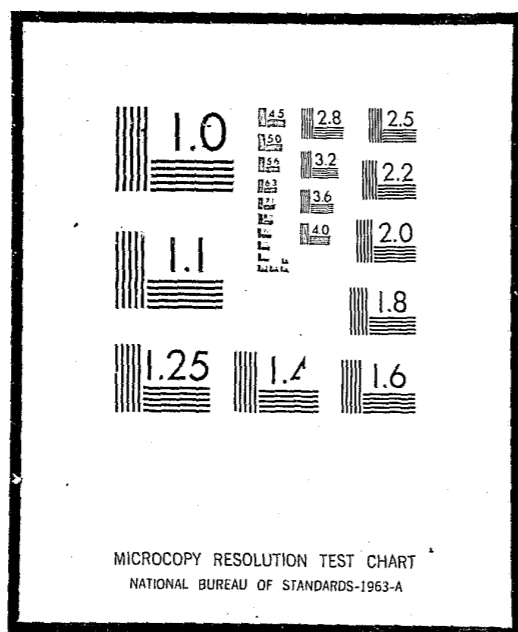


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FIVE CHALLENGES*

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Psychologists are uniquely qualified to contribute solutions to five of the most pressing and difficult problems confronting the field of corrections and related social agencies. These problems are pressing not only because so many lives are so severely disrupted by criminal behavior and by the societal responses to that behavior but also in view of an increasing national disenchantment with the effectiveness of any prevention or correctional programs. These problems are difficult not only because they are complex but also because their solutions will require manpower and hard work. Psychologists are well equipped to tackle these problems by dint not only of their scientific tradition but also by reason of their concern for individual persons and the alleviation of misery.

The history of criminal justice shows that in the treatment of persons convicted of crime we have

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been at worst inhumane, at best inefficient, and at all times confused. Psychologists can lessen the confusion, increase efficiency, and contribute to providing more humane criminal justice; they can do these things by meeting the five challenges to be described.

The first challenge is to lessen the confusion by developing an internally consistent theoretical framework. This will undoubtedly require acceptance of the second challenge: that of defining person classifications with demonstrable relevance to specified goals. This challenge is related to the third, which is to develop and test effective treatment and control programs. The fourth challenge is to monitor the ability of agencies to achieve their goals; and the fifth is to develop and test ways to ensure that the results of these efforts are communicated and used.

The Need for Integration of Theories

Nothing is so practical as a good theory, according to an often-quoted comment by Kurt Lewin. A good theory guides both practice and research; in addition, it helps bring their integration by providing a basis for action research yielding new knowledge.

In building theories, much attention has been given to delinquency, little to adult crime, and almost none to

corrections. As noted by Klein,¹ texts on corrections "...are as likely as not to omit the very word, theory, from their indexes"; "Conrad's Crime and Its Correction"² employs the word theory only to note its lack in corrections"; and Empey describes correctional policies and activities as "guided by a kind of intuitive, goal-oriented guessing...."³ Empirical tests of theories, and of effectiveness of action programs, have been woefully inadequate or not attempted.

If rigorous criteria of a "good" theory were listed, it could be shown readily that existing theories of delinquency and crime do not hold up well under examination. There is no available comprehensive, internally consistent theoretical framework to impose order and guide research and practice in corrections. We are not wholly ignorant of the precursors to anti social conduct or of requirements for its modification; but the needed comprehensive system, building upon presently available knowledge and earlier theory, has not yet been developed.

A selective, noncomprehensive review of contributions to theory requires their arbitrary classification. While any classification probably will not be to the liking of the theorists so classified, it will serve at least to depict the diversity of approaches which have been taken. Besides the earliest theories--including

those of Bentham and Beccaria, whose writings continue to exert a profound influence on contemporary views of crime, the law, and punishment--most approaches fall within five general groups: (1) psychogenic, (2) social, (3) physiological, (4) constitutional, and (5) economic.

The psychogenic theories, emphasizing the personality or psychological functioning of the individual in the development of delinquent or criminal behavior, may be classified (in terms of their historical development or central concerns) as analytic, phenomenological, or behavioral. The classification is unsatisfactory because of overlapping concerns, but it serves to point up the magnitude of the problem of integrating the widely divergent theoretical viewpoints which guide psychological research and practice in corrections.

The basic concepts of analytic theories have proven difficult to operationalize, with the consequence that experimental verification or refutation is exceedingly difficult. Yet, the central arguments that delinquent and criminal behavior results from a failure of effective ego or superego controls due to faulty early training or parental neglect⁴ or, alternatively, that it represents a symptomatic method of coping with a basic problem of adjustment--that is, defense against anxiety^{5,6,7}--guide much clinical practice. The promise of

the resulting model for corrections, based upon speculations concerning the origins and proper treatment of the mentally ill, has not been matched by achievement; and research workers seem to have decided either that science is not up to testing the theory (and returned to clinical practice) or that the theory is not up to science (and turned to alternative theories). Analytic theories overlap with phenomenological approaches in asserting that the determinants of behavior often are not reality features of the person's environment but rather the individual's perception of that reality. The overlap with behavioral theories is an emphasis upon the importance of learning.

Phenomenological theories focus upon the postulate that behavior, including acts defined as delinquent, is a product of the individual's perceptions. They may be illustrated by approaches stressing the development of interpersonal maturity or of cognition.

Sullivan, Grant, and Grant extensively developed a concept of personality maturity levels for a classification of persons thought to have relevance for treatment of those who become defined as "delinquent" or as adult "offenders."⁸ Successive levels of "integration" are defined by the diagnosed perceptual abilities of the person and produce characteristic modes of interpersonal

relations. Reports of treatment research at a naval retraining command and also in a community treatment program for "delinquents"--the latter based upon further extension of the theory by Warren--support the view, explicit in the theory, that different types of "offenders" require different types of treatment.^{9,10}

Cognitive theories tend to stress the person's interpretation and cognitive response to the environment, with variations in such response leading to a perceived legitimacy of deviant behavior. Examples of important conceptions of such approaches include "self-definitions" which insulate against delinquency;^{11,12,13} of "techniques of neutralization" which provide rationalizations decreasing behavioral restraints;¹⁴ or of "stigmatization" (the labeling of persons as "bad," "delinquent," or "criminal") which reinforces self-perceptions and creates a "self-fulfilling prophesy."^{15,16,17,18,19}

The concept central to behavioral theories is learning; and learning principles developed initially in psychological laboratories now have led to an impressive body of knowledge concerning the acquisition, control, and modification of behavior. The resulting technology has been applied to a variety of clinical problems--a 1966 summary emphasizing applications to delinquent and criminal behavior prepared by Shah reviews the most

relevant theoretical work, techniques of behavior modification, and implications of this approach which emphasizes the utilization of learning theory, the experimental analysis of behavior, and the development of explicit, observable, and precise procedures.²⁰ Behavioral approaches seek to establish lawful relationships between operationally defined sets of behaviors and environmental variables. Thus, for example, concepts such as "reinforcement," "punishment," or "extinction" do not constitute postulates or hypotheses; rather, they are constructs defined by such functional relationships and constitute descriptions of observed relationships.

Behavior modification approaches mainly are based upon the operant conditioning principles specified by Skinner,²¹ although some are derived directly from the classical conditioning model²² and some have drawn guiding principles from Hull,²³ Guthrie,²⁴ and others. The classical conditioning theory approach is exemplified by Wolpe: autonomic nervous system responses, the physiological concomitant of anxiety, may be arranged to occur at very low, manageable levels; the general technique for avoiding anxiety in a specific situation is to condition a response incompatible with anxiety--commonly relaxation--thus making possible a desensitization process.²⁵ Techniques based upon operant conditioning

principles, in contrast, usually attempt to deal directly with maladaptive behavior rather than any underlying events.

Work in this area in recent years has tended to move from the laboratory to work in institutional settings and hence to work in natural environments; and this progress has important implications for the corrections field, which increasingly is giving emphasis to community-based treatment approaches in preference to institutional programs. Notable examples of serious attempts to develop and test large-scale programs in correctional institutions are those of Cohen in the National Training School for Boys,²⁶ of McKee at the Draper Correctional Institution in Alabama,²⁷ and of Jesness in the California Youth Authority.²⁸ Attempts to modify behavior in the natural environment are exemplified by the studies of Tharp and Wetzel and by the clinical reports which they cite.²⁹ Similarly, Schwitzgebel found his young delinquent subjects in pool halls and on street corners,³⁰ as did Slack;³¹ and Thorne, Tharp, and Wetzel discussed implications of behavior modification for probation work.³²

Despite the overlapping concerns, the basic premises of analytic, phenomenological, and behavioral theories are widely divergent; and the theoretical

integration called for will be a difficult task even within the psychogenic approaches. What about the other theoretical frames of reference?

Social theories with implications for corrections have been influenced especially by Durkheim³³ and Merton,³⁴ the latter's theory focusing on the ambivalence toward norms which arises when common goals are proclaimed for all, while social structure restricts access to the approved means of reaching these goals for certain segments of it and the disenfranchised resort to deviant means of attainment. Notable contemporary social-psychological theories include the conceptions of differential association as advanced by Sutherland³⁵ and modified by Cressey,³⁶ both of whom emphasize the learning that takes place in intimate personal groups; and various workers have attempted to increase the verifiability of the theory,³⁷ recast its conceptions into operant learning theory,³⁸ or empirically test hypotheses derived from it.^{39,40,41} A particularly noteworthy example is provided also by the opportunity structure theory of Cloward and Ohlin,⁴² which emphasizes the nature of the community's integration of legitimate and illegitimate means to cultural goals as determining the nature of delinquent accommodations to goal achievement and which has been widely influential in planning

delinquency programs and later "war on poverty" programs. These social theories have provided a prolific source of suggestions for practical steps which can be taken to reduce delinquency and crime, but the many opportunities to test the programs developed from these conceptions unfortunately have not been taken.

Physiological anomalies or dysfunctions have been hypothesized by many writers to be among the precursors to delinquent and criminal behavior, and the possible importance in individual cases--particularly of brain damage, endocrine dysfunction, or nutritional deficiencies--is well known to clinicians. Since 1965, considerable attention has been given to a rare genetic abnormality--the XYY constitution--which seems to be associated with persistent aggressive behavior; a number of research workers are actively studying this topic.⁴³

The constitutional theories, most notably of Kretschmer⁴⁴ and Sheldon,⁴⁵ which emphasize the role of physique and associated temperament in the development of delinquency are well known to psychologists; but the results of empirical efforts on this topic rarely are incorporated in theory building.

Delinquency and crime have been linked to economic conditions by a number of writers⁴⁶ and by the President's Commission on Law Enforcement and Administration of Justice.⁴⁷

Confronted with this diversity of theoretical conceptions of delinquent and criminal behavior, one may ask what kinds of theories are needed or are apt to be most useful. Do we need theories of delinquency--or do we need theories of the development of delinquency behavior, of the process by which behavior becomes defined as delinquent, of the processes by which delinquency behavior may be prevented or controlled, of the processes of effective treatment of adjudicated delinquents, of effective management systems, or of "rehabilitation" or behavior modification? Do we need all of these, or do we need some for some purposes, some for others? Is presently available information and the "state of the art" so insufficiently developed as to suggest that any attempts toward a single, unified theory are destined to be futile? Is it sufficient, for present purposes, to specify single hypotheses to justify isolated research efforts?

The words "delinquent" and "criminal" are popular in common usage and in technical literature, but are they useful concepts? These labels are used frequently as if they describe a state of the person; but clearly they do not.⁴⁸ The common analogy between crime and illness breaks down immediately when it is realized that "crimes" relate to a combination of person(s) and event(s). Although one may operationally define a "criminal" as a persons who has

committed a crime (any crime, if we do not care that the definition now includes the whole population!), or as a person convicted of a crime, or incarcerated for a crime, or the like, such descriptions are not descriptions of the state of the person; rather, they are descriptions of the state or stage of the system with which the person is involved because of his or her acts. The number of persons awaiting trial provides no description of the persons involved; it provides rather an opportunity for assessment of the delays of the criminal justice system.

Perhaps it will be argued that the label, "criminal," does indeed describe a "state of the person" and that we know what we mean by calling someone that name--apart from reference to any specific behavioral acts or external events. If so, can we specify when a person becomes a "criminal"? Do we accept the belief that "once a criminal always a criminal"; and, if not, can we tell when a criminal is no longer a criminal? How, by examination of him--physically, medically, psychologically, or any other way--can we say when he has moved out of the state of "being criminal"?

If conviction for a crime does not define a state of the person, then it does not define a need for treatment, since it is not possible to treat an event but only a

state. There may be social, medical, psychological, or other "states" which may be ascribed to individuals; and these states may tend to increase the probability of crime. We may seek to "treat," i.e., modify these states; but this requires their careful and explicit definition.

Psychologists of a behavioristic inclination will find this whole diversion as unnecessary as the concept "state of the person" itself. If states of the person must be defined in terms of stimulus conditions (events) and responses (acts) anyhow, what is the need for the concept? Perhaps one answer is to be found in the heuristic value of the person-classification approaches discussed below, which usually have stemmed from psychogenic or phenomenological frames of reference.

This cursory review of some of the leading approaches to explanations of delinquency and crime is intended only to suggest the diversity of theories that have been advanced. The literature on each of the approaches mentioned is vast; and, similarly, there is an extensive literature on psychological differences between delinquent and nondelinquent populations and on the related topic of prediction--much of which has implications for theory. Thus, the problem is posed: how can a variety of overlapping, yet conflicting, psychological theories be merged with the most useful features of the

social theories, psychological evidence, and other approaches into an integrated theoretical framework? Further, how can this framework be combined with more explicit statements of the objectives and methods of correctional agencies? The lack of a comprehensive, internally consistent, verifiable theory of delinquency to guide action programs to increased effectiveness poses a major challenge to our field.

Whether or not this is the most critical challenge, however, is open to question. William James had, in 1888, something to say about the role of the psychologist. In a letter to Hugo Munsterberg, he said:⁴⁹

Whose theories in Psychology have any definitive value today? No ones! Their only use is to sharpen further reflection and observation. The man who throws out the most new ideas and immediately seeks to subject them to experimental control is the most useful Psychologist in the present state of the science.

His comment still is relevant; and in corrections the new ideas and testing needed have to do with offender classification, with program evaluation, with evaluation of agency effectiveness, and with research utilization.

The Need for Improved Classification Methods

A variety of studies recently has shown the need for improved schemes for classification of persons in view of evidence supporting a differential effectiveness of

treatment programs upon various subsets of populations.^{50,51,52,53,54}

A recent review⁵⁵ has described five general approaches to this classification problem.

There have been psychiatrically-oriented approaches--represented, for example, by the work of Jenkins and Hewitt,⁵⁶ Redl,⁵⁷ Erikson,⁵⁸ Aichorn,⁵⁹ Bloch and Flynn,⁶⁰ Argyle,⁶¹ the Illinois State Training School for Boys Treatment Committee,⁶² the California Youth Authority Standard Nomenclature Committee,⁶³ and Cormier.⁶⁴

There have been classification studies related to the social theories mentioned previously, for example, in the reference group typologies proposed by Schragg⁶⁵ and Sykes⁶⁶ and in social class typologies as exemplified by Miller.⁶⁷

There have been behavior classifications related to either offense types or conformity-nonconformity, such as those of Gibbons and Garrity,⁶⁸ Ohlin,⁶⁹ Reckless,⁷⁰ and Lejins.⁷¹

There have been classification schemes which rest upon assumptions regarding social perception or interpersonal interaction--such as those of Gough and Peterson;⁷² Peterson, Quay, and Cameron;⁷³ and Sullivan, Grant, and Grant⁷⁴--and there has been at least one instrument based upon cognition, measuring information

possessed concerning significant others.⁷⁵

Finally, there have been a number of empirically derived classification procedures, mainly developed in relation to prediction methods. These include the Mannheim and Wilkins Borstal studies in Great Britain;⁷⁶ base expectancy studies by Gottfredson and Beverly⁷⁷ and others; configuration analysis procedures as used by Glaser⁷⁸ and by Babst;⁷⁹ association analysis procedures as employed by Gottfredson and Ballard;⁸⁰ and cluster analysis methods as used by Fildes and Gottfredson.⁸¹

An excellent recent discussion by Warren has shown there is a considerable communality among many of these and other classification systems.⁸² Figure 1 is adapted from a chart in her paper, which includes an outstanding set of references on this topic, including those to the typologies listed in the figure. (It should be mentioned here, as by Warren, that the cross-classifications shown were not checked with the authors and that one--namely Quay--views his system not as a typology but as having reference to dimensions of behavior.⁸³)

Cross-Classifications of Offenders Typologies

Subtypes	Jennings	Elms	Eric Witt	MacGregor	Makky	Quay	Reiss	Warren	A P A	Argyle	Gibbins	Jenkins and Heritt	McCord	Reckless	Schrag	Stadt
1. Asocial		Sub I Type II		Schizophrenic	Antisocial Character-Primalive	Unsocialized psychopath		I	Passive-aggressive personality	Lack of sympathy		Unsocialized aggressive			Asocial	Isolate
Aggressive	Immature, aggressive			Aggressive				Asocial, aggressive								
Passive	Immature, passive			Passive-aggressive				Asocial, passive	Passive-aggressive							
2. Conformist		Stage I		Antisocial Character-Organized	Passive-aggressive	Inadequately immature		I	Passive-aggressive personality	Inadequate superego			Conformist			Receiver
Nondelinquently oriented	Immature, passive							Conformist, Immature								
Delinquently-oriented	Socialized conformist			Passive-aggressive		/Subcultural/	/Relatively integrated/	Conformist, Cultural	Passive-dependent		Gang offenders	/Socialized/				
3. Antisocial-manipulator	Manipulator			Antisocial Character-Organized Aggressive	Antisocial Character-Organized Aggressive			I	Antisocial personality	Inadequate superego			Aggressive (psycho-pathic)		Pseudo-social	Manipulator
4. Neurotic		Stage Type II		Neurotic		Neurotic-disturbed		I, Neurotic	Sociopathic personality disturbance	Weak ego control				Neurotic Personality	Prosocial	Love-sick
Acting-out	Neurotic, acting-out							Neurotic, acting-out			Joyrider					
Anxious	Neurotic, anxious							Neurotic, anxious			Behavior problems	Over-inhibited	Neurotic-with-drama			
5. Subcultural-identifier	Cultural delinquent	Stage Type II		Subcultural	Subcultural	Subcultural	Relatively integrated	I	Dysocial reaction	Deviant identification	Gang offenders	Socialized			Antisocial	Learner
6. Situational		Stage II						I	Adjustment reaction of adolescence		Casual delinquent					
Types not cross-classified				Mental Retardate Psychotic				I	Situational, emotional reaction		Heroin user			Offenders of the moment		Eruptive behavior

Figure 1

The figure suggests that six classification bands can be identified tentatively as cutting across various typologies; these Warren entitled Asocial, Conformist, Antisocial-manipulator, Neurotic, Subcultural-identifier, and Situational offender. The consistencies in the data from the typological studies reviewed, and the communalities across differing theoretical viewpoints, provide encouraging signs toward an eventual integration.

Warren also found signs of an increasing integration of psychological and sociological viewpoints in the area of classification. Citing examples such as Cloward and Ohlin, Cohen, and her own integration attempts, she stated:⁸⁴

Sociologists continue to accuse psychological typologists of taking insufficient cognizance of environmental factors; psychologists continue to accuse sociological typologists of having insufficient regard for intra-psychic factors. Nevertheless, it is now possible to find investigators who are attempting to theoretically link the sociological, psychological, and situational variables which are all relevant to a completely satisfactory taxonomy.

All these classification schemes, which are illustrative and not exhaustive, are not equally valuable for all purposes--some have more direct treatment implications than others; some are demonstrably more reliable than others; some are more helpful in generating testable hypotheses than others; and, in only a few instances,

the relevance of the classification for treatment placement has been clearly demonstrated. Thus, the need is great for development of theoretically sound, clinically useful, testable classification systems, with enunciation of the probable etiology; for proposed treatment or control measures; and for demonstration of the effectiveness of differential treatment placements.

The importance of person classifications at each step in the "correctional continuum" from conviction to discharge should be emphasized. To the extent that criminal justice agencies adopt goals of modifying behavior to reduce the probability of law violations, it is important to have available at each decision point (concerning placement decisions) classification information which will indicate the setting and methods most likely to achieve those goals. In the absence of any classification system, no interactions of person x treatment on outcome measures can be observed; and there is now considerable evidence that such interactions are critically important.

The Need for Systematic Program Evaluation

The development of improved classification methods should be included with the development and testing of the improved treatment programs that constitute

the third major challenge to correctional psychologists. Within correctional agencies, little emphasis has been given to the general problem of evaluating effectiveness of programs. The 1967 report of the President's Crime Commission pointed out that the nation spends more than \$4 billion annually on the criminal justice system, but:⁸⁵

...the expenditure for the kinds of descriptive, operational, and evaluative research that are obvious prerequisites for a rational system of crime control is negligible. Almost every industry makes a significant investment in research each year. Approximately 15 percent of the Defense Department's annual budget is allocated to research.

The Commission noted that only a small fraction of one percent of the total expenditures for crime control is spent on research and added,⁸⁶

There is probably no subject of comparable concern to which the Nation is devoting so many resources and so much effort with so little knowledge of what it is doing.

Unfortunately, the observation still seems up-to-date.

What is needed, in every correctional agency, is a system providing for continuous program evaluation as an aid to the administration, management, and program development of the organization. There are four basic features to this framework: they are interrelated and interdependent, as the word system implies.

The first feature is available to us: it is a laboratory for social research and action. We have

failed to realize the potential contribution to science and to the alleviation of misery of the laboratories provided by the nature of correctional agencies. The second feature is a system for collection and storage of three kinds of information: in order to evaluate programs, we need to collect information concerning the persons defined as offenders, including the already suggested development of improved classification procedures; information describing the person's treatment exposure; and information describing outcomes in terms of goals of the agency. The third feature is the collaborative use of what Cronbach termed the "two disciplines of scientific psychology,"⁸⁷ namely correlational studies and experimental studies; this can enable us to invest the scarce resources of research time where the likelihood of increased knowledge is greater. Fourth, provisions for furnishing information to agency decision-makers are required; and upon the effective communication of research results hinges their utilization in practice.

If such a framework is to be useful in program evaluation, explicit descriptions of the programs being evaluated are needed as well. Without them, attempts to evaluate programs may finish with a double disappointment: an inability not only to state the program's accomplishment but also an inability even to describe the program.

Correctional programs are usually changed on the basis of experience gained as the program is developed. Program quality control procedures, therefore, are needed in order to ensure that programs are run in accord with a plan or that the plan--and not only the program--is modified. This need has been well stated by Pearl:⁸⁸

...the basic concern in an experiment (to investigate the effectiveness of a treatment program in a social agency) is the quality of the intervention and secondarily the quality of the measurement.

Programs, no matter how well designed or sound in theory are only as good as that which is put into practice. It is the highest of self-deception to inaugurate a program of high-sounding phrases while actually continuing to do business at the same old stand, in the same old way, with the same old procedures. The reverse of this could also be true. It is possible to institute effective innovations in...programs without being aware of the nature of their impact.

Without careful record-keeping and documentation of changes in a program plan, we never can assess the impact of the program adequately to provide guidance for future program planning. Regardless of the program outcomes--whether favorable or unfavorable in terms of agency goals--and even with careful follow-up study of these outcomes, the program cannot be described completely enough that others can repeat it. If the program was clearly described in advance, but changed as it was put into practice; and if the changes were not

clearly spelled out, then the evaluation effort can only be misleading, resulting in the conclusion that the program is effective, or that it is ineffective, when that particular program never has been tried.

As part of the program description, the characteristics of the treaters often are overlooked. In a few studies, notably those of Gough,⁸⁹ Glaser,⁹⁰ Havel,⁹¹ the Grants,⁹² and Warren,⁹³ this problem has been given some attention. In the latter study, a major focus of the research is on the appropriate matching of the youth under supervision and the staff assigned treatment responsibility.

Similarly, measures of the treatment environment have been lacking, although they could contribute significantly to the evaluation of institutional programs. Conceptions of therapeutic communities, as exemplified by Maxwell Jones, markedly have influenced correctional program development in a number of settings;⁹⁴ but in the absence of methods for measurement of the perceptions of the environment by residents and staff, the precise nature of the impact of such changes cannot be determined. The studies of Moos⁹⁵ and Wenk⁹⁶ provide examples of needed research in this area.

The utilization of persons typically regarded as "subjects" in research or "recipients" of treatment

as participants in agency self-study efforts and programs aimed at both personal and social change represents a significant departure from traditional, stereotyped thinking about who should do what, with what, and to whom in corrections. This movement, best exemplified by the work of Grant⁹⁷ and Toch^{98,99} also deserves careful descriptive work permitting its assessment.

The collaborative use of experimental and correlational methods for program evaluations provides, within any correctional agency, a basis for continual improvement of effectiveness. The two approaches, in combination, also can provide the analytic methods necessary to utilization of an information system to guide decision-makers at all levels in more rational program planning, treatment allocation, and control.^{100,101}

A first requirement, however, often neglected in correctional research, is the explicit definition of program objectives. Correctional agencies, like persons, are apt to have not a single goal but many; like persons, they are apt to have some conflicting ones.

Much further work needs to be done to improve measures of program outcomes. A single example may illustrate the complexity of this problem--namely, the use of a parole violation criterion as a measure of favorable or unfavorable program outcome. Assume that parole violation is

defined as any return to prison, or absconding from parole, or sentence to jail more than 60 days during a specified time period. Similar definitions have been used in many studies, and it is not argued here that this has not been useful as a crude measure of outcome. Yet, its serious limitations as an adequate outcome criterion are obvious. Setting aside the basic problem of reliability, what do we lack in this criterion? Of course, some of the guilty may not be caught; and some of the innocent may be wrongly classified as violators. Perhaps a more serious problem is that, in addition, we have in every instance a classification based not only upon the behavior of the person under parole supervision but also upon the behavior of others--i.e., upon an administrative or judicial response to that behavior; and these two sources are "artificially tied"¹⁰² in any analysis. Further, the dichotomous classification makes no allowance for the severity of the violation--nor does it include any notion of variation in the quality of adjustment achieved by those not classed as violators. Thus, no before and after comparisons of the severity of antisocial behavior are possible; and even the identification of monetary and social costs involved are extremely elusive. It is very apparent that improved measures of behavior

to be classed as offensive deserve a high priority for research efforts.

Similar problems are posed throughout the delinquency and crime field, especially since we have at present no adequate measures of either delinquency or crime. The limitations of the Federal Bureau of Investigation's crime report series as measures of crime are well known,¹⁰³ a number of studies have made useful contributions through self-report studies,¹⁰⁴ and the National Institute of Law Enforcement and Criminal Justice has initiated a large-scale victimization survey--each of these approaches contributes uniquely to the problem's solution, but each has limitations as a completely valid measure.

Once program objectives have been identified and explicitly defined, the most rigorous approach to program evaluation remains the classic experimental design; but this approach alone, despite its power, is inadequate to the task of evaluating the variety of programs--often ardently advocated but usually untested--which are in use in corrections. Some of the problems with classical experimental designs may be mentioned: experimental designs may be precluded by the nature of the problem, by law, or by ethical considerations; selective biases may creep in despite random allocation to comparison groups; control groups exposed to "no treatment" are

impossible, since these persons always receive a different treatment such that we always are faced with a comparison of program variations; it is not usually possible to arrange to study a representative sampling of treatments, and though we may be able to generalize about subjects we cannot then generalize about treatment; and it is usually not administratively feasible to test, in a single agency, more than a few varieties of treatment by means of this kind of research design.

Correlational studies can provide the basis for a systematic study of experience, with different classifications of persons, with varieties of treatment, effecting various outcomes. Thus, the variation in outcomes can be analyzed in terms of components: that variance due to characteristics of the persons classed as offenders, to program variation, and to error. Through the use of a variety of multivariate designs, statistical controls to some extent can be substituted for the lacking experimental controls; and, when the null hypothesis for treatment effects fails to be supported, further research using experimental designs then might be developed in order to test hypotheses about the source of the difference.

Such an approach can provide tools for analyses of decisions concerning persons involved with the criminal

justice system from arrest to final discharge and can point the way to a better investment of time when classical experimental designs are used. Given an adequate information system, with reliable information on offenders, treatments, and outcomes, the large-scale use of multivariate methods in this way is now completely feasible due to the increased availability of high-speed computers. This can enable us to survey the terrain to identify where oil is more likely to be found; then we can dig deeper there.

Thus, it may be proposed that "the two disciplines of scientific psychology" can provide the framework for meeting the fourth challenge--that of monitoring corrections' ability to achieve its goals. Needed in each social agency responsible for crime and delinquency treatment and control programs is an information base permitting study of the natural variation in program outcomes, analyzing this variation in such a way as to provide useful management information on program effectiveness and useful guides to further, more rigorous, and more detailed research.

An important feature of such a monitoring system is found in prediction methods, which provide useful tools for program evaluation studies by identifying and summarizing variables which must be controlled, either

statistically or experimentally, when groups are to be compared. Consideration of the prediction problem again confronts us with a vast literature; but a number of critical research problems may be abstracted from a recent review:¹⁰⁵

1. Improvement of the criterion measures of delinquency or crime to be predicted;
2. Cross-validation studies of available measures in order to test their applicability in various jurisdictions and repeated assessment of validity along with social change;
3. Development of prediction measures for specific subgroups rather than for samples of total populations of children or of adults;
4. Empirical comparisons of various methods in use for combining predictors;
5. Systematic follow up of studies demonstrating a variety of discriminators of samples defined as "delinquent" and "non-delinquent" in order to improve current prediction methods;
6. Improvement of statistical prediction methods by testing hypotheses from clinical practice;
7. Utilization of mathematical decision theory, including attention to assessment of the social and monetary costs associated with errors and

- successes along the correctional continuum;
8. Integration of prediction methods into the information system of each agency responsible for the custody, treatment, or release of persons accused or convicted of law violations in order to permit repeated validation studies, enable systematic feedback to decision-makers, and provide tools for program evaluations.

The Need for Research Utilization

The gap between what is known and what is applied is often discussed, but seldom has it been recognized as a problem worthy of study in its own right; and the fifth major challenge confronting correctional psychology is to develop and test ways to ensure communication and utilization of research results. Research aimed specifically at understanding the processes by which research results can be incorporated to modify existing programs, or lead to new ones, is needed. Related studies are needed to point the ways in which knowledge gained from psychological research can influence public understanding and public policy concerning the prevention, treatment, and control of delinquency and crime.

While a lack of utilization of research is much decried, one may wonder whether that lack itself has been

well demonstrated; perhaps more research is used than is realized. In designing new correctional programs, for example, does not the whole "apperceptive mass" of those involved come into play? Do correctional administrators, like Tolman's rats, exhibit latent learning? Would token economies be developing in prisons except for Skinner, or indeed, for Hull or Thorndike? Would the present emphasis on increased use of alternatives to incarceration obtain in the absence of demonstrations that such alternatives can be used without increased public risks or of repeated failures to demonstrate rehabilitative gains due to confinement? Would the prison pendulum have swung from revenge to restraint to rehabilitation to reintegration in the community without the input of social science?

There is now increased funding of demonstration projects, however; and with that there is a greater responsibility of guarding against the danger--so often seen in the past--of programs ending when the project period is over and the research pulls out. The need is great for well-planned and programmed implementation of the project results. For such implementation to occur, a monitoring function, a questioning attitude, and an institutionalization of data collection and processing functions all must be built into the agency itself in the course of the project. In order for

this to take place, agency staff, and not just the researchers, need to be involved in, and a part of, the whole process. If A is to learn from B, it has to be B's thing. For many projects, as much attention should be given to the development and follow through of an implementation model as for the research itself. The aim should be to implant within the agency a repetitive cycle--as a continuity of effort--of questioning, research, demonstration, system modification, and more questioning. Administrators must begin to ask "how do you know?" and to act on the basis of the present evidence; then they ought to question the new procedures.

The Psychologists' Role

Psychologists will, I believe, see outstanding opportunities for their best skills in meeting these challenges. Jacques Loeb, when asked whether he was a philosopher, psychologist, chemist, neurologist, or physicist, replied, "I solve problems."¹⁰⁶ Solving problems which are primarily behavioral is the business of psychologists; and the problems which must be solved in order to cope more rationally, efficiently, and humanely with delinquency and crime are mainly behavioral. Psychologists of various inclinations, in collaboration with others, will be needed to meet the five challenges described: to develop

an integrated theoretical framework, to define person classifications with demonstrable relevance to treatment alternatives, to develop new treatment and control strategies and test their effectiveness, to develop--in every social agency responsible for crime and delinquency programs--adequate information bases to permit the monitoring of program effectiveness, and to devise effective means for research utilization.

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