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Exploring the Drug Use and Criminal Behavior Nexus:  
A Research Agenda and Selected Research Designs

FINAL REPORT

by

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Center for the Study of Social Behavior  
Research Triangle Institute

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which gave the project its initial guidance. Robert Gandossy did yeoman's work in preparing two documents that thoroughly reviewed the voluminous literature in the drug/crime area. Lynn Guess provided a critical eye in reading and revising the final report. His input is tremendously appreciated.

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## EXECUTIVE SUMMARY

This project to develop a drug/crime research agenda was supported by a grant (No. 78-NI-AX-0018) from the Center for the Study of Crime Correlates and Criminal Behavior of the National Institute of Law Enforcement and Criminal Justice (NILECJ), Law Enforcement Assistance Administration (LEAA). The project was carried out by the Research Triangle Institute (RTI). The following is a summary which highlights the project's activities, conclusions, and recommendations.

### Background

Early in 1975 the National Institute on Drug Abuse (NIDA) began a systematic effort to compile existing knowledge about the relationships between drug use and crime. From that knowledge base the intent was to recommend research approaches that would advance understanding about the relationships between drug use and crime. A 1976 NIDA Panel report appeared in which it was concluded that the existing literature and research efforts fell short of establishing drug/crime relationships which would permit the Panel to "draw valid general conclusions." The major contributions of the NIDA Panel report were to call attention to the lack of data that provide useful information (especially for policy purposes) on central drug/crime issues and to call for new research strategies and directions for providing those needed data.

Following the NIDA effort, Congress mandated LEAA's National Institute of Law Enforcement and Criminal Justice to "make studies and undertake programs of research to determine the relationship between drug abuse and crime and to evaluate the success of the various types of drug treatment programs in reducing crime." In response to the mandate NILECJ undertook a variety of projects. One of those projects was to develop a drug/crime research agenda. The final report, which is summarized here, is the result of an agenda development effort undertaken by the Research Triangle Institute.

### Initial Project Activity

The NILECJ drug/crime research agenda development project began with a review of the NIDA Panel report materials as well as an extensive review of literature published both prior to and subsequent to the NIDA Panel activities. Existing data sets and ongoing studies which might provide relevant empirical data for future research efforts were also identified and reviewed.

A project Advisory Board was convened. Some members of the Advisory Board were members of the earlier NIDA Panel. A working paper was provided to the Advisory Board members prior to their first meeting. The paper provided a brief overview of the literature, a discussion of measurement and sampling issues, a preliminary typology of drugs and crime, suggested research approaches, and suggested salient issues for the drug/crime area. The Advisory Board reviewed and offered amendments to this compilation of materials and suggested additional drug/crime research issues. The Advisory Board then assisted the project staff in setting priorities for the issues and in generating associated researchable hypotheses. The total set of issues generated by both the project staff and the Advisory Board were reviewed by the project staff and organized into four major issue areas--economic, life cycle, patterns of drug use, and treatment. Since NILECJ has underway drug/crime research in the area of economic issues and since NIDA is committed to a program of drug/crime research addressing treatment issues, NILECJ determined that this project should focus on the life cycle and patterns of drug use issues.

The life cycle/patterns focus calls for a research design which can identify and monitor the development and processes of drug/crime relationships. Additionally, to avoid one of the weaknesses of past research, the design should utilize a representative sample of the population. A representative sample would permit addressing the question of whether "official" drug users and offenders fairly represent all drug users and all offenders. The sample would also provide baseline data on drug use, criminal behavior, and the drug/crime nexus. From this representative sample onset behaviors would be identified and monitored. The monitoring of such behavior(s) would, in turn, provide data on the temporal sequencing of drug use and criminal behavior.



### The Ideal Research Design

The ideal design to meet these requirements is a prospective longitudinal panel design employing a random sample. While NILECJ was in agreement with this conclusion, a variety of constraints make the option for a prospective longitudinal panel research design impractical. A major constraint is financial, since a very large sample would have to be drawn and maintained over a period of years. Since drug use is a rare event (especially opiate use) in the general population, an excessively large sample needs to be drawn to yield sufficient cases that will onset the behavior of interest. An additional constraint is that much basic information about the dynamics of drug use and criminal behavior is currently lacking so that designing an adequate longitudinal survey instrument would be difficult. Before NILECJ could recommend committing the necessary resources for a major longitudinal effort, it was felt that a series of studies of a small magnitude would be more appropriate for two major reasons: first, such studies would provide useful baseline information and insights into drug/crime relationships and, second, smaller preliminary studies could simultaneously support major developmental needs for a large scale longitudinal effort.

### Alternative Research Approaches

In response to the NILECJ concerns, several research approaches or issues were suggested which independently could gather useful drug/crime data and which could also provide basic research support for the development of a future prospective longitudinal effort. First, a set of methodological issues were explored. Suggestions for methodological studies included the refinement of validation procedures for self-reported drug use and criminal behavior, the development of drug/crime typologies, the development of risk profiles for persons at risk for drug use, and a compilation of researchers' experiences with all aspects of longitudinal research projects. In addition to the methodological considerations underlying all research approaches to the drug/crime issue, other research issues discussed were the utilization of a descriptive approach to provide basic data on drug user characteristics, a cross-sectional survey design, a case study approach, and an ethnographic

approach. The strengths and weaknesses of each approach were discussed in the context of their contributions to drug/crime research.

#### A Model Research Agenda

The research in support of a longitudinal effort further suggested a model research agenda for pursuing the drug/crime issues. Broadly, the model research agenda builds on ethnographic studies which would identify critical variables in drug/crime relationships and describe the processes by which drug/crime relationships develop. In the next stage, information gleaned from the ethnographic efforts would be verified in limited or small scale surveys. Then with some certainty established about critical variables and processes, larger surveys could be undertaken. The larger surveys could be carried out with samples that permitted generalizability of findings to the total population. These three preceding levels of research activity could then set the stage for a major prospective longitudinal panel study.

#### A Recommended Research Agenda: Three Interdependent Designs

The Advisory Board in considering the constraints on mounting a longitudinal effort, the broad model research agenda proposed, and the shortcomings of past drug/crime research efforts, suggested outlines for several research designs. While these suggested research designs purposely fell short of the ideal longitudinal design, they were suggested on a pragmatic basis in an attempt to generate a feasible design with a high information yield whose costs would not be excessive. In response to the Advisory Board comments and suggestions, three formal research designs that essentially elaborate the initial model research agenda were developed.

The three designs, an ethnographic effort, a cross-sectional survey, and a short term panel study, are planned to be carried out as interdependent and consecutive projects and thereby form a recommended research agenda. Each proposed design might also be carried out independently, although it is clearly noted that the knowledge gained from the successive and related implementation of each suggested research design feeds into the subsequent design with results that are cumulative. This interdependency of research designs also has important cost reduction benefits. The

designs are ordered following the general guidelines of the model research agenda. The recommended ordering for the designs is, first, the ethnographic effort, second, the cross-sectional study, and third, the small scale panel study.

#### Ethnographic Studies

It is proposed that three simultaneous ethnographic studies be carried out in selected SMSAs in the United States. The SMSAs would be chosen based on a rough measure of the extent to which there appears to be a large proportion of drug users in that SMSA. NIDA's NDATUS system could provide a reasonable measure of this since NDATUS is an attempt to comprehensively enumerate all operating drug programs throughout the country. An ethnographic team or two would work in each SMSA for about a year and a half. Each ethnographic team would describe the processes by which drug/crime relationships develop. This in turn would generate salient research variables, research strategies, and research hypotheses. The ethnographic projects would serve as pilot studies for subsequent survey efforts.

#### Cross-sectional Survey

Following the ethnographic studies, one SMSA would be chosen for further study based on the likelihood that a sufficient number of adolescents who would begin drug use and/or criminal behaviors could be included in subsequent survey samples. With the SMSA chosen, the cross-sectional survey would begin. The survey instrument would be guided by information gained from the ethnographic efforts. The cross-sectional survey, in turn, would provide more rigorous support for the findings of the ethnographic studies. In addition, a major purpose of the cross-sectional survey would be to provide a representative sample from which findings would be generalizable to the adolescent population of the SMSA in which the survey takes place. Within the SMSA, schools would constitute the primary sampling frame. The school sampling frame would be stratified according to a risk factor for adolescent drug use. Those schools characterized as high risk for adolescent drug use would be oversampled. The representativeness of the sample would be maintained by statistical

adjustments for the stratified and oversampled subpopulations. The results of the survey would provide incidence and prevalence information about adolescent drug/crime patterns and relationships generalizable to the adolescent population of the SMSA.

#### Panel Study

The purpose of the third study, a short term panel study is to find onset behavior for drug use and/or criminal behavior and to monitor those behaviors for temporal sequencing and to pinpoint the dynamics of the drug/crime nexus. The panel study would be guided by both the ethnographic efforts and the cross-sectional survey. The ethnographic data would provide direction for the exploration of onset behavior and of the processes leading to the drug/crime nexus. The cross-sectional data would provide a picture of drug use and criminal behavior patterns among adolescents in the SMSA. This information would be vital to the selection of a study panel of adolescents whose drug use and criminal behavior characteristics are known. Once the adolescent panel is selected, members would be followed for a period of three years with interviews every half year.

By the end of the implementation of the third suggested design, a great deal of information about the relationships between drug use and criminal behavior will have been accrued. The ethnographic studies will have provided descriptive data about the dynamics and processes of drug/crime relationships. The cross-sectional study will have provided baseline data on drug use and criminal behavior patterns (as well as their intersection) for the adolescent population of the SMSA. The panel study will have provided data on adolescent drug use and criminal behavior from its onset through its temporal sequencing to its nexus. The findings of these proposed studies will provide valuable information about the relationships between drug use and criminal behavior beyond that provided by past research. Although a single SMSA would be the focus of study, findings could be tested at other locations or by a national survey. And finally, with the completion of this trio of research designs it will become clear whether a major prospective longitudinal effort would be warranted and feasible.

### Summation

Past research in the drug/crime area has not satisfactorily established the empirical components of the drug/crime nexus. Some identified needs of research are to establish baseline data for drug use and criminal behavior in a representative sample of the general population and to understand the processes of onset and sequencing for drug use and criminal behaviors. These needs point to an "ideal" prospective longitudinal panel study of adolescents. However, a variety of constraints rule out the longitudinal design. Instead, a more modest approach which achieves, in a piecemeal fashion, the identified needs of drug/crime research is proposed. Three interdependent and consecutive research designs, an ethnographic effort, a cross-sectional survey, and a short term panel study are recommended. The results of these recommended research agenda projects will significantly increment our knowledge of drug/crime relationships. In addition, the results will provide an empirical base from which to assess the feasibility of pursuing the "ideal" prospective longitudinal panel design. If the "ideal" longitudinal approach is judged feasible, the findings of the recommended drug/crime research projects will provide critical information necessary for the most effective implementation of a prospective longitudinal panel design.

## I. INTRODUCTION

Beginning with a one-day workshop early in 1975, the National Institute on Drug Abuse (NIDA) began a systematic effort to better understand the relationships between drug use and crime as they currently were understood and from that knowledge base to "recommend research approaches" to further that knowledge. The product of that nascent effort was the NIDA Panel report entitled, Drug Use and Crime.<sup>\*</sup> The resultant report became, for many, a focal point of much controversy. There was criticism from detractors as well as kudos from supporters. In many ways this response reflected the state-of-the-art in drug/crime research. Research findings were often contradictory and were challenged on a variety of levels from emotional harangues to political and policy disagreements to scientific methodological debates. In "telling it like it is", the report made itself vulnerable to the widest spectrum of debate and disagreement that the controversial topic of drugs and crime could entertain. While the report offered no final resolution to the issue, it highlighted many of the pitfalls and shortcomings of past research and suggested some improved approaches for future research efforts.

Following the NIDA effort, a 1976 Congressional mandate gave LEAA's National Institute of Law Enforcement and Criminal Justice (NILECJ) the following task:

The Institute shall, in conjunction with the National Institute on Drug Abuse, make studies and undertake programs of research to determine the relationship between drug abuse and crime and to evaluate the success of the various types of drug treatment programs in reducing crime . . . . .

(NILECJ, 1977:1)<sup>\*\*</sup>

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<sup>\*</sup> The National Institute on Drug Abuse and Research Triangle Institute. Drug Use and Crime: Report of the Panel on Drug Use and Criminal Behavior. Research Triangle Park, North Carolina: September, 1976. The National Institute on Drug Abuse and Research Triangle Institute. Appendix to Drug Use and Crime: Report of the Panel on Drug Use and Criminal Behavior. Research Triangle Park, North Carolina: September, 1976.

<sup>\*\*</sup> National Institute of Law Enforcement and Criminal Justice (NILECJ). Program Announcement: Research on the Relationship Between Drug Use and Crime. Washington, D.C.: Law Enforcement Assistance Administration, 1977.

In response to this mandate, NILECJ<sup>\*</sup> undertook a variety of projects one of which was to develop a drug/crime research agenda.

Prior research on drug-crime relationships has been reviewed and summarized through the recently completed work of the NIDA Panel on Drug Use and Criminal Behavior. The work of this panel resulted in a state-of-the-art summary review, Drug Use and Crime, which appeared in September, 1976. Using the panel's work as a baseline, NILECJ will fund a project to develop a more detailed research agenda and strategies for carrying out further research in this area in light of realistic expectations concerning the necessary data. Such an approach, with its emphasis on research strategy development and pre-testing, is in line with the primary recommendations of the NIDA Panel.

(NILECJ, 1977:2)<sup>\*\*</sup>

In early 1978, NILECJ began a project with the Research Triangle Institute (RTI) to develop a drug/crime research agenda. The first step in the project was to review the voluminous literature in the drug/crime area including the NIDA Panel report. Following the literature review, specific research subtopic areas were identified. Those identified were methodological issues, economic issues, treatment issues, life cycle issues, and patterns of drug use issues. While independently derived, these subtopic areas were similar to those around which the NIDA Panel report was written, although the NIDA Panel report gave different labels to their areas (for example, economic issues were discussed under the heading of "The Drug User and Market Behavior" and treatment issues under the heading of "Impact of Demand Reduction on Crime and Criminal Behavior").

The subtopic areas identified by the RTI project staff were reviewed by an Advisory Board convened especially to aid the staff in developing

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<sup>\*</sup> The program was undertaken by the Center for the Study of Crime Correlates and Criminal Behavior in NILECJ which is the research arm of LEAA.

<sup>\*\*</sup> National Institute of Law Enforcement and Criminal Justice (NILECJ). Program Announcement: Research on the Relationship Between Drug Use and Crime. Washington, D.C.: Law Enforcement Assistance Administration, 1977.

a research agenda.\* The Advisory Board confirmed that the subtopic areas fairly represented the drug/crime literature and then turned to generating a set of "burning" issues for each area which were then ranked by the Advisory Board according to their judged importance to research in the drug/crime area.\*\* In reviewing the first phase project products, the NILECJ staff recommended that the project turn its attention to the two subtopic areas of life cycle and patterns of drug use issues. Since this focus would, of necessity, include methodological concerns, three of the five identified subtopic areas would be considered in developing a research agenda. The rationale for excluding the economic and treatment subtopics was that NILECJ projects were already underway in the area of economic drug/crime issues and that NIDA was proceeding with a research program in the treatment area that focused on drug/crime problems. With these parameters set, a preliminary research agenda and accompanying designs were developed to speak to the basic questions of:

To what extent, and under what conditions, does drug use contribute to or "cause" criminal behavior?

To what extent, and under what conditions, does criminal behavior contribute to or "cause" drug use?

Are there common "causes" which tend to generate both criminal behavior and drug use?

Research designs, developed with the help of the Advisory Board, were specifically fashioned to avoid producing "more of the same" drug/crime research that the NIDA Panel had reviewed and criticized. The resultant research designs attempt to confront issues, heretofore largely ignored, in a rigorous scientific and yet economical fashion.

This is then the final report for the NILECJ/LEAA sponsored drug/crime project. The project development and results are firmly based on the

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\* See appendix A for a list of Advisory Board members. The RTI/NILECJ Drug/Crime Project Advisory Board will be referred to simply as the Advisory Board.

\*\* See appendix B for the issues generated and ranked by the Advisory Board.



existing literature<sup>\*</sup> and the NIDA Panel report. As the NIDA Panel report notes, the existing literature and research efforts fail to come to satisfactory terms with the basic drug/crime questions. While this is not a total rejection of existing studies and their findings, it is an assertion that existing efforts contribute little to the issues raised here. This report is an effort to give some clarification to these issues, to explore the methodological difficulties in pursuing these issues, and to suggest a research agenda and designs to, in part, answer these issue questions.

In the next section (section II) a brief history of the project is presented which provides information about the process of how the resultant research designs were derived. Section III contains the major portion of a report presented to the project Advisory Board. The purpose of that report was to aid the Advisory Board in helping to develop research designs within the constraints indicated by NILECJ. In section III an overall research strategy is suggested and the variety of ways in which that strategy might be implemented are noted. In section IV detailed research designs are discussed. The designs which are responsive to a variety of constraints, should be viewed as an interdependent set of research efforts whose individual results would have emergent cumulative qualities that provide valuable insights into the drug/crime issues. It is intended that the issues discussed in this report and the suggestions for future research will provide a broad base for new research directions and result in productive efforts made to resolve many drug/crime questions and quandaries.

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<sup>\*</sup> See Gandossy, et al. A Survey and Analysis of the Extant Crime/Drug Literature. Research Triangle Park, North Carolina: Research Triangle Institute, 1979.

## II. PROJECT HISTORICAL PERSPECTIVE

The overview in section I traces the development of the effort to generate a research agenda for the drug/crime area. In this section, the context in which the research agenda and specific research designs have emerged is described. The presentation of this developmental perspective is intended to provide clarification for the reader with respect to why particular research strategies were finally selected rather than others.

### NIDA Panel Report

The NIDA Panel, after a careful review of the available literature and data in the drug/crime area, concluded that past studies have not empirically closed on the question of whether drug use "causes"\* crime. In addition, the sets of relationships that may account for the drug/crime nexus are not solidly established. This is not to say that past research has been unproductive and has resulted in a void of knowledge, but rather issues such as the temporal sequencing of the drug/crime phenomenon and the representativeness of those sampled in drug/crime research efforts negatively reflect on the ability of that research to deal directly with the questions of what relationships characterize the drug/crime nexus and under what conditions these relationships pertain. The difficulty that the NIDA Panel experienced in dealing with the existing literature and research efforts is reflected by the following statement which appears early in their report.

The Panel was faced with constructing state-of-the-art summaries from fragments of information rather than interrelated pieces. It is with good reason that the Panel concludes that there is a pressing need for research to provide more complete information. It does so, not to avoid the responsibility of making definitive policy-relevant statements on what is now known in the crime-

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\*The question of causality, in its most rigorous form, has unduly complicated and interfered with activities in both the scientific and policy arenas by diverting attention from the resolution of practical or applied issues. The concept of causality is discussed and interpreted in section III. That discussion of causality relegates it to its proper place in the drug/crime context and thereby makes it a useful adjunct in dealing with those issues rather than a distracting, debilitating, and overemphasized problem.

drug area, but because in many instances previous research did not permit the Panel to draw valid general conclusions. Consequently, what follows constitutes the Panel's best effort at doing what it could with what is at hand.

(NIDA and RTI, 1976:2)\*

The NIDA Panel proceeded to identify the shortcomings of various research efforts and recommended guidelines or strategies for surmounting many of the identified shortcomings. Unfortunately, the Panel did not take the next step to indicate how their suggested guidelines or strategies might be carried out, what the priorities were for each, and how they interrelated for an overall research agenda. However, the major contribution of the NIDA Panel report was to call attention to the lack of data to provide useful information (especially for policy purposes) on central drug/crime issues and to the need for new research strategies and directions for providing those needed data.

#### Issues from a Review of the Drug/Crime Literature

The RTI project team undertook an extensive review of the literature in the drug/crime area\*\* which included the NIDA Panel report and its companion appendix volume.\*\*\* While the literature documents issues such as the impact of treatment on drug users and their subsequent criminal activity (even on this issue assertions were made which contradict one another), it does not offer satisfactory nor detailed evidence for

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\* The National Institute on Drug Abuse and Research Triangle Institute. Drug Use and Crime: Report of the Panel on Drug Use and Criminal Behavior. Research Triangle Park, North Carolina: September, 1976.

\*\* Gandossy, et al. A Survey and Analysis of the Extant Crime/Drug Literature. Research Triangle Park, North Carolina: Research Triangle Institute, 1979.

\*\*\* The National Institute on Drug Abuse and Research Triangle Institute. Drug Use and Crime: Report of the Panel on Drug Use and Criminal Behavior. Research Triangle Park, North Carolina: September, 1976. The National Institute on Drug Abuse and Research Triangle Institute. Appendix to Drug Use and Crime: Report of the Panel on Drug Use and Criminal Behavior. Research Triangle Park, North Carolina: September, 1976.

the dynamics of the connection between drug use and crime. The literature does, however, clearly and logically provide strong arguments for a connection between drug use and crime based on the need to generate income for the purchase of drugs where the income is generated through illegal activities. The NIDA Panel concurs on this point.

...the argument for relating criminal behavior to drug use is perhaps strongest from an economic perspective.

(NIDA and RTI, 1976:100)\*

In a recent article on the relationship between female criminality and drug use, Jennifer James, et al.\*\* , note the following:

Like male offenders, female offenders gravitate to those activities which are easily available, provide a satisfactory return, are within their skills and opportunities, and carry the lowest risk of arrest. Drug use becomes involved in their life-style and is supported by it; however, drug use does not dictate specific criminal activities beyond the obvious need for a reliable cash income.

(Emphasis added)  
(James, et al., 1979:229)

The import of the James, et al. article is that it clearly establishes the economic perspective noted by the NIDA Panel by taking the position that drug use generates the need for income and the illegal modes taken to produce that income are dictated by the skills and inclinations of the individual involved.

#### Heroin Addicts and Crime

If the study of the relationships between drug use and crime were restricted to heroin addicts, the outcomes of such research efforts might be relatively straightforward. Assuming that the price of heroin

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\* The National Institute on Drug Abuse and Research Triangle Institute. Drug Use and Crime: Report of the Panel on Drug Use and Criminal Behavior. Research Triangle Park, North Carolina: September, 1976.

\*\* James, Jennifer, et al. The relationship between female criminality and drug use. The International Journal of the Addictions, 1979, 14, 215-229.

was high, that addicts were addicted to the point that their demand for heroin was inelastic, and that addict opportunities to generate income by legitimate means were highly limited or non-existent, then logic would dictate that the addict would, of necessity, turn to criminal activity to generate income for drug purchases. Research data indicate that the price of heroin on the street is normally high and that heroin addicts have few skills and little time that can be translated into legitimate income-producing behavior. However, current evidence indicates that the extent to which the addict may be addicted (street heroin is reported by narcotics enforcement agencies to be currently between 1 percent and 3 percent pure) and the extent to which the addict has inelastic demand for heroin is more limited than once thought by researchers. So, what appeared to be a relatively straightforward drug use and crime connection for heroin addicts becomes far more complex.

The drug/crime nexus for heroin addicts is perhaps the easiest one of all the drug/crime relationships to impute logically and to establish empirically. This is, of course, reflected in the literature. A major portion of the drug/crime literature deals, in fact, with heroin addicts and their involvement in criminal behavior. This leaves a significant gap, however, in our research knowledge about other types of drug users and their involvement in criminal behavior. The polydrug user, for example, further complicates research attempts to explore the drug/crime connection.

The literature also tends to focus on the drug user who becomes involved in criminal behavior but deals little with the criminal who becomes involved in drug use. Furthermore, it is not clear from existing research whether addicts and other drug users were involved, and to what extent, in criminal behavior prior to their drug use (although the weight of the evidence in this area tends to point to criminal activity prior to drug use even by addicts). Even if it were firmly established that criminal activity of some sort was usually antecedent to drug use, researchers would have to establish the significance of such a finding.

In sum, the literature reflects the fact that past research efforts have concentrated on exploring drug/crime issues and areas most amenable to empirical investigation. Heroin addicts have been, in the main, the

focus of research for at least three interdependent reasons. First, heroin addiction was long defined as a primary drug abuse problem in the United States (for example, its moral implications are defined as being more severe than they are for alcohol abuse which, by many criteria, is a more serious problem) because addicts are viewed as a threat to law and order in American society. Secondly, the connection between heroin use and addiction and criminal activity is more clearcut (for the several reasons noted above) than it is for any other type of illicit substance. Finally, due to the emphasis on heroin and heroin addiction a variety of law enforcement efforts and treatment programs have served to officially identify many of those using heroin. These identified addicts, in turn, served as a ready pool of research subjects for exploring drug/crime relationships.

#### Other Issues

The development of research focusing on heroin addicts, as understandable as that development may be, bypasses many other drug/crime issues some of which are central and vital to answering questions about the relationships between drug use and crime. As was noted earlier, a primary research focus on heroin ignores the host of other drugs which may bear a relationship to criminal behavior. The use of substitute drugs by heroin addicts calls our attention to this issue and polydrug users reflect the potential complexities of attributing relationships between specific drugs and criminal behavior.

Representativeness. A primary focus on heroin users who have been officially identified (by law enforcement or treatment programs) raises questions about those heroin users who may go undetected. Researchers still do not have a clear notion about the representativeness of those heroin users studied (usually a captive audience) and all other heroin users. Furthermore, information about other types of drug users, whether polydrug users or single drug users, is skimpy; certainly the question of representativeness is a salient issue for the study of these drug users.

### Sequencing

Studies of heroin users, the variety of treatment programs to which they may be exposed, and the impact of those treatment programs on their subsequent criminal behavior answers a limited set of questions about the drug/crime relationship. Information about criminal activity prior to the treatment program is largely lacking except for the self-reports of the addicts and checks of police arrest records. While these data appear to be more trustworthy than one might anticipate, they are mostly used for assessing the impact of drug treatment on criminal behavior.

The issue then that needs to be explored in order to establish the initial drug use and criminal behavior set of relationships is onset behavior and the temporal sequencing of either behavior vis-a-vis the other behavior. Onset behavior and temporal sequencing are best studied in a prospective longitudinal design or by retrospective reporting that is closer to the event occurrence than has been reported in the literature. In order to separate out the variety of drug/crime relationships that may occur as the result of different drugs used and different patterns of criminal activity, studies of onset and temporal sequencing need to be done for users of more kinds of drugs than just heroin. The difficulties of executing such a research effort are discussed below and in section III.

Sampling the rare event. The major impediment to this approach (the prospective longitudinal design) lies in the difficulty of adequately sampling the rare event. Drug use in general appears to be a relatively infrequent event, especially for adolescents.\* Heroin use in particular

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\* A nationwide study of 11 through 17 year olds in 1976 indicated that less than 10 percent of the adolescents had used any drug other than alcohol and marijuana. None of the adolescents admitted to using heroin. (Ageton, S.S. and D.S. Elliott. The Incidence of Delinquent Behavior in a National Probability Sample of Adolescents. Project Report No. 3. Boulder, Colorado: Behavioral Research Institute, September, 1978). A 1978 study of New York State students in grades 7 through 12

is a rare event.<sup>\*\*</sup> Therefore, any design which is intended to cover the broad spectrum of drugs in order to deal with the relationships between drug use and criminal behavior in its most general terms must have the research sampling based on the rare event, in this case heroin use. In a study of adolescents designed to look at onset behavior and temporal look at onset behavior and temporal sequencing of drug use and criminal behavior, the maximum proportion of beginning heroin users one might

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indicates that less than 12 percent of the students had used any drug other than marijuana and hashish (alcohol was not included in the study; the use of stimulants for students in grades 9 through 12 ran as high as 16 percent of the sample). (Unpublished paper. New York State Division of Substance Abuse Services. Substance Use Among New York State Public and Parochial School Students in Grades 7 through 12. Albany, New York: November 1978.) A nationwide study in 1974-75 of men who were between the ages of 20 and 30 indicated that use of drugs other than alcohol and marijuana (which were 97 percent and 55 percent respectively) varied from a low of 6 percent for heroin to a high of 31 percent for all other opiates. (O'Donnell, John A., Harwin L. Voss, Richard R. Clayton, Gerald T. Slatin, and Robin G.W. Room. Young Men and Drugs - A Nationwide Survey. (NIDA Research Monograph 5). Washington, D.C.: U.S. Government Printing Office, 1976.)

Criminal and delinquent behavior, on the other hand, is more of a "normal" event among adolescents. In a 1967 national study of adolescents between the ages of 13 and 16, 88 percent of the sample reported that they had, at least once in the three year period preceding their interview, been involved in illegal behavior or activities. (Williams, Jay R. and Martin Gold. From delinquent behavior to official delinquency. Social Problems, 1972, 20, 209-229).

<sup>\*\*</sup> Ageton and Elliott (cited in the preceding footnote) report that no one in their sample admitted to heroin use. The New York State Division of Substance Abuse Services (report cited in the preceding footnote) reports 2.6 percent of their sample admitted to heroin use. O'Donnell, et al., (cited in the preceding footnote) report 6 percent of their sample indicated they had ever used heroin.



expect based on current data would be approximately 3 percent. In order to generate 100 cases of heroin users the researcher would have to sample about 3,333 adolescents. Obviously then the implications of measuring the rare event are far-reaching and important for research.

In sum, the drug/crime literature shows the predominant focus of past research has been on heroin addicts who have been arrested or who are in treatment programs, and their criminal behavior. Future research efforts need to be more concerned with representative samples of study respondents, to include a wide spectrum of drugs and polydrug use patterns, and to focus on onset and temporal sequencing of drug use and criminal behavior. Future research needs are then a significant departure from past efforts and unfortunately, past efforts have limited value for future needs.

#### Drug/Crime Advisory Board<sup>\*</sup>

Prior to the first meeting of the Advisory Board a working paper briefly highlighting the drug/crime literature, discussing some of the methodological issues in doing drug/crime research, and presenting some salient research issues was submitted to the Advisory Board for their review and comments. As the result of discussion during the first day of a two day Advisory Board meeting, a set of research issues emerged and were presented to the Advisory Board to be ranked. The results of that ranking and a listing of the issues are found in appendix B. After the ranking exercise at the beginning of the second day, the Advisory Board developed additional issues and generated researchable hypotheses. These issues and associated hypotheses may also be found in appendix B. Although many issues and hypotheses were raised in the two day meeting, it was clear, especially from the ranking of the first day issues, that the Advisory Board agreed that all were important issues but disagreed on the priorities to be assigned to each.

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<sup>\*</sup> A list of the members of the Advisory Board is contained in appendix A.

Following the first Advisory Board meeting the issues raised by the Advisory Board were analyzed and organized into subject areas -economic issues, life cycle issues, patterns of drug use issues, and treatment issues. In addition, cutting across all of these area issues and central to the design of research efforts are methodological issues.\* This organization of issues gave some conceptual clarity to the problem of developing a research agenda for the drug/crime area.

#### NILECJ Refocuses Efforts

NILECJ, in reviewing the results of work done up to and during the Advisory Board meeting, decided to narrow the project focus to the life cycle issues and patterns of drug use issues. Since NILECJ has underway drug/crime research in the area of economic issues\*\* and since NIDA is committed to a program of drug/crime research addressing treatment issues, the redefinition of issues for project concern was reasonable. Additionally, the drug/crime literature indicated that the life cycle and patterns of use issues were areas less developed by research than were the other two. Furthermore, in coming to terms with the central question of the relationships between drug use and criminal behavior, the life cycle and patterns of use perspectives were found to be the most relevant ones for developing research strategies and an overall research agenda.

#### The Ideal Design\*\*\*

As was noted above, the ideal research design for obtaining data

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\* Methodological issues are discussed in greater detail in section III. Since the development of a conceptual approach needs to precede methodological considerations, the subject area issues are initially developed independent of other concerns.

\*\* Work in this area is being carried out by the Hoover Institute for NILECJ.

\*\*\* This is discussed in more detail in section III.

most useful for establishing the relationships between drug use and criminal behavior is a prospective longitudinal panel design using a random sample. This design would provide a representative sample of the population thereby addressing the question of whether official drug users and offenders (that is, those identified by the police or by treatment programs) fairly represent all drug users and all offenders. The sample would also provide baseline data about drug use, criminal behavior, and the drug/crime nexus. The design would also allow onset behaviors to be identified and subsequently monitored. This, in turn, would provide data on the temporal sequencing of drug use and criminal activities.

Unfortunately, the ideal design has several notable constraints. The most obvious drawback to this design is that it is very costly. Longitudinal efforts are, in general, costly due to the expense of obtaining and maintaining a respondent panel over time. The major expense for the implementation of the longitudinal design arises from the need to draw an extremely large sample in order to be assured of including a sufficient number of cases in the rare event categories (for example, heroin users). This large sample would then have to be maintained for the duration of the project since every person in the sample who has not already become involved in the rare behavior remains a candidate until the behavior occurs or the project ends.

The content material for a longitudinal effort should be firmly established at the outset. Frequent or extensive changes throughout the life of a longitudinal effort are disruptive to the continuity of the data collection and analysis. A longitudinal design tolerates less change in its instrumentation than any other kind of research design. At present, knowledge about the issues that the proposed ideal design would investigate is limited. Until the needed measurable variables for such a design are more firmly established, the various stages of a longitudinal research effort could either be plagued by alterations resulting from information gained from an earlier stage of the project, or the researchers might have to continue a research effort with progressively emergent and cumulative defects.

While a prospective longitudinal design has always been a methodological option, very few longitudinal projects have been carried out. Researchers, in general, are unfamiliar with and lack experience in administering longitudinal efforts. Careful planning, proper instrumentation, and a long term staff commitment are basic elements of carrying out a successful longitudinal design. Another problem reflecting the lack of experience with longitudinal efforts is the paucity of data analysis techniques and computer software to process and analyze longitudinal data. As experience with longitudinal studies grows and as the research demand increases for methods to process and analyze data resulting from such studies, a better quality longitudinal effort will be more likely than can be expected currently.

The longitudinal approach to the drug/crime research problem does not, for a variety of reasons, appear to be a feasible approach.<sup>\*</sup> While cost considerations are a prime reason for not pursuing a longitudinal effort, there are other identifiable problems with this approach which makes its implementation premature. More basic and descriptive studies are needed to provide research maps for more complex and extensive efforts in the future, such as a major longitudinal study if indeed such preliminary studies provide evidence that greater efforts are warranted.

#### Drug/Crime Advisory Board Reconvenes

Prior to the second meeting of the Advisory Board, a paper<sup>\*\*</sup> suggesting research designs and strategies was developed based on the prior activities and thinking of the project staff and the Advisory Board. The Advisory Board reviewed the suggested research designs and strategies and met to

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<sup>\*</sup> NILECJ, while recognizing the importance of a long term longitudinal design for helping to resolve certain drug/crime research questions, rejected supporting such an effort in their research program at present. If alternative research designs provide evidence to support the need for a longitudinal effort, it is highly likely that such an effort would be undertaken in the future.

<sup>\*\*</sup> Section III is a revised version of the main body of this paper.

help develop research designs that were feasible and responsive to the needs of NILECJ. The Advisory Board agreed with the suggestions of the preliminary report provided them and tried, within the constraints drawn (for example, the NILECJ decision not to pursue the design of a long-term prospective longitudinal study at this point), to generate acceptable research designs. The Advisory Board noted that the development of such designs should avoid producing "more of the same" with reference to past research efforts. This was not a rejection of existing information but was, rather, an assertion that past studies have missed the mark on central drug/crime issues. The following selected transcribed segments from the Advisory Board meeting exemplify the Board's position.\*

This drug/crime research has been kicked around for a long time and as of '76 and the NIDA Panel, we looked at all of the literature that was existing, the analyses of the literature, and so forth. And it was clear, it was almost to the letter that we rejected the previous work as having shown anything. Then the question was wide open. What we seem to be reverting to here is going back to perhaps doing studies in a way in which another panel or reasonable group of people will come together and reject whatever we suggested. I think that looking at dollars at this point should be the second thing to do, but the first thing we should do with dollars in mind is, let's put together a research design for a study that we would call baseline. But make sure we get it down to minimum proportions. But we should feel very comfortable that designing the study in this way, of carrying it out, will lead us to make conclusions which wouldn't be judged right off the bat as biased because of the way in which we chose our subjects and the way we have carried out our work. ....Let's come up with the smallest, lowest cost that we could, but of a "pure study" and then let's figure out how much it would cost to do such a thing. But to go ahead and just create another biased study at just a slightly more sophisticated level is to not answer the question.

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\*The quotes are taken from a transcript of the proceedings of a two day meeting of the RTI/NILECJ Drug/Crime Advisory Board on June 7 and 8, 1979 at the Research Triangle Institute in Research Triangle Park, North Carolina.

The foregoing comments were made by a former member of the NIDA Panel. In reply to these comments, the political and policy considerations of developing a research agenda in the drug/crime area were raised.

Let me offer another alternative since I have a feeling I'm between a rock and a hard place. I'm not sure which the Panel is. But as a scientist I agree with what you are saying, as a politician or bureaucrat I recognize the fact that if we can't have the ideal, the alternative shouldn't be nothing. There should be some alternative that's better than just one more of those biased things we reject and I am trying to see if we can come up with the ideal and that middle thing--something that is better than what we criticized before and not nothing.

The former NIDA Panel member replies to this point.

But there has to be a threshold. A threshold to where you would say that it is not ideal, it's better--plus it's better above that threshold where this is not acceptable. That's the problem. I don't really think at this point that without reaching into the population in a systematic way, without drawing out the data which now is useful for hypotheses testing on those crucial issues related to say, the onset and the relationship between drugs and crime--some of the life cycle problems. Without doing it in that way, picking up inappropriate populations, we haven't crossed the threshold. It is unfortunate in this case that the threshold may be --- I don't mean, pure and ideal in some utopian sense, I mean be pragmatist. Let's be pragmatist and try to come up with the lowest possible cost study to which people cannot have an objection, or their objections are minimal, or their objections are objections with which we could live. Rather than burn up two days over this--we come up with something and then we try to figure how much it cost and then we cry and go back--let's get that minimum one at which we, the scientists in us, the little bit of scientists in us would say, oh, I'm not happy with this little nut and that little nut and that little nut, but it's not a DC-10.

Based on this type of exchange and thinking, the Advisory Board proceeded to grapple with the difficulties inherent in choosing rigorous, feasible, and acceptable research designs that speak to the drug/crime issues and that adequately substitute for the more costly and risky long term

prospective longitudinal panel design. The results of the Advisory Board's suggestions are found in section IV where specific research designs are presented in detail.

In the next section the groundwork and the various considerations for the development of the research designs of section IV are presented. An overall research strategy is presented along with a discussion of the types of research approaches that could be initiated to carry out the overall strategy.

### III. RESEARCH ISSUES AND APPROACHES

This section suggests research designs, approaches, and strategies for exploring the relationships between drug use and criminal behavior. This section is a reproduction, with minor modifications, of a portion of the report presented to the Advisory Board prior to their second meeting. The intent of the report was to identify, organize, clarify, and present to the Advisory Board the basic issues, methodological problems, research design alternatives, and overall research strategy for the drug/crime area. The Advisory Board was in agreement with the document presented to them and used it as a foundation on which to elaborate feasible research designs and strategies. The resultant designs are an amalgam of the efforts of both the Advisory Board and the project staff and are presented in section IV.

#### Background

As was noted earlier, at the first meeting of the Advisory Board a set of research issues pertinent to the drug/crime issue were identified by the Advisory Board members. These issues were ranked by the Advisory Board in terms of their importance for developing a research agenda in the drug/crime area. In addition, small subsets of hypotheses were generated for some of the research issues.\*

The research issues identified by the Advisory Board were subsequently categorized into four larger issue areas - economic issues, life cycle issues, patterns of drug use issues, and treatment issues. Upon review of these larger issue areas, NILECJ determined that the development of a research agenda should focus on the two areas of life cycle and patterns of drug use concerns since the economic issues for the drug/crime relationship were explored under a separate NILECJ grant and the intervention or treatment issues were felt to be in the domain of NIDA's research program.

The two general categories of life cycle issues and patterns of drug use issues were defined as follows:

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\* These issues and hypotheses, as they developed, are found in appendix B.



Life cycle characteristics: How are drug use and crime patterns distributed over individual careers? Specific questions like age of onset, maturing out, and the sequencing of drug use and crime are examples of particular questions that need to be addressed if life cycles are to be described in such a way that the crime/drug relationship can be analyzed.

Patterns of drug use: Drug use patterns by drug type and in different population subgroups need more adequate description. What are sex, age, class, race differences in the use of drugs, both by extent of use and by type of drug used? This issue requires that polydrug use patterns be specified.

These category distinctions often tended to merge when being discussed since patterns of drug use over time became part of the life cycle and the life cycle was defined primary by individual drug use and criminal behavior patterns. In order to minimize the difficulties of maintaining a somewhat artificial distinction, a single category of patterns/ life cycle will be used here. To reiterate, the patterns/life cycle issues are the focal issues for the development of agenda options for a NILECJ research program.

#### Basic Questions

NILECJ's purpose in pursuing the drug/crime issue is to develop a research agenda which holds reasonable promise of providing insight and understanding about drug/crime relationships. It is hoped that the information emerging from the research will "eventually lead to more informed crime control policies."<sup>\*</sup> Basic questions emerging from this goal are the following:

To what extent, and under what conditions, does drug use contribute to or "cause" criminal behavior?

To what extent, and under what conditions, does criminal behavior contribute to or "cause" drug use?

Are there common "causes" which tend to generate both criminal behavior and drug use?

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<sup>\*</sup> LEAA. The National Institute of Law Enforcement and Criminal Justice. Washington, D.C.: U.S. Government Printing Office, 1979, 1.

### Causality

An issue of great import for these basic questions is how one views the concept "cause." The concept of cause has been troublesome for drug/crime researchers and policymakers in the past, hence the use of quotation marks around the word. Philosophically and scientifically there is general agreement (but not total agreement) that one cannot show an empirical, material, or ontological relationship between a cause and an effect. "One reason why it is impossible to make an air-tight case for an ontological causal relationship is that the possibility of a third factor always exists, and that possibility cannot be dismissed logically."<sup>\*</sup> However, policymakers often do not hew to such rigorous scientific and philosophical standards. They typically use the term loosely and in a way that the general public would commonly use and understand the term. Policymakers want to know what "causes" what, in order to make decisions about policy strategies that will most effectively impact on the problem with which they are concerned. The translation of conservative and cautious scientific findings into public policy and action programs has been, for the most part, a perilous journey for scientific data (from the perspective of the scientist) and often a disappointment for the policymaker.

In order to come to terms with this potentially troublesome issue and to neutralize the disruptive effect it may have on developing a drug/crime research agenda, the concept "cause" will be defined here in a scientifically rigorous way without demanding proof of the ontological relationship between a cause and an effect. This could be done by adopting David Hume's terminology of "constant conjunction" as a surrogate term for causality. However, since it is often useful to be able to use the term "cause" in various discussions (particularly with policymakers), Simon's operational definition of "causality" is appropriate to adopt.<sup>\*\*</sup>

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<sup>\*</sup> Simon, Julian L. Basic Research Methods in Social Science. 2nd Edition. New York: Random House, 1978, 475.

<sup>\*\*</sup> For another discussion of the "minimum requirements for an adequate causal analysis" see Hirshi, Travis and Hanan C. Selvin. False criteria of causality in delinquency research. Social Problems, 1966, 13, 254-268. Simon acknowledges his debt to the Hirshi and Selvin work in the development of his operational definition of causality.

First, it is an association that is strong enough so that the observer believes it to have a predictive (explanatory) power great enough to be scientifically useful or interesting.

Second, the side conditions must be sufficiently few and sufficiently observable so that the relationship will apply under a wide enough range of conditions to be considered useful or interesting. In other words, the relationship must not require too many "if's," "and's," and "but's" in order to hold.

Third, for a relationship to be called "causal," there should be good reason to believe that, even if the control variable were not the "real" cause (and it never is), other relevant "hidden" and "real" cause variables must also change consistently with changes in the control variables. That is, a variable being manipulated may reasonably be called "causal" if the real variable for which it is believed to be a proxy must always be tied intimately to it.

Fourth, the more tightly a relationship is bound into (that is, deduced from, compatible with, and logically connected to) a general framework of theory, the stronger is its claim to be called "causal."

Simon goes on to say:

In brief, one can never decide with perfect surety whether in any given situation one variable "causes" a particular change in another variable. At best, given your particular purposes in investigating a phenomenon, you may be safe in judging that very likely there is causal influence. It is correct to say (as it is so often said) that correlation does not prove causation--if we add the word "completely" to make it "correlation does not completely prove causation." On the other hand, causation can never be "proven" completely by correlation or any other tool or set of tools, including experimentation. The best we can do is make informed judgments about whether to call a relationship causal.

(Simon, 1978: 497-498)

In this spirit then, research designs focused on drug/crime relationships should be constructed so as to maximize the researcher's ability to make informed judgments about the "causality" of the relationships found. In this way then the necessary transition from findings to policymaking modalities can be more confidently made while preserving the integrity of researchers making "informed judgments."

It is intended that this brief discussion of causality serve to remove for the reader any potential or existing stumbling blocks to further discussion of drug/crime issues. The three basic questions underlying drug/crime relationships are discussed next.

### Three Drug/Crime Questions

We now turn to the basic questions that serve as the underpinning or driving force for these options for a drug/crime research agenda. There are three primary questions. The first question is the prime concern of most drug/crime research: to what extent and under what conditions does drug use contribute to or "cause" criminal behavior? For about three-quarters of a century now, American social scientists have been intrigued with discovering the causes, correlates, and determinants of criminal behavior. One underlying motivation for discovering the causes of crime lies with the implications such a discovery would have for crime control strategies. An understanding of drug/crime relationships (particularly in the case where drug use stimulates criminal activity) would contribute to the general fund of knowledge on the causes of crime as well as set the stage for the development of a variety of policy strategies designed to reduce those drug related crimes.

The second question reverses the direction of causality and asks about the extent and conditions under which criminal behavior might lead to drug use. On the whole, this is a less interesting relationship than the one raised in the first question above. However, this question is implicitly tied to the first question by virtue of the possibility that criminal behavior may lead to drug use which in turn may lead to increased criminal behavior.

The third question is posed to account for the possibility of spuriousness in the relationships which might be found in answer to the first two questions. This question raises the possibility that there may be common causes or sets of circumstances out of which both criminal behavior and drug use emerge.

These relationships do not exhaust the possibilities for exploring drug/crime relationships. For example, something may be the cause of crime (for example, a criminogenic environment) and in turn that particular

criminal behavior may lead to drug use which in its turn increases the criminal behavior. These then are some related hypotheses about the many possible relationships that may be discovered between crime and drugs. More than likely no single relationship will be found to predominate but rather a variety of temporal-sequential relationships may be found.\* Figure III-1 presents a general model for organizing drug/crime research. This model suggests that the behavior of individuals involved in crime and/or drugs is mediated by such things as a criminogenic environment and other unspecified etiological factors. The question then about what generates the drug use behavior and/or criminal behavior suggests that, in the spirit of the third basic question above, whatever accounts for the first behavior may in fact also account for the second or subsequent behavior.

It should be noted at this juncture that the basic questions are truly "basic" since they are subject to becoming more detailed, modified, and refined. For example, one would more than likely be interested in refining the basic question of the drug use/criminal behavior relationship to ask how the patterns of use of different types of drugs relate to particular types of criminal behaviors.\*\*

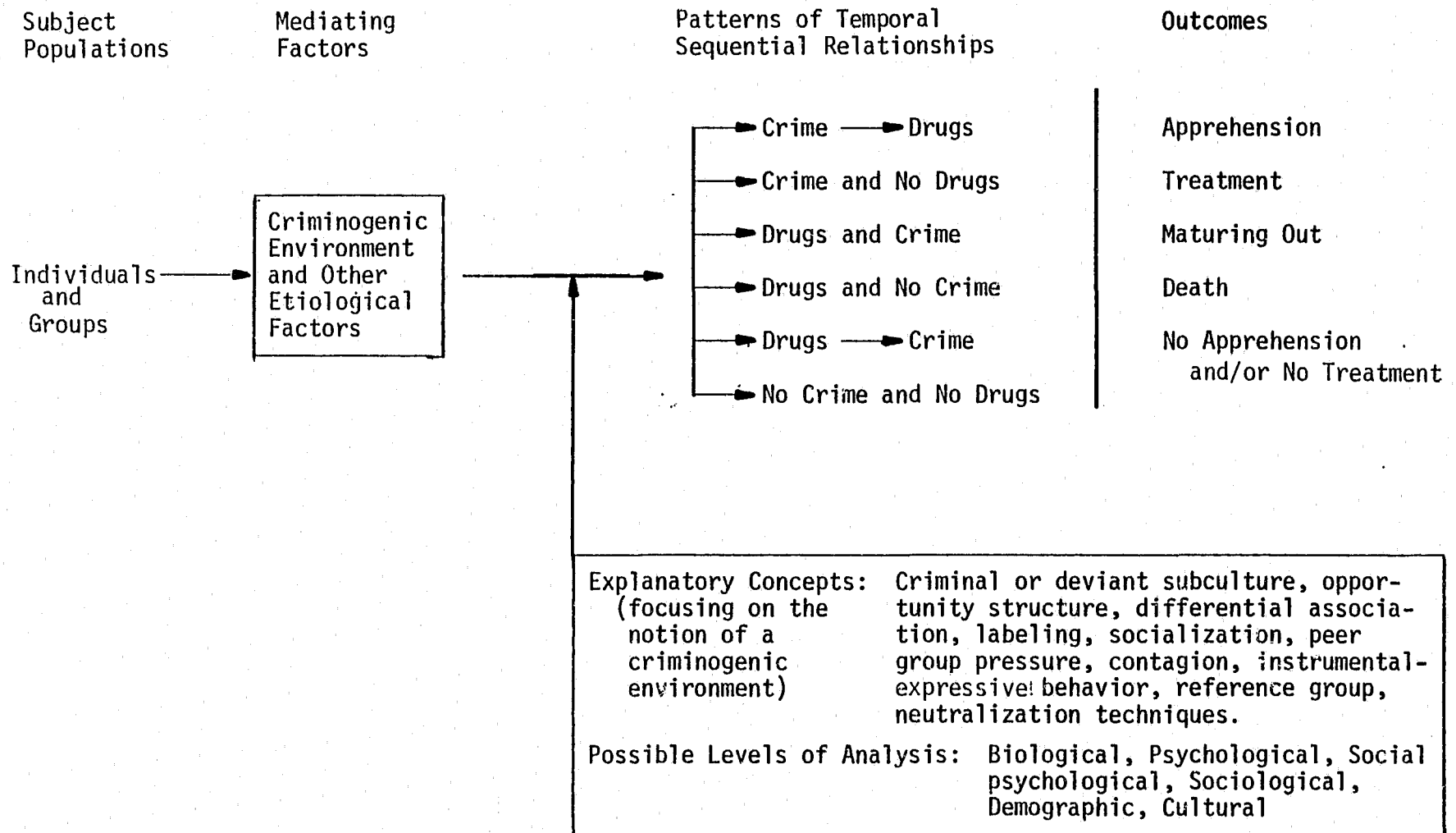
Given the necessity for detailing the elements of the "basic" questions for research purposes, the major focus raised by these research questions may be considered. Examination of the basic questions focuses the proposed research efforts on onset data. That is, in searching for "cause" or at least for answers to the question of which phenomenon precedes which, the onset of one behavior or the other is of major interest. Determination of onset and sequencing of drug use and criminal

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\* A similar position is taken by Carl Chambers. See Chambers, Carl D. Narcotic addiction and crime: An empirical review. In Inciardi, James A. and Carl D. Chambers (eds.) Drugs and the Criminal Justice System. Beverly Hills, California: Sage Publications, 1974, 125-142.

\*\* Drug classifications are given in a recent NIDA publication which is specifically designed to enhance the "comparability of research in the drug abuse field." Rittenhouse, Joan D. (ed.) Report of the Task Force on Comparability in Survey Research on Drugs. Rockville, Maryland: National Institute on Drug Abuse, 1978. A similar classification system is found for crime in the FBI's Uniform Crime Reports. For the purpose of any proposed drug/crime research, modifications to the UCR scheme would be recommended to meet the particular orientation of that research.

Figure III-1. General Model for Organizing Drug/Crime Research



behaviors is not sufficient to establish causality, but it is necessary for making decisions about any causal aspects of the drug/crime relationship.

### The Ideal Research Strategy

The ideal research strategy (barring considerations of budget, time, staffing, and other such resources) for answering the basic causal and developmental questions about the relationships between drug use and criminal behavior is through a prospective longitudinal panel research design. Alternative research designs, such as single or even repeated cross-sectional studies, do not provide careful monitoring of both onset behavior and the expanding development of complex social behaviors of drug use and criminality. No other approach provides the continuing and intensive tracing of alternative modalities for behavior sketched out in figure III-1.\*

### The Sample

A general plan for such a prospective longitudinal panel design is presented in figure III-2. The first and most basic consideration is to choose representative samples of persons who will provide the information thought to be necessary to answer the crime/drug questions. Since onset and sequencing of drug use and criminal behavior are crucial, the persons to be sampled would need to be those who have not yet become involved in either drug use or criminal behavior, which is to say, adolescents.

Recent research\*\* findings on a national sample of adolescents aged 11 to 17 indicate that the percentage of drug users (excluding alcohol users) among adolescents is low (Ageton and Elliott report that in 1976 the proportions of youth reporting ever having used drugs were (1) 17

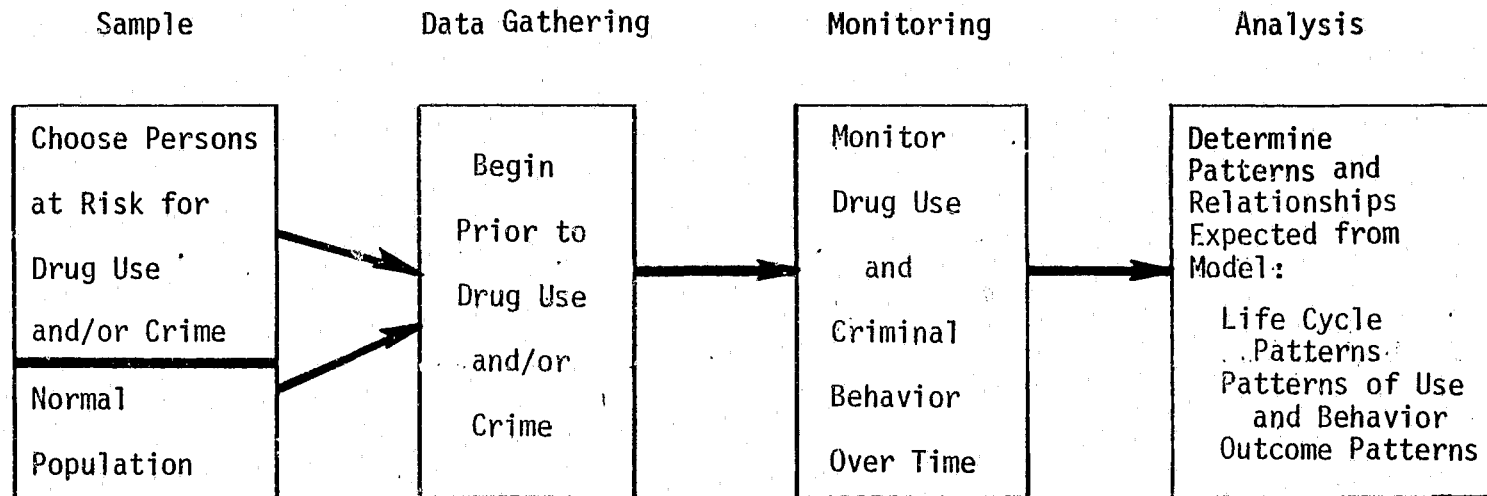
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\* Actually, a case study approach or an ethnographic approach would allow more intensive study of behavior than the longitudinal approach. However, these approaches typically suffer from small sample sizes and the lack of generalizability based on the sample composition.

For a discussion of approaches and problems for longitudinal efforts in drug research, see Kandel, Denise B. (ed.) Longitudinal Research on Drug Use. New York: Wiley, 1978.

\*\* Ageton, S.S. and D.S. Elliott. The Incidence of Delinquent Behavior in a National Probability Sample of Adolescents. Project Report No. 3. Boulder, Colorado: Behavior Research Institute, September 1978.

Figure III-2. Longitudinal Design for Drug/Crime Research





percent ever used marijuana, (2) 3 percent or less for every other type of drug, and (3) 0 percent every used heroin). Therefore, an exceptionally large initial simple random sample would have to be drawn in order to be assured of a sufficient yield of persons in the categories of interest. In order to improve the efficiency of the sample in this respect, it is proposed that a risk profile be developed by means of which persons at high risk for becoming involved in drug use and/or crime can be identified for oversampling. The sample could then be constituted by approximately 70 percent of persons from the high risk group and approximately 30 percent of persons from the "normal" population.

The "normal" segment of the sample would serve as a control group for comparison with the high risk group. Also, persons from the high risk sample and the "normal" sample who deviate from their expected drug use and criminal behavior patterns (that is, high risk adolescents who do not become involved in drug use or crime and "normal" adolescents who, against expectations, do become involved in drug use or crime) should provide additional valuable insights into the etiology of drug use and/or criminal behavior development.

Based on the recent Ageton and Elliott data, a reasonable age to begin a longitudinal study that predates the onset of drug use for most adolescents would be 10 years of age. This age corresponds well with data on onset of adolescent criminal behavior. Elliott reports that 48 percent of the 11 and 12 year olds in his survey admitted to "hitting students." This constituted the most frequently admitted offense for that age group. The bulk of the remaining 40 offenses (some of which are status offenses) asked about, however, were admitted to by well below 10 percent of the 11 and 12 year olds in the sample. It seems reasonable then to choose a sample of young persons 10 years old to begin the longitudinal panel. For most of the sample, this age should precede the onset of virtually all drug use and most criminal behavior.

#### The Sample and Crime Seriousness

As is apparent from the foregoing discussion, the sample would have to deal with adolescents or youngsters in order to carry out a prospective longitudinal panel study that deals with onset of drug use and criminal behavior. One concern with this type of sample may be that looking at

youngsters and their "criminal" or delinquent behavior may not be fruitful in terms of generating findings that would allow policy decisions about crimes targeted for intervention. Crime in the youth population may be qualitatively and quantitatively different from crime in an older population such as persons in their late teens and early twenties. For example, youth offenses may be frequent but largely trivial. While this may be the case for some youth, it apparently is not necessarily so for others. The FBI 1977 Uniform Crime Reports shows (see table III-1) the following percentage distribution for Index crimes (crimes judged to be especially serious). Based on the UCR data, serious crime by adolescents increases between the ages of 13 and 20.

Table III-1. Arrests by Age for Index Crimes

Age	Percent of Total Index Crime Arrests
10 and under	1.7%
11-12	3.8%
13-14	10.4%
15-16	17.0%
17-18	15.4%
19-20	10.7%
21-22	7.9%
23-24	6.2%
25-29	10.4%
30-34	5.6%
35-39	3.4%

NOTE: The first three age categories and the last three are taken as they appear in the UCR table; the remaining categories were collapsed for the purpose of this presentation.

SOURCE: FBI. Crime in the United States 1977. Washington, D.C.: U.S. Government Printing Office, 1978, 180-181.

Other data from a national study of undetected delinquency<sup>\*</sup> indicate that the seriousness of offenses (as measured by the Sellin-Wolfgang Index of Seriousness) also increases in this age range as does

<sup>\*</sup>Williams, Jay R. and Martin Gold. From delinquent behavior to official delinquent. Social Problems, 1972, 20, 209-229.

the frequency of offenses.\* The age range of adolescents in this study was 13 to 16 years of age. Since 28 percent of the 13 year olds in the sample had a seriousness score greater than zero for their reported offenses and the proportions with non-zero scores increased with age, one can assume that the incidence of serious offenses for adolescents is not entirely trivial. These data on delinquent behavior provide additional support, in a gross fashion, for the arrest data for youth committing UCR Index Crimes. It would appear then that by some standards youth crime is as significant and serious as adult crime. Despite the general reassurances of the data reported above, this issue should be investigated in more detail. A separate research project should explore the question of whether the crime patterns of youth do in fact resemble those of adults in terms of types of crimes and seriousness of offenses. Any differences found in such a study should then be assessed in light of their implications for the crime/drug relationship.\*\*

#### Sample Representativeness

In order to be able to generalize the findings of the longitudinal effort, the sample should be nationally representative and drawn on a probability basis. Stratification for selection of high risk and "normal" adolescents in some ratio (for example, 70 percent/30 percent) from Primary Sampling Units in a national sample frame is indicated for a more efficient sample of these two groups of interest to the proposed research.

#### Data Collection

Data gathering would ideally begin a year or so prior to the adolescent's involvement in drug use and/or criminal behavior. By following

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\* The age range of the sample was from 13 years of age to 16 years of age. At age 13, 72 percent of the adolescents had a 0 score on the Sellin-Wolfgang Index. As age increased, the proportions with a 0 score decreased: 69 percent of the 14 year olds, 67 percent of the 15 year olds, and 58 percent of the 16 year olds had a 0 score.

\*\* For example, if a particular offense could be considered more of an adult offense than a youth offense and if that offense had a strong tie with drug use, then data from a youth sample would have little bearing on clarifying the relationship between drug use and that particular crime.

or monitoring the adolescents through time, the onset of the behavior of interest could be documented in detail. The intricate patterns of polydrug use and/or "polycriminal" behavior could be traced as they occur and could be correlated with a variety of characteristics of the adolescent and his or her environment. This in turn would provide valuable data for understanding the dynamics of these behaviors and for establishing the properties associated with the various patterns of drug use and criminal behavior.

Data gathering should ideally continue on at least an annual basis for a period of 8 to 10 years<sup>\*</sup> in order to follow the development of the youngest members of the adolescent sample from age 10 to age 18 or 20 - a point at which some adolescents begin to mature out of delinquent behavior.

#### Limitations of the Ideal Design<sup>\*\*</sup>

A long term longitudinal design, while the superior approach for investigating developmental issues and temporal sequencing of behavioral patterns, is difficult to execute properly and is expensive. A typical problem encountered in such a design involves maintaining the sample intact over time. Attrition may jeopardize the representativeness of the sample because those that drop out may share special characteristics of interest to the research. Following a panel for a period of 10 years may also serve to sensitize the respondents to certain issues (such as drug use and criminal behavior) in such a way as to alter their behavior

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<sup>\*</sup> This period of time is at once a major necessity and a major drawback of the "ideal" approach. Pursuing this approach at present, it is argued, is premature.

<sup>\*\*</sup> Kandel presents a series of papers in her edited work which deal with various methodological problems and limitations of longitudinal research. This volume is of special interest in that it specifically deals with longitudinal research on drug use issues. See Kandel, Denise B. (ed.) Longitudinal Research on Drug Use. New York: Wiley, 1978.

For additional discussion of the longitudinal approach see the British work, Wall, W.D. and H.L. Williams. Longitudinal Studies and the Social Sciences. London. Heinemann, 1970.

(that is, the respondents might have behaved differently had they not been included in the study--the sensitizing impact of social research has never been adequately measured but some believe it can have significant effects on study participants).

Attention must be paid not only to attrition among respondents in a longitudinal study but attrition among the research staff must also be considered a source of potential problems. It is difficult to recruit and to get the commitment of a research staff for such a lengthy period of time. It is important that the few central members of the research staff remain on the research team for the duration of the project in order to provide the necessary direction and continuity of effort required by a longitudinal design. Continual turnover of key staff could seriously affect the efficient administration of a research project spanning a decade.

In addition to problems of staff turnover, the research group must keep their attention on the central purpose of the research. For example, modifications to the original data collection instruments may become necessary in response to project experience in order to improve the quality of the data. However, such modifications must be limited and must not interfere with the basic comparability of the data over time. The addition of new data elements and substudies and the like can and should be undertaken during the study period - but - a firm commitment to the basic data required to answer the questions that generated the research must be established from the beginning and then maintained through the project.

External events may also seriously intrude on a longitudinal effort. For example, dramatic changes in drug laws could radically alter the patterns of drug use and the relationships between such drug use and criminal behavior. Events such as changes in laws, enforcement procedures, and legal proceedings, as well as civil disturbances and international conflicts, economic changes, and technological changes, all may serve to alter social patterns so drastically as to significantly influence the focal interests of the ongoing research. Some of these changes, if carefully documented, can be incorporated into and accommodated by the research design while other changes literally may make the research little more than a historical documentation effort.

In summary, the prospective longitudinal research design using a panel sample can generate large amounts of data about developmental processes and their temporal sequencing which are superior to data generated by other research designs. The disadvantages of the prospective longitudinal panel research design are its cost, complexity of administration (for example, quality control of data), maintenance factors (for both respondents and research staff), and length of time to complete. In addition, the unresolved issue of the potential impact of repeated measures on respondent behavior is raised by the longitudinal design. In choosing a long term prospective longitudinal panel research design these factors must be dealt with in the context of the specific goals set for and resources committed to the research. Reasonable judgments need to be made in advance identifying particular methodological "sticking points" of the longitudinal design strategy. Research planners and researchers must also assess how these problem areas can be satisfactorily resolved.

#### Hypothesized Phases - Drug Use and Criminal Behavior

While a research design that investigates onset behavior may reveal a great deal about existing conditions that stimulate criminal behavior and/or drug use, a more detailed breakdown of patterns of drug use and criminal activity in terms of developmental phases may provide additional information about and insights into drug/crime relationships. For example, the patterns of frequency and type of drug use or criminal behavior and their relationships may vary significantly from one phase to another.

The notion of distinct developmental phases for drug abuse and criminal activity is, while logical, empirically speculative. This discussion hypothesizing three phases is rudimentary and subject to being empirically demonstrated. The concept of phases is introduced here to underscore the notion that if both drug use and criminal behavior are played out in distinct phases or stages with the result that the respective drug/crime relationships are affected in some important ways, complete investigation of the relationships between drug use and criminal

activity requires that any research design accomodate the phasing possibility.

The first task then would be to construct the elements of a definition for each of the phases for both drug use and criminal behavior. Then, having constructed and operationally defined the phases, the research design must empirically test them as conceptually discrete stages in the individual's developmental drug use and/or criminal behavior. The final research task would be to explore the drug/crime relationships within each phase to determine if those relationships vary in some essential way from phase to phase. In this way, these conceptual phases would provide a useful way to partition drug/crime relationships in order to gain a clearer understanding of the relationships and their complexities.

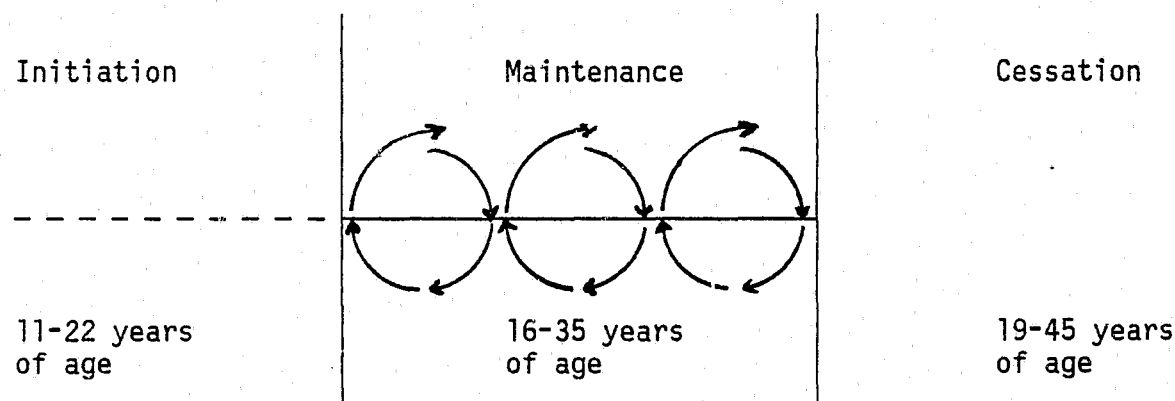
Briefly and in the most general terms, the three phases might be conceived as follows. The initiation phase is characterized by onset behavior which is sporadic and largely experimental. With respect to drugs, for example, drug use may become regular recreational use at weekly or greater intervals. The maintenance phase may consist of variable patterns of behavior ranging from steady involvement in drug use and/or crime to cyclical involvement with these activities. Cyclical involvement in these behaviors may even simulate the cessation phase because the behavior appears to be discontinued. However, since the cessation phase is only temporary the behavior may be considered to be cyclically maintained. The cessation phase is characterized by a stable remission of behavior established in the prior phases (this phase has sometimes been called the "maturing out" phase).

A series of complexities may occur in this apparently simplistic formulation of phased drug use and criminal behaviors. For example, it is conceivable that an individual drug user or criminal may be or appear to be in different phases simultaneously, as in the case of a person who uses one drug in a maintenance phase while initiating use of another drug. A polydrug user may appear to be in different phases simultaneously when, for example, a drug whose use is in its initiation phase is substituting for the drug of first choice that is in the maintenance phase. Another complexity is that the drug user or criminal may go from the initiation phase to the cessation phase without going through the maintenance

phase. Still another complexity involves the issue raised above in which the sometimes cyclical nature of the maintenance phase may mimic the cessation or possibly initiation phases. The many variations possible in the maintenance phase would have to be documented carefully and rules developed to distinguish behaviors exhibited during transition between the phases from the cyclical behaviors of the maintenance phase.

Figure III-3 presents a model of the phases discussed above along with estimates of the age ranges associated with each particular phase. The model is useful in that it sensitizes researchers to the possibilities that the initiation and maintenance phases may involve different relationships between drug use and criminal behavior; that drug use behavior may pass through the phases at a different pace from criminal behavior; and that patterns of polydrug use and "polycriminal" behavior further complicate an already complex set of events for which a relationship is being sought.

Figure III-3. Hypothesized Phases - Drug Use and Criminal Behavior with Estimated Associated Age Range for Phase Behavior



#### Hypothesized Phases - Research Strategies

The notion that different drug/crime relationships may occur particularly during the initiation and maintenance phases suggests several research strategies. Rather than assuming and planning for a single longitudinal effort to attempt to cover all the hypothesized phases (which would be a major undertaking and time consuming), two or more



longitudinal studies might be conducted simultaneously on samples of persons in the different hypothesized phases. Each longitudinal study would focus on different age cohorts and distinguish persons by their drug use and/or criminal behavior phase rather than their age. Comparisons could then be made by phase and age for exploring drug/crime relationships.

Preliminary conceptual development as well as empirical evidence for the phasing assumptions is essential before a firm commitment can be made to the above alternative research strategies. Assuming that the concept of phases could be supported, several preliminary research efforts to explore drug/crime relationships could proceed independently of a major longitudinal effort.

#### The Fate of the Longitudinal Approach

In an interim report to NILECJ on suggested research designs it was asserted that "the prospective longitudinal research design is the research design recommended for the exploration of the drug/crime relationship." NILECJ's response was that they were basically in agreement. However, before they could recommend committing the necessary resources to such an effort, they felt that a series of studies of a smaller magnitude would be more appropriate for two major reasons: first, such studies would provide useful information and insights into drug/crime relationships and, second, smaller studies could simultaneously support major developmental needs for a large scale longitudinal effort. In response to this request, the remainder of this discussion will explore and suggest research designs and strategies that address these near-term goals.

#### Research in Support of a Longitudinal Effort

The research suggested here is in the spirit of supporting an eventual longitudinal effort. However, each research design or issue discussed can stand on its own as being important to understanding more about drug/crime relationships or important methodologically for criminological research in general. Under the best of circumstances the proposed research would achieve all of these desirable goals.

### Methodological Issues

One important issue with which all drug/crime research must deal is the validation of self-reported drug use and criminal behavior. In the ideal longitudinal design, drug use and criminal or delinquent behavior would be self-reported, in all likelihood, on an annual basis. Problems with concealment and recall have not been resolved by past research. Since self-reports of undetected deviant behavior cannot always be corroborated by official records, other reliable sources of corroboration should be identified. There is then a need for a careful and thorough validation study of self-report data.\*

A second methodological issue is the measurement of drug use patterns and the development of typologies. The drug use patterns that exist (recent literature notes a shift from single drug to polydrug use) need to be determined and typologies based on existing knowledge about patterns need to be developed. Resolution of these issues would contribute greatly to measurement accuracy in the ideal longitudinal panel design.\*\* A similar need exists for the measurement of criminal behavior or polycriminal behavior. Establishing standardized and accurate measures of these behaviors would greatly enhance the longitudinal effort.

Past research has tended to treat drugs, and to a lesser extent, criminal behavior on a nonspecific conceptual level rather than to specify the particular components of each major variable. Treating drugs and criminal behavior as unitary concepts rather than considering relationships among their components tends to mask many potentially important details of drug/crime relationships. The development of

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\* See the discussion below on case studies and retrospective data which presents some of the problems common to retrospective self-reporting. These difficulties are often compounded by attempts to elicit self-reports on deviant behavior.

\*\* A recent publication from NIDA attempts to summarize, organize, and standardize definitions and measures relevant to survey research on drugs. The standardization is done with an eye to flexibility as is noted in the Introduction - "The Task Force, therefore, wishes to emphasize that the classification schemes, key variables, and recommended items and domains of the three chapters that follow are all subject to future revision." Rittenhouse, Joan D. (ed.) Report of the Task Force on Comparability in Survey Research on Drugs. Rockville, Md.: National Institute on Drug Abuse, 1978.

cross-classifications or matrices of drug and crime typologies could give more specific direction to future drug/crime research, make the research efforts more comparable, and based on research comparability, organize research findings for their maximum cumulative effectiveness in understanding the complexities of drug/crime relationships.

It will be recalled that in the discussion about sampling for the longitudinal effort a selection of adolescents at high risk for drug use was called for (although adolescents at high risk for delinquent behavior are also of interest). A separate but associated research effort to develop risk profiles is therefore needed. Development of risk profiles might best be accomplished based on a general survey that would provide basic descriptive data on user characteristics. Once reasonable risk profiles are developed, the efficiency of selecting adolescents with high probability of displaying the behavior sought by the research will be greatly enhanced.

Finally, a compilation of researchers' experiences with longitudinal studies needs to be made in order to anticipate problems and to provide useful plans for the successful management of the proposed longitudinal effort. To date, very few longitudinal research efforts have been implemented. Those efforts that have been carried out have had to face a variety of limitations such as the lack of computer programs and statistical packages to process and analyze longitudinal data sets. As a result of these difficulties, researchers have had to develop special techniques for handling and supporting longitudinal data. A compilation of the experiences and techniques developed by these researchers is needed to provide guidelines for future longitudinal efforts.

#### Other Suggested Research - Descriptive Approach

As noted above, there is a need for basic descriptive data on drug user characteristics. Although the major emphasis is needed for drug user characteristics, the characteristics of those involved in criminal behavior should also be included. While a sizeable literature on undetected delinquent behavior and the characteristics of the offenders and patterns of their offenses already exists, a similar literature on drug users is not as readily available.

The following information is important for planning a longitudinal effort.

Proportion of adolescent population involved in drug use by type and/or criminal behavior by type.

\*Age at onset for drug use.

\*Age at onset for criminal behavior.

Sequencing patterns for drug use and criminal behavior.

Drug use patterns over time (note changes by drug types and if polydrug use note combinations of drugs).

Criminal behavior patterns over time (note changes by criminal type and if "polycrime" behavior note combinations of crime types).

\*Sex, age, race, socioeconomic status, urban-rural residence, city size, family composition (number in family, family intact) and other demographic characteristics of those with the following sequencing - drugs then crime, crime then drugs, drugs and crime coterminous, drugs but no crime, crime but no drugs, and no drugs and no crime.

\*Social milieu - opportunities it offers for drug use and criminal behavior.

\*Social and psychological characteristics of those with the six sequencing characteristics - peer group characteristics, perception of peer group crime and drug use activities, number of friends, school grades, self concept, personal efficacy (internal/external controls).

This list is not meant to be exhaustive but to suggest the kinds of basic information required for any research effort in the drug/crime area. The information would contribute to such tasks as developing a risk profile, designing a proper sample, and developing a meaningful set of questions about drug/crime relationships. The more that is known about the characteristics of the target study group, the more likely it is that the research design will be thorough and feasible enough to speak to the issues of central importance, regardless of what they may be.

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\* Factors in developing a profile of persons at risk.

### Other Suggested Research - Cross-sectional Survey Design

The study design most frequently used as an alternative to the longitudinal panel effort is a one-time or repeated cross-sectional design.\* This design can be used as a psuedo-longitudinal design.\*\* In essence, the design samples persons of all ages from the population of interest rather than following a single birth cohort through time. The assumption is then made that the persons of different ages approximate the maturational movement of the single birth cohort through time. The assumption is not unreasonable provided that the time span is not excessive and that significant historical events\*\*\* have not intervened and altered the experiences of the participants in the cross-sectional design.

The usual cross-sectional design is less expensive to mount than is the longitudinal panel effort since most cross-sectional surveys collect data at only one point in time rather than repeatedly as in a panel study. In addition, problems of attrition and repeated measures do not plague the cross-sectional design even when the surveys are repeated because a new sample is drawn for each repetition of the survey. As long as events have not occurred to negate the assumption of similar developmental experiences across ages in the cross-sectional design, that design may be viewed as highly comparable to the longitudinal panel effort.

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\* For a discussion of this point, see Babbie, Earl R. Survey Research Methods. Belmont, California: Wadsworth Publishing, 1973, 65-66, 62-65.

\*\* Babbie refers to this function as "approximating longitudinal surveys." An excellent example of this use of the cross-sectional design can be found in Simmons, Roberta A., Florence Rosenberg, and Morris Rosenberg. Disturbance in the self-image at adolescence. American Sociological Review, 1973, 38, 553-568.

\*\*\* For a discussion of factors jeopardizing validity, see Campbell, Donald T. and Julian C. Stanley. Experimental and Quasi-Experimental Designs for Research. Chicago: Rand McNally, 1963, 5-6.

Identifying and choosing the target group at each sampling level for the cross-sectional design may present some difficulties. The wide net descriptive study (as described above) would provide information about the appropriate strata to include in the cross-sectional sample (the assumption is made that the sample would especially focus on persons in different stages of their drug/crime "careers"). Another sampling difficulty for this approach would be in deciding which age groups to sample; such a decision could be based on an organizing scheme such as the hypothesized phases discussed earlier. The result of other research could be used to identify and verify the phases and the age ranges of persons in those phases. If the age ranges are indeed as broad and overlapping as suggested above in figure III-3, sampling decisions might have to be based on other relevant criteria.

#### Other Suggested Research - Case Study: A Retrospective Approach

Retrospective reporting can, to the degree it is accurate, be used to reconstruct the behavior and activities of an individual in a longitudinal fashion. Data collected by means of retrospective reporting suffer, however, from reliability and validity problems which vary according to the subject matter reported and the time interval for recall. For example, reporting of past psychological states is usually troublesome and of questionable reliability since accurate reporting of a prior state may be influenced by intervening events which in turn create psychological states that distort accurate recall of the original state. And as the time interval increases from the occurrence of an event being recalled and reported, distortion from memory decay will increasingly affect accuracy of the data.

Some steps can be taken to reduce reporting error in retrospective data. One method which has gained popularity recently is a bounding technique. Reference points for the respondent are established by external verification (such as arrest records or hospitalization episodes) or by the respondent himself. The more closely these boundary points correspond to significant events in the life of the respondent, the more likely the respondent will be able to accurately reconstruct the events surrounding the significant or memorable reference points. Another way

of dealing with memory decay in retrospective reporting is to limit the recall period. Then, in order to expand this actual recall period across the maturational period being approximated, a cross-sectional study could incorporate coverage of this reporting period in its sampling design. For example, a study asking respondents to recall events for a one year period might stratify the sample by sequential ages and thereby approximate a pseudo-maturational period of six years; in this way, assuming some comparability between persons of different ages, recall for a given event such as delinquent behavior is stretched from one year to six.

An approach which can maximize the use of retrospective reporting for long time spans is the case study.\* A case study can be retrospective and/or prospective. Our concern here is with the retrospective case study. Data collection for the case study is similar in form to the survey interview in that an individual is queried about past events. The major difference comes in the characteristics of the interviewing period. In the survey interview, the interview period is relatively brief (perhaps an hour) and the interviewer typically gets brief answers, with some additional probing, to a standard set of questions. In the case study interview, the interview period is usually lengthy (perhaps interviews lasting one to two hours each twice a week for a period of months). The interviewer is typically a highly trained social scientist who follows a general topical guideline for the interviews. The interviewing is intensive as well as extensive, allowing the respondent over the life of the case study time for recall and valid reconstruction of his or her past. With a skilled interviewer, the data are usually highly detailed and useful for gaining insights into developmental experiences of the respondent. A drawback to the case study approach is that the limited number of cases, due to the time consuming methodology, severely restricts generalizability of the findings. Nevertheless, the case study approach, of all those relying on the retrospective data

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\* A case may be defined in a variety of ways depending on the particular focus of the research. A case may be an individual, an organization, a city, and so forth. For the purposes of this discussion, the case level of analysis the individual.

collection techniques, can provide the most detailed and perhaps valid data on past individual behavioral dynamics.

#### Other Suggested Research - Ethnographic Approach<sup>\*</sup>

A classic approach (honored more in theory than in practice) to survey research is to carry out a pilot study<sup>\*\*</sup> in which the investigator does preliminary field research to define the issues which will be the focus of the survey. This approach is particularly crucial when little is known about the topic area to be surveyed or where there is disagreement (in the literature or among the "experts") about the topic area. Often, an informal measure of this lack of knowledge is the proportion of open-ended to close-ended questions in survey instruments.

Many researchers and others who are conversant with the drug/crime issues and problems feel that, while there is value in the research already done, the central issues of onset, sequencing, and the possibility of a common factor or condition spawning drug use and criminal behavior have not been adequately addressed. The ethnographic approach may appropriately be used to fill what some feel is a vacuum of knowledge. The goal of an ethnographic study would be to describe the conditions and processes surrounding the drug/crime relationship in their most minute detail. The social milieu and its likely contribution to the drug/crime phenomenon would be carefully monitored. Those who are involved in drug use and criminal behavior but remain formally unidentified and unapprehended would have their activities carefully documented.

While the ethnographic approach, like any other methodology, is no panacea, its unique strengths are especially well suited to the research problem at hand. The ethnographic approach would permit an in-depth view of the components and dynamics of the drug/crime relationship. The

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<sup>\*</sup> Ethnographic research in the drug/crime area is best represented by a volume which was the outgrowth of a NIDA sponsored workshop on researching crime and drug use in natural settings. See Weppner, Robert S. (ed.) Street Ethnography. Beverly Hills, California: Sage Publications, 1977.

<sup>\*\*</sup> In the methodological literature the term "pilot study" typically refers to a dress rehearsal (small scale test) for the major survey data collection. Here "pilot study" is used to mean a study that pilots or gives guidance to the development of survey instruments and data collection plans.

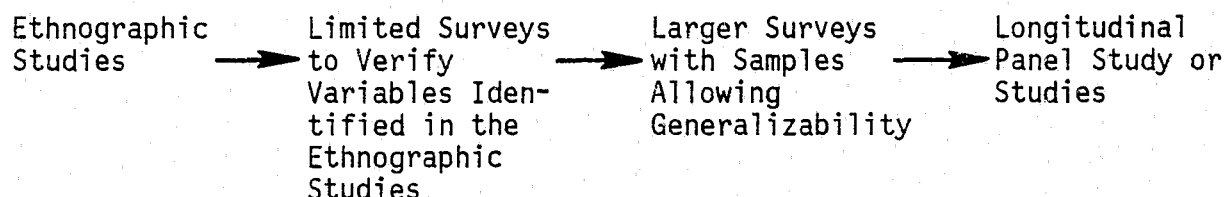


findings of the ethnographic effort would generate models of the drug/crime relationship on which further research efforts could be built. Hypotheses stemming from the ethnographic findings could be tested in a variety of limited cross-sectional survey studies whose findings in turn could be applied to and tested in larger survey efforts and ultimately serve as the basis for the ideal longitudinal panel study or studies.

The costs for an ethnographic study are modest. Taking an ethnographic approach as the first step in unraveling the drug/crime relationship puzzle promises to be cost effective. Simultaneous ethnographic studies, for example, could be mounted in selected sites throughout the United States. The sites would have to be carefully chosen to insure a reasonably high level and variety of drug use and criminal behavior. The studies could run from one to two years in duration. Except for some planning and coordination of the types of information to be gathered, the studies could be run independently with comparisons of findings made at the end of the projects. Alternatively, the ethnographers could meet periodically throughout the field studies and compare notes on progress and problems. In either case, the knowledge yield for the drug/crime relationship should be high. With these insights, the foundations could be laid on which to build increasingly larger and more highly focused survey studies.

Figure III-4 shows a model research agenda emerging from ethnographic studies and leading to a longitudinal panel study. This agenda could be followed step by step or certain steps could be deleted depending on the type and quality of the research findings.

Figure III-4. A Model Research Agenda



The ethnographic study strategy could also be used to better understand a relationship claimed by most enforcement agencies. Many enforcement officials and police officers firmly assert that the use of drugs (particularly heroin)\* eventually leads to the user's involvement in crime (usually of an income generating nature). In several cities the police conduct periodic roundups of "hypes" (heroin users), then pay close attention to the robbery, larceny, and burglary rates. Typically the police report that after the "hypes" are taken off the street, these crime rates decline. Why the rates decline is not totally clear. Ethnographers could begin to provide a clearer explanation for this oft cited outcome. They might find that increased police patrols to round up "hypes" act as a deterrent to other criminals (due to a perceived increased probability of being apprehended). On the other hand, perhaps the "hypes" have indeed been accounting for the heightened crime rate for those particular offenses.

In sum, the ethnographic method offers a highly flexible research approach with the potential for unraveling those heretofore little understood complexities of the drug/crime relationship.

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\*The observation of this writer stemming from work with narcotics enforcement groups throughout the country is that police feel that most burglaries, robberies, and thefts committed by drug users are committed by heroin addicts. The brunt of the drug/crime relationship is placed on the addict's need for money to support this habit, according to many police.

The validation of methods for estimating the amounts and types of crimes attributable to drug users should be a major concurrent objective of a NILECJ/LEAA drug/crime research agenda.

#### IV. RESEARCH DESIGNS

The development of these research designs was channeled by three basic considerations. First, the designs would need to be developed to focus on life cycle and patterns of drug use and criminal behavior issues. This focus relieves the designs from considering economic and treatment issues. This focus also highlights the need for the designs to concentrate on onset behaviors (drug use and criminal activity) and the temporal sequencing of the behaviors. Second, based on the 1976 NIDA Panel report, a review of the drug/crime literature, and the recommendations of the drug/crime Advisory Board the research needed to be designed to avoid carrying out "more of the same" research (see section II for a discussion of this point). Third, the most desirable design for researching the drug/crime relationships, namely the long term prospective longitudinal panel design, had to be discarded because of its cost and complexities (see discussion in section II).

Conditioned by the above considerations, a research agenda of specific designs began to emerge. A prospective look at onset and temporal sequencing of drug/crime behavior would constitute a significant departure from past efforts in the drug/crime research area. Onset and temporal sequencing data would also help to establish a rudimentary notion about drug/crime causal relationships (see section III for a discussion of causality). Since past research typically used samples that did not permit generalizability, a benchmark study needs to be done whose sample representativeness will aid in interpreting other studies and in establishing the generalizability of past research findings. Finally, in order to break ground in this research area a descriptive approach should be taken initially to lay the basis for explanatory model building and other subsequent research efforts. The resultant general overall research agenda is found in figure III-4. The agenda strategy begins with ethnographic studies that serve to lay the foundation for subsequent survey efforts of increasing scope and complexity.

Three designs are presented here. These designs attempt to achieve the goals discussed above for future drug/crime research. The designs are presented as being interdependent but may also be viewed, if necessary, as separate designs. The order in which they are presented is purposive since one design is intended to set the stage for the next research effort.

Briefly then the first design is an ethnographic study, the purpose of which is to discover and describe the dynamics and intricate variations of the drug/crime process. A successful ethnographic effort will serve to set the stage for further studies by identifying critical variables and relationships that need to be considered and investigated. The proposed ethnographic research would take place in selected Standard Metropolitan Statistical Areas (SMSAs) and would cover segments of the urban, suburban, and rural sections of each SMSA.

The second study, a one-time cross-sectional survey effort, would take place in the same SMSA as the ethnographic study. Although the ethnographic efforts could take place in as many as three separate SMSAs, only one of those locations would be chosen for the carrying out of the second design. The major purpose of the cross-sectional design would be to draw a sample of adolescents who would fall into the drug/crime categories of interest and whose representativeness for adolescents in the entire SMSA could be statistically determined. This in turn would provide a basis for comparison with studies which have used samples of persons officially identified as drug users and/or criminals.

The ethnographic and cross-sectional efforts would be mutually supportive with the ethnographic studies providing a solid base on which the subsequent cross-sectional study would build. Ethnographic information about the SMSA site should prove invaluable for providing information on critical parameters of the cross-sectional survey effort. The ethnographic effort could identify areas of the SMSA in which the drug and/or crime problem was particularly acute for adolescents. These high risk areas could then be oversampled in order to get a higher yield of adolescents involved in the drug/crime nexus. In turn, the cross-sectional design could provide support from its survey data for the findings and assertions of the ethnographic effort.

The third effort, a short term four year panel study (three years of data collection and one year of analysis and report writing), would also take place in the same SMSA as the cross-sectional study and the antecedent ethnographic work. The purpose of the short term panel study would be to explore the circumstances and characteristics of onset behavior and to monitor this behavior for temporal sequencing patterns of drug use and criminal behavior. The panel itself could be generated from information gained from both the ethnographic and cross-sectional efforts. The ethnographic study could identify high risk segments of the community which could be oversampled in order to yield the type of cases desired by the research purpose or focus. The cross-sectional study, as the result of in-depth interviewing of a sub-sample, could also generate panel members with the desired study characteristics. Having knowledge about the population from which these samples would be drawn allows statistical adjustments to be made to the specially sampled panel segments in order to make statements about the representativeness of that sample for the total SMSA adolescent population.

A common difficulty plaguing both the cross-sectional and panel studies is the sampling problem of dealing with the rare event. As was previously discussed in section II, the prevalence of drug users (with the exception of alcohol and marijuana) in the adolescent population is very low (ranging from 0 percent in one study to 2.6 percent in another and 6 percent in yet another for heroin and 10 percent to 16 percent for other types of drugs). In order to take into account the full range of drugs in any study, the most infrequent case (heroin) estimates must be used for determining sample sizes. Since large samples are required to yield sufficient cases of the rare event, the higher cost of such large samples must be offset by other means such as special subsamples. The research agenda and designs presented here are specifically formulated to deal with this difficult and potentially costly rare event methodological issue. While these designs are compromised by this problem, they do offer valuable insights into and information on drug/crime issues of interest. Since there is little information about the particular drug/crime issues being addressed by this proposed research, the information gained would be a worthwhile tradeoff for the necessary limitations in implementing the proposed designs.

### Design 1: Ethnographic

The purpose of the ethnographic approach is to fully describe the process that leads to the drug/crime intersection without being unduly hampered by the serious difficulty imposed on research attempts to investigate drug/crime issues--the rare event issue. The rare event refers in the main to heroin use but also applies, to a lesser extent, to all drug use. In addition, the incidence and prevalence of serious criminal behavior in a population of adolescents is limited. The intersection of these two behaviors and how that intersection occurs, which is the focus of these research efforts, creates further sampling problems. The ethnographer is free to pursue these behaviors without regard to sampling issues of statistical generalizability. The sample the ethnographer chooses is purposive and usually developed by informants.

The ethnographer with his specialized sample and frequently repeated measures by way of observation and interviews (the major ethnographic modalities) is able to obtain detailed information about social behavior and processes. The survey, with its larger samples and less frequently repeated measures or perhaps only one data collection point, can only infer this process and the dynamics of behavior. The ethnographic approach, however, can yield rich and detailed descriptive data which provides insight into the drug/crime intersection process. The ethnographic approach can provide descriptions of the process, develop hypotheses to be tested by surveys, identify the crucial variables to be included in a drug/crime study, verify knowledge already accumulated, and in general provide a sense of the parameters of the drug/crime issue to set the stage for future research efforts. A good ethnographic study is therefore an invaluable component of planning and organizing more formal survey research projects. The ethnographic study needs to be carried out first in order to provide the basic material to guide subsequent research.

The proposed ethnographic effort should be simultaneously carried out in at least three SMSAs. This will allow for regional coverage of the United States in the event SMSAs meeting other selection criteria could be regionally distributed. The multiple studies would also provide independent intersite verification of general drug/crime nexus findings. Each SMSA would be chosen on the basis of the measurable drug problem

that area was experiencing. The use of NIDA's NDATUS system would provide a reasonable measure of such problems since NDATUS is an attempt to comprehensively enumerate all operating drug programs throughout the country. These programs deal with different drug problems through various modality approaches thereby providing a certain level of information about all drug problems brought to the attention of treatment programs rather than just heroin problems (by way of methadone maintenance programs).

The first task for an ethnographer in an SMSA would be to define certain segments of that SMSA which would prove most fruitful for studying the phenomenon of interest, namely, onset behavior and temporal sequencing of the drug/crime nexus. As a minimum, the ethnographer should consider areas at the neighborhood level which contain predominantly blue collar blacks (inner city), blue collar whites (city fringe), white collar whites (suburbs), and the rural area of the SMSA.\* Obviously, one ethnographer would be unable to effectively and efficiently cover these areas. For this reason, it is suggested that an SMSA be assigned to two ethnographers\*\* who, while working independently in specified areas of the SMSA, would meet periodically to exchange information and to loosely cooperate in their ethnographic endeavor.

Toward the end of the ethnographic studies, one of the SMSAs would be chosen to pursue the next two designs. The choice of the SMSA would hinge on considerations (taken from ethnographic estimates) about which one offers the optimal amount of information for a survey approach to the drug/crime problems. Since the ethnographic information is intended to clarify the drug/crime process, salient research variables, research strategies, and research hypotheses should emerge which will enable a

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\* In addition to the suggested ethnographic focus on blacks and whites, other racial or ethnic groups (such as Hispanics, Indians, or Orientals) should also be included for ethnographic observation when they are found to be a substantial subpopulation of the SMSA.

\*\* While the term ethnographer implies a single person, it is possible that an ethnographer may opt to constitute an ethnographic team under his or her direction. An example would be a professor who utilizes the services of graduate students to complete the project and to train the students. Such an ethnographic team would have to operate under the budget allocated to a single ethnographer.

reasonably informed and precise survey to be formulated. In addition, in pursuing the research questions in an SMSA in which prior work has been done, certain information can be profitably fed into the subsequent effort. For example, high risk segments of the adolescent population can be identified by the ethnographers to aid sampling strategies for survey efforts that follow. Various contacts established by the ethnographers may facilitate entree and cooperation for the subsequent survey.

In order to insure that the ethnographers will be attuned to these subsequent survey needs, a brief orientation meeting of the ethnographers should be held prior to their fieldwork. This meeting will provide them with a sense of the kinds of information that will be needed for follow-on survey efforts such as identifying high risk areas for special oversampling or establishing working relationships with certain schools or neighborhoods which would facilitate later survey access. Planning of this sort would have to anticipate the needs of future surveys in sufficient detail so as to be instructive to the ethnographers prior to the beginning of their studies.

A period of two years should suffice for achieving this research goal -- one and a half years of fieldwork and a half year devoted to assembling the research materials gathered for writing the final report. It is estimated \$50,000 per year would be satisfactory for supporting an ethnographer in his or her study. This sum includes expenses for support such as materials (tape recorder, tapes, paper, and so forth) and services (secretary and possibly a limited number of research assistants).



## Design Summary

Design Type: Ethnographic

Design Purpose: To fully describe the process of the drug/crime nexus. To gather information which will contribute to the development of further studies of drug/crime onset behavior and temporal sequencing of behaviors. To identify critical variables for further studies and to estimate the incidence and prevalence of the problem.

Study Site: Choose three SMSAs for simultaneous study. Choose SMSAs on basis of drug problem indicator such as NDATUS information.

Sample: A purposive sample focused on the drug/crime nexus process phenomena. In each SMSA draw cases from neighborhood level. Minimally consider blue collar whites and blacks, white collar whites, and those in rural segments of each SMSA.

Type of Data Collection: Observation and interviews. Two ethnographers per SMSA working in loose cooperation.

Research Staff Requirements: Experienced ethnographers (anthropologists or sociologists). Support from graduate students desirable if directed closely by principal investigator. Support staff typist for tape transcription (if tape recordings used) and typing of reports and records.

Period of Performance: One-and-one-half years fieldwork and one-half year report writing. Two years total.

Resource Estimates:

Staff Time: Ethnographer - 70 to 90 percent time.  
Secretary - 40 to 50 percent time.  
Field staff (to assist ethnographer) - 30 to 50 percent.

Sampling costs: None (normal part of ethnographic work)

Field costs: \$50,000 per year per ethnographer (includes entire staff)

Analysis costs: Included in estimate of field costs.

Comments, Caveats, and Special Problems: The success of this research approach rests heavily on the skill of the ethnographer. If the study is successful, it will tell much about drug/crime relationships. The study is, in many ways, a baseline study which will determine the direction of future drug/crime research efforts (that is, whether to continue this line of inquiry and if so, what research strategies to adopt).

Selected drug/crime issues and hypotheses that can be addressed by this design approach may be found in appendix B, part IV.

## Design 2: Cross-sectional Survey

The purpose of the cross-sectional survey is to draw a representative sample whose characteristics are generalizable to the adolescent population of the SMSA in which the study takes place. A second purpose is to provide survey support for the findings of the ethnographic study.\* The study will sample a cross-section of adolescents based on an age range indicated as being the most productive for the study goals.\*\* This will provide incidence and prevalence measures of the behaviors being studied and the prevalence of their intersection.

### Study Site Selection

One of the three SMSAs covered in the ethnographic studies would be chosen for the cross-sectional survey. The SMSA would be chosen based on indications that there would be a sufficient number of cases of interest available for a survey. A secondary consideration would be the ease with which the survey team could gain access to the primary sampling frame - schools. Since access to school populations varies over time, the ethnographers may be best able to assess the probability of schools cooperating with the survey.

### Sampling

Once the SMSA is chosen, the ethnographers who worked in that area would be consulted to aid in developing the sample. Schools\*\*\* (and classrooms within schools) would constitute the primary sampling frame. The ethnographers could provide information about the schools in the

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\* It is assumed that the three designs presented here will be interdependent and cumulative in the knowledge they produce. However, each design may also stand on its own. However, attempting the cross-sectional or panel designs without the knowledge generated by the ethnographic study would make these two designs more difficult to execute well.

\*\* If the study is done independent of the ethnographic effort, the age range indicated by the literature would be approximately 10 years of age to 17 years of age.

\*\*\* Includes public, private, and parochial.

SMSAs that constitute high risk drug use areas for adolescents.\* The school sampling frame would then be stratified according to the risk factor determined for drug use. Another sample of school dropouts should be taken from a listing of dropouts provided by the schools falling into the primary sample. Since it is very likely that school dropouts would have a higher probability of being involved in drugs and/or criminal behavior than those still in school, it is important to include dropouts in the cross-sectional sample.

Within the school sample frame, those schools judged to have a higher risk factor for students being involved in drug use would be oversampled. While the sampling stratification and oversampling result in reduced variance for variables measured, this is tolerable since the study is largely a descriptive study and not one calling for great statistical precision for analytic purposes. As for the issue of representativeness, statistical adjustments are possible for the stratified and oversampled subpopulations in order to make satisfactory generalizations to the SMSA adolescent population.

#### School Sample and Screening Questionnaire

The procedure for sampling schools and administering a screening questionnaire would be the following. Schools drawing students from areas of the SMSA in which the prevalence of drug use appears to be high would be defined as having a student body at high risk for drug use. All schools in the SMSA would be stratified along this dimension and the highest risk schools would be oversampled to help assure that a sufficient number of adolescents who may be involved in various combinations of drug use and criminal behavior will be included in the sample. Within schools, students would be sampled by classroom. That is, classrooms

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\* Drug use (other than alcohol and marihuana), as opposed to criminal or delinquent behavior is viewed as the more rare event for adolescents. For this reason high risk drug use areas are chosen. It is also highly likely that the two deviant behaviors, drug use and criminal behavior, are closely related so that identifying a high risk drug use area would simultaneously identify a high risk criminal behavior area.

If this study were undertaken without the benefit of a prior ethnographic study, these high risk areas could be estimated in other ways - for example, the police, treatment programs, and the like.

would be subsampled from the schools sampled. Every student in the classroom would be administered a short questionnaire. This questionnaire would be a screening instrument to establish the characteristics of the persons selected in the sample and to screen for those persons who should be selected out to be interviewed in depth about their drug/crime behavior. At minimum the questionnaire should ask about onset of drug use and criminal behavior and about patterns of both behaviors. Demographic variables should also be included such as age, sex, and race. Other salient variables identified by the ethnographic studies (or in lieu of that, by the extant literature) should also be included. The total administration time for the questionnaire should be no more than thirty minutes and about twenty minutes on the average.

Since the questionnaire is a screening form (meaning that a subset of those given the questionnaire would be recontacted), some form of identification linking the questionnaires to their respondents will have to be established. Also, since sensitive self-report data are elicited, this linking will have to be done with the greatest of care so that only the researcher will be able to link names with answers. A tear-off sheet with an identification number matching one on the questionnaire would be the most straightforward way to accomplish this. Control over the identifying tear-off sheet would have to be maintained by the researcher, which indicates that the researcher's staff should administer the in-school questionnaire to provide assurances both by word and action that the answers to the questionnaire will remain under the control of the researcher and will not be available to school personnel. The length and simplicity of the survey instrument (a self-administered questionnaire), the precautions taken to preserve the confidentiality of the respondent, and the demeanor of the research administrator all will combine to help maximize eliciting truthful self-reports on the screening instrument. Also, the successful coordination of this effort with the schools involved will contribute to a higher quality of data.

The administration of the questionnaire should include a makeup period for those missing the first administration. When a classroom is chosen in the sample, a complete census of those in the classroom should be carried out. It is possible that chronic absentees may be just those

students whose behavior is the focus of the study. Another group that should be considered for the same reason is the dropout group. The names and addresses of student dropouts for those schools falling in the sample should be obtained from the school in order to contact and screen the dropouts for potential inclusion in the followup effort.

#### Followup Interview

On the basis of the screening questionnaire, a subset of four groups of students should be identified -- those students admitting to drug use only, those admitting to criminal activity only, those admitting to drug use and criminal activity, and those not involved in either activity. This group of four types would then be interviewed at some length about their activities or lack of them. Information about their peer group and the activities they engage in with the peer group as well as direct questions about the drug/crime nexus would be included along with more specific details about their drug use (by type of drug) and criminal behavior (by type of crime). The interview would be, in part, an expanded version of the screening questionnaire. The purpose of this is to provide a validation of the screening questionnaires. The extent to which students expand on specific activities and events reported in the questionnaire will provide the researcher with a better idea of the quality of the data collected in the first stage of the cross-sectional study. In addition to repeating these items, other information deemed crucial for understanding the drug/crime connection would be explored in the expanded personal interview.

The followup interview should be done outside of both the school and the respondent's home. Since many students in the schools sampled will have been screened and school officials will therefore be knowledgeable about their participation in the screening, another school contact could compromise the selected subsample of students in a variety of ways. A home interview would also compromise the student in that the amount of privacy needed for the sensitive questions covered in the interview would rarely be achieved. The establishment of a neutral interviewing site is desirable in order to gain the most reliable self-report information. The interviewers should also be matched to the student respondent

by sex and race. If students are to be interviewed at neutral sites away from the home and school, parents might feel more comfortable with the matching of their child by sex with the interviewer (this would be particularly so with females). If students are to report their deviant behavior honestly, particularly their drug use behavior, this might best be encouraged by a person of the same race (this is based on the idea that obtaining drugs and to a lesser extent, using drugs, tends to be an intraracial activity).

#### Panel Selection from Cross-sectional Study

The cross-sectional study should, through the in-depth interviews as well as through the screening effort, be able to choose potential candidates for a panel study (the third design discussed here). Insights gained from the earlier ethnographic studies along with the experience of the cross-sectional research may allow the researcher to identify potential onsetters (for either drug use, criminal behavior or a combination) as well as to identify persons at different points in sequencing behavior. From this information, a partial panel for a short term prospective panel effort could be formed. In this way the cumulative knowledge of the first two efforts discussed here could contribute to the next proposed study -- a panel study.

#### Sample Size and Costs

Next a brief discussion of the size sample that could be drawn and its associated costs is presented. Since adolescent involvement in drug use is less likely than involvement in criminal behavior (see section II), sampling calculations are based on the most conservative estimates of deviant behavior -- drug use. Table IV-1 shows a variety of sample sizes and the expected percentage intervals that would be achieved for various confidence levels based on assumptions about the distribution of drug users in an adolescent population. The estimated proportion of heroin users one might find in an adolescent population is, at best, 2.5 percent (see section II), while a more conservative estimate of the use of any type of drug other than alcohol and marijuana by adolescents is 10 percent (see section II). The table is constructed using these two

Table IV-1

Confidence Levels and Intervals for Selected Sample Sizes  
for Estimates of Adolescent Drug Use

Estimated Prevalence of Adolescent Heroin Ever Use				Estimated Prevalence of Adolescent Drug Use Excluding Alcohol and Marihuana			
p = 0.025				p = 0.1			
Confidence Levels				Confidence Levels			
n	95% (t=1.96)	90% (t=1.645)	80% (t=1.282)	95% (t=1.96)	90% (t=1.645)	80% (t=1.282)	
500	(1.13,3.87)	(1.35,3.65)	(1.60,3.40)	(7.37,12.63)	(7.79,12.21)	(8.28,11.72)	
750	(1.38,3.62)	(1.56,3.44)	(1.77,3.23)	(7.85,12.15)	(8.20,11.80)	(8.60,11.40)	
1,000	(1.53,3.47)	(1.69,3.31)	(1.87,3.13)	(8.14,11.86)	(8.44,11.56)	(8.78,11.22)	
1,250	(1.63,3.37)	(1.77,3.23)	(1.93,3.07)	(8.34,11.66)	(8.60,11.40)	(8.91,11.09)	
1,500	(1.71,3.29)	(1.84,3.16)	(1.98,3.02)	(8.48,11.52)	(8.73,11.27)	(9.01,10.99)	
2,000	(1.82,3.18)	(1.93,3.07)	(2.05,2.95)	(8.69,11.31)	(8.90,11.10)	(9.14,10.86)	
2,500	(1.89,3.11)	(1.99,3.01)	(2.10,2.90)	(8.82,11.18)	(9.01,10.99)	(9.23,10.77)	
3,000	(1.94,3.06)	(2.03,2.97)	(2.13,2.87)	(8.93,11.07)	(9.10,10.90)	(9.30,10.70)	
3,500	(1.98,3.02)	(2.07,2.93)	(2.16,2.84)	(9.01,10.99)	(9.17,10.83)	(9.35,10.65)	
4,000	(2.02,2.98)	(2.09,2.91)	(2.18,2.82)	(9.07,10.93)	(9.22,10.78)	(9.39,10.61)	
10,000	(2.19,2.81)	(2.24,2.76)	(2.30,2.70)	(9.41,10.59)	(9.51,10.49)	(9.62,10.38)	

The upper level and lower level interval points for each confidence level is expressed in percent. For example, for a sample size of 3,000 one could expect at the 80% confidence level that the number of adolescents ever having used heroin should be between 64 and 86. At the same confidence level the number of adolescents ever having used any drug except alcohol or marihuana would be between 279 and 321. The formulae for deriving the upper and lower limits of the number of persons expected from the sample are as follows:

$$P_u = \hat{p} + t \frac{\sqrt{pq}}{\sqrt{n}}$$

$$P_l = \hat{p} - t \frac{\sqrt{pq}}{\sqrt{n}}$$

values. Although the computations for this table assume a randomly selected sample rather than a multiple-framed stratified sample, the figures for the purposes of deriving some cost estimates are reasonable.

At the outset approximately three months will have to be spent in project planning and instrument design. Two instruments need to be developed. First the screening questionnaire must be carefully designed so as to be clear to the respondent, brief for administration, and useful for accurate screening. Procedures for assuring confidentiality of the information will have to be worked out in detail (assurances of anonymity cannot be given since the purpose of screening is to recontact selected respondents). The execution of the planning, preparation, and instrument development phase will be greatly aided by information from the ethnographic studies. Both familiarity gained with the study site (SMSA) as well as with particular drug/crime issues will enhance the contribution that the ethnographic data can make to the cross-sectional survey in its initial stages. It is estimated that the cost of this start-up phase of the project would be \$30,000.

It should be noted that if the cross-sectional survey is undertaken without the benefit of the proposed ethnographic studies that the initial phases of the project will consume more time and will be more costly. In addition, without being able to build on the ethnographic effort, the identification of critical variables for the proper development of instrumentation will be more difficult. To alternatively choose a cross-sectional survey independent of an ethnographic effort (or a similar pilot effort) would be more time consuming and costly than the approach suggested above and the overall findings of such a study would be, in all probability, less useful.

It is suggested that an initial sample size of 4,000 be selected. At an 80 percent confidence level, the researcher can expect to draw from between 87 to 113 adolescents who admit to using or having used heroin and from between 375 to 424 adolescents who have used or are using other drugs (besides alcohol and marihuana).<sup>\*</sup> The approximate

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<sup>\*</sup> Again, these estimates are based on simple random sampling. Since the intention is to identify high areas for drug use in particular, these estimates are conservative yields since oversampling high concentration drug use areas (represented by schools) will be expected to produce even larger samples of particular types of drug users.



cost for screening students in school is estimated to be \$15.00 per student. The cost for screening 4,000 students would then be \$60,000. The out-of-school students would cost approximately \$40.00 per student to screen (this assumes the out-of-school students are identified by the school and a list of names and addresses is generated from which to sample). Assuming about 400 out-of-school students would be contacted, the cost for screening them would be \$16,000.

The estimated cost for the in-depth student interview would be about \$100 per student. Assuming that, on the average, 150 cases could be selected for further study in each of the four groups (drug use only, criminal behavior only, drug use and criminal behavior, and no drug use or criminal behavior report), a total of 600 adolescents would be interviewed for a total cost of \$60,000.

The above cost estimate figures include instrument testing and refinement, all aspects of instrument administration (such as interviewer training, travel, callbacks, and the like). These figures do not include drawing the sample, data processing, and data analysis. Estimates, based on the screening sample size of 4,000 are \$10,000 to develop and draw the sample, \$6,000 for preparing the data for computer analysis, and \$14,000 to analyze the data. Using these assumptions, the estimated total costs for the recommended sample sizes is \$206,000.\* The period in which this could be reasonably accomplished ranges from twenty to twenty-four months.

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\*The total given the figures in the text is \$196,000. However, an additional \$10,000 is included to cover costs such as the researcher's travel to Washington for project meetings, final report writing time, anticipated problems with gaining access to schools, and other unanticipated activities.

### Design Summary

Design Type: Cross-sectional survey

Design Purpose: To draw a representative sample of adolescents in an SMSA whose drug/crime patterns and relationships may be generalized to that SMSA.

Study Site: Choose one of the three SMSAs in which the ethnographic studies were completed. Choose SMSA where indications are that the opportunity to study the drug/crime relationships is the greatest.

Sample: Sample frame is schools. Stratify schools on risk of students to be involved in drug use. Sample classrooms within schools. Sample dropouts from school lists.

From school sample which is initially screened, choose subsample of four types of behavior -- drug use but no criminal behavior, criminal behavior but no drug use, drug use and criminal behavior, and neither behavior.

Type of Data Collection: Screening is done by self-administered questionnaires. Selected subsample is given personal interview.

Research Staff Requirements: Principal investigator(s) experienced in survey research. Also need sampling statistician, field supervisors, field questionnaire administrators, field interviewers, and data processing support staff. Principal investigator(s) need substantive experience in drug use and criminal behavior areas in addition to survey experience.

Period of Performance: Twenty to twenty-four months.

Resource Estimates:

Staff time: Principal investigator - 50 to 70 percent time  
Sampling statistician - 3 months total  
Research Assistant - 75 to 80 percent time  
Secretary - 6 months total

Project planning and instrument design: \$30,000

Sampling costs: \$10,000

Field costs; \$136,000

Analysis costs: \$20,000

Total estimated cost: \$206,000

Comments, Caveats, and Special Problems: Due to trying to sample a rare event (drug use and in particular heroin use) and to establish sample representativeness for the SMSA, the sample will have to be carefully drawn to insure these goals. The screening questionnaire will have to be short enough so as not to be too costly but long enough to make using it worthwhile in terms of estimating certain behavior to the SMSA adolescent population and preliminarily exploring drug/crime relationships. School samples with their clustering of eligibles make an effort of this magnitude feasible. If the cooperation of the schools is lost, the study will not be able to be done at a reasonable cost (a household sample, for example, is not feasible). Crime will have to be defined precisely so as to exclude trivial adolescent deviant behavior. Drug use will also have to be precisely defined and in particular patterns of polydrug use will have to be accurately described. Retrospective reports should be trusted for only a short period of time. For example, when getting detail on the drug/crime nexus, a period of recall exceeding one year should be avoided in the self-report.

Selected drug/crime issues and hypotheses that can be addressed by this design approach may be found in appendix B, part IV.

### Design 3: Panel Study

The purpose of this proposed short term panel study is to look at onset behavior for drug use and/or criminal behavior and to monitor those behaviors for temporal sequencing. In the short period for which the panel study is proposed (three years data collection) the goal of the panel effort is to gather as many cases as possible which involve the dynamics of the drug/crime nexus. In order to best realize this goal, it is suggested that the panel be generated using information from the antecedent ethnographic and cross-sectional studies.\* The following discussion is based on the premise that findings from the ethnographic and cross-sectional studies carried out in the same SMSA will be used to develop the short term panel effort. Following this presentation is a discussion of how the panel effort could be carried out independently of these two other studies.

#### The Sample

Statistical generalizability of the sample is not a primary issue for this design but rather the issue of concern is the generation of a sample which will be likely to include respondents who will display the behavioral dynamics and sequencing required by the research design. The sample of potential onsetters with sequencing to the drug/crime nexus of interest can be taken from both the ethnographic and cross-sectional efforts. The ethnographers will have worked with individuals in their study that they could identify as prime candidates for various onset and probable sequencing patterns of interest. However, due to the relatively small number of persons studied by the ethnographers, compared for example to the cross-sectional effort, the ethnographic studies cannot be considered a primary source of panel members for the short term panel study.

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\* The usefulness of remaining in the same SMSA for the three research efforts becomes more and more apparent as the special needs of each study are supported by the findings of the previous studies. Since no one study (that is currently feasible) can survey the dynamics of drug/crime relationships, be descriptive, and be representative of the target population all at once, the three designs presented here best approximate this goal when implemented in the same location (an SMSA).

The selection of the panel can be made from the cross-sectional data. Since 4,000 students would have been screened in the cross-sectional study with the sample being stratified by the risk of the student being involved in drug use, that listing is a logical and feasible source for use in constituting a panel of persons who have the potential for involvement in the drug/crime nexus. It will be recalled that two levels of information would be available from the cross-sectional study. One is the information from the screening questionnaires administered to 4,000 in-school students and approximately 400 screenings of out-of-school students. The second source of information would come from the in-depth interviews with a selected subsample of the screened students.

The panel should begin with at least 200 adolescents who have been involved in either drug use or criminal behavior, but not both. This will increase the chances that some panel members will onset the other behavior in the drug/crime pair during the short term of the panel study. The remainder of the sample, 600 adolescents, should at the time of their panel entry be uninvolved in both drug use and criminal behavior.\* The majority of the 200 panel members who are involved in either drug use or criminal behavior can be drawn from the cross-sectional subsample (in-depth interviews). Provided that the panel study begins about the time of the completion of the cross-sectional in-depth interviews, the cross-sectional data will be fresh enough to constitute this special portion of the panel. Those adolescents who, at the outset of the panel study, are not involved in either drug use or crime will have to be selected from the cross-sectional initial screening (of course, some will also come from the cross-sectional in-depth interviewed subsample). Since the time elapsed from the initial screening to the end of the cross-sectional study could be as long as a year, those selected from the cross-sectional initial screening for inclusion in the panel (the 600 no drug use and no crime segment) will have to be rescreened for eligibility. Those found to have onset one behavior but not the other

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\* Since most adolescents, at some time or another, become involved in infrequent and trivial behavior that may be technically counted as delinquent or criminal behavior, definitions will have to be carefully drawn of what will constitute criminal behavior for the purposes of the panel selection.

in the rescreening will be eligible for inclusion in the special segment of the panel (the 200 who are involved in either drug use or criminal behavior but not both).

#### Implementing the Panel

Assuming that the panel is constituted, the following would occur. Everyone in the panel would be followed for a period of three years. The initial sample would include adolescents from ages 11 to 15.\* Each panel member would be interviewed every six months for three years about his or her drug use and criminal behavior as well as measuring those variables that appear to be related to the onset and sequencing phenomena. The six months monitoring interview would be essentially a screening of panel members who had not yet onset. This screening strategy would reduce the costs of semiannual contacts with the panel members. Each member of the panel who failed to manifest the behavior of interest would continue to be screened every six months. For those panel members becoming involved in drug use and/or criminal behavior, a special expanded interview designed to tap the dynamics of the process would be instituted and they too would be followed for the duration of the study.\*\* Each member of the panel would remain a member for the full three years but at different interviewing status levels as determined by their self-reported behavior.

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\* Although in section III it was suggested that 10 years of age be a beginning point for constituting a longitudinal panel, that suggestion was in the context of a long term panel study. In a short term effort the age span must be truncated to maximize the possibility of observing the behavioral process of interest. Information from the ethnographic and cross-sectional studies will, no doubt, provide the basis for modifications to this suggested age interval for the short term panel.

\*\* This highlights another reason for such frequent contact with the panel members. At any point the maximum period of recall for a panel member would be six months. Six months is viewed as a reasonable period for accurate retrospective reporting of these behaviors. Adjustments for shorter recall periods would unduly burden the panel design and significantly increase costs.

### Instrumentation and Prior Efforts

Much of the content of the screening/monitoring instrument for the panel and the in-depth followup instrument would be determined by the findings of the earlier ethnographic effort. The panel effort would be guided by the ethnographic studies and in turn would serve to provide survey data in support of those findings. The cross-sectional study would provide information on some of the characteristics which earmark adolescents who have a high probability of becoming involved in onset behavior. The panel study would benefit by being able to use these data to help in choosing a sample that would have a high yield of onsetters; panel results would also serve to verify that these are characteristics correctly identified by the cross-sectional effort. The interplay of information between the three designs should be extensive. Provided all three efforts take place in the same SMSA, this interplay and the usefulness of each effort's findings would be significantly strengthened.

### An Independent Panel Study

An alternative to the panel study discussed above which is highly dependent upon prior ethnographic and cross-sectional efforts, is the independent panel study which derives no information or benefit from ethnographic or cross-sectional efforts. In that case, the following strategy could be followed. A procedure similar to drawing the cross-sectional sample would be followed. A preliminary analysis of the site in which the panel study would be done should be carried out in order to stratify the areas of the city or SMSA and the schools<sup>\*</sup> in those areas in which adolescents would be at high risk for drug use and criminal behavior. Like the cross-sectional sample, a sample of 4,000 adolescents would be selected from schools. These adolescents would be screened in order to choose panel members. This screening would be carried out in the schools with the same rules and caveats as noted for the cross-sectional design. The major focus of the screening would be to develop

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\* The alternative to sampling schools is to sample households. A household sampling for adolescents would be highly expensive and have less chance, dollar for dollar, to yield adolescents in the rare event category of drug use.

a panel of 600 cases which appeared to have the potential to begin drug use or criminal behavior and to proceed to the drug/crime nexus in the period of the study. The success of selecting such a purposive subsample would largely rest on making accurate estimates of which schools had a high proportion of adolescents at risk for such behavior. In order to further heighten the potential for finding the drug/crime nexus during the period of the panel study, an additional 200 adolescents who indicated on the screening questionnaire that they had been involved in either drug use or criminal behavior (but not both) would be inducted into the panel.

A major drawback of the independent panel study is its inability to benefit from information from prior studies (that is, the ethnographic and cross-sectional efforts). In effect some preliminary work paralleling the ethnographic and cross-sectional efforts would have to be done preparatory to the sampling of schools and screening the student sample to constitute the panel. In table IV-2 cost estimates are given for both the panel study approaches discussed above.

Table IV-2

Estimated Costs for Panel Study Design Done As  
Follow-up to Cross-Sectional Study or Independently

		<u>Follow-up to Cross-sec- tional Study</u>	<u>Independent Effort</u>
Project Planning and Instrument Design		\$ 6,000	\$ 60,000
Drawing Sample		2,000	10,000
Initial Screening (Year 1 - Point 1)		5,000	60,000
Year 1 - Point 2			
600 Screens x \$40	\$24,000		
200 Depth Interviews x \$100	20,000		
Project On-Site Staff Costs	40,000		
Data Processing	<u>6,000</u>	90,000	90,000
Year 2 - Point 1			
500 Screens x \$40	\$20,000		
300 Depth Interviews x \$100	30,000		
- Point 2			
450 Screens x \$40	18,000		
350 Depth Interviews x \$100	35,000		
Project On-Site Staff Costs	40,000		
Data Processing	<u>8,000</u>	151,000	151,000
Year 3 - Point 1			
400 Screens x \$40	\$16,000		
400 Depth Interviews x \$100	40,000		
- Point 2			
350 Screens x \$40	14,000		
450 Depth Interviews x \$100	45,000		
Project On-Site Staff Costs	40,000		
Data Processing	<u>10,000</u>	165,000	165,000
Year 4 - Data Analysis and Report Writing		<u>100,000</u>	<u>100,000</u>
GRAND TOTAL		<u>\$519,000</u>	<u>\$636,000</u>



### Design Summary

**Design Type:** Short term panel study

**Design Purpose:** To trace onset behavior for drug use and criminal behavior through its temporal sequencing to its nexus.

**Study Site:** Use SMSA established by ethnographic effort and cross-sectional study. Alternative strategy to choose an SMSA which appears to have drug use problems among its adolescents (see discussion in Design 1.)

**Sample:** Base sample on work of cross-sectional study. Draw sample from cross-sectional screening. Alternative is to draw sample in same manner as drawn in cross-sectional study and proceed to subsample from screening (see discussion of cross-sectional sampling).

**Type of Data Collection:** Periodic (six months) screening interviews with followup in-depth interview if respondent meets particular behavior criteria for detailed study. Alternative is same as cross-sectional study. Screening questionnaire with followup interviews of selected subsample.

**Research Staff Requirements:** Principal investigators (two co-principal investigators to allow for continuity of three year data collection effort) should be experienced in survey research with substantive experience in drug use and crime areas. Since interviewing takes place every six months, at least one of the principal investigators should have a full time commitment to the project (that is, at least 85 - 90 percent). Also need support staff of sampling statistician, field supervisors, field interviewers, and data processing staff (this latter group should be overseen by a research assistant from the project along with one of the principal investigators).

**Period of Performance:** Four years. Three years data collection and one year split between preparation for data collection and final report writing.

#### **Resource Estimates:**

**Staff time:** Principal investigator - 85 to 90 percent  
Co-principal investigators - 50 percent  
Sampling statistician - 1 to 3 months, depending on plan adopted  
Research Assistant - 75 to 80 percent  
Secretary - 4 months per year average

**Sampling Costs:** \$2,000 if cross-sectional study used.  
\$10,000 if independent effort undertaken.  
(See Table IV-2)

**Field costs:** (See Table IV-2 for details)

**Analysis costs:** (See Table IV-2 for details)

**Total estimated cost:** (See Table IV-2 for details)

**Comments, Caveats, and Special Problems:** It will be difficult to capture the onset and temporal sequencing phenomena in a three year period. Therefore, the group chosen to be followed will have to be chosen to maximize the possibility that these behaviors will occur. The ability to use information from the ethnographic and cross-sectional studies will significantly strengthen the yield of desirable panel members. However, if the study is done independently much more effort and expense will have to be put forth for a comparable outcome. Keeping respondents in the panel for a period of three years may be difficult particularly in light of the fact that the persons most likely to be involved in the drug/crime nexus may also be the ones most difficult to recontact at six months intervals. A great deal of effort will have to be expended to keep the panel intact. Retrospective reporting of drug use or criminal behavior will only lag by six months but the reporting may still be less than precise unless the data instrument makes appropriate inquiries and probes and the interviewers are carefully trained to elicit full information.

Selected drug/crime issues and hypotheses that can be addressed by this design approach may be found in appendix B, part IV.

### Research Agenda and Design Relationships

The three designs presented above follow the model research agenda found in figure III-4. The ultimate goal of that research agenda is to carry out a long term, large scale panel study on drug/crime relationships. What precedes that "ideal" design serves two functions. One function is to develop information and methodological techniques to successfully execute such a longitudinal study. The other function is to assess the feasibility and importance of continuing the research agenda to its "ideal" conclusion.

### Interdependent Designs

The three designs, as presented, are interdependent. The knowledge gained from the implementation of each research design feeds into the subsequent design and the results are cumulative. The ordering of the designs is most important. In order to maximize the interdependency of the designs, the recommended order is--first, the ethnographic study, second, the cross-sectional study, and third, the small scale panel study. A discussion of ordering implications for each design follows below.

### Ethnographic Design

The ethnographic research is meant to set the basic parameters for the inquiries that follow it. The ethnographic effort is intended to describe the process that leads to the drug/crime nexus and thereby to identify the crucial variables that should be explored in the cross-sectional and panel study survey approaches. The ethnographic studies are to provide a basic understanding of the relationships existing between drug use and criminal behavior. Without this basic understanding of the drug/crime dynamics, the cross-sectional and short term panel efforts are likely to produce "more of the same" information or at best only a small increment in our understanding of drug/ crime relationships. The ethnographic approach then is a vital base from which to begin. If a single design were to be chosen for implementation, it should be the ethnographic study.

### Cross-sectional Design

The second design in the series is the one time cross-sectional survey. This study is meant to provide researchers with some baseline data on the drug/crime nexus from a general population rather than from captive populations such as is found in prisons and treatment programs. The ethnographic findings have important implications for the cross-sectional study ranging from aiding the efficiency of the sample selection to the content of the in-depth interviews. While the cross-sectional study could be done without the ethnographic effort preceding it, such an approach would be less informed and perhaps result in "more of the same" thereby contributing little to needed research on these drug/crime nexus issues.

### Panel Design

The third design, the short term panel study, like the ethnographic effort, focuses on the onset of drug/crime behavior and its sequencing patterns to the drug/crime nexus. In many respects, these two designs are similar in that they are both concerned with the dynamics of the process leading to the relationships between drug use and criminal behavior. However, the ethnographic study has built into it a great deal of flexibility to pursue issues and findings as they are identified. This emergent quality of discovery of the ethnographic method allows for constant self-correction in the ongoing research process. This is a unique characteristic and major strength of the ethnographic approach for discovering the undiscovered and for clarifying those issues which are little understood by social researchers. The panel study, on the other hand, while possessing a modicum of self-correction, is essentially a survey research vehicle that is constrained by its standardization of instrumentation and the need for repeated measures on the same respondents in order to monitor change and discover social processes. The panel approach therefore has less flexibility than the ethnographic approach and as a result, needs to be more planned, structured, and informed by prior research.

The panel study could possibly stand on its own in researching the drug/crime issues defined here. However, without the information base

provided by the ethnographic and cross-sectional studies, the panel effort would suffer. Without prior support studies, the first wave or two of the panel would be highly exploratory and might only determine research directions for subsequent waves of the panel. Under these conditions this approach would be inefficient and produce findings which would perhaps be misleading. But information from the ethnographic and cross-sectional studies would lay a base for the panel study on which to build, to test hypotheses, and to verify prior findings. This would enable the panel study to contribute greatly to an increasingly cumulative storehouse of information on the drug/crime nexus as well as to set the stage for a larger scale prospective longitudinal panel effort.

#### Independent Designs

While each suggested design could be carried out independently, such a recommendation can only be made for the ethnographic study. To do the remaining two designs independent of each other would be costly, inefficient, and probably result in a low yield of desired information.

#### Research Site Recommendation

In addition to specifying the order in which the designs should be implemented, it was recommended that all of the three designs be carried out in the same site (in this case an SMSA). The first round of ethnographic studies would be done in three sites and from judgements made from those findings, one of the three sites would be chosen for the two follow-on studies. Staying with a single site for the three designs has many advantages. Familiarity with both the site and certain institutions (in this case schools) or persons facilitates access for the researcher to study populations. There are also cumulative benefits to the studies from working in a single site. For example, the ability of the panel study to draw on information from the cross-sectional project for selecting its purposive sample is an economy derived from working in a single site. Another example of the cumulative benefits is the guidance the ethnographic study can provide the cross-sectional sampling process. The cross-sectional sampling is faced with drawing a substantial number

of rare event behaviors (adolescent drug users, specifically heroin users). This difficult task can be aided by ethnographic information on high risk areas and high risk groups in those areas. A stratified sample that oversamples these groups will increase the probability of capturing the rare event of interest. Another benefit is that working in a single site allows the three research studies to overlap one another so as to effectively reduce the total time for carrying out the three designs. While overlapping sequential projects at different sites is also possible, the continuities provided by a single site and the support given to implementing the research from cumulative knowledge of a single site are compelling reasons for utilizing a single site. Therefore, in investigating the relatively unexplored regions of the drug/crime nexus (that is, onset behavior and temporal sequencing leading to the intersection of the two behaviors) it is recommended that a single site be researched fully so as to avoid the complexities that are introduced by across-site variations.

#### Summary

In summary, it is recommended that the three designs be implemented as a coordinated set of research. The designs should be accomplished in the following specific order--the ethnographic project, the cross-sectional project, and finally the short term panel project. The research for all three designs should be carried out in a single site to be determined by the first ethnographic studies. There should be close coordination between the research staffs of the three projects in order to make the planning and execution of projects more efficient, effective, and economical. In addition, the sum of knowledge accumulating across the three projects in a single research site should result in exceeding the sum of knowledge generated by each project if they were done independently.\*

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\* The extent to which the findings of research at a single site (that is, an SMSA) would be generalizable is unknown. However, the single site research projects' cumulative findings should spawn a detailed model of the process leading to drug/crime nexus relationships. This detailed model, in turn, would be testable in part or whole in other locations or by a national study.

The point of the research agenda is to provide research designs that will describe the drug/crime phenomenon in detail, that will identify the salient correlates of the drug/crime nexus and process, and that will lay the base for future drug/crime research, if further research is indicated.

### Design Implementations

Table IV-3 presents estimates of time, cost, and value of findings for the recommended interdependent, same site implementation of the three research designs as well as for other optional, but not recommended, ways to implement the research designs.

### Concluding Comments

The study of the relationships between drug use and criminal behavior is fraught with difficulties. The approach presented here to explore life cycle and patterns of behavior issues is an ambitious undertaking but one which is designed not to produce "more of the same" research. Whether research in this difficult area is totally viable will depend to a great extent on the true magnitude and complexity of the problem. This proposed research agenda is designed to successfully explore the parameters of the problem and more specifically to unravel the complexities of the relationships between drug use and criminal behavior.

Table IV-3

Estimates Based on Alternative Methods for Implementation of Research Designs

Relationship of Designs	Design Types	Estimates		Value of Resultant Findings
		Time	Cost	
Interdependent <sup>1/</sup> Same site, Consecutive as listed	Ethnographic Cross-sectional Panel	2 years	\$200,000 <sup>3/</sup>	High
		2 years } <sup>2/</sup>	\$206,000	High to Medium
		4 years	\$519,000	High
Interdependent Different sites, Consecutive as listed	Ethnographic Cross-sectional Panel	2 years	\$200,000 <sup>3/</sup>	High
		2-2.5 years	\$220,000	High to Medium
		4-4.5 years	\$582,000	High to Medium
Independent <sup>4/</sup> Same site or Different sites, Simultaneous or No particular order	Ethnographic Cross-sectional Panel	2 years	\$200,000 <sup>3/</sup>	High
		2-2.5 years	\$260,000	Low to Medium
		4-4.5 years	\$636,000	Low to Medium

<sup>1/</sup>This is the recommended strategy for the utilization of the research designs. While alternatives are presented in recognition of the need for some research program planning flexibility, they are not recommended.

<sup>2/</sup>With overlapping designs the total time for carrying out these three designs could be shortened.

<sup>3/</sup>This is a per site estimate for the ethnographic effort.

<sup>4/</sup>It is assumed that independent efforts would not benefit from the other studies and therefore would be unaffected by study site location and the order in which the designs are implemented (with the exception of the suggested ordering - in which case a minimal transfer of information could conceivably take place).

Without basic drug/crime data from the ethnographic study, the potential information yield from the cross-sectional and panel studies; beyond current knowledge, is uncertain.

APPENDIX A

RTI/NILECJ Drug/Crime Advisory Board



## MEMBERS OF THE ADVISORY BOARD

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APPENDIX B

Research Issues and Hypotheses

## PART I

The first meeting of the Advisory Board was held July 31 and August 1, 1978. A working paper drafted by Dr. James J. Collins, Jr. was sent to the Advisory Board members prior to that meeting. The paper provided a brief overview of the literature, a discussion of measurement and sampling issues, a preliminary typology of drugs, drug users, and crime types, suggested research approaches, and suggested salient issues for the drug/crime area. On the first day of the meeting the Advisory Board was asked to respond to the working paper and to approve or modify drug/crime issues found in the paper and to suggest other issues which they felt were important. At the end of the day their suggested issues were reviewed by the project staff and organized into 15 distinct issues. The next day these issues were presented to the Advisory Board to be ranked in the order of their perceived importance. Although the level of consensus was not high, a ranking was possible. The results of that ranking are presented below. The rankings are listed from the issue judged most important (1) to the issue judged least important (15).

1. Consider the price and quantity of drugs as a function of supply. What is drug users' behavior in response to available supply? What is drug users' behavior in relation to price and quality? To what extent is the demand for heroin inelastic?
2. How do drug use and crime patterns vary over individual life cycles?  
  
In the individual life cycle what is the drug use and/or crime pattern of onset?  
  
In the individual life cycle what factors are associated with the maturing out phenomenon for drugs and/or crime?
3. What are the patterns of drug use by drug type for different populations?  
  
What implications for crime do user characteristics have? (e.g., sex, age, race, ethnicity, social class, and type of drug(s) used)
4. What is the net reduction of criminal behavior as the result of drug treatment? What is this impact for different intervention modalities?

**CONTINUED**

**1 OF 2**

5. What is the relationship between the price of expensive drugs and crimes of acquisition?
6. What is the sequencing of drug use and criminal behavior? Drug use → crime → drug use? Coterminous development?
7. What factors occur in a social milieu that distinguish nondrug users/noncriminals, nondrug users/criminals, drug users/noncriminals, and drug users/criminals?
8. What impact would a program of heroin maintenance have on crime?
9. What percentage of different crime types and of different drug usage patterns are independently explained by the age distribution of the population? Additionally, how may these patterns be expected to change in the future?
10. What is the relationship between different patterns of polydrug use and crime? (includes alcohol and nonbarbiturate hypnotics)
11. What is the relationship between eruptive violence and drug use, including alcohol?
12. What percentage of individual expenditures for illegal drugs comes from illegal sources?
13. Do "captured" drug using populations differ from drug users not arrested or in treatment? ("captured" = arrested or in treatment) How? Does the probability of arrest differ between drug users and nondrug users who commit similar offenses?
14. Given current drug laws and enforcement patterns what is the cost of official corruption?
15. Does informal labeling by peers and/or formal labeling by authorities result in increased criminal and/or drug use activity?

## PART II

In addition to the 15 issues which the Advisory Board was asked to rank, other issues were subsequently raised by the Advisory Board. The project staff reviewed this total set of issues generated by the staff itself and the Advisory Board and organized the issues into four issue areas -economic, life cycle, patterns of drug use, and treatment. These issues overlap with the 15 issues ranked by the Advisory Board, they overlap with other issue areas, and they sometimes conceptually overlap within an issue area. Despite this they are presented here to give the reader the full flavor of the drug/crime issues considered.

### Economic Issues

- a. How is the price of heroin related to criminal activity?
- b. What are the effects of supply reduction on price, purity, and the availability of drugs?
- c. What percentage of the income of drug users comes from illegal sources?
- d. The measurement of the price of heroin as "price per milligram pure."
- e. To what extent is the demand for drugs elastic?
- f. What effect does the price of heroin have on the size of the population in treatment?
- g. What drugs are substituted for what drugs? What factors produce substitution?

### Life Cycle Issues

- a. Describe the maturing out process.
- b. What is the age of onset for drug use and criminal activity?
- c. How do drug use and criminal activity covary in different life cycle segments?

### Patterns of Drug Use Issues

- a. What are the characteristics of different types of drug users?

- b. What are class differences between different types of drug users?
- c. What effect will the changing age composition of the population have on future drug use and crime patterns?
- d. What percentages of different types of crimes are attributed to drug abusers (by type of drug)?
- e. In the case of polydrug use, how can any demonstrated drug/crime relationship be attributed to a particular drug?
- f. What is the effect of the law on drug users?
- g. Separate physiological, psychological and sociological variables from each other for analysis.
- h. What is the relationship (if any) between "eruptive" violence and drug users of various types?
- i. What drugs are substituted for what drugs? What factors produce substitution?

#### Treatment Issues

- a. What types of intervention (perhaps located on a continuum from punitive to therapeutic) is most effective for what kind of drug user?
- b. What motivates drug users to seek treatment?
- c. What effect does the price of heroin have on the size of the population in treatment?
- d. Separate physiological, psychological, and sociological variables from each other for analysis.
- e. What are the characteristics of different types of drug users in treatment versus those not in treatment?
- f. What is the sentiment among policymakers toward heroin maintenance?

### PART III

Toward the end of the second day of the first Advisory Board meeting, the Advisory Board was asked to generate some researchable hypotheses from the many issues discussed. Following are those hypotheses organized by the four identified issue areas--economic, life cycles, patterns of drug use, and treatment.

#### Economic Hypotheses

Drug users are responsive to changes in drug price.

As drug consumption levels change, the income-acquiring activities of drug consumers change.

If the price of expensive drugs rises beyond the buyer's means to purchase drugs at his current level of usage, then the drug user will increase his illegal economic activities (income generation) and this increase in illegal economic activities will be reflected in crime statistics.

Demand for addictive drugs is elastic for some populations and inelastic for other populations.

#### Advisory Board Comments About Economic Hypotheses

Variation in the price of all drugs, not just heroin must be observed.

Drug switching and substitution patterns and how these patterns are related to drug prices must be observed.

Two prices to observe when looking at economic questions for heroin use are the price per milligram pure of the drug and the overall price to the addict.

Since little is known about demographic differences, drug mixing behavior, drug substitution, and the polydrug use of all addicts (not just those in treatment or arrested) (this applies to most types of drug users also) studies of these characteristics and phenomena were suggested at the micro level in which ethnographic style studies would be carried out. At the present time not enough is known about the behavior of addicts and their reactions to the economic issues discussed to adequately test economic models.

#### Life Cycles Hypotheses

An individual's drug use and criminal behavior is invariant over time.



The probability of arrest given the commission of a nondrug offense is higher for drug users than for nondrug users.

Drug use and criminal behavior development are coterminous.

Drug use exacerbates criminal behavior.

Criminal behavior exacerbates drug use.

Once criminal skills are obtained they tend to be used regardless of drug use behavior.

Individuals mature out of drug use behavior because:

- (a) they can no longer compete in the activities required for acquiring drugs
- (b) they develop a tolerance for the drug
- (c) there are personal value changes which redirect behavior

The earlier the onset of drug use, the earlier the maturing out phenomenon occurs.

Only a small portion of the total activities of different drug using populations is connected with drug use and criminal behavior.

#### Patterns of Drug Use Hypotheses

Different age cohorts exhibit different drug use patterns.

Drug users tend to alter their use patterns in response to scarcity of supply and price change.

Most drug abusers use a variety of drugs. Polydrug use is the typical pattern.

#### Advisory Board Comments About Life Cycles and Patterns of Drug Use Hypotheses

Samples for research should be representative so as to obtain undetected drug users and criminals as well as those detected or officially identified--this calls for methodologies which validate self-reports, triangulate data collected for verification, and other such techniques.

It was noted that one of the problems that will impact on these hypotheses (particularly with regard to heroin) is methadone. Methadone now dominates the street scene (at least in New York City) and it should be a factor to consider in various hypotheses.

Among a population of drug users some commit crime and others do not. Among those whose drug use was antecedent to their criminal behavior, did drug use lead to crime? Among those whose criminal behavior was antecedent to drug use, did their criminal behavior lead to drug use? Which behavior precedes which and under what conditions?

It is highly likely that once criminal skills are obtained that criminal behavior will not stop in the absence of drug use. There may be a great deal of functional autonomy between the two behaviors.

### Treatment Hypotheses

The longer the period of retention in a drug program, the larger the impact of that program--that is, the more positive the outcome of the treatment.

Volunteers in drug programs will do better in the program than those diverted from the criminal justice system.

Criminal life styles are not discontinued when drug users enter drug treatment programs.

The older the criminal addict, the higher the probability the addict will discontinue drug use with or without treatment.

Drug users are motivated to seek treatment by the desire to:

- (a) reduce their tolerance level
- (b) avoid criminal justice sanctions
- (c) become eligible for social services
- (d) recover from addiction
- (e) assist them in changing their life styles

Treatment program retention and success rates are correlated with a variety of client characteristics such as age, race, sex, and type of drug or drugs used.

Treatment program retention and success rates will differ by type of program, program philosophy, staff philosophy, and staff characteristics.

Multiple treatment modalities are more effective than single treatment modalities.

### Advisory Board Comments About Treatment Hypotheses

The Advisory Board agreed that the drug/crime research should not get involved in evaluating treatment programs since this was not central to the drug/crime issues as defined by the project and since this work was being done in another government agency.

#### PART IV

The boundaries of the project were significantly narrowed when the decision was made by NILECJ to focus on the life cycle and patterns of drug use issues rather than the economic and drug treatment issues. This strategy served to minimize potential duplication with related ongoing research in those areas by other agencies and aided in sharpening the focus of this effort on the basic questions and underlying research problems in drug/crime relationships.

Based on the issues developed as the project progressed (as documented by Parts I, II, and III of this appendix), a special set of life cycle and patterns of use issues and associated hypotheses were pulled out of preceding materials. Each issue and its associated hypotheses are presented along with possible research approaches and research requirements supporting those approaches. Existing data sources which potentially offer some support for the research approach or approaches suggested are also given. These and other existing data sources which are judged to have the potential to bring empirical data to bear on the drug/crime relationship(s) are found in appendices C and D. Unfortunately, available data sets have gathered information on criminal behavior and drug use in separate sections of their survey instruments. At best this disconnected drug and crime data can establish which behavior was antecedent to the other in terms of onset. However, the dynamics of the nexus behavior, particularly in the event where the behaviors were concomitant, being the common result of other factors, cannot be adequately explored by this approach. As a result, the existing data sets cannot be used for secondary analysis to directly answer the drug/crime questions raised in section III but can only serve to provide some information on drug and crime patterns to guide, for example, sampling considerations for future drug/crime research.

Following the research issues presented here is a short presentation of proposed drug and crime typologies. The drug and crime typologies suggest how researchers might organize the two primary variables, drugs and criminal behavior, for pursuing drug/crime research.

Issue: How do criminal behavior and drug use covary in different life cycle phases?

Hypotheses: There are distinct drug use and criminal behavior phases through which persons pass.

Drug use behavior and criminal behavior covary one to one.

Drug use behavior and criminal behavior are independent behaviors.

Drug use behavior and criminal behavior covary in a variety of ways.

An individual's drug taking and criminal behavior is invariant over time.

Appropriate Design(s): a. Case studies  
b. Longitudinal, panel

Type of Data: a. Interviews, semi-structured, personal  
b. Interviews, structured, personal

Sampling Considerations: Need to sample persons involved in drug use and criminal behavior either in specific phases or from onset of either or both behaviors through all phases.

Estimated time period for project: a. 2 years  
b. 6-10 years

Person years of effort: a. 2  
b. 5 per year (30-50 person-years)

Existing data sources for support: Rachal and Hubbard (would possibly provide information on the maintenance and cessation phases)

Comments and Special Problems: The life cycle phases need to be established so that they can be monitored in part or as a set.

Issue: What is the onset pattern for drug use and criminal behavior?

Hypotheses: The onset of drug use and criminal behavior are simultaneous.  
(Excluding the case when drug use is defined as criminal behavior.)

The onset of drug use precedes the onset of criminal behavior.

The onset of criminal behaviors precedes the onset of drug use.

The onset patterns of drug use and criminal behavior vary.

Appropriate Design(s): a. Ethnographic  
b. Case studies  
c. Longitudinal, panel

Type of Data: (a) and (b). Interviews, semi-structured, personal  
c. Interviews, structured, personal

Sampling considerations: Need sample of potential drug users and those potentially involved in criminal behavior (data needs to be drawn before onset of either behavior). Control group would be residual of those not involved in either behavior or in only one behavior.

Estimated time period for project: a. 2 years  
b. 2 years  
c. 6-10 years

Person-years of effort: (a) and (b). 2.5  
c. 5 per year (30-50 person-years)

Existing data sources for support: McBride (Sociological Variables and Drug Using Behavior Among High School Students), Akers (Substance Use and Delinquent Behavior in a Sample of Adolescents), Nurco and Ball, and Elliott.

(NOTE: These studies may be able to provide a profile of onset patterns and information for drug use and criminal behavior.)

Comments and Special Problems: The onset behaviors may be difficult to capture. Sampling persons who potentially will be involved in both these behaviors may be difficult.

Issue: What are the characteristics of different types of drug users and their involvement in criminal behavior?

Hypotheses: Different age cohorts exhibit different drug use patterns associated with criminal behavior.

Polydrug users are more involved in criminal behavior than are users predominantly using a single drug.

Appropriate Design(s): a. Specific sample survey  
b. Cross-sectional survey

Type of Data: (a) and (b). Interview, structured, personal

Sampling considerations: Need to identify a wide range of drug users involved in criminal behavior.

Estimated time period for project: a. 2 years  
b. 2 years

Person-years of effort: a. 6  
b. 6

Existing data sources for support: Eckerman, CODAP,  
McBride (Sociological Variables and  
Drug Using Behavior Among High  
School Students)  
O'Donnell, Voss, Clayton, and Slatin  
Preble

Comments and Special Problems: Polydrug users may be several types rather than a single type - this is important to establish in order to adequately explore the relationship.

Issue: To what extent does drug use impact on criminal behavior and vice versa?

Hypotheses: Drug use exacerbates criminal behavior.

Criminal behavior exacerbates drug use.

Once criminal skills are obtained, they tend to be used regardless of drug taking behavior.

Drug use reduces criminal behavior.

Criminal behavior reduces drug use.

Appropriate Design(s): a. Ethnographic  
b. Case studies  
c. Longitudinal, panel

Type of Data: (a) and (b). Interviews, semi-structured, personal  
c. Interviews, structured, personal

Sampling considerations: Need to sample persons involved in one behavior (drug use or crime) prior to the onset of the other behavior.

Estimated time period for project: a. 2 years  
b. 1.5 years  
c. 5 years

Person-years of effort: a. 2  
b. 1  
c. 12

Existing data sources for support: Nurco, Inciardi, Preble, Nurco and Ball

Comments and Special Problems: Need to get persons prior to onset of drug use or criminal behavior (if development of drug use and criminal behavior is concomitant, this will not be possible). Information on criminal behavior, not just arrests, need to be collected. Effects of drug use and criminal behavior on one another may vary by phase of behavior (provided phases can be empirically identified).

Issue: What is the activity involvement of drug users in drug use and criminal activities?

Hypothesis: Only a small portion of the total activities of different drug using populations is connected with drug use and criminal behavior.

Appropriate Design(s): Cross-sectional survey

Type of Data: Interview, structured, personal and use of diaries.

Sampling considerations: Need to identify drug users in different stages or phases of their use (if stages or phases indeed exist) to explore relationships with varying levels and patterns of criminal activity.

Estimated time period for project: 2 years

Person-years of effort: 5

Existing data sources for support: Preble

Comments and Special Problems: Period of recall should be short for accuracy of recording activities. Perhaps should attempt diary method for a short period of time.



Issue: Are identified and/or apprehended drug user criminals or criminal drug users typical or atypical of persons involved in crime and drugs?

Hypotheses: Those persons involved in crime and drugs who are apprehended by the police or who enter treatment differ\* from those persons involved in crime and drugs but go unapprehended and unidentified.

\* differ - in terms of drug use and criminal behavior patterns; in terms of demographic characteristics such as age, race, sex, education, etc.

Persons involved in crime and drugs who are apprehended or identified are representative of those not apprehended or identified.

Appropriate Design(s): a. Ethnographic  
b. Cross-sectional survey

Type of Data: a. Interview, semi-structured, personal and records  
b. Interview, structured, personal

Sampling considerations: Need to sample persons involved in drug use and criminal behavior who are unapprehended or officially unidentified. Compare with samples of persons in drug treatment who are involved in criminal activities and persons arrested who are involved in drug use.

Estimated time period for project: (a) and (b). 2 years

Person-years of effort: a. 4  
b. 6

Existing data sources for support: Current data sets - Inciardi, Preble, Sells (DARP), Rachal and Hubbard (TOPS)

Comments and Special Problems: The sampling of unapprehended/unidentified persons should be difficult.

Issue: Are drug users more at risk for arrest on nondrug offenses than nondrug user offenders?

Hypothesis: The probability of arrest given the commission of a nondrug offense is higher for drug users than for nondrug users.

Appropriate Design(s): Cross-sectional survey

Type of Data: Interview, structured, personal and arrest records

Sampling considerations: Sample of drug user-offenders and nondrug user offenders required by age categories (e.g., 11 to 17 years of age)

Estimated time period for project: 1.5 years

Person-years of effort: 3

Existing data sources for support: Inciardi

Comments and Special Problems: Need representative samples of drug user offenders and nondrug user offenders.  
Need to compute the proportion of offenses committed by arrests for both groups.  
Need reasonable reports of undetected offenses.

Issue: What proportion of different types of crimes are attributed to drug abusers (by type of drug used prior to the offense).

Hypotheses: The use of depressants is associated with property crime or no criminal activity.

The use of psychedelics and stimulants is associated with crimes against persons including self-harm.

Appropriate Design(s): a. Specific sample survey  
b. Secondary data analysis

Type of Data: a. Interview, structured, personal  
b. Secondary data

Sampling considerations: Need sample of persons involved in drug abuse and criminal behavior.

Estimated time period for project: (a) and (b). 1 - 1 1/2 years

Person-years of effort: (a) and (b). 2-4

Existing data sources for support: Eckerman

Comments and Special Problems: Unless a specific set of questions are developed to tap drug use and crime, jailhouse studies will have to be done.

Issue: In the case of polydrug use, how can any drug/crime relationship be attributed to a particular drug?

Hypothesis: When a less expensive drug is substituted for a more expensive drug, the criminal behavior of the user is lessened.

Appropriate Design(s): a. Ethnographic  
b. Specific sample design

Type of Data: a. Interview, semi-structured, personal  
b. Interview, structured, personal

Sampling considerations: Need to identify polydrug users involved in criminal behavior.

Estimated time period for project: a. 1 - 1.5 years  
b. 1.5 years

Person-years of effort: a. 2  
b. 3.5

Existing data sources for support: None known.

Comments and Special Problems: The pattern of polydrug use must be established along with information about dominant (if any) drugs in that pattern. The nature of polydrug use needs to be explored.

Issue: What effect will the changing age composition of the population have on future drug use and crime patterns?

Hypotheses: Drug use follows certain age cohorts and is otherwise unrelated to the age composition of the population.

Criminal behavior is age specific behavior directly related to the age composition of the population.

Appropriate Design(s): a. Longitudinal, trend  
b. Longitudinal, cohort  
c. Longitudinal, panel } \*

Type of Data: a. Interview, structured, personal or questionnaire, mailed or administered  
b. Same  
c. Same

Sampling considerations: Need age specific drug users involved in crime.

Estimated time period for project: a. 10 year period  
b. 10 year period  
c. 10 year period

Person-years of effort: a. 6 per year (60 person-years)  
b. 6 per year (60 person-years)  
c. 6 per year (60 person-years)

Existing data sources for support: None known.

Comments and Special Problems: This research calls for a better understanding of the drug/crime relationship and the determination of the relationship as an age cohort phenomenon or an age group phenomenon.

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\* Longitudinal, trend - "A given, general population may be sampled and studied at different points in time. While different persons are studied in each survey, each sample represents the same population but at different times."

Longitudinal, cohort - "A cohort study focuses on the same specific population each time data are collected, although the samples studied may be different."

Longitudinal, panel - "Panel studies involve the collection of data over time from the same sample of respondents."

The above definitions are drawn from Babbie, Earl R. Survey Research Methods. Belmont, California: Wadsworth, 1973, 63-64.

Issue: What are the characteristics of the maturing out process?

Hypotheses: The earlier the onset of drug use, the earlier the maturing out phenomenon.

Individuals mature out of drug taking behavior for one or more of the following reasons:

- (1) they can no longer compete in the required drug acquisition activities.
- (2) they develop a tolerance for the drug.
- (3) there are personal value changes which redirect behavior.

Appropriate Design(s): a. Case studies  
b. Longitudinal, panel

Type of Data: (a) and (b). Interview, structured, personal

Sampling considerations: Need to sample persons at the cessation phase of their drug use or shortly prior to that phase.

Estimated time period for project: a. 1 year  
b. 3-5 years

Person-years of effort: a. 2.5  
b. 3-4 per year (9-12 to 15-20 person-years)

Existing data sources for support: None known

Comments and Special Problems: Being able to identify the cessation phase for a sample.

Cutting across all of the preceding research issues is a basic consideration for the proper definitional foci for drugs and crimes. In response to drug and crime typologies presented at the first Advisory Board meeting, the following concerns were noted.

1. For the purposes of developing the drug/crime agenda the term drug ought to be defined to include alcohol, at least to the extent that alcohol becomes a part of polydrug use or is used as a substitute for illicit drugs.
2. Drug-defined crime (for example, possession, sale, or manufacture of drugs) should not be excluded from consideration in developing research designs, but drug-defined crimes should be distinguished from drug related crimes.
3. Typologies of drugs, drug users, and crime are, at best, problematic. Typologies should be used with great care.

Although many caveats may be given with regard to the development and use of typologies, the categorization of specific drug types and specific criminal behavior is important for research on drug/crime relationships. The comparison of specific drug types with specific types of criminal behavior serves to focus, guide, and organize drug/crime research efforts in a more productive way than does research which fails to make these distinctions. This level of specification is an important factor in enabling the researcher to disentangle the complex web of drug/crime relationships. This level of specification also facilitates a more precise exchange of research information between researchers which is essential to building a cumulative understanding of the phenomena under study.

In this spirit, the following typologies are offered to provide a minimal common focus to the sets of research issues presented. These typologies are not meant to be definitive but are suggestive of the types of distinctions that should be made for the drug and crime variables in future drug/crime research.

### MAJOR TYPES OF DRUGS OF ABUSE

Depressants - Licit - Alcohol  
Barbiturates  
Inhalants  
Tranquilizers

Illicit - Narcotics (Heroin, methadone, opium, etc.)

Psychedelics - Licit - None

Illicit - Cannabis  
Hallucinogens

Stimulants - Licit - Amphetamines  
Antidepressants

Illicit - Cocaine

### MAJOR TYPES OF DRUG-RELATED CRIMINAL BEHAVIOR

Income-generating crimes to support drug use -

Violent property - Robbery

Property - Burglary, larceny, embezzlement, forgery,  
receiving stolen property, arson

Violent - Homicide, aggravated assault, simple assault,  
weapons

Public order - Prostitution, gambling

Direct pharmacological effects -

Violent Property - Robbery

Property - Arson, larceny, burglary

Violent - Homicide, forcible rape, aggravated assault,  
simple assault, weapons

Drug-defined crimes - Manufacture, sale, possession, and use of  
illicit substances

Property - Forgery (prescriptions)

Drug system support crimes -

Violent property - Robbery, hijacking

Property - Receiving stolen goods (fencing)

Violent - Homicide, aggravated assault, simple assault,  
weapons

Corruption - Bribery



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## APPENDIX C

### Data Sets Identified for Earlier NIDA Project

Following are the data sets identified in the Fall of 1975 which had potential for being used to explore the relationship between drug abuse and crime. This list was generated for the NIDA drug/crime project.

Heroin Use and Criminality: Survey of Inmates of  
State Correctional Facilities, January 1974

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In January 1974 the Law Enforcement Assistance Administration (LEAA), assisted by the U.S. Bureau of the Census, interviewed 10,400 inmates of state correctional facilities. Results from this survey are applicable to 191,400 inmates--the estimated population of all such facilities at the time of the survey.

The purpose of this survey was to gather detailed information on the characteristics of inmates of state correctional facilities. A facility was defined as a "functionally distinct group of adult (or youthful offender) inmates not included in the 1971 survey of local jails; which was operational on January 31, 1974; was capable of providing a unique inmate count; and possessed an address." In all, 710 facilities comprised the universe from which 190 were selected, using scientific sampling procedures. From this sample, 10,400 inmates were selected for personal interview through scientific sampling methods. Thus, about 1 of every 18 inmates under the jurisdiction of state correctional facilities was selected.

Data gathered on the interview questionnaire included (1) demographic characteristics, (2) incarceration history, (3) present conviction and circumstances surrounding it, (4) labor force participation and income (prior to arrest), and (5) drug and alcohol use. Data were gathered by female Bureau of the Census interviewers. The interviews were conducted in the institutions in a one-to-one situation, within sight but not within hearing of guards. Of the 10,400 inmates selected, 86 percent were actually interviewed. For an additional 12 percent of the inmates selected, information was abstracted from prison records. For less than 1 percent, neither the inmate nor the record was available or accessible.

All sample data were inflated to represent the estimated 191,400 inmates in state correctional facilities--the entire population which falls within the scope of the survey--by means of an involved estimation procedure. A further description of the methodology is in a paper by Ken Brimmer and Louis Williams.

Drug Usage and Arrest Charges

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This study is based on detailed arrest records and self-reports of drug usage for 1800 arrestees in six major metropolitan central jail intakes. The detailed information obtained permits an examination in part of all four main questions of interest.

The interview measures asked questions on the order in which drugs were initially used, when use started, current use, method of use, frequency of use, and amount and costs of use for a series of 13 drugs. Use prior to arrest, reasons for use, and combinations of drugs used were also assessed. Drug registers and previous arrest records were checked to validate reports of past use and to contribute to the identification of drug users. The final check on current use was an extensive urinalysis for a variety of drugs.

The focus was on arrests rather than illegal acts that did not result in arrest. Questions were asked about frequency of arrests and reasons for current arrest. Arrest histories were determined from FBI rap sheets. The disposition of the current arrest was also investigated.

Major demographic variables were obtained as well as a number of health and attitudinal indices. A number of measures of other variables of major interest were also included. Some items referred to jobs held immediately prior to arrest; however, it is not possible to determine the proportions of legally and illegally derived income. The costs of current and past use can also be ascertained. One question referred to the types of treatment programs the respondent had been involved with and the number of times involved. No dates for treatment were available.

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All the major issues can be addressed with the data from this study; however, the limited sample size precludes complex analyses that would necessitate dividing the sample to any extent. Four equal size groups of prostitute-addicts, nonprostitute-addicts, nonprostitute-nonaddict offenders, and prostitute-nonaddict offenders were interviewed. The total sample size is 250 with almost all respondents having both criminal and drug histories.

Information on drug use, arrests, and economic activity is assessed in great detail in an extensive interview which was supplemented by a battery of tests, urinalyses, and record searches.

The events surrounding use and types of drug use were comprehensively assessed. Age at initial use, the type of drug initially used, and the patterns of current use are tapped. Urine specimens were obtained for 50 percent of the respondents.

Extensive questions concerning involvement in crime both as a juvenile and as an adult were asked. Of special interest were the items concerning the drug involvement and purpose of the crime for each arrest.

The most important aspect of this study is its orientation toward the economics of drug use. An extensive history of past and current means of support is obtained. Amounts from each current source of support and monthly expenses for legitimate activities as well as the cost of drugs are estimated. Thus, it should be possible to estimate the proportions of income and expenses related to drug use.



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This is a large-scale national longitudinal study of adolescent males. Follow-ups have been conducted and are available for four years. A fifth data collection is currently being analyzed. The sample is a stratified random sample of male 10th grade students in the United States in the fall of 1966. The 1600 respondents interviewed in 1970 represent 70 percent of the original sample of 2200 interviewed in 1967. The follow-up sample appears to be representative of the original sample.

The two main items of interest are the scales of delinquency and drug use. Both were obtained from a self-administered confidential questionnaire as a part of a group administration of a more complete questionnaire. Delinquent acts are measured yearly in all waves, and the use of a variety of drugs is assessed in the last two waves. This data set provides one of the few prospective longitudinal analyses of crime-drug use onset. Because of the general nature of the national sample, the numbers of users and delinquents are limited.

The delinquency questions refer to 21 distinct types of delinquent activities, some of which are not in themselves illegal. These questions were asked in each wave of the study and referred to the year prior to the interview. Although no age or date of initial delinquent act was obtained, the longitudinal nature of the study does provide some indication of temporal sequence.

The drug use items were included in the two most recent waves of the study. Two sets of items were used in the 1970 wave. The first asked about the use of a list of seven substances in the past year. A second set of identical questions was asked about the use of these substances prior to the past year. The questions referred to frequency of use of tobacco, alcohol, marihuana, hallucinogens, amphetamines, barbiturates and heroin. The data set also contains a variety of measures of demographic, personality, and attitudinal measures that might be correlated with drug use.

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The data are based on over 3,000 personal interviews with applicants to this multi-modality treatment program in New Haven. Since only about 50 percent of the applicants enrolled, these interviews provide one of the few possibilities for comparing clients in treatment with applicants who did not enroll. A 3-year follow-up for a random sample of 500 applicants was conducted which should provide longitudinal, comparative data. This follow-up sample includes 380 clients and 120 applicants who did not enroll.

Most variables of interest are assessed in three periods: at intake application, while in the program, and in the follow-up period. Drug use histories for 13 categories of drugs are obtained. Information is obtained for age at first use, year of first use, first drug used, current frequency of use, and year of first regular use. In the follow-up, frequency and length of use in the past month are assessed.

Self-reports of arrests, convictions, imprisonment, and parole are obtained in the personal interview. Types of arrests are obtained from both interviews and records and are coded with sufficient specificity to provide Uniform Crime Report designations. Dates, however, are obtained only for periods of imprisonment.

It is possible to make some inferences about amounts of legal and illegal income although no information is obtained indicating costs of drug use to the individual. Treatment effects are, of course, the central focus of this research.

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This study uses data from interviews with over 8,000 arrestees at the Dade County Jail in 1974. In addition to self-reports, records and urinalyses were used to assess drug use and criminal behavior. An estimated 3 percent of all arrestees in the Dade County Jail are admitted to TASC programs; 8 percent are admitted to community programs. The treatment samples, therefore, contain 240 and 640 clients in each program, respectively. These samples constitute Stage I. Long-term follow-ups (Stage II sample) were conducted for those arrestees assigned to treatment programs. The most interesting aspect of this data set is the opportunity to compare arrestees admitted to treatment with those who were not admitted to the programs.

Generally, the drug use data are the most complete. A complete list of drugs and patterns of use were covered, including age at first opiate use. In the Stage II interview, the ages when use of the various substances were first continued were assessed.

In Stage I, arrest information is obtained for the current offense. In Stage II, more historical data were obtained from arrestees admitted to treatment programs. The number but not types of arrests were obtained.

The average cost of drugs per week was assessed for the month prior to the interview. In addition, average weekly salary and duration of employment over the past 2 years were obtained. The number and type of treatment experiences were also assessed in the Stage II interview.

New Jersey Treatment Programs

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These three studies focused solely on treatment programs in New Jersey. The first two studies used the data from a population of 1800 clients in treatment in October 1971. In the first study, arrest records were obtained for a quota of 30 clients per program for 19 programs (methadone maintenance and drug-free). The second study utilized personal interviews with 476 male clients who reported using heroin six or more times. The third study was a replication of the initial study covering 2700 clients who had been in treatment for at least 18 months as of August 1974.

Four types of information were obtained from personal interviews or records. The date of first heroin use was obtained from treatment records. In the personal interview a series of questions was asked about the number of times drugs other than heroin were used.

Arrest information was obtained from a search of New Jersey State Police data. The numbers of narcotics-related arrests versus other arrests were coded in four periods: (1) prior to beginning heroin use, (2) prior to treatment, (3) while in treatment, and (4) after treatment. In the personal interview the respondent was asked about numbers of arrests and convictions, the temporal sequence of drug use and crime, and the commission of six offenses.

In the personal interview, a question is asked about daily cost of heroin use. Other questions concern which acts were used to support a habit and the amount taken from the largest theft committed. A general series of questions indicates usual type of employment, average weekly wages, and length of employment.

Life History of Narcotic Addicts

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The population included over 4000 narcotics users identified by the Baltimore City Police Department from 1952 to 1971. The random sample of 350 addicts was stratified by year and ethnicity and weighted both in absolute numbers and proportionately toward the earlier years. This data set includes an extensive 3-hour interview covering all major variables of interest.

Detailed information about drug use, criminal activity, and costs of drugs was gathered for three periods: before initial narcotic use, between initial and regular use of narcotics, and during regular use. A variety of measures is also included that attempts to assess more directly the factors associated with initial and regular narcotics use. The respondents were specifically asked about amounts, frequencies, and costs of narcotic use during each period as well as patterns of use of other drugs.

The interview focused not only on arrests and convictions but also on self-reports of activities which "involved breaking the law." A series of questions was asked about each type of act including frequency and income derived from the acts. In addition to the interview data, records from the Baltimore and Maryland police departments, correctional institutions, and FBI rap sheets were obtained.

One of the most important aspects of this study is the focus on the economic aspects of drug use. A variety of questions addressed the questions of sources and amounts of legal and illegal income obtained in each episode of use. Of particular note is the attempt to gauge the average amount of income derived from each criminal act. A question was also included asking about costs per unit of drugs used. Thus, it should be possible to calculate costs of use versus sources of income.

The final topic that can be investigated in this data set is the impact of treatment. Dates of treatment can be compared with episodes of regular narcotic use.

A Study of Drug Use Among Young American Males

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This national study used a sample from Selective Service records for men between the ages of 20 and 30. This sampling approach is probably more likely to tap respondents who use drugs and/or commit crimes than the customary household sample.

Drug use is the major focus of this study, but a number of items do indicate evidence of criminality. An exhaustive list of drugs is covered and an extensive series of questions is asked about patterns of use. The most important aspect of this questioning is the attempt to ascertain the pattern of use by year.

A number of questions is asked that refer to criminal acts, arrests, convictions and imprisonment; however, the questions are not designed to provide comparable information for each of these indicators. Data are available to assess the temporal sequence of the initial commission of a number of criminal acts, first arrest, first conviction, and initial drug use; however, there are no data indicating the number of times these acts or arrests occurred. In addition, no data are obtained on the types of offenses that resulted in arrests. The only indicators of types of crime are a self-report of the commission of ten types of offenses and the listing of types of offenses resulting in convictions. Thus, it may be very difficult to establish a typology of crimes committed by users. Despite the lack of specificity for arrest data, one series of questions does ask if drugs led to problems with the law and the first and last year of such problems.

Some items ask about dates of initial treatment experience and the types of treatment used. However, it would be impossible to develop any indicators of pre- and post-treatment criminality. One question is asked concerning the cost per amount of drugs obtained. Questions are also asked concerning amount of income from legitimate employment. No items are included that would assess amounts of income derived from illicit sources.

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This data system is a national overview of treatment programs. The data are derived from reports submitted on a bimonthly basis by participating programs. The DARP system includes records of 44,000 people entered into the system from 1969 to 1973. Complete follow-up data are available for 27,000 clients, and additional follow-ups are currently being conducted for approximately 14,000.

All the key variables of interest are measured. The frequencies of use of nine types of substances for 2 months prior to treatment and for succeeding 2-month periods are assessed. Age at first use and average daily cost of use are obtained in the initial report.

In the admission report, age at first arrest, juvenile commitments, income from illegal sources, numbers of arrests and convictions, and current legal status are obtained. In the follow-up the numbers of arrests for six types of offenses and the presence of income from illegal sources are included as the criminality indices.

Sources of financial support and legitimate amounts earned are obtained, but it is not possible to determine exact proportions of legal and illegal income from the data obtained. The source of income item does ask which of six sources was the primary and which the secondary source of income but more specific data are lacking.

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This data set includes comprehensive information for over 6500 narcotic addicts admitted to the Lexington Hospital facility from 1967 to 1973. Over a 4-year period, 5500 were interviewed with a modified questionnaire used with an initial cohort of 1100 addicts from 1967 to 1969. Most of the major variables of interest are covered in this study, particularly those associated with the temporal sequence of criminal activity and drug use.

A number of aspects of drug use are assessed. The age at first use of and age at addiction to each of 10 drugs are obtained. A series of questions is asked about drug sources. Criminality is measured by the number of arrests and the age at first arrest. The addict is asked if any of seven crimes was committed and, if so, whether or not the act was committed before or after beginning narcotics use. A final series of questions refers to gang activity and includes (1) age of joining, (2) fighting, stealing, and vandalism with the gang, and (3) first narcotics use while a member of the gang.

The types of income sources are obtained. The amount of income from legitimate jobs is also assessed. Two items refer to the cost of drugs. One asks for the highest amount spent in one day and the other for the average amount spent per day. Some information about cost can also be obtained from the series of items assessing sources of drug supplies. A final question assesses the number of "hours spent doing illegal things to get money for drugs...."



APPENDIX D

Data Sets Recently Identified

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## APPENDIX D

### Data Sets Recently Identified

Following, current crime/drug data banks are listed that have been identified as having potential usefulness. They are presented in the following categories:

- Criminal Justice Populations - Drug Users
- Drug Using Populations - Criminal Behavior
- General-Normal Populations - Drug Users and Criminal Behavior
- Drug/Crime - Crime/Drug Time Sequence Behavior
- Drug Use and Sustained Criminal Behavior
- Demand Reduction - Treatment
- Ecological Analysis
- Law Enforcement

For each of the data banks or sources noted, the following information is recorded.

1. Principal Investigator and Study Title
2. Purpose of the Study
3. Sample Description
4. Variables for drug/crime analysis
5. Data collection instrument and availability
6. Utility of study
7. Availability of data

CRIMINAL JUSTICE POPULATIONS - DRUG USERS

1. Ron Akers - Drug Use in a Nationwide Sample of State Prisons
2. The purpose of this study was to estimate the levels of drug use in seven state prisons across the country and to examine drug use and other behavioral variables as responses to imprisonment or importation of outside culture.
3. The data was collected in 7 state prisons across the United States. Regional variation was sought. The data was collected in 1971 and 1972. The majority of respondents were non-White and over 25.
4.
  - a. Drug use before and during incarceration.
  - b. Respondents' estimates of levels of drug use in prison.
  - c. Type of prison
    1. treatment
    2. custodial
  - d. Classification of structural environment, i.e. such things as administrative goals, classification procedures, security procedures and visitation
  - e. Type of leadership among inmates
    1. authoritarian
    2. democratic
  - f. Standard socio-demographic and socio-economic variables
5. Interview schedules will probably be made available.
6. This is similar to the Thomas-Peterson study in Georgia except there is broader regional variation. The study would enable the analysis of drug use in a prison - to determine whether it is imported or develops there and the types of prisons which have higher rates.

1. Ron Akers - Substance Use in a Boys' Reformatory
2. The purpose of this study was to examine drug use prior to and during incarceration and to examine the variables that account for drug use during incarceration.
3. The sample consisted of juvenile males in a Northern Illinois reform school. The sample is fairly evenly divided between Blacks and Whites. The data was collected in the Spring of 1977. N=155-200.
4.
  - a. drug use history before and during incarceration
  - b. respondents' view of juvenile justice system
  - c. sense of injustice
  - d. abbreviated delinquency history particularly arrests
  - e. standard socio-demographic variables
5. Interview schedule will probably be made available.
6. In many ways this study is the juvenile equivalent of the Thomas-Peterson study of drug use in a Georgia Prison. This study would enable the analysis of substance use among incarcerated juveniles, the role of drug use in juvenile prison culture, and an examination of variables that may statistically explain drug use during incarceration.
7. The data are on tape and are available for further analysis. Dr. Akers indicated that he is willing to undertake further analysis.

1. Nick Kozel - Drug Use in a Jail Population
2. The purpose of the study was to examine the extent and distribution of drug use in an incarcerated population.
3. N=44,000. Data collection 1971, 1975 - INSLAW is updating.
4. This project was essentially a record search in the District of Columbia lock-up. Data was available on:
  - a. date of birth
  - b. sex (from a sample of 1,000 only)
  - c. urinalysis results of drug use
  - d. arrest charges
  - e. if arrestee was in treatment at time of arrest
5. There was no interview schedule. The preceding data list was collected from jail records.
6. Because of the urinalysis, this data bank may represent one of the most reliable estimates of drug use patterns in a criminal justice population.
7. The data are on two computer tapes and are available. Mr. Kozel is willing to undertake requested analysis and would probably make the data tapes available.



1. Duane C. McBride - TASC Diversion
2. The purpose of this study in a TASC program was to (a) examine the extent and distribution of drug use in an arrested population and (b) follow a sample of drug using arrestees through a community drug treatment system.
3. Part A of the study was conducted in the Dade County jail booking center from April, 1974 through March, 1975. The data consists of a probability sample of all felony arrests in Dade County. N=5993. Part B of the study also began in April of 1974 and followed a sequential sample of 500 drug using arrestees who were diverted by TASC to the Dade County Comprehensive Drug Program through March, 1976.
4. In Part A of the study:
  - a. Drug use type, ever use, ever regular use, current use and age at first use of opiates, self reports from all respondents; urinalysis from about one-half the respondents.
  - b. Current arrest charge(s).
  - c. Standard socio-demographic and socio-economic variables.In part B of the study:
  - a. Length of time in treatment.
  - b. Type of treatment services including modality and specific program.
  - c. Reason for leaving treatment.
  - d. Continuing drug use and crime while in treatment.
  - e. Data is set up so that TASC clients can be compared to non-TASC clients in same programs.
5. Interview schedules available.
6. RTI already has Part A of this study from the last NIDA crime-drugs TASK Force, though more analysis could be done.

Part B was finished after the last Crime and Drugs TASK Force. It might be useful for investigating demand reduction questions. For example, how well do a group of drug using arrestees do in treatment specifically, and in comparison to non-arrested drug users in treatment?
7. The data are on tape and are ready for immediate analysis. The investigator is willing to undertake further analysis.

1. David Peterson and Charles Thomas - Drug Use in Prison
2. The purpose of this study was to examine the role of drug use in the prisonization process. The results of this analysis are reported in Criminology.
3. N=299, 239 of which were chosen randomly from the general population of the Atlanta Penitentiary and all of 60 inmates of the drug treatment unit. The sample is all male. Date of study, 1976.
4.
  - a. Lifetime history of drug use, including age at first use, if being used in prison or used only prior to imprisonment and frequency of use.
  - b. History of imprisonment - number of times and number of years.
  - c. Assorted prisonization scales.
  - d. Standard socio-demographic and socio-economic variables.
5. Interview schedule available.
6. This study deals with two areas of crime-drugs concerns. First, data from this study can be used to examine the extent of drug use prior to imprisonment in an incarcerated population. Because it is a southern prison, it could add breadth to similar studies in other areas. Secondly, the data could also be analyzed to examine the extent of drug use in a prison and the role of drug use in adjustment to prison.
7. The data are on tape and are available. The investigators have indicated that they would be willing to undertake further analysis of their data.

DRUG USING POPULATIONS - CRIMINAL BEHAVIOR

1. Client Oriented Data Acquisition Process (CODAP) - Administrators of System - William H. Spillane, Ph.D., Director, Division of Scientific and Program Information, John L. Fahs is directly responsible for administering the CODAP System.
2. This system is basically a client record system for the National Institute on Drug Abuse. The system is designed to monitor NIDA clients in terms of entry, progress, and discharge data.
3. The CODAP System was initiated in 1974 and is updated monthly. NIDA has a subcontractor that is responsible for processing the data. Because of the size of the system, computer tapes run 4-6 months behind collection. N=500,000 though many of these are repeats and not distinct individuals.
4.
  - a. Drug type use (only 3 drugs allowed) includes:
    1. frequency
    2. year of first use
    3. year of first continuing use
    4. year of last continuing use
  - b. Number of arrests in last 24 months (this has only been collected since 1977, thus, the N would be about one-half of total).
  - c. Legal status
  - d. Type of treatment being admitted to
  - e. Number of prior treatment experiences
  - f. Standard socio-demographic and socio-economic variables

This data is collected at intake, during treatment and at discharge.
5. Data forms available.
6. The primary utility of this data bank would be to examine number of arrests among treated drug users. That number could be related to drug type. However, no information is available on type of charge.
7. The data tapes are in the possession of NIDA and should be available.

1. James A. Inciardi - Hidden Crime and Drugs
2. The purpose of this study is to examine drug use and/or crime in 4 populations:
  - a. active heroin users on the street
  - b. inactive heroin users in treatment or jail
  - c. nonheroin illicit drug users, active and inactive
  - d. nonillicit drug-using criminals, active and inactive

Essentially, Dr. Inciardi is trying to look at a hidden illicit drug using population and compare their criminal behavior to a known population.

3. Data were collected in 3 cities in 1977 and 1978.

New York N=200  
Miami N=800  
Houston N=800  
Dayton N=200  
Newark N=700

4. Variables:
  - a. Lifetime history of drug use including age at first regular use, frequency and how obtained.
  - b. Lifetime history of criminal behavior and arrests including age for each offense.
  - c. Number of years in treatment in last 5 years.
  - d. Standard socio-demographic and socio-economic variables.
5. Interview schedule.
6. This study's importance lies in its information from a hidden population. Individuals arrested or incarcerated essentially are unsuccessful criminals. Data on drug use and criminals, i.e. those not arrested or in treatment is rare. Note that this data bank can be used to examine crime in drug using populations and drug use in criminal populations.
7. The study is near completion. The investigator is willing to undertake further analysis.

1. James A. Inciardi, Duane C. McBride, and Brian R. Russe - Criminal Behavior in a Population of Emergency Room Drug Cases.
2. The purpose of the study was to collect general social and behavioral data on individuals coming to a county hospital emergency room because of a drug overdose or other reaction. Little information is known about this population so this study focused on a broad range of variables.
3. Data was collected in 1976 in Miami, Florida and Denver, Colorado.  
  
N=300 in Miami                      random samples  
N=500 in Denver
4.
  - a. Complete lifetime drug use history including age and year of first use and current frequency, dosage level and cost per day.
  - b. Drug treatment experiences including type of treatment facility, number of times in treatment.
  - c. Arrest history including age at first arrest, list of all arrest charges, total number of arrests and convictions and total number of arrests in last two years.
  - d. Standard socio-demographic and socio-economic variables.
5. Interview schedule available.
6. This population of emergency room drug users is different than a usual treatment population. The majority even of the heroin users have never been in treatment. This data bank provides the opportunity to look at the criminal behavior of drug users who have not been in treatment programs.
7. The data are on tape and the investigators are willing to undertake further analysis.

1. Clyde B. McCoy, Duane C. McBride, and James E. Rivers - Evaluation of Treatment Services.
2. The purpose of this study is to evaluate Dade County, Florida, treatment services. Baseline data is collected at entry and treatment progress data is collected during treatment.
3. Data collection began in October, 1973 and is ongoing. Current N=about 16,000. Data is collected on all those entering treatment in the Dade County Comprehensive Drug Program. That program administers about all of the individual treatment programs in the county.
4.
  - a. Arrest history - 24 months prior to entering treatment including arrest outcome.
  - b. Current drug use type including frequency, year of first use, route of administration, source and prior treatment experiences.
  - c. Standard socio-demographic and socio-economic variables.
  - d. Progress data such as time in treatment, discharge status, drug use and arrests while in treatment.
5. Variable list available.
6. This data might be useful for looking at the extent of criminal behavior in a drug treatment population. The N is large and covers a 5 year time period so trends in the extent of criminal behavior in a treatment population can also be examined.
7. The data are on tape and are ready for immediate analysis. The investigators would be willing to undertake further analysis.

GENERAL-NORMAL POPULATIONS - DRUG USERS AND  
CRIMINAL BEHAVIOR



1. Ron Akers - Substance Use and Delinquent Behavior in a Sample of Adolescents.
2. The basic purpose of the study was to test theoretical models in sociology in terms of their ability to account for adolescent substance use. In addition, the study also focused on adolescent delinquent behavior.
3. N=about 3,000. Sample consists of juveniles 12-18 years of age in grades 7-12. Data was collected in junior and senior high schools in 3 midwestern states. These states are Nebraska, Iowa, and Wisconsin.
4.
  - a. Substance use history, including type of drug and frequency.
  - b. A variation of the Short and Nye delinquency check list a "have you ever" format.
  - c. Sociological theory indices on:
    1. differential association - bonding - initiation - learning
    2. social control
    3. anomie
    4. labelling
  - d. Standard socio-demographic variables.
5. Questionnaire is available.
6. Basically, this study can be used for two purposes. First, drug use patterns and delinquency patterns can be correlated in a normal, white, mid-America small town population. Secondly, the data can be used to examine and compare the variables that account for drug use and delinquency. That is, it can be determined if drug use and delinquency are both accounted for by the same variables.
7. The data are on tape and available. The principal investigator is willing to undertake further analysis of the data.

1. Delbert S. Elliott - The National Survey of Youth
2. The purpose of the study is:
  1. To estimate the extent and distribution of types of delinquent behavior in a normal national population.
  2. To apply a fairly complete range of social and social psychological theories as an explanation of delinquency.
3. N=about 2,000 - approximately 1/2 male and 1/2 female  
National sample - household survey  
Age range of respondents - 11 to 17 - about 17% from each age group  
Longitudinal design - self reports - first survey 1977, second 1978, third 1979
4. Variables
  - a. Standard demographics
  - b. Theoretical indicators from a variety of perspectives
    1. anomie theory
    2. learning theory - differential association
  - c. Standard delinquency index - "have you in the last year" (44 items)
  - d. Drug use index - alcohol, marihuana, psychedelics, tranquilizers, amphetamines, barbiturates, codeine, inhalants, PCP, heroin, and cocaine - "have you in the last year used"
5. Interview schedule available
6. Potentially, this study has the advantage of permitting analysis of crime/drug association and etiology in a normal population (longitudinal design). With the theoretical variables collected, the data would permit -
  - a. a comparison of variables that account for the onset of drug use and delinquency
  - b. an examination, to some extent, of delinquency-drug use sequential behavior

A disadvantage is that, based on the 1977 data, there are very few drug users (46% alcohol use, 17% marihuana use, and 3% or less of every other type of drug, with no one admitting to heroin use). There may not be enough illicit drug users to permit a delinquency drug analysis.
7. The study is nearing completion. Dr. Elliott is willing to undertake further analysis.

1. Duane C. McBride and Dale D. Chitwood - Sociological Variables and Drug Using Behavior Among High School Students.
2. The purpose of the study was to survey drug use and criminal behavior patterns in a population of high school students. Additionally, the study was intended to use a number of sociological variables in an attempt to explain drug use patterns.
3. An entire tri-ethnic high school in Miami, Florida was surveyed in 1975. N=2052.
4.
  - a. Complete life time drug use history including age at first use, average frequency of use, source if still using and if not, reason for quitting and drug treatment experiences.
  - b. Parental, peer, and sibling drug use type.
  - c. Life time delinquent - criminal behavior - not age specific.
  - d. Standard socio-demographic and socio-economic variables.
  - e. Scales measuring respondent-parent relationships, peer relationships and school relationships.
5. Questionnaire is available.
6. This study might be useful for correlating drug use types and types of delinquent criminal behavior in a non-institutionalized normal population.
7. The data are on tape and are ready for immediate analysis - the investigator is willing to conduct further analysis.

DRUG-CRIME/CRIME-DRUG TIME SEQUENCE BEHAVIOR

1. Clyde B. McCoy and Duane C. McBride - The Sequential Order of Crime, Drugs and Employment.
2. The purpose of this study was to collect life history information from individuals entering drug treatment programs in terms of self-reported drug use, crime and employment history and to examine the sequential relationship between those variables.
3. N=500 - all individuals entering drug treatment programs in Dade County, Florida from June 1, 1974, through September, 1974.
4.
  - a. Life time drug use history including age at first regular use, frequency of use and source.
  - b. History of treatment experience including name and type of program, number of times and total number of months.
  - c. Life time arrest history including age, charge, disposition and specific penalty.
  - d. Standard socio-demographic and socio-economic variables.
5. Variable list available.
6. This data bank could be useful in examining time order crime and drug questions in a treatment population.
7. The data are on tape and are immediately available. The investigators are willing to undertake further analysis.

1. John A. O'Donnell\*, Harwin L. Voss, Richard Clayton, Jerry Slatin and Robin Room - Young Men and Drugs
2. The purpose of the study was to do an incidence and prevalence survey of drug use among a random sample of selective service registrants. Detailed information was also obtained on criminal behavior and other socio-demographic and socio-economic variables.
3. N=2000, young male selective service registrants between the ages of 18 and 30. Random sample. Date of study, 1975.
4.
  - a. Life time history of drug use including age at first use and first regular use and frequency of use.
  - b. Life time history of criminal behavior including first time offense was committed.
  - c. Standard socio-demographic and socio-economic variables.
5. Interview schedule is available.
6. This study represents one of the few drug study surveys based on a probability sample. Like other general population surveys, it does have the problem of finding very few illicit drug users. Less than 200 of their sample ever tried narcotics and less than 100 ever used it regularly. Thus, there are relatively few opiate users whose criminal behavior could be analyzed. However, because of the life history approach, the age of initiation and age of involvement in at least arrests can be analyzed.
7. The data are on tape and are available. The investigators have indicated that they are willing to cooperative in further data analysis.

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\* Deceased.

1. Edward Preble - Life Histories of Street Drug Users
2. The purpose of the study was to conduct indepth life histories of street drug users in Manhattan. Indepth information was obtained on drug use history and criminal involvement.
3. Data collection began in 1975. Information on about 50 Irish and 50 Italians has been collected so far. Now he is focusing on Puerto Ricans and Blacks and expects to have about 50 from each of those groups. A few numbers of other ethnic groups have slipped in. Data was collected in Manhattan on the street in a storefront. Data is semi-structured, ethnographic.
4. a. Complete drug use history including
  1. age
  2. frequency
  3. source
  4. routeb. Complete arrest history including
  1. age of each arrest
  2. charge
  3. dispositionc. Socio-economic variablesd. Lots of narrative life history on family, peer, work relationships.
5. There is not a questionnaire or variable list as such. It is more ethnographic. They have computerized some information. Computer variable list is available.
6. This would be good for time sequence analysis.
7. Dr. Preble is willing to make information available.

DRUG USE AND SUSTAINED CRIMINAL BEHAVIOR



1. David Nurco and John Ball - Impact of Heroin Addiction on Criminality
2. The purpose of the study is to conduct an interview follow-up of 243 drug using arrestees to determine drug use and criminal behavior patterns since onset of drug use. Basically, they will compare the criminal behavior of those who continued to use heroin and those who did not.
3. N=243. The study was done in Baltimore, Maryland.
4.
  - a. Life history of drug use including age at first use and frequency.
  - b. Life history of criminal behavior and arrests.
  - c. Specific focus is on criminal and drug using behavior since onset of drug use.
  - d. Standard socio-demographic and socio-economic variables.
5. Data instrument is not currently available.
6. This study could be important in examining the role of heroin use in maintaining criminal behavior.
7. The data are currently being analyzed. The investigators will be willing to undertake further analysis.

1. Saul Sells - DARP Follow-up Study.
2. Prior to the initiation of the CODAP System as a means of establishing and maintaining patient records, Sells administered something called the DARP system. Basically, it was a nationwide client record system in operation from 1969-1973 administered from Texas Christian University. In 1976, Dr. Sells directed a follow-up study of the DARP population.
3. This study has an N of about 13,000. It is a nationwide baseline and follow up study. Essentially, it is composed of those who entered federally funded treatment programs during the period 1969-1973. It is comprised primarily of narcotics users.
4. Baseline:
  - a. Life time history of drug use including
    1. type
    2. frequency
    3. source
    4. route of administration
  - b. Life time history of arrests including number and some charges
  - c. Standard socio-economic and socio-demographic variables

Follow-up:

  - a. treatment experiences
  - b. drug use since treatment - same measures as baseline
  - c. arrests since treatment - same measures as baseline
  - d. treatment experiences since treatment
  - e. standard socio-demographic and economic variables
5. Variable list in preparation
6. Baseline data can be used to assess extent of crime in treated drug using populations. However, the most important use of the data would be to examine the influence of continuing drug use on arrests. The data could essentially be used to compare the arrest rates since treatment of those who continued to use drugs and those who did not, controlling for pretreatment arrest activity and some more complex variation thereof.
7. The follow-up data are still being collected. Most of it is done and some analysis has been completed. The data will, no doubt, be available in some form once NIDA has it.

DEMAND REDUCTION - TREATMENT

1. Clyde B. McCoy - The Social Costs of Treatment Denial.
2. The purpose of this study was to compare a group of individuals admitted to methadone maintenance with a group who were placed on a waiting list. Comparisons were in terms of emergency room lists and costs, arrests and other criminal justice processings and associated costs and deaths.
3. N=409 - Two-thirds male; about one-quarter Black, one-half White. Data collection 1976-1977. Data collected in Miami, Florida.
4. At application to treatment.
  - a. Drug use history including:
    1. type
    2. frequency
    3. source
    4. age at first use
  - b. Some arrest history - in last 24 months including charge
  - c. Standard socio-demographic and socio-economic characteristics

After admission or being placed on waiting list for next 5 month period.

  - a. emergency room visits, number and cost
  - b. arrests, number, charges, disposition and costs
  - c. deaths
5. There is no questionnaire as such. This study essentially involved a record search. The variables are listed in #4.
6. This study would be applicable for dealing with demand reduction questions. Does treatment reduce criminal behavior of addicts? These were heroin users who had heavy criminal involvement prior to treatment. The assignment to waiting list or treatment was fairly random. It depends on when they came during the day.
7. The data are currently available for analysis and the investigator is willing to undertake further analysis.

1. Valley Rachal and Robert Hubbard - Treatment Outcome Prospective Study (TOPS)
2. To evaluate the impact of drug abuse treatment services and to provide information on the natural history of drug abusers seeking treatment.
3. A longitudinal prospective cohort study in which clients in twenty drug treatment programs in six cities will be selected during a one year period. All entrants to the drug programs during the year period will be interviewed at intake and during treatment. In the followup study a subsample of this initial population will be selected.
4. Detailed self-report information on drug use history (from age of first use, age at first regular use, and the like) and on illegal involvement: the individual's criminal behavior (age when offense was first committed, frequency of offense overall and for year prior to the interview) and contacts with the police and courts.
5. Interview schedules available.
6. This study provides retrospective onset information for drug use and criminal behavior which speaks to the sequencing issue. Provides some information about the characteristics of the three stages of drug use (initiation, maintenance, and cessation) hypothesized.
7. Pilot study data (N=4,000) are currently available.

ECOLOGICAL ANALYSIS

1. Clyde E. McCoy and Duane C. McBride - The Neighborhood Distribution of Crime and Drugs.
2. The purpose of this study is to examine the areal distribution of criminal and drug using behavior by type and to examine and compare the explanatory variables that statistically account for the distribution of criminals and drug users.
3. The overall N is about 20,000. The population is divided into 3 groups.
  - a. noncriminal drug users
  - b. criminal drug users
  - c. nondrug using criminals

Basically, the study will examine the census tract distribution of these 3 groups and use census tract characteristics to account for the distribution of the 3 groups. Data collection occurred during 1974-1977. It involves secondary analysis of existing data banks. Study begins on 7/1/78. Data were collected in Miami, Florida.

4.
  - a. Drug use type - life time and current, including:
    1. frequency
    2. source
  - b. Current arrest charge, crime type
  - c. Area of residence
  - d. Standard socio-demographic and socio-economic variables
  - e. Census tract socio-demographic and socio-economic characteristics
5. There is no questionnaire as such - the variable list is given in #4 and is a compilation of variables from existing data banks.
6. This study would be useful for examining the issue of whether or not drug users and criminals or particular types of drug users and criminals are drawn from the same population.
7. Analysis will be available and the investigators would be willing to undertake additional analysis.

LAW ENFORCEMENT



1. Sacramento Police Department - H.I.P. (Heroin Impact Program)
2. The purpose of this study was to aid in the evaluation of the Heroin Impact Program which was initiated in Sacramento County on a trial basis for a period of one year.
3. Data were compiled for the first six months of the H.I.P. effort in 1976. Data are available on the number of arrests by month for addicts (arrests made under Section 11550 of the Health and Safety Code which makes it unlawful to use or be under the influence of heroin--persons convicted under this code are sentenced to not less than 90 days in the County Jail). Police data on the amount of heroin seized (in grams) were plotted by month. Data on burglaries and robberies reported in the County were also plotted by month and compared with these offenses reported by month for the two years prior to the H.I.P. effort.
4.
  - a. Heroin addict arrests resulting from H.I.P. enforcement effort.
  - b. Amount of heroin seized (in grams) during H.I.P. enforcement effort.
  - c. Number of burglaries and robberies reported to the police in Sacramento County during H.I.P. enforcement effort and for the preceding two years.
5. Data are available from police records of arrests, drug confiscations (as well as other evidence confiscated such as stolen property), and reported property offenses.
6. Section 11550 of the California Health and Safety Code allows enforcement officials to remove heroin addicts from the street for a period of at least 90 days thereby making the evaluation of special enforcement efforts and their impact on property crimes a realistic study. A preliminary study was done in which a random sample of heroin addicts (N=59) and a sample of drug officials (N=57) working in Sacramento County completed questionnaires which sought to establish the extent of the heroin problem in Sacramento County, its relationship to other crimes, and a judgement on how effective the criminal justice system in the County is in curbing heroin abuse. Based on data from these questionnaires the rationale for looking for the H.I.P. program to impact on property crimes was strengthened.
7. The Sacramento Police Department is willing to share their data and to cooperate in carrying out further studies.

**END**