
- How important are community reinforcements of family and official sanctions in deterring crime? Do organized communities increase their effectiveness?

Summary

The Project on Human Development in Chicago Neighborhoods is exploring why some young delinquents persist into adult criminal careers while most other youthful offenders desist in their teens. The study is designed to gain a deeper understanding of how social interactions are related to persistence and desistance. It is examining both the social conditions that encourage socially beneficial and antisocial behavior as well as the processes by which these social conditions operate on individuals.

Peer relationships are probably the crux of desistance, so the Project is spending considerable time and effort measuring them. Although costly, time-consuming, and difficult scientifically to obtain, these data are crucial to understanding desistance from crime. Moreover, gathering information about network parameters—including the number of and ties among members in each network, its density or tightness, and the antisocial or prosocial relationships of its members—must be ongoing because changes in peer networks over time may prove to be important.

To predict desistance and persistence, the Project is assessing not only the occurrence of delinquent or criminal behaviors, but also their outcomes and consequences. Do criminal behaviors lead to punishment, ostracism, increased status in the community, or more money?

The behavior theories described in this chapter make different predictions about future behavior based on the consequences of detecting and sanctioning past behavior. They illustrate why it is important to know the offense for which a person is arrested as well as the result of any prosecution. Conversely, if an offender avoids detection, are positive consequences gained—such as money or an increase in status among peers? The Project will further our understanding of continuation in and desistance from criminal behavior by testing competing hypotheses from biological and psychological development, social control, social learning, social disorganization, network, rational choice, and deterrence theories.

Notes

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Chapter 8

Focus on Crime Prevention

For the past three decades, criminal justice professionals have relied on two different strategies to manage criminal activity. In the 1960's, diversion was the prevailing theme. Both researchers and professionals working in the criminal justice field experimented with alternative approaches, such as "outward bound" programs or social service placements, rather than jail or probation. In the 1980's and 1990's, the pendulum swung back to the traditional approach of incapacitation: imprisonment and sometimes the death penalty.

However, neither method stemmed the annual increase in criminal and violent behavior. And neither approach has provided information about the origins, persistence, or termination of criminal behavior to determine its relative effectiveness.

A third approach—prevention—has not been tried on a similar scale. The Project on Human Development in Chicago Neighborhoods aims to develop the theoretical underpinnings and practical effectiveness for large-scale prevention.

Because so much remains to be learned about the development of criminal behavior, the Project relies heavily on observation and fact-gathering. This report has described the surveys, measurements, and raw observation that form the heart of the Project.

The data collected will create a moving picture of development—both normal and deviant—from before birth to age 32, describe potential intervention strategies, and set the stage for the next generation of criminology research.

The Project's fact-gathering approach should not be interpreted to mean that this research project is the first in a new field. Previous research has produced substantial data about the nature of crime and criminals, but it has not led to comprehensive theories about how criminal behavior develops from birth onward. The Project builds on this information base and proposes to meld past accomplishments into one multidisciplinary investigation.

Out of this investigation, theories about the development of criminal behavior are being integrated and elaborated. These theories can help predict which individuals are most likely to develop antisocial or aggressive behavior as well as later delinquent or criminal behavior. They can also aid in structuring programs that either prevent individuals from developing these behaviors in the first place or steer them back toward more socially accepted behavior after they have appeared.

The Limits of Previous Theories of Criminal Activity

Several theories have been formulated to explain the evolution of criminal activity. Each one tends to explain this evolution for only a limited range of ages.

- Theories based on individual temperament or the relationship between child and caregiver help explain how antisocial behavior originates during early childhood, but do not necessarily apply to juveniles or adults.
- Control theories or those based on subcultures and peer relationships appear to predict criminal behavior among adolescents, but may not apply to children or adults.
- Social learning, rational choice, and network theories are often used to describe adult crime, but may not apply to children.

In large part, this segmentation by age stems from the limited amount of data available to researchers. Few studies were large enough, conducted long enough, or simultaneously surveyed a wide enough range of individual and community variables to accumulate the base of information needed to develop comprehensive theories on the natural history of crime.

Framing theories of antisocial behavior

To be useful, theories of antisocial conduct need to integrate the study of human development, the influence of family and community, and the role of school and peer groups. While previous studies have focused on one or more of these aspects for a limited period of time, the Project is collecting information on all of them. This wealth of data will provide important building blocks for integrative theories that blend these variables and operate over the first decades of life.

Although existing theories have helped shape the Project's design, no single theory predominates. This strategy allows the core scientific group to frame testable hypotheses that link elements from competing theories.

On the basis of the Project's methodology, these hypotheses combine individual and environmental influences. The hypotheses fall into three broad categories—differential social organization; individual differences; and relationships, peer groups, and social networks.

Testing hypotheses related to social organization

The kind and quality of social organization appears to play an important role in the development and continuation of criminal behavior (see chapter 7). A community with high mobility and heterogeneous composition will have difficulty establishing and maintaining a local consensus on norms, values, and beliefs. Instead, cultural conflict and loss of community control are encouraged, conditions that are favorable to the development of delinquent and criminal behavior.

Three cross-cutting hypotheses that the Project is investigating involve the effects of differential social organization.

Hypothesis I. The prevalence of childhood conduct problems, adolescent delinquency, and adult crime in a neighborhood is related directly to the kind of social organization in a neighborhood.

Hypothesis II. Family structure and child care vary among communities. The more single-parent households with young children in a community, the greater the likelihood that children are reared with inconsistent or harsh disciplinary measures, so that inconsistent messages are delivered in controlling children's aggressive and antisocial behaviors. Both approaches to parenting encourage aggressive attitudes and behavior to develop in children and adolescents.

Hypothesis III. Schools vary in their requirements for academic achievement. Lower standards for academic achievement increase dropout rates, reduce occupational expectations, and limit occupational attainment. Neighborhoods with poor schools also have few economic opportunities and high rates of unemployment. Limited opportunities for economic and social advancement increase the probability that antisocial behavior will occur.

Testing hypotheses related to individual differences

Individual differences in impulse control, verbal skills, and social competence are important facets of a child's personality that may represent a vulnerability to engage in criminal or aggressive activity. The following three hypotheses regarding individual characteristics are being tested.

Hypothesis IV. Children who persistently exhibit the precursors of antisocial behavior—stubbornness, hyperactivity, defiance, sense of daring, and lack of empathy—can be identified before age 6. Failure to establish secure interpersonal bonds during infancy, having a difficult temperament, or suffering an injury to the brain before, during, or after birth increase the likelihood that such a pattern will emerge.

Hypothesis V. Children identified in the preschool years are likely to persist in antisocial behavior throughout childhood

and adolescence and into early adulthood, accumulating a record of delinquent, criminal, and abusive behavior as they mature. They are more likely to abuse alcohol and illicit drugs and to engage in early and promiscuous sexual behavior than other people living in the same neighborhoods. This relatively small group, probably no more than 5 to 10 percent of all individuals in a given neighborhood, is responsible for far more crime and antisocial behavior than their numbers indicate.

Hypothesis VI. The great majority of adolescents involved in delinquent behavior do not exhibit the pattern of early and persistent antisocial behavior shown by those described above. They commit fewer serious offenses and spend much less time involved in delinquent activities than individuals who begin exhibiting anti-social behavior at an earlier age. While they may engage in alcohol and drug use at a higher rate than nondelinquent teenagers from the same neighborhoods, their rate is lower than early-onset individuals.

Testing hypotheses related to relationships, peer groups, and social networks

Throughout life, relationships help forge an individual's behavior, attitudes, and personality (see chapter 3). During early childhood, the most crucial interactions are with a caregiver. Later, friends, peers, lovers, co-workers, and neighbors—to name a few—give social cues and feedback. Some relationships may pull an individual into a life of crime or help extract that person from it.

The following two hypotheses involving relationships are being tested.

Hypothesis VII. During the transitional period from childhood to adolescence, peer groups play an increasingly significant role in determining who becomes delinquent. Groups and gangs and their loose social networks, inspired by children who are already antisocial, introduce delinquent activities to some adolescents who have not shown antisocial tendencies up until this age.

A number of factors influence the entrapment of adolescents in antisocial activities. For example, children who reach puberty earlier than normal may be drawn into groups of older, more deviant peers; underachievement in school may compromise self-esteem and produce frustration in learning; and parents may find it more difficult to monitor and control adolescents than children.

Hypothesis VIII. From midadolescence to young adulthood, a large percentage of delinquent individuals return to more conforming routines and lifestyles. A steady job, marriage, and family formation encourage desistance from delinquency and crime. In contrast, the relatively small group of persistently antisocial individuals is not likely to be influenced by such factors.

All eight of these hypotheses combine elements from a variety of prevailing theories. All focus on the early identification and prediction of both serious and transient delinquents and criminals. By testing these and other hypotheses, including those that arise during the course of the Project, and by collecting a vast amount of information on a range of variables, the Project will identify characteristics of those children and youth who are likely to become the most serious and persistent delinquents in a community. By examining the conditions that place a child at risk and the process by which these conditions exert their influence, the Project will move from statements of prediction to scientifically grounded recommendations for targeted prevention strategies.

Summary

Most criminal justice efforts begin after an individual has committed a crime or has been arrested for violent activity. By that time, he or she has learned antisocial behaviors that are difficult—and expen-

Prevention hinges on the ability to select which out of a large number of children are likely to become serious and persistent delinquents in a community.

sive—to unlearn. On the other hand, working with high-risk individuals *before* they turn to crime will give them a smoother start in life, reduce the number of crimes committed, and save money that would otherwise be spent pursuing, prosecuting, and jailing offenders.

Prevention hinges on the ability to select which out of a large number of children are likely to become serious and persistent delinquents in a community. Some of the clues that identify these children are already known, but the indicators are not yet accurate enough to allow us to target individuals for early and sustained intervention programs. The Project will identify patterns based on individual behavior, human development, and environmental context. This information should improve our ability to recognize children with the potential to become criminal or violent adults and to design more effective types of intervention for different ages.

Many more youths begin delinquent activity in adolescence than would be expected on the basis of their early development. A crucial question is whether these youths are more likely to have shortlived delinquent careers than children who have already shown evidence of antisocial behavior prior to adolescence. The Project will help to identify both the circumstances in which desistance is most likely to occur and the individuals who are most likely to give up delinquent activity. This, in turn, will help improve the types of intervention used for this age group.

Improving predictions, developing effective intervention programs, and changing social policy will save a considerable amount of money—in reduced losses from crime; in lower local, State, and Federal budgets for fighting crime; and in the enhanced productivity of otherwise criminal persons.

The Project on Human Development in Chicago Neighborhoods is poised to improve dramatically our understanding of the conditions that lead some children toward delinquent and criminal behavior. When information from the Project is combined with other ongoing longitudinal and experimental studies on criminal behavior, society will be in a better position to reduce the level of crime and violence in the Nation. Given the Project's ambitious agenda and able research team, this knowledge may be in hand within this decade.

Appendix 1

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Administrative Group

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Appendix 2

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Chicago, Illinois
November 2–3, 1990

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Workshop on Family Structure and Ethnicity
New Orleans, Louisiana
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University of Wisconsin

Joy Osofsky
Louisiana State University

Irving Piliavin
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Deborah Prothrow-Stith
Harvard School of Public Health

Stephen Raudenbush
Michigan State University

Albert J. Reiss, Jr.
Yale University

Margaret Beale Spencer
Emory University

Donald Vereen
Harvard Medical School

Sarah Wewers
Louisiana State University

Melvin Wilson
University of Virginia

Workshop on Gender Issues in the Development of Antisocial Behavior
Cambridge, Massachusetts
June 11–12, 1990

Kenneth Adams
Castine Research Corporation

Jack Block
University of California, Berkeley

Jeanne Brooks-Gunn
Educational Testing Service

Ann Brunswick
Columbia University School of Public Health

Anne Colby
Murray Research Center

Felton J. Earls
Harvard School of Public Health

Carol Nagy Jacklin
University of Southern California

Solomon H. Katz
University of Pennsylvania

John Laub
Northeastern University

Richard Linster
National Institute of Justice

Tara Martin
Murray Research Center

Joan McCord
Temple University

Jacqueline McGuire
Judge Baker Children's Center

Fayneese Miller
Brown University

Terrie Moffitt
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Joy Osofsky
Louisiana State University

Erin Phelps
Murray Research Center

Frank Putnam
National Institutes of Health

Albert J. Reiss, Jr.
Yale University

Lee Robins
Washington University School of Medicine

Robert J. Sampson
University of Chicago

Kristen Savola
Murray Research Center

Lisa A. Serbin
Universite Concordia

Margaret Beale Spencer
Emory University

Elizabeth J. Susman
Pennsylvania State University

Emmy Werner
University of California, Davis

Jennifer White
University of Wisconsin

Cathy Spatz Widom
Indiana University

Copeland Young
Murray Research Center

Deborah Zarin
Judge Baker Children's Center

Consultation Meeting on Traumatic Stress
Cambridge, Massachusetts
March 2, 1992

Laurence Aber
Russell Sage Foundation

Stephen Buka
Harvard School of Public Health

Ann Densmore
Judge Baker Children's Center

Felton J. Earls
Harvard School of Public Health

Norman Garmezy
University of Minnesota

Stuart Goldman
Children's Hospital

David Huizinga
University of Colorado

Daniel Kindlon
Judge Baker Children's Center

Karlen Lyons-Ruth
Cambridge Hospital

Jacqueline McGuire
Judge Baker Children's Center

Edward Melhuish
University of Wales

Enrico Mezzacappa
Judge Baker Children's Center

Dorothy Otnow-Lewis
New York University Medical Center

Stephen Raudenbush
Michigan State University

Patrick Skerrett
Freelance writer, Boston, Massachusetts

Elizabeth J. Susman
Pennsylvania State University

Penelope Trickett
University of Southern California

Donald Vereen
Harvard Medical School

Ellen Watters
Judge Baker Children's Center

Deborah Zarin
Judge Baker Children's Center

Workshop on Biological Measures in the Study of Aggressive Behavior
Madison, Wisconsin
September 14, 1990

Kenneth Adams
Southern Illinois University, Carbondale

Gerald L. Brown
National Institute on Alcohol Abuse and Alcoholism

Robert Cairns
University of North Carolina

Avshalom Caspi
University of Wisconsin

Suzanne Clark
University of Wisconsin

John Constantino
Albert Einstein College of Medicine

Richard Davidson
University of Wisconsin

Felton J. Earls
Harvard School of Public Health

Gary W. Kraemer
University of Wisconsin

Richard Linster
National Institute of Justice

Donald Lyman
University of Wisconsin

William Mason
University of California, Davis

William T. McKinney
University of Wisconsin

Terrie Moffitt
University of Wisconsin

Michael Raleigh
UCLA Neuropsychiatric Institute

Albert J. Reiss, Jr.
Yale University

Robert Rose
University of Minnesota

Robert J. Sampson
University of Chicago

Elizabeth J. Susman
Pennsylvania State University

J. Richard Udry
University of North Carolina

Jennifer White
University of Wisconsin

Consultation Meeting on Preventive Interventions
Woods Hole, Massachusetts
July 25–26, 1991

William Beardslee
Judge Baker Children's Center

Stephen Buka
Harvard School of Public Health

Robert Cairns
University of North Carolina

Felton J. Earls
Harvard School of Public Health

Margaret Ensminger
Johns Hopkins School of Public Health

Peter Greenwood
RAND Corporation

Ruth T. Gross
Stanford University

Gail Holliday
Harvard School of Public Health

David Huizinga
University of Colorado

Marshall Jones
Hershey Medical Center

Sheppard Kellam
Johns Hopkins School of Public Health

Doreen Koretz
National Institute of Mental Health

Lawrence Mayer
Arizona State University

Joan McCord
Temple University

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David Offord
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Stephen Raudenbush
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John Reid
Oregon Social Learning Center

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