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**TREATMENT AND REINTEGRATION OF VIOLENT
JUVENILE OFFENDERS: EXPERIMENTAL RESULTS**

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INTRODUCTION

In the 1960's, Americans began to ask important questions about youth violence. The National Commission on the Causes and Prevention of Violence, known as the Kerner Commission, concluded in 1969 that the United States was the world's leader in its rates of homicide, assault, rape and robbery.¹ To most people, crime in general and violent crime in particular became major sources of discontent (Weiner and Wolfgang, 1985). Like the Commission, most Americans believed that violence was primarily the province of youth. Their fear then and now is not without some evidence.

Juvenile arrests for violent crime increased dramatically and reached an all-time high in the 1960's. They remained at their highest rates until they began to recede midway through the 1970's (Strasburg, 1984; Weiner and Wolfgang, 1985).² After 10 years of steady decline in the number of juveniles arrested for violent crimes, there was a slight increase in 1984. By 1986, over 70,000 juveniles were arrested annually for homicide, rape, robbery and aggravated assault, an increase of nine percent from the 1984 levels. Yet the number of juveniles arrested in 1986 is still lower than a decade earlier. The decrease in arrests from 1975-84 occurred in conjunction with a decrease in the adolescent population during that period. But the recent increase occurred while the adolescent population continued to decline. Overall, violent juvenile crime rates have remained stable since 1975, and for certain crimes have actually declined in that time, though these rates remain unacceptably high.

Data from arrests and victimization surveys agree that the perpetrators of violent crimes comprise a distinct and consistent profile: they are young males, from socially, politically, or economically disadvantaged minority groups, residing primarily in inner cities. Accordingly, juvenile violence is primarily an urban phenomenon, and accordingly is associated with the correlates of urbanism, especially poverty and generally weakened social institutions such as schools and neighborhood groups (Weis and Sederstrom, 1981; Laub, 1983; Shannon, 1984).

The perception and reality of juvenile violence in the decades since the Kerner Commission has ignited public fear, evoked strong rhetoric to "get tough" with juvenile offenders, and given support to significant changes in juvenile justice policy. Looking back over this period, several factors contributed to rather dramatic changes in juvenile justice. Citing evidence from treatment research that "nothing works" (Martinson, 1974; Lipton, Martinson and Wilks, 1975), a policy debate began nationwide on the appropriate judicial forum to adjudicate violent crimes by juveniles. Critics of the juvenile court

suggested that its rehabilitative dispositions were ineffective in controlling youth violence and inappropriate for the seriousness of violent juvenile crimes (Wilson, 1983; Feld, 1983; Regnery, 1986). A second factor was the dramatic increase in violence by juveniles in the 1960's, and their continuing high rates in the past decade. Together with earlier criticism of the informality of juvenile court proceedings and Supreme Court decisions attacking the disparity in due process protections for juveniles (*in re Gault*, 387 U.S. 1, 1967; *Kent v. United States*, 383 U.S. 541, 1966; *McKeiver v. Pennsylvania*, 403 U.S. 528, 1971), basic questions were raised about the *parens patriae* philosophy of the juvenile court. The juvenile justice system was challenged to demonstrate that it could at once serve the "best interests of the child" while protecting his or her due process rights, at the same time effectively rehabilitating juvenile offenders while addressing growing concerns over the rights of victims and community safety.

These concerns were focused specifically on violent juvenile offenders, for several reasons. First, the national commissions on violence and crime in the 1960's (Currie, 1985), and later presidential commissions in this decade (President's Task Force on Violent Crime, 1982, hereafter "Task Force") illustrated the steadily growing intolerance of the "permissiveness" of the courts and demands for more punitive and incapacitating dispositions for those who commit for assaultive crimes or who are chronic offenders. These reactions also were part of a more general law and order trend in public opinion about crime and justice, reflected in the growing prison and jail populations throughout the period. Second, research beginning in the 1970's (Wolfgang et al., 1972; Hamparian et al., 1978; Strasburg, 1978; Shannon, 1980) consistently found that a small but "violent few" account for a disproportionate share of serious and violent juvenile crime. Despite their small numbers, they were perceived as a sufficient threat to community safety to justify basic changes in juvenile justice philosophy and policy (Task Force, 1982).

Third, violent juvenile offenders obviously were the most problematic population in the juvenile court, requiring at once the most intensive interventions and also the most secure treatment. In this respect, they "drive" the policies and programs of the juvenile courts and corrections agencies, consuming the most resources and public attention (Miller and Ohlin, 1984). Accordingly, doubts on the efficacy of juvenile court dispositions, together with public intolerance of violent crime, placed violent juvenile offenders at the center of an ideological debate between proponents of the juvenile justice philosophy, and its rehabilitative dispositions, and advocates of a retributive or punishment-based system whose purposes are to deter and incapacitate offenders.

The demand for changes in the legal paradigms of juvenile justice arguably are

related to the apparent weaknesses of the rehabilitative interventions which are at the heart of juvenile court dispositions, especially for the most dangerous offenders in the juvenile justice system. Lacking demonstrably effective correctional interventions, which also can provide credible sanctions and address community protection concerns, juvenile court critics have turned to punishment philosophies to control violent juvenile crime. As the juvenile and criminal courts begin to resemble one another in process and punishment, doubts are raised about the necessity of a separate juvenile court (Farrington, Ohlin and Wilson, 1986). Thus, the future of a specialized court for juveniles may rest on its dispositional competence in dealing with violent crimes by juveniles. Whether correctional programs can effectively treat and control violent juvenile crime will influence if not determine, the outcome of this debate.

The Violent Juvenile Offender Program (hereafter, VJO Program) tested an experimental dispositional option for the treatment and reintegration of violent juvenile offenders (Fagan et al., 1984). At its inception in 1980, this research and development program was designed as a critical test of the rehabilitative ideals of the juvenile court. Its goal was to determine if correctional interventions could address public safety while providing remedial services to the most serious offenders in the juvenile justice system. The results were seen as a bellwether of the future of the *parens patriae* philosophy and the scope of juvenile court jurisdiction (Fagan and Forst, 1987; Krisberg, 1987; Gendreau and Ross, 1987).

This report presents the findings of the VJO Program experiment. This section continues with an analysis of the weaknesses and controversies in the literature on rehabilitation which fueled the belief that "nothing works" and in turn, the criticisms of the juvenile court. The next section summarizes the new social knowledge on community corrections and reintegration programs which has emerged over the past decade, a knowledge which challenges the criticisms of rehabilitation. The third section analyzes the intervention model which was the independent variable in the VJO Program experiment. The methods and research design are described in the fourth section. The results and policy implications conclude the report.

Issues and Controversies in Research on Juvenile Corrections

The policy debate on the juvenile court was fueled in part by the belief that "nothing works," first articulated by Robert Martinson in 1974, and restated one year later by Lipton, Martinson, and Wilks (1975).³ The inconclusive results of later studies on

juvenile corrections (e.g., Murray and Cox, 1979) further strengthened the arguments of juvenile court critics. Until 1980, the prevailing wisdom was that rehabilitative efforts do not work (Bailey, 1966, Robison and Smith, 1971; Slaikeu, 1973; Cook and Scioli, 1975; Wright and Dixon, 1977; Sechrest, White and Brown, 1979; Lab and Whitehead, 1988).

A closer look at these conclusions suggests perhaps a more complex relationship between treatment and subsequent behaviors. Several reviewers have noted that the rehabilitative failure argument presumes rigorous treatment evaluations which correctly reject hypotheses about the effects of various interventions (Sechrest, White, and Brown, 1979; Gottfredson, 1982; Fagan and Hartstone, 1984; Rezmovic, 1984). Yet this has hardly been the case. The conclusions that "nothing works" may be based more on the absence of empirical evidence that treatment is effective, rather than on conclusive evidence that treatment does not work. However, no proof is not the same as disproof. In turn, the rejection of rehabilitative policies may be premature.

The weaknesses of the evaluation studies which underlie the "nothing works" conclusions are now widely recognized. The persistent claims that treatment is ineffective are based on surveys of treatment evaluations which also point out the weaknesses of their designs. For example, neither statistical nor experimental controls were consistently applied (Logan, 1972); accordingly, no attribution of effects was possible. Problems with outcome measures characterized other weaknesses, including a tendency to rely on dichotomous measures of recidivism based on rearrest. Study periods often were too short to adequately detect long-term gains, while in other studies they were too long to determine incremental effects.

Other programs were marked by inconsistencies between theories and intervention practices, or outcome measures which expressed the intervention goals. More often, the absence of theory led to widely divergent intervention practices. They often were not well grounded in the theories and causal assumptions which explained delinquent behavior. Cressy's (1958) observation appears to hold true for the more recent efforts: rehabilitation tends to label as theory anything that programs do. Some programs are often atheoretical, relying on the vision or zeal of staff to achieve behavioral changes. Also, outcome measures often were insensitive to incremental changes in behavior, such as reduction in the rates, severity of crime, or intervals between crimes.

Finally, most studies paid insufficient attention to the degree to which the intervention was actually implemented. Evaluators often speak of "the program" or "the treatment" as if the experience of each program client was identical (Mark, 1983). This often led to the use of a dichotomous treatment variable in models designed to estimate

treatment effects (Cook and Poole, 1982). However, this assumption of a "black box" has been challenged in the recent evaluation literature (Sechrest and Redner, 1979; Cook and Poole, 1982; Mark, 1983; Scheirer and Rezmovic, 1983; Rezmovic, 1984). Often, program participants are exposed to a variety of experiences, despite their participation in an ostensibly uniform program. This variability is likely to increase with multiple program sites, where organizational and operational characteristics affect treatment implementation. Differences in clients' motivation and characteristics, program personnel, and site characteristics can cause differences in treatment implementation.

Obviously, treatment is not an all-or-nothing matter. The assumption of uniform implementation and intervention can lead to erroneous conclusions that a treatment was ineffective, when, in reality, implementation was inadequate to afford a valid test of the program. Inattention to variability in treatment implementation, for example, would discount the possibility that the interventions were not sufficiently strong to create attitudinal or behavioral change. It also may be that the treatment appeared ineffective because it was not received by a majority of clients, or that it was not implemented as designed. In other words, the failure to measure treatment implementation in analyses of treatment intervention can severely confound the interpretation of results (Cook and Poole, 1982). As Sechrest and Redner (1979) point out: "Any conclusions about whether a treatment is effective or not must be reached in full knowledge of just how strong the treatment was" (p.23).

It is impossible to say how often studies have concluded that treatments were ineffective when they should have concluded that weaknesses in treatment implementation precluded definitive conclusions on their effectiveness (Rezmovic, 1984). Sechrest, White, and Brown (1979) and others have found this to be particularly true for correctional interventions. If evaluations have been performed on poorly implemented correctional intervention programs, then the "nothing works" doctrine and the delinquency policies which flow from it seem unfounded. It is more likely that innovative methods have not been well tested, and that worthwhile programs have been overlooked or incorrectly classified as ineffective.

In fact, Romig (1978), Neithercutt (1978), and Greenwood and Zimring (1985), among others, have found treatment programs for serious juvenile offenders that were demonstrably effective. Gendreau and Ross (1980) disputed the basic finding from the 1970's, and later found empirical support for effective rehabilitation programs in the evaluation literature of this decade (Gendreau and Ross, 1987). Evidence of positive effects of correctional interventions appeared to increase as researchers and program staff

devoted greater effort to the important linkages between theory, practice, and research strategy. At the same time, new strategies for correctional interventions for violent juvenile offenders were evolving. The use of small, community-based corrections programs spawned new issues and controversies within juvenile corrections. The policy debates, particularly on their effectiveness in controlling crime, and in turn protecting public safety, are discussed later on in this section.

The VJO Program: A Critical Experiment

The VJO Program was designed as a critical experiment to resolve many of the weaknesses cited earlier. The intervention model incorporated principles derived from theory about the specific causes of juvenile violence, as well as contemporary practices which had been successful in diverse settings. The program includes credible and logical sanctions which address the public safety and fairness dimensions of juvenile court dispositions while maintaining their focus on rehabilitation. An experimental design, with continuous measures of intervention and a range of outcome measures, provided a rigorous test of the program design.

The program model was characterized by two unique features. First, the program design emphasized theory and its synthesis with contemporary juvenile corrections practices. Second, interventions emphasized reintegration of violent delinquents into the community, with continuity of the intervention principles and practices into the community living phase of program. Thus, while the VJO program tested innovations in treatment interventions, it also tested reintegration strategies designed to strengthen correctional intervention. While most youths adjust well to institutional settings, their highest risk for failure occurs during the first few months after return to the community when they first begin to manage the contingencies of community life (Greenfield, 1985). The reintegration emphasis specifically addressed the decay of treatment effects in the early months after community re-entry.

Accordingly, the VJO experiment was a test of policies which emphasize investment of correctional attention and resources in the latter stages of intervention, and also strategies to insure its continuity with the earlier residential phases. Traditional practice often invests the majority of its attention and resources to secure care for violent juveniles, and also to treatment interventions within closed institutional programs. This experiment departed from those practices, both in terms of the substance, process, and structure of intervention, as well as important practical emphases on insuring the

continuity of intervention through return to the community. The design and implementation of the program design has been described in detail elsewhere (Fagan et al., 1984; Fagan and Forst, 1987) and is summarized later on.

TREATMENT AND REINTEGRATION: POLICY AND PRACTICE

Prior Research on Treatment and Reintegration of Juvenile Offenders

Over 15 years have passed since the state training schools were closed in Massachusetts, and a nationwide debate began on the effectiveness of community corrections programs for juvenile offenders. That era also marked the beginning of critical research studies on a variety of innovations in juvenile corrections, from the early experiments in Provo (Empey and Erickson, 1972) and Silverlake (Empey and Lubeck, 1971), to the important studies on the Massachusetts reform (Coates et al., 1978) the UDIS program in Chicago (Murray and Cox, 1979), recent research on the impact of juvenile court intervention in Utah (Austin, et al., 1987), and evaluations of private community-based corrections programs (Greenwood and Turner, 1987). The results of these efforts have sparked a controversy among researchers and professionals on the interpretation of this research, and the effectiveness of policies which stress small, diversified correctional interventions and intensive community reintegration and supervision. The results of this debate will influence a current second generation of reform in juvenile corrections throughout the country.

The issue of public safety in these "alternative" programs has been widely studied. Depending on one's ideological perspective and approaches to measuring recidivism, the news can be seen as either good or bad. In general, recidivism in small community-based programs is about the same if not better than in large institutional programs, particularly for the critical one year period following return to the community from residential placement. This finding was true in the early community corrections experiments in Provo and Silverlake, the UDIS evaluation and the recent Utah research. Beyond that initial re-entry time, many other social and environmental factors intervene to influence behavior patterns. The extent to which skills and behaviors learned in programs are internalized and carry over into the youth's life in the community is a critical question for understanding recidivism, and also for determining effective programs and principles.

The research over the past decade shows that a diversified network of small community programs can control youth crime as well as large, expensive institutional models, at a lower cost and under far more humane conditions.

The practice of intervention and reintegration of youth released from institutions began in the early century when youth from the New York and Philadelphia Houses of Refuge were indentured upon release (Eldofonso and Hartinger, 1976; Lerman, 1984). Juvenile parole or aftercare developed in its contemporary form in the 1950's, with the adaptation of adult parole supervision concepts to juvenile corrections. Early juvenile aftercare practice blended the enforcement-oriented approach of the adult system with the rehabilitative concerns of the juvenile system, borrowing from the traditions and language of social work to foster an approach which differentiated juvenile parole from the adult counterpart. Today, approaches to juvenile parole supervision vary widely across the states. Some states have parole divisions while others combine probation and parole supervision within county-level agencies. Some private correctional agencies, such as the Associated Marine Institutes (Florida) and Vision Quest operate their own aftercare or reintegration components.

Unfortunately, there has been little research on the effectiveness of juvenile parole or reintegration strategies. Contemporary knowledge on effective reintegration strategies comes from the few experiments measuring the effectiveness of parole supervision practices. Palmer (1971) compared institutional care with community-based treatment and found a lower level of parole failure for those youth who were not placed in institutions. But Lerman (1975) dismissed the finding as an artifact of informal handling of rearrests by parole officers.

The Provo Program (Empey and Erickson, 1972) was a non-residential treatment program in which adjudicated juveniles were randomly assigned to regular probation supervision or intensive probation supervision with daily group counseling. Efforts to expand the experiment to include the state training school were unsuccessful. The highest failure rate occurred for youths from counties other than Provo placed in the state training school. The intensive supervision group had the lowest rearrest and reincarceration rates, though biases similar to the Lerman (1975) study were evident.

The Parklands study (McCravy and Delehanty, 1967) was similar to the Provo experiment, but it emphasized education and family counseling and the participants were younger. The program had a high dropout rate (less than one-third of those in intensive supervision completed the program), and only 22 percent of the experimental group were successful. There were no significant differences between the intensive and regular

supervision groups. Moreover, the longer the subjects remained in the program the worse they performed. Finally, the boys who were rejected as program failures had a better performance record than those who graduated.

Outcomes from the Highfields Program (Freeman and Weeks, 1956) indicate it too was modestly successful. The program assigned experimental subjects to a residence with an unstructured atmosphere and informal inmate-staff interaction. The control groups were juveniles in "mainstream" institutional care. At the six-month follow-up, a larger percentage of experimentals (63%) were not reincarcerated than the controls (43%).

The California Youth Authority conducted two juvenile parole experiments in the 1960's. The Fremont Program (Sechel, 1967) randomly assigned youthful offenders (average age 17.5 years) to either experimental or control groups (California Youth Authority institutions or camps). The experimental program consisted of individual and group therapy, half-day work assignments and community meetings. Also, the experimental groups could not "fail" during the program--once in, they were retained for the full treatment period. At the 15- and 24-month follow-up mark, there were no significant differences between the two groups in reincarceration or parole revocation. Initially, the Fremont youth had a higher recidivism rate, but the differences diminished over time. Overall, however, Fremont youth had a higher rate of failure after two years.

The Marshall Program (California Youth Authority, 1967) was derived from the Fremont Program, but differed in its organization structure (tighter, more autonomous). It also allowed boys to be deemed "failures" during the program (e.g., unable to adjust or untreatable). The emphasis of the program was on "social survival" (for example, skills to locate and maintain a job). During the 15-month follow-up, Marshall youth had relatively similar violation rates (44%) to institutional releasees (47%), but much lower violation rates than direct releasees (boys released directly from the CYA Reception Centers, 56%). In both the Fremont and Marshall programs, experimental offenders did not have significantly different rates of recidivism than offenders in regular institutional programs.

The Silverlake experiment (Empey and Lubeck, 1971) was a more rigorous design than the Provo experiment. Youth were randomly assigned to either "mainstream" juvenile corrections (i.e., training schools) or a community-based group home emphasizing regular school attendance and a rigorous milieu therapy based on guided-group interaction therapy. The equivalent reductions in recidivism after one year (and desistance rates) led Empey and Lubeck to conclude that non-institutional correctional interventions were a reasonable alternative to incarceration.

The Unified Delinquency Intervention Services program (UDIS) in Chicago provided further comparisons of training school placement with intensive community-based corrections. Murray and Cox (1979) concluded that the two interventions produced equivalent reductions in recidivism, though Maltz (Maltz et al., 1980; Maltz, 1984) argues that the non-experimental design was vulnerable to statistical artifacts. Austin et al. (1987) conducted similar research in Utah. Comparing youth in regular probation with matched samples in intensive community-based treatment and supervision programs, they too concluded that well supervised youth did not increase their rates of offending. Both these studies suggest that non-incarcerative placements do not increase public safety risks, result in similar recidivism reductions for secure confinement and community-based interventions, and demonstrate that supervision can be equally effective with incarceration but at a far lower cost.

The Massachusetts experience with intensive supervision using case management principles also furthers our understanding of the effectiveness of parole supervision. Comparing youth recently released from training schools with others placed in intensive community-based programs, Coates et al. (1978) found higher recidivism rates among training school youth. They also compared programs based on structure and orientation toward preparation for community living after return to the community. Not only were recidivism rates lower in more structured programs, but preparation for reintegration also produced lower recidivism rates. Moreover, they found that treatment gains⁴ in community-based residential care were neutralized upon the youth's return to the community under conditions of "traditional" parole supervision.

The studies illustrated the critical relationship between gains in residential treatment, reintegration strategies, youths' adjustment to the uncertainties and problems of community living, and their recidivism. It has led to rethinking of the structure and substance of reintegration strategies. The results suggested a new definition of the role of juvenile parole or "aftercare" to include advocacy and treatment dimensions in addition to surveillance and supervision. Structural implications included reduced caseloads and disaggregated supervision within smaller geographical areas. Parole workers were termed "caseworkers" or case managers, and were responsible for assuring that treatment interventions and community support services were a continuum of correctional care over different placements, rather than serving as an afterthought to institutional confinement. Finally, it placed reintegration at the highest priority for post-release supervision, with the assignment and involvement of caseworkers occurring immediately after placement in a community (residential) corrections, well before the youth's return to the community.

These supervision and intervention concepts are at the heart of the VJO experiment.

Reintegration Policy and Practice

The VJO Program was a reintegration experiment with strategic importance for juvenile corrections. Each year, over 600,000 juveniles are released from public and private juvenile correctional facilities (Krisberg et al., 1984). Confinement costs are high, ranging from \$25,000 to \$50,000 annually to securely house and provide services for these youth (U.S. Department of Justice, 1986). Reductions in incarceration rates or periods can measurably lower these costs, and reintegration strategies are critical to reducing length of stay and avoiding returns to secure care.

The early period after release from secure care seems to be critical in avoiding crime. For juveniles, risks for recidivism and return to correctional confinement are highest during the early months after release (Jackson, 1983; Murray and Cox, 1979; Krisberg et al., 1987). More than 70 percent of California youths released from training schools are rearrested within one year, and more than half are returned to secure confinement (Greenwood and Abrahamse, 1982; Haapanen and Jesness, 1982). One-third of the juvenile inmates released in North Carolina during fiscal year 1979-1980 were returned to prison within three years (Clark and Crum, 1985). A comparison of juvenile returns to prison in 14 studies found that the median recidivism rate was 32 percent within three years of release (Bureau of Justice Statistics, 1984). Finally, a nationwide survey of juvenile training school returnees estimates reincarceration to be 30 percent within three years and 40 percent within six years (Greenfield, 1985).

Similar trends were found for young adults in several studies. Parolees in these studies often were in the same age bracket as juveniles released from secure care. Beck and Shipley (1987) examined recidivism rates for a nationwide sample of (n=3,995) parolees ages 17-22, released from 22 states in 1978. One in five (19%) were returned to prison within one year, and nearly half (49%) were returned to prison within six years. Within one year, one in three (32%) was rearrested; within two years nearly half (47%) had been rearrested. The amount of time served had no consistent impact on recidivism rates, but the length of prior adult record and age of first adult arrest were the strongest predictors of rearrest and return to prison.

The Illinois Repeat Offender Project (ICJIA, 1986) found that 60 percent of adult inmates released from prison during 1983 were rearrested after one and a half years. Klein and Caggiano (1986) found that the percent of prison inmates rearrested after three

years from California, Texas and Michigan was 76, 60, and 53 percent, respectively. A Delaware study (DSCA, 1984) found that more than half (51.4%) of a 1980-82 release panel was rearrested by late 1983. Greenfield's (1985) survey of inmates in state facilities in 1979 found that rates of return to prison nationally were 29.4 percent within three years and 39.9 percent within six years. Greenfield also found that for younger parolees, ages 18-24, the six year return rate was 49.4 percent. These high return rates suggest that effective reintegration strategies may be a key to avoiding generations of what Irwin (1970) calls "state-raised youth."

The extent and seriousness of crimes by youth released from correctional programs suggests that effective reintegration strategies also could have significant effects on juvenile and adult crime rates. Those most likely to commit crimes after release tend to be juvenile offenders with lengthy histories of serious offenses. These chronic offenders also are the highest risk group for adult criminality. Among the predictors of high rate adult criminality and "predatory" street crime (Visher, 1986) are early age of first arrest, frequent juvenile contacts, and prior confinement in a secure juvenile institution (Chaiken and Chaiken, 1982; Blumstein et al., 1986; Klein and Caggiano, 1986). Thus, effective supervision strategies offer a salient strategy for reducing returns to confinement and recidivism rates for youth released from institutions, and in turn reducing overcrowding in training schools and prisons while limiting expenditures on incarceration of youth and punishment of subsequent adult crimes. If failure on reintegration or parole precedes chronic juvenile and adult crime, improvements in reintegration may also lower total crime rates and overall crime control costs.

Despite its obvious importance, juvenile corrections has not focused on developing successful reintegration strategies in recent years. Attention to reentry of offenders into the community and concerns for treatment and service delivery have received a relatively low priority in policy development and resource allocation, the result of a general shift in policy and philosophy on juvenile crime. "Just deserts" and retribution policies have resulted in harsher sanctions for juvenile offenders, leading to the expansion of training schools and secure care institutions and with it the attention and resources of juvenile corrections agencies. Today, juvenile corrections facilities are handling ever larger numbers of serious juvenile offenders, often minority males charged with serious and violent crimes, in increasingly overcrowded and antiquated facilities (Breed and Krisberg, 1986).

The inattention to reintegration is the product of two related processes. First, skepticism about reintegration is part of larger doubts over the past 15 years about the

value and effectiveness of rehabilitation and the benign philosophy of the juvenile court (Miller and Ohlin, 1984). The primacy of incapacitation strategies naturally eclipsed efforts to improve reintegration and provide treatment services to released offenders. Further, the traditional perception of the juvenile aftercare worker as a counselor and service provider did little to enhance reintegration policies in a system concerned with punishment. Second, despite cycles of decline and increase, rates of serious juvenile crime have remained at high levels throughout the past decade. Juvenile crime⁵ increased nine percent from 1984 to 1986, and serious youth crime⁶ also increased in that period following a decline of nearly a decade. The population of "at risk" youth actually declined in that period, and the observed trends contradicted the predictions of a continued downward trend in juvenile arrests through 1990 (Cook and Laub, 1986). Skepticism about rehabilitation, as well as general social trends disfavoring other than punishment, both contributed to the deemphasis on reintegration.

Yet the benefits of effective reintegration policies are readily apparent. As mentioned above, it provides a mechanism to control and relieve overcrowding in juvenile correctional facilities. Second, it provides an opportunity to interrupt the development of adult criminal careers, and is a logical part of a general strategy to combat youth crime. Third, reintegration strategies provide a bridge between institutions and the community, providing a structured program to continue the treatment gains in highly structured, regimented secure programs and adapt them to the uncertainties of the neighborhood social milieu. Fourth, reintegration strategies can ensure a reasonable level of community protection and safety, in contrast to the traditional parole supervision models with high caseloads and infrequent contacts. Finally, the relationship between secure care and reintegration suggests its critical role in the overall success of juvenile correctional policies. A recent study by the National Council of Juvenile and Family Court Judges (1984) summarized this role:

Far too many serious offenders are released to the community "cold turkey," straight from secure placement without any adequate resources or adequate efforts for gradual reintegration into community living. Evaluation data suggests that failure to assist youth in this reintegration process often causes those gains made in residential placements to "wash out" upon the youth's return to the community (p. 17).

Accordingly, the VJO Program tested a unique approach to reintegration which addressed three key parts of reintegration programming: transition from institutional to community settings with continuity of services and interventions, enhanced methods of

control and supervision for juvenile offenders in the neighborhood social milieu, and interventions designed to teach youth to live within the relatively unstructured and often frustrating life in the neighborhood.

This Study

This paper reports the results of the VJO Program's impact on the recidivism and social outcomes of violent juvenile offenders. Participants were placed in initially in small, secure facilities and reintegrated to the community through transitional facilities and then under intensive supervision upon returning to their neighborhoods. Control youths were placed in standard juvenile corrections programs. A continuous measure of intervention or treatment is used, based on a detailed study of the implementation of the program design in the study sites (Fagan and Forst, 1987). Accordingly, estimates of treatment effects are strengthened by comparing the relative strength and integrity of interventions (Sechrest, White and Brown, 1979).

Recidivism and other post-release data are used as a basis for comparing the recidivism and social outcomes of experimental youth (i.e., those from the VJO Program) with controls. Appendix A discusses the approach to defining and measuring recidivism. We use a strategy of multiple measures, including official records on the frequency, severity and timing (delay) of rearrests, the rate of reincarceration, and self-report measures of delinquency. In an experiment, the random assignment of offenders to experimental and control groups eliminates the need to develop recidivism definitions based on relative declines in frequency or severity of offenses within groups. Between group differences are compared, and these are attributed to differences in implementation of the experimental model and comparisons to "mainstream" corrections practices.

THE VIOLENT JUVENILE OFFENDER PROGRAM

In 1980, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) of the Department of Justice initiated a research and development program to test experimental programs for the treatment and community reintegration of chronically violent juvenile offenders. The program was launched at a time of rising rates of violent juvenile crime (Strasburg, 1984; Weiner and Wolfgang, 1985) and growing disaffection with the rehabilitative policies and programs of the juvenile justice system (Miller and Ohlin, 1984;

Feld, 1987). The VJO Program was a research and development program designed to implement an intervention model integrating strain, control, and learning theories, and to measure its impact on the recidivism and social outcomes compared to youths in "mainstream" juvenile corrections programs. The integrated theory addressed the correlates and causal paths leading to delinquent behaviors and particularly adolescent violence (Fagan and Jones, 1984), and was based on earlier integrations of strain, control and learning theories (Elliott et al., 1979; Hawkins and Weis, 1985). Figure 1 illustrates the hypothesized causal paths for violent behaviors during adolescence.

When translated into an intervention model, it emphasized the development of social bonds and "unlearning" delinquent behaviors while developing social competence and skills applicable to a natural setting. The program design emphasized the transition and reintegration of program youths into the community following correctional intervention. The program design incorporated "performance measures," or operational definitions of each element, to bridge from theory to practice. These program standards were intended to promote uniform implementation and minimize variability across sites. Implementation strategies included training of program personnel responsible for service delivery, the development of supportive materials to ensure that operational definitions were communicated in practical and consistent terms, monitoring of treatment delivery according to the operational definitions and performance standards, and on-site technical assistance to address the specific needs and deficiencies of the implementing site. Projects were implemented in four sites--Memphis, Tennessee; Newark, New Jersey; Boston, Massachusetts; and Detroit, Michigan. Each project was funded in two 18-month phases, at \$700,000 each.

Program Elements

The program design included four dimensions: a multiple phase program, theoretical principles, structural elements, and the actual intervention strategies.⁷ The underlying theoretical principles incorporated the intervention theory and served as a bridge between theory and program. They were intended to inform program design by providing strategies for the practical application of theory. Briefly, the four underlying principles included:

- o *Social Networking*--the strengthening of personal bonds (attitudes, commitment and beliefs) through positive experiences with family members, schools, the workplace, or non-delinquent peers.

- o *Provision of Youth Opportunities*--the strengthening of social bonds (attachments and involvement) through achievement and successful participation in school, workplace, and family activities.
- o *Social Learning*--the process by which the personal and social bonds are strengthened and reinforced. Strategies include rewards and sanctions for attainment of goals or contingent behaviors.
- o *Goal-Oriented Behaviors*--the linkage of specific behaviors to each client's needs and abilities, including problem behaviors and special intervention needs (e.g., substance abuse treatment or psychotherapy).

The structural elements included components to implement the underlying principles and deliver the specific treatment interventions. Three of these elements stand out as hallmarks of the program design, and are described below. Case management included periodic review and (as necessary) modification of each youth's service needs and plans, continuity so that youths receive all needed services, clear and consistent expectations for youths across placements, and specified opportunities for rewards where gains are made.

A second element was the effort to reintegrate youths into their communities throughout the program phases. A simple rule-of-thumb was followed: projects should spend as many dollars on youths when they are in the community as they do in earlier phases, through supervision and purchase of services. Reintegration was designed to sustain new behaviors and skills learned during treatment, and reinforce them during transition to family and community life on the streets and in the workplace.

Finally, program design required a *multiple phase residential program* which included: secure care, community based residence (CBR), and community living or community reintegration. This ensured that project youth received the maximum amount of treatment in the least restrictive environment, providing a gradual re-entry into community living. Figure 2 illustrates the planned integration of the dimensions of the program design, with specific elements of theory incorporated into the structural elements and each of the specific interventions.

Implementation: The Strength and Integrity of Intervention

The strength and integrity of correctional interventions for both experimental and controls provide a unique measure of the independent variable for this study. By comparing the experimental programs with "mainstream" juvenile corrections, we

determined not only the extent to which the program theories and principles were present in both experimental and control conditions. In at least one site, the underlying principles of the program design were more salient for the control program than for the experimental, suggesting an unusual opportunity to further assess theory as well as program practices.

Table 1 illustrates the results of implementation of the program design at the four sites, and characterizes the independent variable in the experiment. Implementation of the program elements varied by element and the measure used to assess it (Fagan and Forst, 1987). Youth perceptions often were at odds with staff perceptions, and observations sometimes contradicted structured measures. Yet it is possible to combine the implementation results from qualitative and quantitative measures to construct a composite assessment of implementation of the core elements in the program design. Table 1 shows the results of this assessment, based on a simple trichotomous rating from low to high.

INSERT TABLE 1

The Boston and Detroit programs were rated as having the strongest implementation. They adhered to both the spirit and letter of the model. In turn, they had a moderate or strong implementation for the majority of elements, but also several weak areas. Moreover, these sites varied on individual elements. The complications of establishing the program elements at the other sites resulted in mostly weak to moderate ratings. Also, the composite assessments for each site were validated by overall assessments based on secondary analyses of field notes and comparative analyses by research staff.

The results suggest that no particular element determines implementation (Fagan and Forst, 1987). A salient program environment is established when a threshold of elements is achieved. Implementation appears to be a function of achieving this threshold, regardless of the specific elements which were established. There is no prescribed set of components which constitutes a program. Also, programs may have glaring weaknesses in one or more elements and still achieve a sufficient implementation threshold to sustain a program environment. Finally, the importance of context and process data to understand the mitigating circumstances of implementation outcomes enhances this type of analysis. Incorporating the organizational dynamics and characteristics adds to the analysis of implementation.

Table 2 confirms the these differences in correctional interventions by comparing

the length of treatment interventions for each of the program phases. The intent of the VJO experiment was to provide more intensive, though not necessarily longer, treatment services for violent youths. Thus, though intervals of correctional intervention would remain about the same length, there would be substantive differences for experimental and control youths in the amounts of time spent in various conditions of care and supervision. The emphasis on reintegration suggested that while secure care might be shorter, there would be greater use of transitional residential placements and longer periods of community-based supervision for the experimental group. While experimental youths would move more quickly through secure care but remain longer in transitional and intensive supervision conditions, control groups would spend longer intervals in secure care, have fewer and shorter placements in transition facilities, and spend longer periods in the community under more intensive supervision conditions (Fagan and Forst, 1987).

INSERT TABLE 2

Correctional interventions for violent juvenile offenders averaged between nine and 10 months. Detroit had the longest correctional interval -- about one year. In all other sites, the average was less than one year. For Boston and Detroit, the programs with the strongest implementation of the program design, experimental program supervision lasted from about 33 to 50 percent longer. In the other two sites, control supervision was longer, primarily due to longer periods in secure care.

Treatment periods for each program phase further illustrate the differences between experimental and control conditions. Secure care stays varied extensively by site -- from nearly one year for Detroit experimental youths to about four months for Memphis and Newark experimentals. Experimental programs averaged about 195 days, or 6.5 months, of secure confinement, compared to 237 days, or about eight months, for controls. Only in Boston were secure care stays comparable for experimental and control youths. In Detroit, experimental youths remained longer in secure care than controls. However, this was due in part to the practice of Detroit case managers to return youths to state training schools for violations of program rules. In Newark and Memphis, secure care stays were far shorter for experimental youths. The length of stay in community-based residential placements best illustrates the contrast between the experimental and control treatments. Not only was the utilization of this option far greater among the experimental programs (Fagan and Forst, 1987), but the average length of stay in these transitional placements was more than three times greater.

This was planned. The program design emphasized transition and return to the community by strengthening and accelerating reintegration services before youth left the training schools. Interventions began upon placement in the training school, but intensified shortly before release. The program was not intended to modify length of stay. Rather, it was designed to emphasize reintegration plans during secure care, beginning the process of planning and community adjustment well before the release date. Accordingly, differences emerged in the length of transitional stays and again for the time in the reintegration phase. Not only were more experimental group youth placed in transitional facilities, but those placed spent nearly two months longer in these carefully selected facilities.

The lengths of community supervision, however, were far shorter than secure care stays for both experimental and control youths -- the average experimental group supervision period was 40 days, and 30 days for controls. Boston, the site with the strongest implementation, had the longest supervision period for experimentals -- 77 days. Newark's period was 15 days -- about two weeks. These short periods for experimental youths were not consistent with the program design. The program design, and underlying principles, assumed that skills learned in earlier program phases would be adapted to the community, and that supervision would continue for several months as youths resumed their social activities -- school or work, family and community life. One plausible explanation -- program stays ending early due to the age limit for juvenile corrections -- applies only in Boston where juvenile corrections jurisdiction ends at 18 years of age.

Nevertheless, there were critical substantive differences in supervision: caseloads were smaller, services were intensive and strategically planned, and community social networks were formed for each youth to facilitate adjustment to community living. Accordingly, though shorter than planned, supervision for experimental youths established far different community conditions than were experienced by control youths.

DATA AND METHODS

Samples

The sample for the VJO experiment consisted of (N=227) violent juvenile offenders identified from the four urban juvenile courts in 1981-85. All were males, and were selected based on the offense criterion of a committing offense for a Part I index felony,

and a prior adjudication for a "major" felony.⁸ Subjects were identified from juvenile court records at the time of the adjudication for the (target) committing offense. Only males were selected since referral to residential treatment intervention programs would result from their participation, and funds were not available for separate programs for female delinquents. The use of adjudication as the standard for eligibility was purposefully restrictive to avoid oversampling due to inconsistency across locales in procedures for charging on arrests and petitions. The adjudication standard permitted a uniform proceeding, with defense representation and confrontation of witnesses, to be the standard of evidence that a violent act had actually occurred. While some violent adolescents no doubt were excluded, errors in sampling "false positives" were minimized. Fagan et al. (1986) validated the sample through comparisons with non-institutionalized adolescents in matched social areas.

Of the original pool of eligible subjects, six were deemed ineligible for participation for various reasons.^{9,10} Note too, that not all youth completed all phases of the program, due to the abrupt termination of the VJO Program in all sites at the conclusion of federal funding in 1985.

Table 2 shows the sample sizes and characteristics for experimental and control youth in each program site. All participants were males, since the experimental programs were developed as residential units. The age range is extremely narrow, and few youths entered the program beyond 17 years of age. Over 90 percent of the youths were Black, with the remainder predominantly White. The high representation of Black youths reflects the increasing proportion of minorities, especially Blacks, in state juvenile corrections facilities in this decade (Schwartz et al., 1987).

Differences between sites in youths' prior juvenile court involvement illustrate the importance of local custom and normative standards of crime and punishment in the social context of juvenile court decision making. Obviously, the threshold for state correctional placement varies extensively across locales. Newark youths, for example, had averaged more than 12 prior petitions and four adjudications prior to the current violent offense, while Detroit cases averaged about four petitions and two adjudications. Thus, the adjudication rate for an offender cohort who eventually had two adjudications for violent juvenile offenses ranges from 34.5 percent in Newark to 57.5 percent in Boston. Obviously, the ability to identify and adjudicate specific violent offenses varies widely across locales. Yet the disparities also may reflect the quality of juvenile arrests, specific practices such as collapsing multiple incidents into one petition, and prevailing judicial practices regarding formal and informal sanctions.

Measures and Methods

Recidivism data included criminal histories obtained from official sources and self-reported delinquency collected in follow-up interviews. Official criminal histories were sought and obtained for all experimental and control youth in the sample. Both juvenile court and parole files were reviewed to secure the necessary recidivism data for those youth who committed new offenses before reaching the age of majority. Because juvenile arrests and dispositions are not automated in many locales, it was necessary for field researchers to gain access to each subject's original source files. Data for each offense were collected, including the arrest charges and dates, charges filed in court (petition charges in juvenile court, arraignment charges in criminal court), case outcome, outcome charges, and disposition or sentence.

Follow-up interviews were conducted with experimental and control subjects, to obtain self-reported delinquency (SRD) and measures of social outcomes. These included subjects' attitudes toward work, family and the juvenile justice system, self-reported victimization experiences, and peer relationships. The follow-up interviews were conducted at three time intervals: at release from secure care, approximately four to six months afterward and again at about one year following release from secure care. A final followup interview was conducted at the conclusion of the research for all youths, regardless of their time out of the program.

Interviews were conducted in varying circumstances, depending on the subject's location and criminal justice status. For youth in the community, interviews occurred in neutral locations (e.g., coffee shops, libraries, public parks). For youth in institutions, arrangements were made for interviews to be conducted in rooms with no observers or recording equipment. Interviews were conducted by field researchers who were not affiliated with any criminal or juvenile justice agency. In many cases, they were the same interviewers who spoke with subjects at the time of the initial (intake) interview.

Unfortunately, locating the subjects once they were returned to the community and securing their consent to participate was more difficult than originally anticipated, despite the offer of a \$20 payment for their participation. The payment offer eventually was raised to \$50, but the response rate still did not increase appreciably. Only 52 of the 122 experimental youth (42.6 percent) eventually took part in the follow-up interview; 24 of the 105 control youths (22.9 percent) were eventually interviewed.

RESULTS

Recidivism analyses included the incidence of official criminality during the first, second and third years at-risk, self-reported criminality, and time to first rearrest. Social outcomes at the time of follow-up interviews also are discussed.

The Prevalence and Incidence of Rearrest and Reincarceration

Table 3 shows that 70 percent of the youths in the study were arrested following their program involvement, but fewer than 15 percent were reincarcerated as either a juvenile or adult.¹¹ The rates varied extensively by locale, with far lower rearrest rates observed in Detroit than the other three sites.¹² Reincarceration rates also varied extensively by site, from none for Detroit controls to over 40 percent for Memphis experimentals. Simple two-way crosstabulations revealed no significant differences in either rearrest or reincarceration rates for any of the four sites.

INSERT TABLE 3

The incidence of rearrest, or rearrest rates per youth, also are shown for each offense type in Table 3. Rearrest rates were calculated as rates per youth, based on the number of rearrests irrespective of time at-risk. Analysis of variance showed that Boston experimental youths had significantly fewer total rearrests per year and rearrests for violent offenses. Their rates also were lower for other felony arrests (generally, non-violent felony offenses), and for misdemeanors. Detroit youths showed no significant differences, though the higher rate of technical violations and misdemeanor rearrests likely contributes to the differences in reincarceration rates in that site.

In the two sites where implementation was weakest, rearrests for controls actually were lower than for experimentals. Memphis controls were rearrested significantly less often for total arrests, violent offenses, and misdemeanors. Memphis controls also were reincarcerated at a far lower rate than experimental youths, though the results were not statistically significant. Newark controls were rearrested less often for technical violations and misdemeanors.

The findings are suggestive regarding the impacts of the experimental interventions. In Boston, where implementation was strongest, significant reductions were obtained in the rate, but not prevalence, of rearrests. In Memphis, the site where the

program principles were in stronger evidence in control programs, results also suggested that these principles are associated with significantly lower recidivism rates. In these two sites, lower rearrest rates for total crimes were accompanied by significantly lower rearrest rates for violent crimes, felony property and weapons offenses, and misdemeanors. Accordingly, where the program design was well implemented, and where its underlying principles were in strong evidence, significantly lower recidivism rates for violence, serious crimes, and total crimes were in evidence.

Recidivism by Time at Risk

Table 4 examines recidivism as a function of time at-risk in the community following release from secure care.¹³ There are separate tables (4a-4d) for each site. Time in the community was categorized in one year periods, and the sample partitioned according to the time at-risk for each youth. The number of youth at-risk for each time period is shown, together with the percentage arrested their mean number of arrests during that period. Two crime categories were used: all offenses ("any offense"), and felony offenses which comprise the UCR Parts I and II crimes.

Avoidance of criminality following release shows the extent to which interventions can forestall a return to crime. The average number of crime-free days, or the average number of days experimental and control youth were in the community (following release from secure care) until their first arrest, also is shown in Table 4. Time to first rearrest is shown for any offense, and then for the felony offenses mentioned above.¹⁴ The results are discussed for each site, then summarized.

1. Boston

Table 4a shows that recidivism was lower among experimental youths than controls for nearly all recidivism categories. Though the prevalence of rearrest was similar for the two groups, the prevalence of rearrests for violence was lower for experimentals during the first year at risk. For both any offense and felony offenses, experimentals had fewer rearrests and a longer interval until their first rearrest for the first two years at risk. (In the third year, only one control youth was at risk, obviating any comparisons). They averaged half the number of rearrests for each category. Experimentals also avoided rearrest longer in the first two at-risk periods. In the first year, controls were rearrested within four months for any arrest, while experimentals avoided rearrest for nearly one year. For felonies, experimentals avoided rearrest for about 1.4 years,

compared to one year for controls.

INSERT TABLE 4A

Also important in these findings are the similarities in the first two years at-risk. Rearrest rates and times to first rearrest, regardless of offense type, were similar for the one and two year at-risk periods. The experimental youths at-risk over two years were rearrested no more often for felonies than those at-risk for shorter periods, though their other rearrests (generally misdemeanors) were higher. Thus, it appears that there was no decay in the effects of the experimental intervention in the second year. For the third year, small sample sizes limit any conclusions about intervention effects.

2. Detroit

Table 4b shows that none of the youths at risk for less than one year were rearrested during that year. This was due primarily to specific practices of the agencies supervising control and experimental youths. They generally treated all new contacts with police as technical violations rather than new offenses. Recorded arrests occurred after the end of program supervision, an interval of varying lengths for both experimental and control youths.

INSERT TABLE 4B

Significant differences were found only for the time to first rearrest for those at risk from one to two years. Experimental group youths avoided rearrest for any offense for about 10 months, compared to less than four months for controls. For felony offenses, the differences were even more pronounced -- nearly 500 days for experimental youths but only 88 days for controls. These results are somewhat skewed by the small number of offenders who actually were arrested. For example, only two of 13 experimental youths in this period were arrested for a felony, and only three of 14 for the controls.

For those at risk for two or more years, no significant differences were found. The prevalence of controls rearrested in this period is far lower than for experimentals, though experimentals avoided rearrest longer. One reason may be the informal responses accorded to Detroit controls in later years when they remained on juvenile supervision status. Experimental youths had completed their correctional periods within one year after release from secure care, and their contacts with the law were adjudicated in the criminal courts. It also is possible that controls adjusted better to community living than

experimental youths, but there is no indication in other analyses to support this explanation.

3. Memphis

There were no significant differences by type of intervention in Memphis, for any of the three at-risk periods. Table 4c shows that the recidivism indicators remained stable over the three periods, suggesting that intervention effects do not decay with longer exposure times. This may also reflect maturation processes over time, or other factors which contribute to stable crime rates for adolescents. The small samples within each group and period further obscure any consistent trends in recidivism indicators.

INSERT TABLE 4C

4. Newark

As in Memphis, there were few significant differences between experimental and control groups for any of the recidivism indicators. The percentage of youths rearrested increases over time for both groups, while the average number of rearrests varies extensively by group and period. In general, recidivism indicators were poorest for youths at risk for longer periods.

INSERT TABLE 4D

The results suggest that there were no substantive differences in the recidivism indicators for experimental and control groups, regardless of risk time, and that risk of criminal activity in general increases over time for Newark youths.

5. Summary

In sites with stronger implementation of the program design, trends across recidivism indicators suggested that experimental group youths had lower risk of criminal activity than controls. The several recidivism indicators were internally consistent as well -- when significant differences were found, they were not isolated to one indicator or another, but occurred across several recidivism measures. This consistency was evident both within at-risk periods and, generally, for two or more periods at each site. Accordingly, the results can be viewed with some confidence, despite the small numbers

of youths at risk. It appears that the principles and theories built into these programs can reduce recidivism and serious crime among violent juvenile offenders.

In Boston and Detroit, the experimental programs seem to effect the frequency, severity and temporal dimensions of rearrest, compared to "mainstream" juvenile corrections. There were fewer rearrests for felonies, fewer rearrests in general, and a longer interval until the first arrest, regardless of time at risk. But the prevalence of rearrest remains unaffected and relatively high across time periods. Their difficulty in avoiding recontact with the justice system may reflect several factors. First, their own routine activities in the community may increase their exposure to people or places with high criminal activity. Despite their involvement or avoidance of actual crimes, this increases the probability of rearrest. In the high crime neighborhoods where most of these youths live, and to which they returned following correctional interventions, such opportunities are widespread and perhaps even difficult to avoid. Second, the base rates of rearrest of adolescents in such neighborhoods may be high. The prevalence of rearrest there may be an actuarial probability, rather than an indication of actual criminal involvement. Indeed, differential patrol practices and arrest decisions by police officers in high crime neighborhoods vary. There is more frequent contact with police, and a higher probability of arrest for each contact with police (Smith, 1986). Sampson (1987) has shown that the probability of juvenile court contact increases for adolescents in areas with high concentrations of unemployment and other poverty indicators. Accordingly, prevalence should be viewed as one of several recidivism dimensions, together with the frequency and severity of rearrests and delay in first rearrest.

We observed that for sites with positive intervention effects as well as those with no differences, the prevalence of rearrests did not increase over time, nor did the average number of arrests per offender. The stability of recidivism indicators across the three at-risk periods may reflect several processes and influences. First, intervention effects may not decay over time. The probability of rearrest appears about the same over three different time intervals. If arrest is only weakly related to actual criminal events (Huizinga and Elliott, 1987), then increases in actual crimes should have a small influence on the probability of detection and arrest. Second, youths may mature over this period, and natural desistance processes may contribute to reductions in the overall frequency and severity of criminal activity. Third, we observed in at least one site the informal handling of new offenses as technical violations and not as arrests. These practices may have understated the actual incidence and severity of rearrests for both experimentals and controls, at least until the end of juvenile corrections jurisdiction at age 18, shortly after

program termination. Thus, for at least the first two years at-risk, arrest probabilities may have been truncated for both groups.

These trends should not detract from the central finding in this section -- experimental programs which were well implemented resulted in a lower rate of rearrests for all crimes and for felonies, and helped postpone rearrest for all crime types significantly longer. Those with weaker program interventions produced results no different from "mainstream" juvenile corrections.

Time to First Rearrest for a Violent Offense

In this section, we again analyze the question of time to first rearrest, but do not control for time at risk. This analysis assumes that each respondent has at least some time at risk, since data collection lasted at least one year beyond the conclusion of their correctional involvement. This section also is concerned specifically with rearrests for the violent offenses which defined program eligibility. Accordingly, Table 5 shows time to rearrest for all youths, irrespective of time at-risk. The results again seem to mirror the programs' implementation outcomes.

Overall, experimental group youths avoided rearrest for any crime for about one year after secure care release, and about 1.5 months longer for violent crimes. Controls avoided rearrest for nine months for any offense, and about 10 months for a violent crime. Boston experimentals avoided rearrest for any offense for about one year, or nearly 50 percent longer than did the controls. For violent crimes, they avoided rearrest for nearly 14 months, compared to about 10.5 months for controls. In Boston, the average interval for the first rearrest was nearly three months after the first arrest for any offense. Three Boston experimentals avoided rearrest for a violent offense, but all the controls in fact were rearrested.

INSERT TABLE 5

Similar findings were obtained in Detroit, where experimental youths avoided rearrests for about 14 months, over three times longer than controls. For violent crimes, rearrests also did not occur on the average until 14 months after secure care release, about twice the interval for controls. However, the findings suggest that the first arrest for Detroit experimentals was for a violent crime, unlike Boston where violence was averted for another three months after first rearrest. The percentage of Detroit youths avoiding

rearrest for violence was greater for controls (50 percent) than experimentals (38 percent).

Differences in time to rearrest for Newark youths were negligible. First rearrests occurred within about seven months for each group, though rearrests for violence for experimental youths occurred after nine months, about two months later than for controls. Memphis experimentals actually were rearrested earlier than controls for any offense, at about one year compared to 15 months for controls. For violent crimes, rearrests for experimentals occurred at 13 months, about five weeks later than controls.

It appears once again that youths in well implemented experimental programs avoid rearrest for any offense and for violent offenses longer than did their control group counterparts. In the site with relatively weak (Newark) implementation, there were few differences. In Memphis, where there where program elements were more evident in control programs, youths in those programs avoided rearrest longer than the experimentals in the weaker program. These arrests include only those that occurred after release from secure care, suggesting that there were lengthy intervals of time in the community before the first rearrest occurred.

Two factors seem to contribute to these trends. First, the effects of the experimental programs or their elements of theory and practice (as evident in the control programs in Memphis), may have endured longer, helping them avoid a return to crime. Second, crime may have been delayed for experimental group youths due to the more rigid community supervision they received. In either event, the results illustrate a positive effect for the program design and its underlying theories and principles.

Self-Reported Criminality during the Past Year

Interviews with experimental and control youths were conducted to measure both self-reported criminality and their social well being during and after correctional intervention. Follow-up interviews were routinely scheduled for 12 months after release from secure care, at the conclusion of the reintegration phase of community supervision (or parole supervision for controls), and one year after last contact with the program. The schedule proved extremely difficult to meet. Subjects were located at facilities or living in cities across the states, factors which complicated the interview schedules. Post-program interviews proved extremely difficult to complete -- subjects were difficult to locate, reluctant to participate (despite the increasing the stipend for interview participation to \$50), and often declined to answer specific questions on self-reported crimes. Cooperation was difficult even when the same interviewers were used throughout

the study period.

Accordingly, a final panel of follow-up interviews was conducted for all experimental and control youths during the final months of the study. For incarcerated youths, interviews took place in the facilities where they were placed. Since they were easier to locate, they are overrepresented in the interview cohort. Thus, estimates of self-reported crimes are probably high range estimates, and overstate the actual criminality of the study youths. Also, their post-program at-risk periods are not standardized, but the time frame for recalling self-reported crimes was the 12 months preceding the follow-up interview.¹⁵ Table 6 shows the total number of self-reported crimes, offenses for three broad homogeneous offense categories of illegal acts (violence, property, and drug offenses), and two specific offense categories which mirror UCR crime categories for "safety" offenses and weapons offenses.^{16,17}

INSERT TABLE 6

Self-reported crimes were significantly lower for experimental youths in Boston, for all crime categories. Rates were generally lower for Detroit experimentals, except for the important category of index crimes where they were higher than controls. Rates were lower in all categories for Memphis experimentals, in contrast to their rearrest rates.¹⁸ However, the Memphis and Boston findings may be anomalies resulting from exaggerated responses by two control group youths. Adjustments for these respondents revealed little difference between experimentals and controls. The Memphis and Detroit results were not statistically significant, despite large substantive differences. Too few Newark controls were located and interviewed to support any meaningful analysis.

Again, the results suggest that well implemented and managed programs, informed by theory and advanced practices, can achieve significantly lower recidivism rates for violent juvenile offenders compared to "mainstream" juvenile corrections. The sites with evidence of fewer self-reported crimes for experimental youths were not confined to specific offense categories or types. They were evident in the violent offense categories which specifically defined the program population. Only in Detroit did we observe negative effects for the experimental interventions in offense *severity* for the important category of felony violence, though not for the other specific or general categories. However, the observed problems with exaggerated response rates further illustrate validity issues with self-reports, and their general lack of concordance with official reports of

delinquency (Elliott and Huizinga, 1984; Huizinga and Elliott, 1987). Despite the general agreement between self-reports and rearrest rates in Table 3, the results should be viewed cautiously.

Social Outcomes

The follow-up interviews also determined the social outcomes of experimental and control youths. Enhanced educational and vocational opportunities were a basic part of the intervention strategy. There are obvious practical and theoretical implications for emphasis on these social deficits. These are necessary social and economic skills for entry into conventional social roles and opportunities, and accordingly are highly correlated with desistance from delinquency. Also, opportunities for positive experiences in these domains were thought to be important in socializing youths to reject criminal opportunities and behaviors, to develop social competencies in dealing with daily life events, and in raising youths' stakes in conventional activities and the perceived cost of rearrest.

Interview items included questions concerning youths' living situations, their school achievements, work experience during the follow-up period, and whether they were employed at the time of the interview. Social integration scales, based on the integrated theory underlying the program design, also were included. These scales measured respondents' commitment and attachments within the key social domains of family, school or work, peers, and community. The scales were validated early on during the research as contributors to crime and violence (Fagan, Hansen and Jang, 1983), and as discriminants of violent youths from adolescents in similar neighborhoods who avoid serious youth crime (Fagan, Piper and Moore, 1986) and drug use (Fagan, Weis and Cheng, 1988).

Few differences were found between experimental and control youths on the social outcome indicators. Most youths continued to live with their parents or stepparents (from 50 to 60 percent across the four sites). Their school achievements were comparably poor -- the percent completing high school varied from 12.5 percent (Detroit experimentals) to 33.3 percent (Newark controls). Most had worked since their return from the VJO or control program, ranging from 71.5 percent (Memphis experimentals) to 100 percent (several groups). Only for those working at the time of the interview was there a significant difference -- in Boston, 75 percent of the experimentals were working compared to 29 percent of the controls ($p < .10$). It is uncertain whether these results reflect intervention effects or simply the backgrounds of those who consent to

interviews.¹⁹

Social integration scales also revealed few consistent patterns, whose interpretation was complicated by small sample sizes. The social integration scales included three types - social bonds (for example, attachment and involvement in school or work), perceptions of social setting (for example, work environment, peer delinquency, or violence in the neighborhood), and psychosocial scales (for example, substance abuse problems, locus of control). Though specific scales were significantly different between experimentals and controls, there were few consistent patterns across indicators or within programs.

Movement into and out of delinquency, even the most disturbing and aggressive behaviors, occurs predictably for many youths. It appears from these findings that the social integration factors which initiate or maintain delinquency may be unrelated to its cessation. Intervention had little discernable effects on the social indicators of school, work or family, nor did it strengthen the social bonds which are thought to be part of the etiology of delinquency. Yet there were indications of reduced recidivism for experimental youths. Accordingly, there is reason to believe that some aspects of program participation may have contributed to these effects, though without significantly altering the social status or social integration of the participants. The implications for processes of desistance are discussed in the next section.

Discussion

The various recidivism measures suggest a complex and sometimes conflicting view of the impact of the experimental interventions programs. But, when the experimental results are viewed across a range of recidivism indicators, a general trend emerges which suggests that the experimental interventions can significantly reduce recidivism among violent juvenile offenders. There was a general association across a range of recidivism indicators between strong implementation of the underlying theoretical principles and structures of the program design and lower recidivism rates. The prevalence of rearrests and reincarceration differed little for experimental and control youth. However, significant effects were found for the number of felony arrests, violent crimes, and time to first rearrest for all crime types. Self-reports also were lower in these programs, for all offenses and specifically for violent crimes.

Table 7 summarizes the recidivism outcomes for the four program sites. For each indicator, the percent difference between experimental and control groups is reported, together with the statistical significance from the appropriate test for the experimental-

control difference.²⁰ A maximum percent difference of 100 percent is reported, due to the small N's and the resulting sensitive and skewed distributions of the data. The scores for controls are the base for calculating the percent differences, since marginal improvements over the performance of mainstream juvenile corrections are of interest to policy and theory. A negative value indicates that the control group had a lower recidivism score than experimental youths.

INSERT TABLE 7

For the range of recidivism indicators, experimental youths in Boston consistently had lower recidivism scores than controls. Most percent differences exceeded 25 percent, and several were over 100 percent lower. About half were statistically significant. The indicators in Detroit generally were large, positive percent differences, particularly for avoidance of rearrest and self-reported crimes. Yet there also were several negative differences between experimentals and controls. On balance, the differences for Detroit experimentals suggest positive impacts from intervention. Memphis had few statistically significant differences other than negative findings for rearrest indicators. Self-reported crimes for experimentals were lower than controls. Other effects were either small or not statistically significant. Indicators in Newark either showed small intervention effects or were negative. In sum, table 7 illustrates the generally positive effects associated with strong implementation, and the corollary negative effects of weak implementation in Newark and Memphis.

The experiment emphasized reintegration in two ways -- early reintegration activities preceding release from secure care, and intensive supervision in the community with emphasis on gradual reentry and development of social skills to avoid criminal behavior. The stability of the findings across at least two years of follow-up suggest that the reintegration strategy can help avert the abrupt return to criminality after program release which marked the early experiments in community corrections such as Silverlake and the Provo experiment. The withdrawal of the program supports following return to the community in these early experimental programs stands in contrast to the concerted efforts in these programs to continue interventions during the often difficult transition from institutional to community contexts.

In particular, the delays in return to crime for experimental youths suggests that the reintegration strategy also is an effective crime control strategy. Though the data do not describe relative behavioral changes beyond the two year period, parole research

consistently cites the initial six month period following release as the critical period of highest risk of recidivism. The results suggest the value of a reintegration strategy, with early emphasis on return to the community, for investment of correctional resources to achieve results at least comparable and perhaps more effective as current correctional policy.

The findings comparing programs further suggest that rearrest probabilities are influenced less by the length or even the nature of incarceration than the quality of intervention. The recidivism outcomes also suggest that the length of intervention may be less important in influencing rearrest than is the intensity of service and its orientation toward community living skills. For example, Detroit youths in the experimental program spent nearly one year in secure care prior to transitional placement and community reintegration. Yet they had significantly longer street time without rearrest and violent crime. For example, looking only at the average length of stay in secure care, longer incarceration stays are not associated with less recidivism. The results suggest that inadequate care and supervision following release increases recidivism probabilities, especially in contrast to reintegration services with intensive treatment in a transition residence and close supervision in the community.

Though social bonds or even social status was unaffected by intervention, the process of intervention may have had strong effects on social competence and youths' beliefs in their ability to achieve goals and perform socially appropriate behaviors. The emphasis on social learning specifically rewarded behaviors such as achievement of educational goals or non-violent methods of resolving personal conflicts. In turn, these social skills can hasten a youth's entry into conventional life roles -- worker or student, neighbor, and social affiliations with others in conventional life roles (and in turn, reduced involvement in a delinquent peer network). Two processes occur in this transition from adolescence to adulthood. First, entry into these life roles may increase the perceived costs of further wrongdoing. Second, success in conventional roles builds social competencies and increases the personal rewards of participating in non-criminal activities. Such social reinforcements are basic to the processes of strengthening social bonds (Fagan and Jones, 1984). By rewarding these new social skills, the social learning emphasis of the experimental program simply may have hastened the otherwise natural processes of cessation and maturation which reduces most delinquent behavior as adolescence ends.

The results in sites with shorter periods of correctional intervention further illustrate the importance of reintegration as a treatment intervention as well as a practical

concept. These findings are consistent with previous research about "prisonization" and the "counter-deterrence" of long-term incarceration without adequate attention to reintegration issues (Wheeler, 1978; Coates et al., 1978). New strategic investments in juvenile corrections should include transitional placements and rigorous community supervision to shorten the period of correctional care. Moreover, it appears that these strategies can assure public safety as well if not better than lengthy and costly correctional institutional interventions, and in more humane conditions. The strategy requires that intervention is rooted in sound theory and valid practices, and implemented with care and integrity.

IMPLICATIONS FOR POLICY AND RESEARCH

The VJO Program was developed to answer a central question: can carefully implemented and well managed programs, rooted in sound theory and advanced practices, demonstrate their effectiveness in controlling violent youth crime and their ability to return offenders to their communities without risking community safety. This experiment provided new empirical information and social knowledge to answer this question, and to inform program and policy development. Although large proportions of all offenders were rearrested following their release, the well implemented programs showed significant reductions in the number and severity of arrests, as well as the time in which they postponed rearrest. The results provide empirical facts from which to develop policies, and a rational perspective on which to build programs. This initiative demonstrates that new approaches for intervention with violent delinquents are feasible within the juvenile justice system.

The VJO experiment was unique in several respects. First, it focused exclusively on violent juvenile offenders. This group, though a small percentage of juvenile offenders, requires the most intensive treatment and security needs, and consume a disproportionate share of correctional resources. They also are a bellwether for the juvenile justice system -- public confidence in the juvenile court depends on its ability to control violent youth crime (Miller and Ohlin, 1985). The empirical basis for reducing juvenile justice jurisdiction for violent offenses primarily was the perceived weakness of rehabilitation programs and the concept of individualized dispositions which lie at the philosophical heart of the *parens patriae* doctrine. This study offers an empirical basis to reaffirm these principles, and in turn, question legislative trends toward criminalization of youth violence.

Second, the VJO Program design integrated contemporary theory and advanced practices. This was a significant change for juvenile corrections, where correctional strategies seemed vulnerable to fads, untested clinical insights, and "pop psychology" approaches (Finckenauer, 1984). The VJO Program provided a unique opportunity to test correctional practices rooted in theory, and accordingly, offered a means to generalize its lessons beyond the specific programs where it was tested. Moreover, by focusing on the most difficult youths in juvenile corrections, the principles and strategies are generalizable to other types of delinquent youth.

Third, the experimental design avoided many of the weaknesses in earlier studies which limited their contributions to policy and often gave rise to stormy controversies.

Though limited by small sample sizes, the research strategy provided two important contributions. The strategy of multiple indicators of recidivism avoided pitfalls from reliance on one measure or dimension of behavior. The convergence across the range of indicators strengthens confidence in the findings. Also, the intervention variable was measured in several ways, not simply as a dichotomy of treatment or no treatment. Because the program design had diverse theoretical and practical components, it was best conceptualized as a vector with many dimensions. Thus, when intervention was measured, we found that there was a continuum of implementation outcomes, and accordingly, variation in its "strength and integrity" (Sechrest and Redner, 1979). This strategy also was able to discern "negative" implementation, where the elements of theory and practice were more evident in the control than the experimental group.

In generalizing from this research, we learned to think of correctional programs not only in phases, lengths of stay, or discrete substantive components such as education or vocational placement. Programs and correctional strategies perhaps are better conceived as systems whose dimensions are tied together by logical and consistent themes which are evident in all aspects of the system. Program planners intended that its theoretical and practical bases would inform its design. Thus, the use of credible and logical sanctions, behavioral goals, opportunity structures, and other expressions of the theoretical principles were built into case management, each residential phase, each of the substantive interventions, and the concept of reintegration. These design and measurement strategies, together with the recidivism findings, offer new organizational and conceptual perspectives for thinking about juvenile corrections.

Fourth, the importance of reintegration cannot be understated. Whether housed in large training schools or small community-based programs, violent juvenile offenders eventually will return to the community. The reintegration concept had several specific implications for corrections: planning for that return and constructing interventions to support those plans, a transitional reentry which provides a bridge between the structured institutional world and the unpredictable contingencies of the streets, and the continuation into the community living phase of the control, advocacy, and treatment functions of the program. This simple refocusing of correctional thinking and efforts proved critical to effective intervention. Reintegration principles were enhanced by the use of small, community-based programs for the earlier program phases. They maintained youths in secure settings but which are sufficiently small to avoid the "prisonization" of youths. They help retain contact with family and other social supports for reentry, and made possible the use of a flexible system of rewards and punishments which are essential

to the social learning dimension of correctional treatment.

Finally, the VJO Program was launched in an era when policy responses to violent juvenile crime emphasized punishment and retribution in juvenile court dispositions. Conclusions that "almost nothing works" (Martinson, 1974) to rehabilitate offenders provided support over the next decade for de-emphasizing rehabilitation in juvenile justice and stressing competing crime control ideologies based on deterrence and retribution. Not only was there new emphasis on the length and conditions of punishment, but many states expanded the options for removing violent juvenile offenders to criminal court (Feld, 1987). But the VJO Program demonstrated that credible, intensive sanctions can become a salient part of correctional intervention. Confinement in secure care occurred in most cases, for lengths of time determined by progress toward reaching intervention goals. In most sites, time in secure care for VJO youths was comparable to mainstream corrections. However, the content of that time was quite different. It was accompanied by enhanced opportunities educational and vocational treatment, and was linked to later correctional interventions and eventual community reentry. The VJO Program changed the substantive meaning of secure confinement by linking its duration with treatment goals which in turn reflected reentry goals. Confinement in this context was both punishment and a social learning process. These policies neither risked nor worsened public safety, and optimized the use of expensive secure care placements.

The results suggest that there need not be ambivalence within juvenile correctional agencies regarding the balance between treatment and punishment. Reintegration strategies can successfully curtail crime, and still blend punishment with opportunities for social development in a correctional setting. The results of the VJO Program, and its theoretical and practical bases, offers evidence to inform policies and programs for controlling violent youth and returning them to the community. The results also suggest an agenda for research and development to further test correctional innovation. The next sections describes implications of this study, and translate its results into concepts for policy, practice, theory and research.

Policy Implications

A Reinvestment Strategy

The VJO Program represented a strategy of reinvestment of juvenile corrections resources. The strategy implies reduced investments in traditional training

school/aftercare models, which presumed that institutional treatment would "cure" delinquent youths of their behavioral and social problems. Training schools are expensive. Corrections administrators often are confronted with a "zero sum game," where reinvestment of resources toward reintegration services in effect reduces the funds available for secure care, and thus exerts a natural pressure to limit the use of training schools and expand the use of smaller, less expensive placements. Instead, correctional policy implied by the VJO Program is based on social investments to prevent future crimes through the supervision of youths in community and enhanced opportunities for social development during reentry. This was the investment strategy applied in Massachusetts (Loughran, 1987) and again in Utah (Van Vleet, Rutherford and Schwartz, 1987). This new model reallocates resources from the front-end of the correctional process (secure care) to latter stages of correctional intervention: return to the community. In this study, it did so without increasing risks to public safety: intensive community supervision appears to be successful in lowering recidivism rates directly following release from secure care.

The VJO strategies borrowed from the policy experiments in Massachusetts and other reintegration programs, and created a model of phased reentry and intensive community supervision. The new investments foster a system which reduces reliance on a single institution for interventions, and strengthens interventions in community-based programs and supervision during the critical reentry periods. The reinvestments also strengthen supervision in the reentry phase of correctional intervention, by intensifying the supervision of youths returning from residential placement. Accordingly, this strategy increases the investment in public safety during the aftercare period. Supervision is done by programs as well as case managers.

The policy implications suggests that correctional resources be reinvested in services which foster the successful reentry of violent juvenile offenders. The enormous cost of training schools can be redirected to expand substantive community-based services for violent delinquents. The cost savings alone in reduced secure care would pay for the enhanced transitional and supervision services. This amounts to a reallocation of resources, a reinvestment in reintegration, and a reorientation of correctional intervention to stress the social skills, competencies and behaviors necessary for a successful (i.e., crime-free) return to the neighborhood. These programs should include a range of security levels to make sanctions credible but without the immersion in institutional subcultures which often ossify delinquent attitudes and behaviors. Correctional policy should diversify the types of programs and supervision tactics to insure that interventions

are sustained during the critical reentry period, that supervision is both intensive during that period while insuring that treatment interventions continue, and which rely on both programs and personnel for supervision during reentry.

Defining the Boundaries of the Juvenile Justice System

Lacking confidence in the ability of the juvenile justice system to sanction or rehabilitate violent juvenile offenders, legislators expanded their options to apply criminal court sanctions in the 1980's (Rubin, 1985; Feld, 1987). Policies to reduce juvenile court jurisdiction over violent adolescents have included liberalized waiver criteria, exclusion of specific age/offense/offender categories from the juvenile court, and establishment of concurrent jurisdiction for violent offenders with prosecutorial election of the appropriate forum for adjudication. The premise for these changes is the lack of effectiveness of rehabilitation programs, perceived threats to community safety from individualized dispositions, and the minimal retributive content of juvenile court sanctions for violent crimes.

Transferring juvenile offenders to adult court for prosecution has profound implications, not only for the youth themselves but also for the adult correctional system. Transfer to criminal court is a severe sanction, with potentially harsh consequences for the convicted offender: an extended pre-sentence detention, a protracted adjudicatory process, a felony conviction resulting in social and legal sanctions, the initiation of a criminal record, and a lengthy stay in a secure correctional facility (Rudman et al., 1986). Juveniles sent to prison receive fewer rehabilitative services and are more likely to be victimized than youth committed to traditional training schools (Forst, Fagan and Vivona, 1987). Transfer is a "last resort" sanction for the juvenile court, because of its low incidence, the potential for qualitatively harsher punishment than in the juvenile justice system, and the ultimacy that a transfer decision implies (Zimring, 1981).²¹ And, the legislative criteria for transfer are generally vague or standardless. Despite the serious consequences of a transfer decision, for violent juvenile offenders they often appear to be random or do not reflect the operational criteria expressed in legislation. result in decisions (Fagan and Piper, 1988). Accordingly, the transfer decision does more than elect a judicial forum for an accused youth; it invokes a jurisprudential philosophy that governs the proceeding as well as the purpose, nature and severity of the sanction.

The results of this experiment suggest that resources and technologies for the treatment of violent juvenile offenders are available within the juvenile justice system.

The VJO Program demonstrates that "appropriate community-based controls" exist to supervise and reintegrate youth without increasing threats to public safety. This is a generalizable program, rooted in sound theory and practical knowledge, feasible to implement, and evaluable. The sanctions are substantive and credible, and supervision during community reentry is sufficiently intensive to protect community safety. If viable programs exist to sanction and reintegrate violent delinquents, then exclusion from the juvenile justice system should be restricted to a narrow range of objectively defined categories of offenses and offenders.

When transfer is invoked, it should reflect a decision that the youth has crossed a behavioral threshold which calls for a correctional response which the juvenile justice system may be unable to provide. This study describes dispositions within the juvenile justice system for violent youths who have had two or more prior adjudications for violent crimes. These results suggest that the threshold where last resort options are invoked need not be reduced, even for chronic offenders. The alternative to reducing juvenile jurisdiction is the development of new strategies for juvenile corrections. New dispositional options, informed by the principles of this model, can expand the capacity of the juvenile justice system to handle violent offenders.

Specific age boundaries should be established which make a youth eligible for transfer, and the burden of proof continue to rest with prosecutors that all remedies within the juvenile system have been exhausted. Two standards should inform the transfer decision. First, the jurisprudence of transfer should address probable cause for the current offense as well as the severity of the charges, to avoid spurious charges which might result in transfer.²² Second, standards for defining "amenability to treatment" are necessary which operationally define interventions to guide the determination of whether prior attempts have failed, or if programs themselves have been inadequate for a sufficient threshold of intervention to have occurred. Transfer decisions should ask whether youths have failed in programs, or whether programs have failed to provide adequate supervision or opportunities to reintegrate violent offenders.

Practical Implications for Juvenile Corrections

Management Strategies

The VJO model places less emphasis on service delivery to youths, and instead stresses credible sanctions, enhanced opportunities for education and jobs, and supervision

and control strategies for the community reentry phase which sustain interventions across phases. The future challenge to correctional policy-makers is to further refine methods to move youths from the "coercive control" of traditional training school/parole models to internalization of self-control. In this perspective, the quality, process and structure of interventions are as critical as the discrete services provided to juveniles. Accordingly, the implications of the VJO Program for correctional practice address management and quality control strategies.

Community reintegration is in large measure a management function. The supervision of youth, accountability to and from youths, and quality control of service providers (contractors) should be included as management priorities. The management characteristics of effective programs and systems in this study offer directions for the organizational strategies in juvenile corrections. First, programs which were well implemented, and in turn, effective, were developed in systems committed to innovation, experimentation and change. They saw research and management audit as essential to maintaining the quality of services. Information and data were available routinely to inform both management decisions and individual case plans.

Second, the importance of integrating theory and practice strengthened the integrity of interventions. Programs relied on more than just the enthusiasm and good intentions of staff to improve their services. They looked to external principles of adolescent development and delinquency theory to guide them. In turn, the concepts underlying these programs were replicable, and avoided the cult of the charismatic leader.

Third, effective programs had a sufficient degree of autonomy within systems to make decisions which reflected internal program goals rather than external contingencies. For example, rather than moving (or retaining youths) from phase to phase based on demand for beds, effective programs remained true to the principles of movement via progress on treatment goals. These systems shared an organizational perspective which insulated programs from such pressures and also tolerated risk taking and even failure. This does not imply that they were not accountable within a larger system. The mandate for community protection insures that effective systems will balance risk with decisions in the interest of youths. These need not be competing strategies. Instead, quality of supervision can be viewed as the most effective crime control strategy. This requires the trust and cooperation of the agencies surrounding the systems, and a shared philosophy and goals for intervention.

Fourth, the concept of program and system was unique in the effective programs. They saw phases not as discrete programs but as part of a continuum, linked together by

principles for intervention (again, the concept of theory) and tactics such as case management for maintaining the consistency and logic of services in disparate settings. Phases were complementary, not competing. They shared common expectations from the overall management structure (e.g., monitoring) and also common principles of intervention (e.g., consistent sanctions and rewards, behavioral contracts).

Finally, the importance of staff emerges, too. Management strategies should provide a reciprocal reward to the benefits programs receive from staff enthusiasm and dedication. Where staff in effective programs committed their energies to struggle with youths, they were rewarded with professional recognition, intensive training, and the development of skills. Previous studies have recognized the importance of staff quality to effective programs. Strategies for managing those resources are necessary to sustain these qualities, attract them throughout the system, and to insure they will be available in later generations of staff and programs elsewhere in the system.

Rethinking Interventions

The central elements of the VJO Program design suggest directions for rethinking practical approaches to interventions. First, the structural components of the program design are replicable -- case management, multiple phases, program autonomy, diagnostic assessment and individualized case planning, and continuity of intervention -- and can be designed into correctional systems. The integral elements of the well implemented and effective programs -- small caseload size, frequent case manager contact during the transitional and reentry phases, use of family and social networks in the community to foster reintegration, a balanced system of rewards and punishments specific to each phase -- also can be developed within correctional systems.

The avoidance of crime and the reduction in self-reported delinquency over the at-risk period indicate positive outcomes for about one year on the street. The delay by VJO Program youth in return to crime and violence also suggests that supervision is effective. However, the transfer from coercive control to self-control may not be taking place; youths seem to return to crime shortly after the reintegration phase concludes. Thus, efforts to build *lasting* behavioral change must be developed, in addition to these effective short-term measures. Accordingly, program interventions should be refined to emphasize behavior control and specific correlates of violent behavior. Perhaps this should involve early concentration on techniques to teach self-control of violence while in institutional care, and provide opportunities for practice during the phased community

reentry. Training efforts for corrections staff should focus heavily on developing these skills and techniques by Case Managers. Correctional staff, both institutional and aftercare staff, either need to learn these skills and apply them, or to locate providers who can work in this critical behavioral area with violent juvenile offenders.

Together with the underlying theoretical principles of the VJO Program design, these results combine to generate several compelling principles and guidelines to inform correctional programs and practice. First, the VJO Program translated an integrated theory of violent delinquent behavior into specific principles for intervention. These principles in turn provided operational criteria for the design of specific intervention elements. The principles were described earlier in this monograph, and their theoretical foundations analyzed elsewhere (Fagan and Jones, 1984). Correctional interventions for violent juvenile offenders can apply these principles, together with the structural components, to build programs. Correctional efforts focused on specific offender subgroups -- such as property offenders or sex offenders -- should similarly look to sound theory to develop operational principles for the design of interventions. A general theory of delinquency, or a unique program approach, is unlikely to translate well to specific offender subgroups whose etiological factors and pathways to desistance will vary. Specific intervention principles, rooted in sound theory and practice, are necessary for effective intervention with unique offender subgroups.

Second, authority should be decentralized in specific program units. With this approach, programs can make explicit use of special intervention tactics (e.g., use of home furloughs as rewards) within diverse correctional settings. In this milieu, formal sanctions and rewards can be made more vivid, specific, comprehensible and salient to participants, certain and swift in their application. Third, specific modeling and reinforcement for prosocial behavior, and violence avoidance, should be explicit components of correctional programs. This dimension reflects the social learning principles which are central to this program design. Correctional workers, both facility staff and case managers, as well as those in specific areas such as education or vocational training, can promote the development of positive behavior patterns toward associates and in their own daily lives.

Third, correctional workers should teach problem solving and social judgmental skills. These skills can be developed in programs and refined in opportunities for practice during transitional and reentry phases. Such skills can help youths resolve interpersonal (i.e., family or peer relations), social (i.e., work, housing or finance) or situational difficulties (in the community). They also help build social competence through positive experiences in routine school or work experiences. Personal investments and rewards

from conventional activities may reduce the social and personal rewards of crime or violence and in turn helps make more salient the rewards of avoiding crime. While crime has its rewards, its personal costs should also be made more evident -- for example, the risks of detection, loss of newfound opportunities, or the stresses on social and personal relationships.

Fourth, the use of community resources can begin the process of transferring supervision and social networking from individual case managers to the larger community. By involving youths in diverse programs, programs replace case managers in providing the rewards and structure of daily life. This is part of the process of moving from coercive to self-control, and involving the community as a part of the opportunity structure and social networks in the youths lives. Eventually, communities should replace correctional agencies in supervising their youths. The involvement of community programs and social networks begins the transfer process. But this strategy depends on the development of strong formal and informal controls in communities to provide opportunities for youth participation and anti-criminal social structures. The social fabric of neighborhoods determines the quality of social controls, crime opportunities and in turn crime rates (Sampson, 1986; Simcha-Fagan and Schwartz, 1986).

Implications for Theory

There are numerous explanations of juvenile violence, each deriving from a particular theoretical perspective and having some measure of explanatory power.²³ The VJO Program design assumed that the causes of violent behavior in a juvenile court population would span a range of theories -- no single theory or explanation would adequately address the range of behaviors and contributing factors likely to be found among violent juvenile offenders. A theoretical model of violent juvenile crime was developed which was integrated control and learning theories, with specific components from early childhood socialization to address violent behavior. That is, the theory proposed that violent delinquency was part of a pattern of general deviance, or delinquency, and that the violence component was explained specifically through social learning processes which taught and reinforced aggressive behaviors.²⁴

The theory was validated in two ways. First, the study sample of violent juvenile offenders was compared to the general adolescent population in "high crime" inner city neighborhoods. This study determined whether constructs from this theoretical model could discriminate between adolescents in violent delinquency from those who avoid

patterned criminality and violence (Fagan, Piper and Moore, 1986). The theoretical model discriminated violent youths from others with comparable social and neighborhood backgrounds in nearly 90 percent of the cases. Specific factors which were especially salient in distinguishing violent delinquents from other urban youths included experiences in school, associations with (officially) delinquent peers, (violent) victimization experiences, and positive work experiences.

Second, the theory also was validated in this research, where principles for correctional intervention were applied to a sample of violent juvenile offenders. The programs which were most effective in reducing recidivism had the strongest overall implementation of the program design, especially in their expression of the underlying theoretical principles (Fagan and Forst, 1987). Four specific intervention principles were derived from the integrated theory, each expressing a practical application of theoretical constructs. However, the small sample sizes did not allow for testing specific components of the theory, nor its validation across different offender types.

Together, the validation of theory in these two studies has implications for further developments in theory, and its translation into correctional practice. First, there are obvious implications for building correctional practice on theory. Contemporary juvenile corrections programs either do not specify causes of delinquency which their interventions try to address, or they assume that there are common causes to delinquency which apply equally to violent youths and all other types. It is not surprising then that there generally is little linkage of theory to correctional practice. The absence of theory, or its mismatch to offender populations, lies at the root of the historical weakness of the evaluation literature in juvenile corrections (Sechrest et al., 1979). This study suggests that theory should be an explicit part of program development in juvenile corrections. Although the relationships between theory and treatment intervention are complex and difficult, the linkage should be pursued through the development of performance standards for correctional practices which express its theoretical underpinnings. The alternative is guesswork, or dependence on established (atheoretical) practices without an understanding of the reasons why they work or fail.

Second, the theoretical factors which informed this intervention theory also are etiological, or causal, factors. Thus, there seems to be convergence between the factors which contribute to delinquency and those which enable youths to desist from crime. The evolving juvenile justice policy of this decade was based in part on the belief that what causes delinquency is irrelevant from stopping it. Wilson (1975), for example, states wonders "If a child is delinquent because his family makes him so or his friends

encourage him to be so, it is hard to conceive what society might do about his attitudes and about his delinquency (49)." The results here suggest, to the contrary, that initiation, continuation, and desistance from delinquency are related processes.

There has been little study of the factors which promote desistance from delinquency. Recent studies with career criminals (Shover, 1985), opiate users (Biernacki, 1985), and adolescents in "high crime" neighborhoods (Sullivan, 1987) suggest that the decision to stop crime is conscious, and reflects a variety of complex processes, particularly extrication from social networks which supported crime or drug use. Most offenders end their criminal activities at the end of adolescence (Blumstein et al., 1985). Explanations of desistance from crime among adolescents include maturation, entry into conventional life roles (e.g., marriage, stable employment), and the declining influence of the peer group beyond adolescence (West, 1983; Mulvey, 1987).

The results of this research suggest complementary processes of desistance which appear to blend rational choice theory with the control theory dimensions of integrated theory in this research. The processes of reconstruction of social bonds and unlearning of violence may simply change the relative weights of the factors which one considers in making the decision to commit crimes (Hirschi, 1986). The intervention process also may introduce new factors into the calculus -- new resources such as educational or vocational skills, social judgmental skills -- which also change the perceived value of crime, or even increase its perceived costs. Thus, what control theory might express as increasing the "stakes in conformity," rational choice theory might conclude is a change in the social, personal and economic calculus of crime. Desistance apparently occurs when natural processes of maturation also result in increasing involvement in conventional life roles -- worker, spouse, father, member of a community. As social competencies develop in conventional activities, participation in social roles and networks reduce dependence on criminal activities for social and economic reward, and reduce the influence of delinquent peer networks. Accordingly, these interventions may work to accelerate the processes of desistance, increasing the contributions of those factors or social bonds which help most youths chose to avoid serious crime.

Third, though violent delinquent delinquents differed markedly from other urban youths, they also differed from one another. Analyses of specific offender types suggested that there were distinct types of violent delinquents (Fagan, 1988). Analyses of sex offenders (Fagan and Wexler, 1988), substance users (Fagan, Weis and Cheng, 1988), and gang members (Fagan, 1988) suggest that specific types of juvenile violence occur within a general pattern of violence and deviance. Accordingly, these patterns reflect

perhaps separate or hierarchical causal explanations of delinquent behavior, each of which might require specific interventions within a general framework. A general theory of delinquency, or a common intervention strategy, is unlikely to translate well to specific types of offenders, whose causal factors and treatment needs are likely to vary.

Diagnostic assessment and individualized case planning are necessary to determine which programs are most appropriate for particular youths, which interventions should be provided and what theories they should embody, what treatment goals should be set, and generally how decisions on placement and release should be made.

Finally, violent juvenile crime occurs among a small group of adolescents. Many of these are school dropouts, or others with several types of social deficits. For many youth, associations with delinquent peers, a key predictor in this study, may be a manifestation of the same processes which also are reflected in their drug or alcohol use, school dropout, or even poor choice of friends. The inability to make social judgements, to manage or avoid "trouble" in complex or ambiguous social situations, in school or on the streets among peers, is a common attribute of youths in this study. It also is true for youths in the general urban youth population who had the highest rates of delinquency and substance use (Fagan and Weis, in press).

What is "trouble" in this context? It is the inability to make social judgements or control behaviors in ambiguous situations where opportunities are present for violent conflict, violence to obtain money or other goods, drug or alcohol use, or school situations or other social problems. It also may explain of how youths chose their peers or social networks, and accordingly the particular patterns of deviance they later evidence. Thus, it may be the motivational process where youths chose their peers and the situations they and their peers often encounter with opportunities for getting high or crime commission.

Perhaps "trouble" also is the explanation for the repeated finding in longitudinal studies about not only peer associations, but the importance of "prior delinquency" in explaining delinquent involvement. "Trouble" may be conceived as deficits in social judgement and development. The implications of "trouble" for intervention are critical when considering adolescents and the unfolding of a sequence of behavioral problems leading to crime and drug use. The "problem use" or "trouble" variables suggest that there may a critical time "window" early in adolescence when the inability to manage problems in school or at home begins to disrupt social bonds, but perhaps before dropping out processes, substance abuse or violent delinquency begin. This difficulty may be interpreted as a developmental deficit. Even shortly after one dimension of a generalized deviant pattern emerges, such as dropping out of school or initiation into drug use, the

influence of "trouble" may contribute further to associations with others sharing similar patterns, leading in turn to the onset of more serious crimes. Also, perhaps the absence of "trouble" contributes either to limited immersion in delinquent social networks or only limited involvement in other deviance. The identification of "trouble" in the form of violent behavior, or other social problems, as well as the inability to manage difficult problems in school, should be a critical feature of intervention theory and process.

A Research Agenda

The overall results of the VJO Program experiment suggest concrete directions for rethinking correctional interventions, specifically aftercare and reintegration concepts. These concepts merit continued testing and development to improve this component of juvenile corrections. A commitment to testing, innovation, and experimentation is a characteristic of effective management in correctional organizations. This study suggests that further research and development to advance this intervention theory and model are warranted. Future efforts should provide insulation from the organizational problems which undercut implementation in two of the four sites. Research and development, with careful attention to practices rooted in theory, and rigorously evaluated, is a viable strategy for innovation and design of new correctional strategies, both for reintegration and for system development.

To build on the knowledge from this study, a "second generation test" of reintegration strategies should include different offender populations. The theoretical issues described above should be an explicit part of the next generation of studies -- for example, experiments on interventions which foster reintegration by accelerating the "natural" processes of desistance. Research should examine whether these concepts can be generalized to specific offender populations. The design of specific intervention strategies for specific offender groups, such as sex offenders or substance users, is a necessary next step in developing diversified correctional systems. Both the structural issues, such as phased programs and case management, underlying principles such as social learning and opportunity structures, and substantive treatment services for specific offender groups, should be part of continuing R & D on reintegration.

Further research also is necessary to refine the way we measure and evaluate correctional intervention. This in turn will improve our understanding of why interventions succeed or fail, and the specific elements which contribute to those outcomes. The implementation study (Fagan and Forst, 1987) illustrated a paradigm for

looking at correctional systems -- how programs are tied together, how services are linked, how organizational strategies are developed and put into place, and what policies and philosophies make a series of otherwise discrete interventions into a logical coherent process. The concepts of integrity and strength of intervention (Sechrest et al., 1979) suggest several directions for treatment measurement. The strategy in this study used multiple measures, assessed from various stakeholders within the corrections system (including youths), to look at the internal consistency of interventions within correctional systems, in terms of both theory and intervention processes.

Research on the decision to stop committing crimes, and the role of correctional intervention in that decision, is critical in forming intervention strategies. Comparisons of the correctional experiences and social backgrounds of those who persist or desist from crime can improve correctional interventions. Analysis of the social, personal, and neighborhood factors which enable desistance or work to neutralize it can further contribute to the design of effective interventions.

The importance of community context on recidivism and accordingly, correctional effectiveness, has been demonstrated in several studies (Sampson, 1986; Simcha-Fagan and Schwartz, 1987). Reintegration strategies in part attempt to provide youths with skills to avoid the predictable effects of social disorganization, weak formal and informal social controls, and limited economic opportunities. The skills of avoidance, together with the contribution of reintegration to helping youths manage complex social situations which offer crime opportunities, should be understood and incorporated into correctional programs. Research on how youths manage these situations, avoid crime, and pursue opportunities should inform correctional interventions to promote these skills. Also, factors which bear on neighborhoods and their influence on crime should also be assessed. Research is needed to illustrate the relationship between crime control policy and other social domains which contribute to crime -- for example, employment, housing, and child welfare.

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NOTES

1. National Commission on the Causes and Prevention of Violence, 1969. To Establish Justice, To Insure Domestic Tranquility, Final Report. Washington DC: U.S. Government Printing Office.
2. Paul Strasburg, 1984, "Recent Trends in Serious Juvenile Crime," in Mathias, DeMuro, and Allinson (eds.), *Violent Juvenile Offenders: An Anthology*. San Francisco: National Council on Crime and Delinquency. Also, Neil A. Weiner and Marvin E. Wolfgang, 1985, "Violent Crime in America, 1969-82," in Lynn A. Curtis (ed.), *American Violence and Public Policy*. New Haven: Yale University.
3. Within a few years of the publication of "What Works -- Questions and Answers About Prison Reform," Martinson recanted the statement that "nothing works." (conclude -- cite Gendreau and Ross, 1987).
4. For example, improvements in behavior and attitudes toward law and violence, family interactions, attitudes toward education, and job skills and preparation.
5. Arrests of persons under the age of 18, according to the FBI's Uniform Crime Reports.
6. Arrests for Part I and Part II felonies.
7. See: Fagan et al. (1984) for a full description of the program model and its links to the research design.
8. Homicide, aggravated assault, armed robbery, kidnap, forcible rape or sodomy, and attempted murder or attempted rape, were the committing offenses. The eligible prior offenses included the committing offenses, plus burglary, auto theft, any felonious robbery or assault (e.g., 3^o), and grand theft.
9. Two of the six youth died during the program; four other youth were not released from secure care at the termination of the experiment.
10. For example, youth absconded from the program.

11. Reincarceration included confinement in a juvenile corrections facility for a new offense or return for a technical violation as a juvenile, or a jail or prison sentence for an offense adjudicated in the criminal courts.

12. The Detroit results are anomalous. While a significant difference in return rates is plausible, this dramatic disparity is unlikely given the similarity of rearrest rates. Instead, the results may reveal more than simply differences in correctional outcome. Nearly 80 percent of the youths in the experimental program were terminated from supervision following program completion, while most control youth remained on supervision during the entire at-risk period. Thus, when rearrests occurred, most experimental youths were well above the age of majority (17 years) and processed as adults in the criminal court. Also, when the experimental program concluded, the unit was disbanded and workers reassigned to caseloads other than juvenile delinquency. Most youth were well beyond the age of majority (17 years) at the time of program completion, and eligible for criminal court jurisdiction for new offenses. When rearrests did occur, their parole status was "clear" and their new offenses handled in the criminal court. Controls, on the other hand, remained on juvenile supervision until the age of 19 years, and often with the same caseworker who originally handled their case. If rearrested, their cases remained in the juvenile system, and handled as a technical violation or possible parole revocation. The cases were not treated as new offenses, either with a new petition or formal filing of criminal charges. The differences in the jurisdiction of rearrests for youths from experimental and control programs bear on how cases were handled and the likelihood of reincarceration.

13. Calculations of at-risk time for youths following the end of program supervision proved extremely complicated, due their movements in and out of secure care and residential placements following their initial secure care release.

14. ANOVA routines were used in lieu of survival analyses or proportionate hazards models due to the small sample sizes within sites. Accordingly, the analyses examine only the first rearrest, rather than the cumulative distribution of failure rates for the entire cohort.

15. Youths confined in training schools, jails, or state prisons were asked to report their activities for the most recent 12 month period they were not incarcerated.

16. These included self-report items constructed to reflect the Uniform Crime Report Part I "Index" crimes of aggravated assault, armed robbery, and arson of an occupied structure.

17. Subscales of self-reported delinquency items which reflect small homogeneous behavior categories similar to the Uniform Crime Report categories. For example, offense-specific scales include weapons offenses, extortion, felony assault, robbery, minor assault, felony theft, minor theft, vandalism, drug sales, alcohol use, and drug use. These generally are non-overlapping scales with separate configurations of items.

18. The exaggerated findings for controls in Boston and Memphis were due to one respondent in each site reporting the maximum number of events for several items ("88 times in the past year"). Analyses substituting the item mean for other controls in that site for these two respondents resulted in smaller means, but no changes in the F-values.

19. One strategy to estimate this bias would be to introduce controls for the factors which distinguish those who consent from those in the total sample. Unfortunately, the small samples in the follow-up interviews made it impossible to control for any factors.

20. The indicators of recidivism for two or more years at-risk were excluded. The generally small N's in these comparisons raised questions about the stability of the trend.

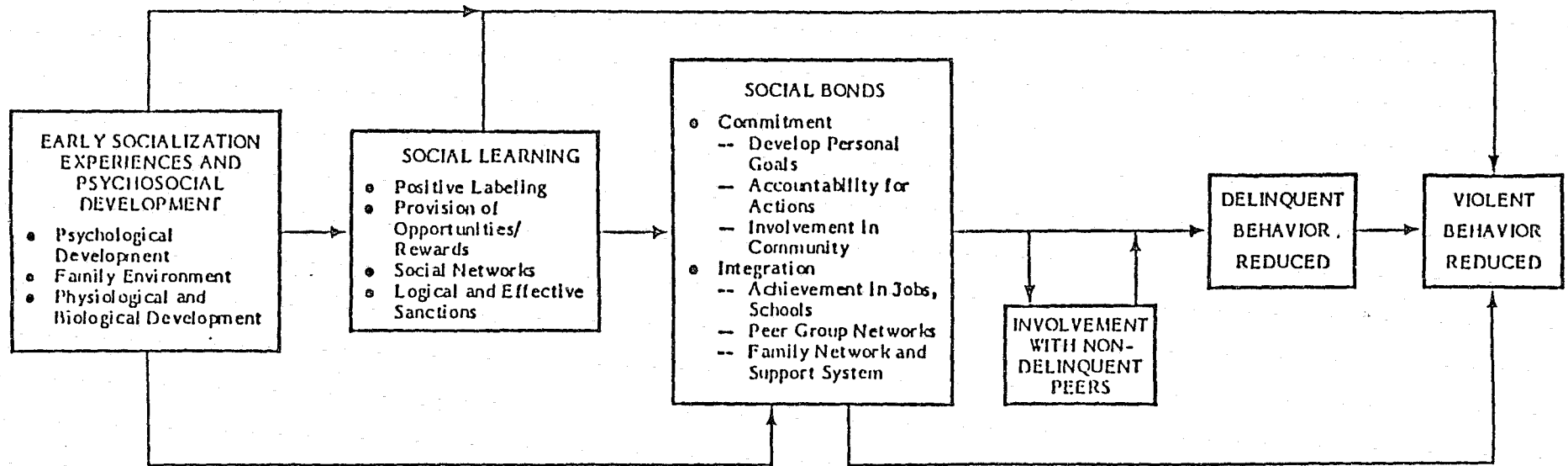
21. In most states, transfer of jurisdiction is an irrevocable act. Thus, once an adolescent is transferred to criminal court, even if the specific charges are dismissed, all subsequent charges against that youth are regarded as criminal offenses, and are adjudicated in the criminal court. The transfer decision is an expulsion from juvenile court.

22. For example, Fagan et al. (1984b) found that nearly 25% of cases filed in criminal court in a concurrent jurisdiction system were dismissed. Yet the youths' criminal had been initiated, and all subsequent charges were heard in criminal court.

23. See, Finckenauer, 1984, for an analysis of competing delinquency theories and their implications for juvenile corrections).

24. See: Fagan and Jones, 1984, and Fagan, Hartstone and Rudman, 1984, for detailed statements of the theoretical model and its translation to the program design.

FIGURE 1: Intervention Model for Violent Juvenile Delinquency



COMMUNITY REINTEGRATION MODEL

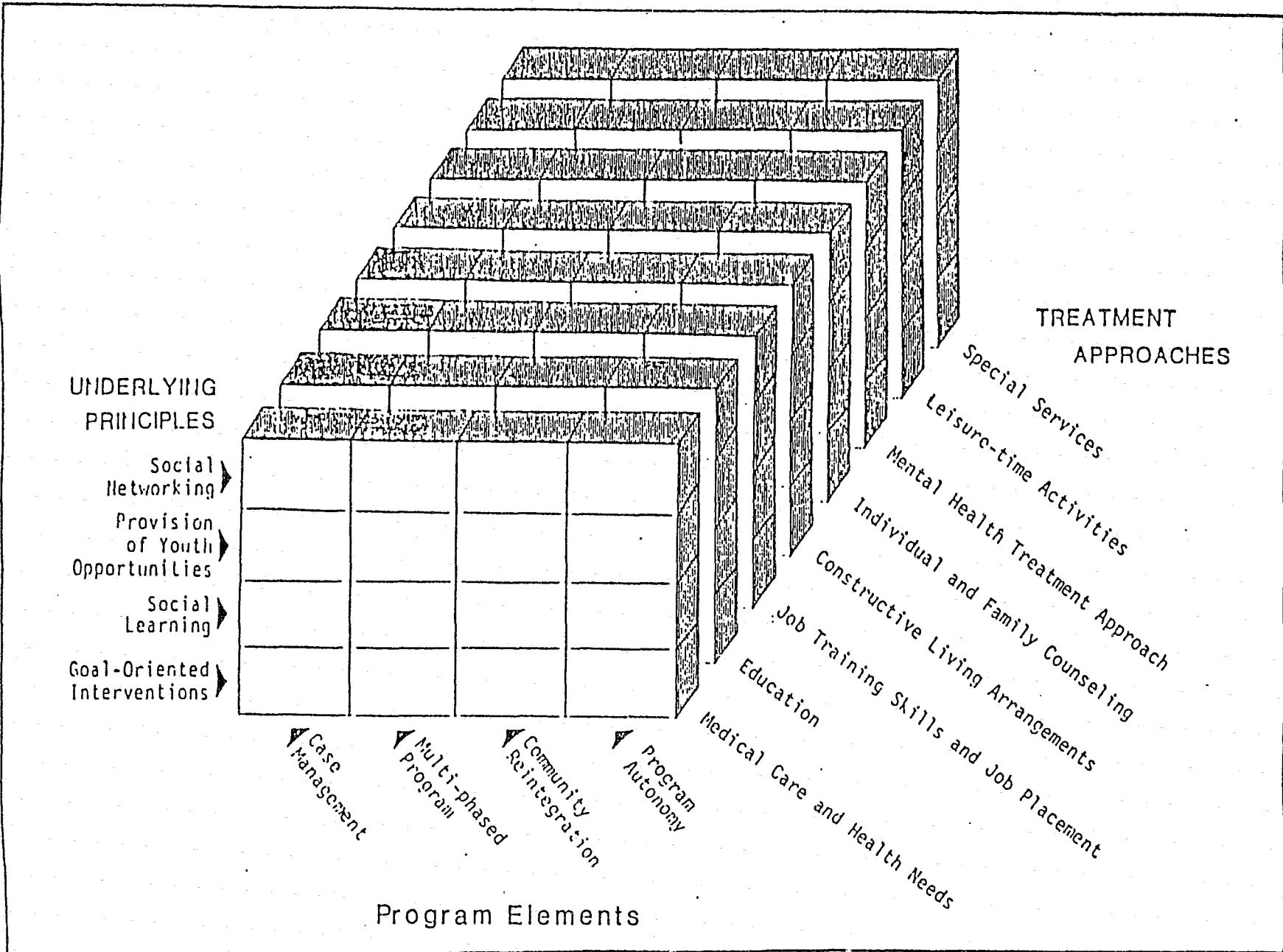


TABLE 1

IMPLEMENTATION OUTCOMES BY PROGRAM DOMAIN^a

PROGRAM DOMAIN	Boston	Detroit	Memphis	Newark
Case Management	Full-time case managers with DYS experience. Youth ratings high on four elements of CM role, but overall staff ratings low. Early assignment, 1-3 meetings per week on early phases. Overall implementation: HIGH.	Full-time case managers with DSS experience. Youth ratings very high on four elements of CM role, but staff ratings low. Late assignment for 60%, 1-3 meetings per week in all phases. Overall implementation: HIGH	Full-time case managers with small caseloads, early assignment, 1-3 meetings per week in all phases. CM's had little experience. Youth and staff ratings on four elements of CM role were high. Overall implementation: HIGH	Part-time case managers, problems in continuity across phases. Early assignment but little contact in community phases. Youth ratings on four elements on CM role were low, but staff ratings high. Overall implementation: LOW
Integrated, Multiple Phases	Established separate SC facility with experienced DYS staff, contracted for CBR phases with longstanding DYS vendors. SC phase was 40 miles from Boston. Abrupt shift in program climate and rules from SC to CBR phases. Decision process weak across phases. Overall implementation: MEDIUM	Added CM component to existing SC facilities. Used two vendors for CBR phase. Established CR phase through "community team" approach. SC phase was 40 miles from Detroit. Placed program emphasis on latter phases. SC phase was largely the same for experimental and control youth. Overall implementation: HIGH	Highly integrated program in one facility on Memphis. But little distinction between phases. Semi-independent living phase prior to CR was unique to initiative. Staff was integrated across phases, as were treatment interventions. Overall implementation: MEDIUM	SC unit in county detention center, CBR a few blocks away. Mentor home phase for CR poorly done. Problems in autonomy (decision making) and staff shortages lead to weak program environment. Overall implementation: MEDIUM
Community Reintegration	Job placements (with salary subsidies) strengthened CR focus. Controls had higher job training rates in SC, CBR, but lower in CR phase. Experimentals had stronger job placements in all phases. E's reported better problem-solving skills, but weaker preparation for community living. Experimental staff reported stronger reintegration focus in all phases. Overall implementation: HIGH	Job placements (with subsidy) strengthened reintegration phase. CAT helped establish community ties early on, carried through into CR phase. Experimental youth report higher job training and job placement participation; better skills to resolve conflicts, but controls reported overall better community preparation. Overall implementation: HIGH	Location promoted community ties. But job-related efforts were weak for experimental youth. Experimental youth reported stronger social skills for CR phase. Experimental staff viewed reentry preparation as favorable, more so than control staff. Overall implementation: MEDIUM	Weak CM component diluted CR effort. Poor record of job placement and training efforts, equal for control and experimentals. Little support to youth or family during CR phase. Control youth and staff rated CR efforts equal to or better than experimental efforts. Overall implementation: LOW
Theoretical Principles	Few differences in youth ratings on Social Climate Scales, except for experimentals in CBR phase. Staff rated experimental program stronger. Boston program had most balanced reward/sanction ratio. Overall implementation: MEDIUM	Youth ratings for SC are similar for E's and C's, as expected. No CBR phase for controls, so CBR placements for E's provide significant additional program exposure. Staff ratings are equal on program environment. Reward/sanction ratio unbalanced. Overall implementation: MEDIUM	Youth ratings for SC, CBR phases are similar for E's and C's. Staff ratings stronger for E's. No control CBR, so experimental youth had significant additional program exposure. Poor reward/sanction ratio. Overall implementation: LOW	Youth ratings for SC, CBR are similar for E's and C's. Staff ratings show stronger theory base in control facilities. Poor reward/sanction ratio, implemented very late in program. Overall implementation: LOW

- a. Overall ratings are based on multiple measures, including (1) responses to youth and staff surveys, including Social Climate Scales for theory implementation, and Case Management ratings for preparation for community reentry; (2) qualitative data from field staff observations and review of archival information; and (3) assessments of program characteristics and implementation strategies compared to programs guidelines and performance standards.

Table 2
Sample Characteristics and Interventions

CHARACTERISTICS	Boston		Detroit		Memphis		Newark		TOTAL	
	E	C	E	C	E	C	E	C	E	C
Sample (N)	29	24	36	28	19	21	38	32	122	105
Age at Intake (Median)	16.5	16.3	16.6	16.3	16.5	16.6	16.1	16.0	16.5	16.6
Prior Petitions	5.6	6.8	3.8	4.8	8.8	5.1	14.7	12.6	8.3	7.9
Prior Adjudications	3.1	4.0	1.8	1.8	3.4	2.1	5.6	3.9	3.5	3.0
Total Intervention Days	322.6	238.8	401.6	291.3	201.3	328.5	239.4	272.5	301.3	334.0
Days in Secure Care	165.6	177.5	334.1	257.5	115.3	272.9	126.7	242.1	195.6	237.2
Days in CBR	80.2	22.6	36.1	0.0	39.0	0.0	97.8	30.4	65.6	14.5
Days in Supervision	76.8	38.8	31.3	33.8	46.9	55.6	14.8	0	40.1	29.2

Table 3
 Recidivism by Treatment Group (Official Records)

	(N)	Total Arrests	Violent Arrests	Other Felony Arrests	Misdemeanors or Technical Violations	Percent Rearrested	Percent Reincarcerated
Boston							
Experimental	29	4.1	.9	2.7	.6	82.8	20.7
Control	24	6.3	1.5	4.0	.8	87.5	29.2
Significance (a) ..	-	.05	.09	.14	.62	.92	.69
Detroit							
Experimental	36	1.2	.33	.81	.75	47.2	13.8
Control	28	1.4	.18	.89	.07	46.4	0.0
Significance (a) ..	-	.87	.40	.80	.88	1.00	.11
Memphis							
Experimental	19	6.1	1.1	3.3	1.7	89.5	42.1
Control	21	2.8	.4	2.0	.4	71.4	19.0
Significance (a) ..	-	.013	.067	.166	.013	.304	.32
Newark							
Experimental	38	3.2	.15	2.3	.68	71.0	17.6
Control	32	3.1	.25	2.7	.19	81.3	18.8
Significance (a) ..	-	.86	.51	.70	.05	.48	1.0
TOTAL							
Experimental	122	3.3	.52	2.1	.65	69.7	14.3
Control	105	3.3	.56	2.4	.32	71.4	10.5
Significance	-	.83	.84	.53	.09	.78	.49

a. Significance:

Arrests: P(F)

Percent: P(Chi-Square)

Table 4a
Rearrests by Time at Risk --
Boston

Time at Risk	Treatment Group		Significance
	Experimental	Control	
* 0 - 1 Year at Risk			
N at Risk	10	10	
% Rearrested Any Offense ..	40	50	1.0
Number of Rearrests	2.3	5.2	.05
Days to First Rearrest	344.0	114.0	.01
% Rearrested Felony	20	60	.17
Number of Rearrests	1.0	2.1	.08
Days to First Rearrest.....	518.0	375.3	.66
* 1 - 2 Years at Risk			
N at Risk	6	4	
% Rearrested Any Offense ..	66.7	100	.47
Number of Rearrests	2.5	5.8	.12
Days to First Rearrest	464.5	160.0	.12
% Rearrested Felony	66.7	75	1.0
Number of Rearrests.....	1.0	2.7	.03
Days to First Rearrest.....	464.5	233.7	.27
* Over 2 Years at Risk			
N at Risk	4	1	
% Rearrested Any Offense ..	80	20	1.00
Number of Rearrests	6.3	3.0	.13
Days to First Rearrest	289.0	118.1	.03
% Rearrested Felony	75.0	0	.40
Number of Rearrests.....	1.7	--	--
Days to First Rearrest.....	418.3	--	--

* At risk calculated by subtracting last secure care release date from date of last record check.

** Significance:

Arrests: P(F)

Percent: P(Chi-Square)

Table 4b
Rearrests by Time at Risk --
Detroit

Time at Risk	Treatment Group		Significance
	Experimental	Control	
* 0 - 1 Year at Risk			
N at Risk	4	5	
% Rearrested Any Offense ..	0	0	
Number of Rearrests	--	--	--
Days to First Rearrest	--	--	--
% Rearrested Felony	0	0	
Number of Rearrests	--	--	--
Days to First Rearrest	--	--	--
* 1 - 2 Years at Risk			
N at Risk	13	14	
% Rearrested Any Offense ..	23.1	42.9	.50
Number of Rearrests	2.3	1.5	.40
Days to First Rearrest	299.0	118.0	.05
% Rearrested Felony	15.4	21.4	1.0
Number of Rearrests	1.5	1.3	.79
Days to First Rearrest	498.0	88.3	.01
* Over 2 Years at Risk			
N at Risk	17	7	
% Rearrested Any Offense ..	64.7	28.6	.24
Number of Rearrests	1.8	3.0	.27
Days to Arrest	453.1	180.5	.29
% Rearrested Felony	41.2	14.3	.43
Number of Rearrests	1.4	1.0	.63
Days to Arrest.....	387.1	575.0	.62

* At risk calculated by subtracting last secure care release date from date of last record check.

** Significance:

Arrests: P(F)

Percent: P(Chi-Square)

Table 4c
Rearrests by Time at Risk --
Memphis

	Treatment Group		Significance
	Experimental	Control	
* 0 - 1 Year at Risk			
N at Risk	9	10	
% Rearrested Any Offense ..	38.3	50	.65
Number of Rearrests	2.0	2.2	.77
Days to First Rearrest	275.3	218.4	.70
% Rearrested Felony	44.4	50.0	1.0
Number of Rearrests	1.8	1.8	.96
Days to First Rearrest.....	202.5	307.4	.54
* 1 - 2 Years at Risk			
N at Risk	5	7	
% Rearrested Any Offense ..	40.0	71.4	.03
Number of Rearrests	1.0	1.6	.32
Days to First Rearrest	684.5	659.2	.88
% Rearrested Felony	40.0	42.9	1.0
Number of Rearrests	1.0	1.3	.50
Days to First Rearrest.....	684.5	391.0	.63
* Over 2 Years at Risk			
N at Risk	3	2	
% Rearrested Any Offense ..	66.7	0	.40
Number of Rearrests	1.5	--	--
Days to First Rearrest	457	--	--
% Rearrested Felony	66.7	0	.40
Number of Rearrests	1.5	--	--
Days to First Rearrest.....	519.0	--	--

* At risk calculated by subtracting last secure care release date from date of last record check.

** Significance:

Arrests: P(F)

Percent: P(Chi-Square)

Table 4d
Rearrests by Time at Risk --
Newark

	Treatment Group		Significance
	Experimental	Control	
* 0 - 1 Year at Risk -----			
N at Risk	12	17	
% Rearrested Any Offense ..	41.7	52.9	.83
Number of Rearrests	8.2	3.8	.19
Days to First Rearrest	61.0	(a)	(a)
% Rearrested Felony	50.0	35.3	.68
Number of Rearrests	1.2	1.2	1.0
Days to First Rearrest	(a)	(a)	(a)
* 1 - 2 Years at Risk -----			
N at Risk	15	12	
% Rearrested Any Offense ..	53.3	75.0	.45
Number of Rearrests	3.8	3.1	.64
Days to First Rearrest	12.3	161.5	.08
% Rearrested Felony	33.3	50.0	.63
Number of Rearrests	1.2	1.2	.90
Days to First Rearrest	12.3	81.0	.27
* Over 2 Years at Risk -----			
N at Risk	6	2	
% Rearrested Any Offense ..	83.3	100	1.0
Number of Rearrests	5.0	6.5	.63
Days to First Rearrest	556.0	406.0	.71
% Rearrested Felony	83.3	100	1.0
Number of Rearrests	1.2	3.0	.003
Days to First Rearrest	696.5	478.0	.19

a. Dates of rearrests not available for adult offenses which did not result in convictions.

* At risk calculated by subtracting last secure care release date from date of last record check.

** Significance:

Arrests: P(F)

Percent: P(Chi-Square)

table 4e
Rearrests by Time at Risk --
All Sites

Time at Risk	Treatment Group		Significance
	Experimental	Control	
*			
0 - 1 Year at Risk			
N at Risk	35	42	
% Rearrested Any Offense ..	34.3	45.2	.46
Number of Rearrests	4.7	3.7	.57
Days to First Rearrest	282.9	166.3	.14
% Rearrested Felony	34.3	40.5	.75
Number of Rearrests	7.3	1.7	.29
Days to First Rearrest	265.6	344.5	.58
*			
1 - 2 Years at Risk			
N at Risk	39	37	
% Rearrested Any Offense ..	38.5	64.9	.04
Number of Rearrests	3.1	2.8	.72
Days to First Rearrest	279.2	278.4	1.0
% Rearrested Felony	33.3	40.5	.68
Number of Rearrests	1.2	1.5	.14
Days to First Rearrest	387.3	209.2	.23
*			
Over 2 Years at Risk			
N at Risk	30	12	
% Rearrested Any Offense ..	71.4	28.6	.18
Number of Rearrests	3.2	4.4	.37
Days to First Rearrest	437.7	487.0	.78
% Rearrested Felony	56.7	25.0	.13
Number of Rearrests	1.4	2.3	.07
Days to First Rearrest	457.1	526.5	.75

* At risk calculated by subtracting last secure care release date from date of last record check.

** Significance:

Arrests: P(F)

Percent: P(Chi-Square)

Table 5
Days to First Arrest by Offense Type

	OFFENSE TYPE			
	First Offense		Violent Offense(a)	
	Days	(N)	Days	(N)
Boston				
Experimental	346.8	14	420.3	11
Control	213.1	12	321.1	12
P(F) .....	.20	-	.30	-
Detroit				
Experimental	420.1	14	412.2	9
Control	133.6	8	210	4
P(F) .....	.02	-	.11	-
Memphis				
Experimental	348.0	5	402.1	8
Control	448.6	12	359.6	9
P(F) .....	.60	-	.81	-
Newark (b)				
Experimental	201.8	6	286.0	5
Control	210.4	5	213.3	3
P(F) .....	.96	-	.78	-
TOTAL (b)				
Experimental	350.9	39	393.3	33
Control	271.9	37	306.1	28
P(F) .....	.23	-	.23	-

a. Violent offense is defined as any felony charge for robbery, assault, homicide or attempts, forcible rape or attempts, arson of an occupied dwelling, or kidnap.

b. Date of arrest was available only for juvenile arrests for Newark youths, or for adult arrests which resulted in conviction. Thus, first adult rearrests which did not result in conviction were excluded from analysis.

Table 6
 Self-Reported Crime (SRD) in Last Twelve Months at Risk
 (Annual Frequency in by Type of Offense)

	TOTAL Self- Reported Crimes	OFFENSE-SUMMARY			OFFENSE-SPECIFIC	
		Violent	Property	Drug or Alcohol	Index Crimes	Weapon Offenses
Boston						
Experimental	211.4	31.3	42.8	141.2	12.8	16.5
Control	942.1	349.5	261.7	330.8	172.2	131.2
P(F) .....	.01	.004	.01	.04	.003	.01
Detroit						
Experimental	105.6	39.8	10.8	54.9	13.0	25.3
Control	169.3	62.4	16.1	90.7	2.3	46.7
P(F) .....	.33	.51	.65	.41	.33	.38
Memphis						
Experimental	272.5	98.8	57.0	116.8	36.9	29.4
Control	442.8	176.5	142.5	123.8	67.5	65.5
P(F) .....	.66	.65	.50	.94	.65	.56
Newark (a)						
Experimental	125.3	48.6	14.3	98.4	27.7	25.9
Control	--	--	--	--	--	--
P(F)	--	--	--	--	--	--
TOTAL						
Experimental	163.6	49.8	27.0	95.8	20.6	23.9
Control	506.4	190.6	132.5	183.2	77.6	80.9
P(F) .....	.004	.01	.003	.04	.01	.01

a. Too few control youths completed interviews for analytic purposes.

Table 7 **
 Summary of Intervention Effects on Recidivism Indicators
 (Percent Difference and Significance of Experimental-Control Differences)

RECIDIVISM INDICATOR	Boston		Detroit		Memphis		Newark	
	Percent	P	Percent	P	Percent	P	Percent	P
Percent Rearrested	5.4		-1.7		-25.4		12.7	
Percent Reincarcerated	29.1		-100.0	d	-100.0		6.4	
Total Rearrests	34.9	b	14.2		-100.0	b	-3.2	
Violent Rearrests	40.0	c	-83.3		-100.0	b	40.0	
Other Felony Rearrests	32.5	d	9.9		65.0	c	14.8	
Misdemeanors/Violations	25.0		-100.0		-100.0	b	-100.0	b

Rearrest by Time at Risk								
● At Risk 0-1 Year								
-- Percent Rearrested	25.0		*		24.0		21.2	
-- Number of Rearrests	55.8	b	*		9.1		-100.0	
-- Days to First Rearrest	100.0	a	*		26.1		+	
-- Percent Rearrested (Felony)	66.7		*		11.2		-41.6	
-- Number Rearrests (Felony)	52.3	d	*		0		0	
-- Days to First Rearrest (Felony) ...	38.1		*		-34.2		+	
● At Risk 1-2 Years								
-- Percent Rearrested	33.3		46.2		44.0	b	28.9	
-- Number of Rearrests	56.9	d	-53.3		37.5		-22.5	
-- Days to First Rearrest	100.0	d	100.0	b	3.8		-100.0	d
-- Percent Rearrested (Felony)	11.1		28.0		6.8		33.3	
-- Number Rearrests (Felony)	63.0	b	-15.4		23.0		0	
-- Days to First Rearrest (Felony) ...	98.7		100.0	a	48.1		-100.0	
Time to First Rearrest								
● Any Offense	62.4		100.0	b	-22.3		-4.3	
● Violent Offense	30.8		96.2	d	12.0		34.2	
Self-Reported Crime (Past Year)								
● Offense-Specific Crimes								
-- Index Crimes	100.0	a	-100.0		45.3		*	
-- Weapons Crimes	100.0	a	45.8		55.1		*	
● Offense-Summary Crimes								
-- Violent Crimes	100.0	a	36.2		43.8		*	
-- Property Crimes	100.0	a	32.9		59.9		*	
-- Drug or Alcohol Use	100.0	b	39.5		5.7		*	
● Total Crimes	100.0	a	37.9		38.5		*	

Significance: (a) $p < .01$ (b) $p < .05$ (c) $p < .10$ (d) $p < .15$

* Sample size too small for substantive comparison

** Percent Rearrested: $p(\text{Chi-Square})$

Number Rearrests, Days to Rearrest: $p(F)$.

*** New offenses only, excludes technical violations on parole or probation.

+ Dates of rearrests not available for adult arrests which did not result in conviction.

- Effect is greater for control than experimental group.

APPENDIX A

ISSUES IN THE MEASUREMENT OF RECIDIVISM

Recidivism, the rate at which an adjudicated offender commits additional offenses, is a threshold measure for determining effectiveness of sentencing policies or correctional programs. To the extent that violent juvenile offenders drive crime control and correctional policy (Greenwood and Zimring, 1985), this study relies on recidivism as the criterion measure of the success or failure of its reintegration strategies and overall correctional effectiveness.

Despite its obvious importance for juvenile and criminal justice policy, researchers and policy-makers have yet to agree on a universally acceptable definition or measure of recidivism. A variety of methods are used for calculating recidivism, sometimes offering contradictory results. To explain our selection of a recidivism criterion, and before analyzing the recidivism patterns for the VJO experiment, we first consider the commonly held definitions of recidivism and problems associated with its measurement.

Though most agree that recidivism means a return to crime, there is little consensus among researchers on definitions of "crime," return to crime, or what constitutes a meaningful (non-trivial, non-normative) incidence of crime. Barnes and Teeters (1959) define recidivism as "the proneness of many criminals to continue a life of crime," while Korn and McCorkle (1966) state, "offenders who relapse are known as recidivists." Many studies on recidivism fail to define the term at all. Lipton et al. (1975), in their evaluation of treatment studies, focus more on the measurements of recidivism than on definitions; they do, however, include this working definition: recidivism is "... the return of a person with a criminal record or the commitment of a probationer to a penal institution for violation of the conditions of parole or probation or for the commission of a new criminal offense." As Wallerstedt (1984) states: "In its broadest context, it [recidivism] properly refers to the multiple occurrence of any of the following key events in the overall criminal justice process: commission of a crime, arrest, charge, conviction, sentencing, incarceration."

The definition of recidivism is partly driven by specific research needs, as well as ideological orientations of individual criminologists. Typically, measures of recidivism fall into three categories: rearrest, reconviction, and reincarceration. However, the selection of a particular recidivism measure necessarily depends upon the purpose of the study. Moreover, numerous other indicators of recidivism may be used for evaluative

purposes, for example, probation or parole violation, probation or parole revocation, or absconding (Maltz, 1984). Several studies incorporate more than one definition (e.g., see Waldo and Chiricos, 1977), while other studies are concerned with the frequency of offenses or stress the severity of behavior, and still others treat people as light bulbs by defining recidivism as time to failure (i.e., avoidance of crime). Even when different studies use the same general definition (for example, incarceration) they may use differing criteria for measurement (e.g., return to prison for a new offense vs. a technical violation, return to state prison vs. return to local jail). Accordingly, the operational definition of recidivism is influenced by the behaviors, policies or practices being assessed, as well as beliefs about what constitutes behavioral change.

Operational Definitions. Operational definitions of recidivism vary extensively. Waldo and Griswold (1979), for example, note that "[t]he measurement of recidivism has varied in terms of the level of contact in the criminal justice system, the source of data, the way the data are manipulated, the kinds of crimes (or rule violations) that are counted, and the length of the follow-up period." This section explores some of the problems associated with recidivism measurements when they are put into operation.

One of the more serious problems in getting an accurate account of recidivism is the fact that there is no way to assure complete information on individual encounters with the juvenile justice system. The disaggregation of juvenile justice data, due to multiple jurisdictions and agencies involved with juvenile offenders, historically has kept separate the individual contacts and transactions of youth with the police and the courts. To ensure complete information, several data sources must be sampled, including institutional records for those individuals incarcerated in the same institution or jurisdiction, police and court records, FBI rap sheets as well as self-reported crimes, arrests and convictions.

Few states, however, have a system designed to allow for systematic tracing of an individual's delinquent history nor do they have a mechanism that permits them to incorporate incarceration data in their statewide assessment of criminal statistics. The matter is made worse when trying to determine recidivism rates for multi-state offenders. Beck and Shipley (1987) indicate that more than one-fifth of their juvenile parole sample had been arrested for crimes committed in states other than their original release. Problems may still persist after accounting for multi-state offenders due to the varying collection and compilation procedures employed by each state.

While local (city or town) law enforcement agencies within counties (or states) keep separate records, prosecutorial and court data usually are generated by and kept in county

agencies. Even though these agencies (especially the larger ones) are increasingly turning to computerized record-keeping systems, many smaller jurisdictions still rely on standard filing and record-keeping systems; these, unfortunately, have been characterized by incomplete records, retrieval difficulties, illegible documents, and methodological problems relating to how the data were compiled.

Assuming that an accurate compilation of contacts with the law has been completed, problems arise concerning how the data are aggregated and interpreted. The cliché about where one stands depends upon where one sits applies in interpreting recidivism data. Interpreting arrest data and police charging practices requires disentangling the behaviors of the police from the offender's acts. Smith (1986) shows the variability in police arrest decisions as a function of the neighborhood context where the crime and arrest occurs. Chambliss and Seidman (1971) show the validity problems in arrest data resulting from differential police surveillance and enforcement strategies. McCleary et al. (1982) suggest that arrest and police charging decisions are influenced by organizational factors in local law enforcement agencies. Empey and Erickson (1972) found radical differences in recidivism based on arrests depending on whether crime measurement is in absolute or relative terms.

Similarly, calculation of recidivism for the same population *but using different data sources* also may skew the results. Griswold's (1978) comparison of recidivism measures show that depending upon which baseline measure is used to define recidivism, differing populations will be identified as recidivists. Elliott and Huizinga (1983) illustrate the validity problems in comparing juvenile arrest data with self-reports of serious delinquent acts with a general adolescent population, while Fagan and Reinerman (1986) found similar problems in measuring recidivism among probationers. While Elliott and Huizinga found underreporting of "serious offenders" comparing arrest and self-report data, with lower incidence based on arrests, Fagan and Reinerman found that both frequency and seriousness varied by race and data source. Official measures of recidivism showed fewer contacts for minority youth but with more serious charges, while self-report data showed no differences between whites and minority youth either in seriousness or frequency. They found overreporting of seriousness using official data, but only for black youth.

A related measurement problem is which crimes or rule violation to include. Should *all* crimes, including minor probation infractions or trivial behaviors, be counted, or only subsequent crimes which are of equal or greater seriousness than the original offense? Wallerstedt's (1984) analysis of prison returnees can be used to make the case for both sides of the issue. Furthermore, plea bargaining complicates the matter because the

conviction charge in all likelihood will be different from the arrest charge.

The extent of recidivism also may vary depending upon the length of the follow-up period. Some follow-up periods are as short as six months (Pilnick et al., 1968), others as long as twelve years (McCord et al., 1968). Most studies have follow-up periods of between one and three years, which most researchers agree is an adequate time allotment since the greatest risk of recidivism is during the first two years (Beck and Shipley, 1987; Lipton et al., 1975). One study (Kantrowitz, 1975) suggests that for policy decisions a six-month follow-up is adequate. He established that the same decision, based on a parole violation study, could have been made at the sixth-month interval as was made at the three year interval. However, Waldo and Chiricos (1977) dispute Kantrowitz's conclusion. At the end of their sixth-month interval, the control group had a recidivism rate nearly three times larger than the experimental group. Yet after the 12-month follow-up period both control and experimental groups had virtually the same recidivism rates.

Finally, measurement problems involve the probability of Type I and Type II errors, which vary according to the point in the criminal justice process from which the information is obtained (Blumstein and Larson, 1971). Type I errors consist of those individuals who are erroneously rearrested or reincarcerated, while Type II errors consist of those individuals who have committed a crime but are not arrested or convicted. The farther into the system at which recidivism is measured, the lower the probability of Type I errors and the greater the likelihood of Type II errors. In other words, employing official records (i.e., rearrests) as a criterion would involve a larger Type I error and fewer Type II errors than reconviction or reincarceration.

Type II errors may occur for any one of a number of reasons: diversion from arrest or prosecution or restitution in lieu of charging; the offender may receive immunity from prosecution in exchange for testimony; or the offender may be charged for a more serious offense while awaiting trial for the first offense (Maltz, 1984). Of course, the most common reason for a Type II error is that the youth simply is not caught by the police.

One way to address the problem of Type II errors in official records is to use self-reported delinquency (SRD) data. Self-report measures of delinquency have been validated under a variety of sampling and measurement conditions (see: Hindelang et al., 1981, Elliott and Ageton, 1980, and Weis, 1986, for analysis of the validity and shortcomings of self-report delinquency measures), and for a wide range of relatively trivial (e.g., curfew violations) and serious (e.g., sexual assault) offenses. They standardize reports by avoiding possibly skewed interpretations of behaviors by arresting officers, or

disparate criminal justice decision making influences (e.g., parole revocation decisions).

But self-reports also introduce other error sources. In a correctional evaluation, not all offenders will agree to participate or be located for interview. Unless case attrition is a random event, delinquency estimates may be understated. Second, lengthy recall periods may also introduce biases. Increasing the frequency of interviews is one solution, but close scrutiny by researchers may introduce surveillance effects on respondents' behaviors. Third, underreporting or overreporting may equally occur, but with different groups. Even in the most confidential interviews and circumstances, there may be a natural reluctance by respondents to discuss serious crimes. Overreporting has been noted in self-report studies as well (Elliott and Huizinga, 1983), necessitating either arbitrary truncations of categories or acceptance of self-reports with suspect face validity. A strategy of multiple indicators can balance sources of error and provide delinquency measures based on varying definitions and data sources. By triangulating information from several sources, validation of individual measures is possible, and multiple interpretations of results are possible.