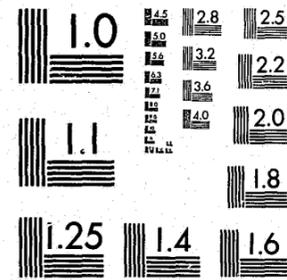


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The Link Between Learning Disabilities and Juvenile Delinquency

Current Theory and Knowledge

EXECUTIVE SUMMARY

April 1976

U. S. Department of Justice
Law Enforcement Assistance Administration
National Institute for Juvenile
Justice and Delinquency Prevention

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The Link Between Learning Disabilities and Juvenile Delinquency

Current Theory and Knowledge

by

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with the assistance of

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ACQUISITIONS

EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

Speculation about the causes of juvenile delinquency has recently centered on "learning disabilities" as one of the possibly significant factors. The notion has attracted the attention of a growing number of counselors to juvenile courts, staffs of juvenile corrections facilities, and clinical psychologists who work with disturbed youth. And there have been increasing calls for action at the Federal level, by the newly created Office of Juvenile Justice and Delinquency Prevention (OJJDP).

The logical first step was a dispassionate assessment. The current interest in learning disabilities--already popularized as "LD"--might be indicative of the promise of the approach for combatting delinquency. Or LD might be a fad, to surge and eventually subside as so many other approaches before it. Both points of view have highly vocal proponents. The American Institutes for Research (AIR) was awarded a grant to sift the available evidence and distill its policy implications.

To carry out this task, AIR adopted a three-tiered approach. First, an extensive literature search was conducted in library collections, the reference files of the relevant Federal agencies, and the abstract services of professional associations. Second, we interviewed forty-six persons who are active and respected in related aspects of LD, delinquency, or both. These consultants included academicians, judges, juvenile corrections personnel, psychologists, and educators working with learning handicapped youth. Third, we reviewed the inventory of existing demonstration projects which seek to identify and treat learning disabilities among delinquents, obtaining information on their activities and, to the extent possible, their impact.

A final report was submitted on 15 April 1976.¹ It suggests that a net assessment of the competing evidence on the LD/JD link can fairly be reduced to two major conclusions. The first is that

The cumulation of observational data reported by professionals who work with delinquents warrants further, more systematic exploration of the *learning handicaps* of delinquents.

A variety of loosely connected but compatible data supports the conviction of these professionals that a disproportionate number of their client youth are unable to learn in a normal classroom setting, for reasons beyond their control.

The emphasis on learning *handicaps* rather than learning *disabilities* should be noted; so should the absence of any *causal* assumptions. For the second conclusion is that

The existence of a causal relationship between learning disabilities and delinquency has not been established; *the evidence for a causal link is feeble.*

On the basis of the sketchy data so far produced, the notion that many delinquents have become so *because* of learning disabilities cannot be accepted. The notion that programs to diagnose and treat learning disabilities early will actually *prevent* delinquency is not supported by any data at all. Far from being "studied to death," as proponents of the LD/JD link sometimes claim, the link has scarcely been studied at all. The existing work that meets normal, minimal standards is fragmentary.

Put most simply, the assessment showed that delinquents do seem to have severe learning problems, which must be considered in the design of remedial programs. More needs to be known about these problems. But we found little to support the

¹ C.A. Murray et al., *The Link Between Learning Disabilities and Juvenile Delinquency: Current Theory and Knowledge*. Washington, D.C.: American Institutes for Research, 1976. Unless otherwise noted, all subsequent footnotes refer to the section of the full report which is being summarized.

much more ambitious claim that these learning problems are the result of learning *disabilities* which could have been diagnosed and treated early in the child's schooling, thereby preventing the delinquency. An OJJDP effort directed at the exploration of the role of learning handicaps in treatment strategies seems appropriate. The support of the large-scale preventive efforts that have been urged in speeches, at conferences, and by the media frankly does not.

The basis for these conclusions is discussed in detail in the full report. The report also contains extensive supplementary information in appendices, including an annotated bibliography of the existing literature on the LD/JD link and an inventory of related demonstration projects sponsored by the Law Enforcement Assistance Administration (LEAA).

This summary turns first to a definition of learning disabilities, then to the evidence linking LD with delinquency, and concludes with a review of the findings and recommendations in the full report. For readers who are unfamiliar with the terminology and issues surrounding LD, a brief overview is appended.

"LD": AN APPROACH TO DEFINITION²

For several decades, educators have called attention to learning problems which did not appear to be caused by low intelligence or poor motivation, or by any of the other usual explanations for poor school performance. Various labels have been attached to these disorders. Some were specific to a symptom--"word blindness," in the 1920's--while others denoted the apparently neurological foundations of the symptoms--"brain injury" and "minimal brain dysfunction." In the early 1960's, the label "learning disabilities" was introduced. It caught on quickly, perhaps because it pointed directly to the real source of concern: children who suffered from these disorders were failing to learn as well as they should. "LD" has become by far the most popular label among parents and teachers of these children. It has secured a firm if

² "The Definition for this Study," 20-22.

controversial place in the lexicons of academic fields which deal with the development of children.

The definition of LD which is in widest use--often called simply "the national definition"--is the one adopted by the National Advisory Committee on Handicapped Children. It reads as follows:

Children with special learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or using spoken or written languages. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems which are due primarily to mental retardation, emotional disturbance, or to environmental disadvantage.³

This definition is the basis for allocating Federal funds for programs in learning disabilities; not surprisingly, the spirit of the definition is generally reflected in the formulations adopted by the forty-three states which have incorporated LD programs into their educational activities. Moreover, the national definition appears to have achieved a widely shared "understood meaning" among the consultants for this study, despite the ambiguities in its wording. The approach used in this study is modeled on it.

We apply one important modification, however, based on this study's focus on LD as a possible cause of delinquency. If a learning disability is to be important enough to cause delinquency, presumably it will not simply show up in subtle ways on test batteries. It will also affect actual learning--the child will in fact be learning *disabled*, achieving noticeably beneath expectations. So, whereas the national definition does not specify a threshold of severity, there is good reason to do so when examining LD in relationship to delinquency.

³Quoted in J.M. Wepman et al. Learning disabilities. In N. Hobbs (Ed.), *Issues in the Classification of Children* (Vol. I). San Francisco: Jossey-Bass, 1975, pp. 301-302.

Conceptually, then, our review is based on a recent formulation reached collaboratively by several leading authorities in the LD field: a learning disability refers to "those children of any age who demonstrate a *substantial deficiency in a particular aspect of academic achievement because of perceptual or perceptual-motor handicaps, regardless of etiology or other contributing factors.*"⁴

Operationally, we include as learning disabilities the perceptual and perceptual-motor handicaps which are commonly labeled dyslexia, aphasia, or hyperkinesis, which meet these diagnostic criteria:⁵

(1) The diagnosis should be based on *evidence which cannot as easily be interpreted as primarily a manifestation of mental retardation, physical handicap, emotional disturbance, or socioeconomic disadvantage.* This does not mean that each separate indicator must be unambiguous, but that the diagnosis should be based on triangulated measures which permit a *pattern* that is inconsistent with the alternative explanations.

(2) The diagnosis should be accompanied by *evidence that a discrepancy exists between achievement and expectation.* For example, that a child may be demonstrated to occasionally reverse letters does not constitute a learning disability if the child is reading and writing at the level expected of that age and intelligence.

THE CAUSAL RATIONALE FOR THE LD/JD LINK

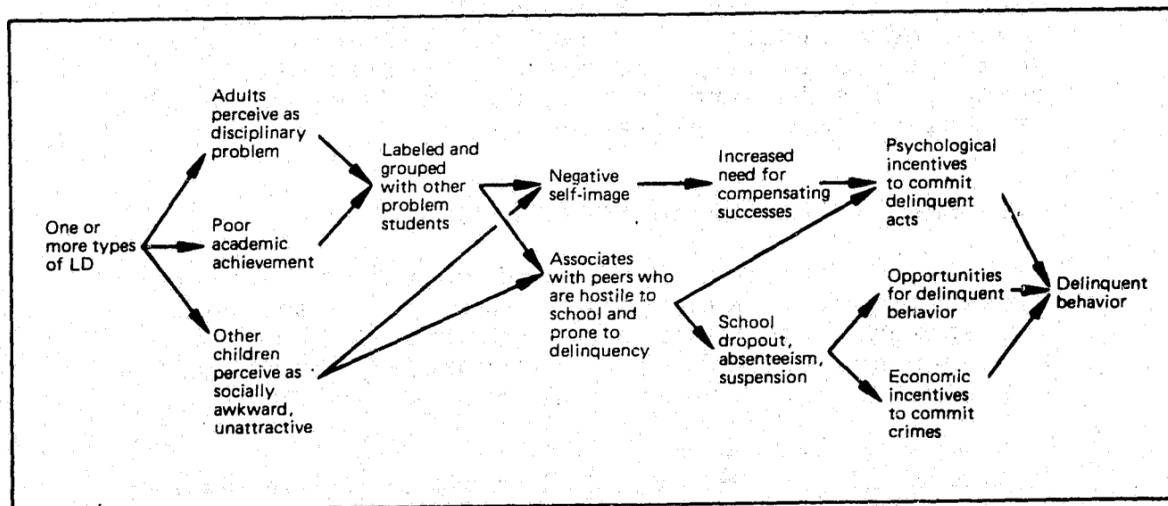
It is not intuitively obvious that a learning disability will cause delinquency. A causal chain is implied: the LD produces effects which produce second-order effects which ultimately produce delinquent behavior. Two possible routes have been proposed

⁴Wepman *et al.*, *op. cit.* p. 307. Emphasis added. In addition to Wepman, the article's authors were William M. Cruickshank, Cynthia P. Deutsch, Anne Morency, and Charles R. Strother.

⁵See the addendum to this summary for brief descriptions of these terms.

by advocates of the LD/JD link.

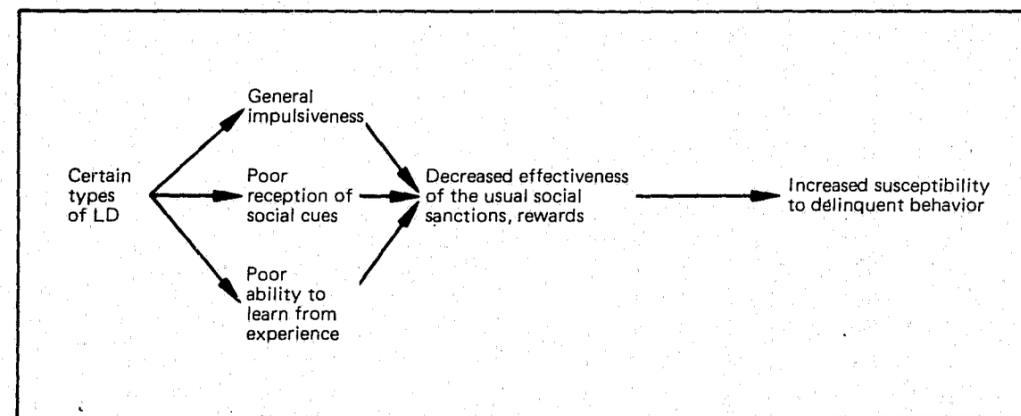
The first of these links LD to school failure leading to dropout, then to delinquency. The logic involves roughly four intervening sets of effects between LD and delinquency.⁶ In the first set, the child gets a reputation--with adults, as a slow learner and perhaps as a disciplinary problem, and with other children, as a socially awkward, perhaps clumsy playmate. At a second stage, the child who has been labeled in these negative ways both develops a negative self-image and is thrown together (informally, or through class assignments) with other "problem students." The third stage entails outcomes such as increased felt needs to compensate for continued school failure, and increasing likelihood of absenteeism, suspension, or dropout from school. At the fourth stage, immediately preceding delinquent behavior, the child has the psychological incentives, the economic incentives, and increased opportunity (in the form of time on his hands) to commit delinquent acts. The chain of the events in this "school failure" rationale is shown in the figure below. It is obviously neither a complete set of links nor the only conceivable sequence, but it does summarize the essential events



⁶ "The Hypothesized Causal Sequence," esp. 24-26.

of one common argument linking LD and delinquency.

The second line of argument linking LD and delinquency is much more direct in taking the chain to the point of increased *susceptibility* to delinquent behavior.⁷ It argues that certain types and combinations of LD are associated with behavioral tendencies that facilitate delinquency. These deficits go beyond the physical and social awkwardness that accompanies many types of learning disability. General impulsiveness is one characteristic; a second is limited ability to learn from experience; a third is poor reception of social cues--the LD child can back himself into a confrontation without knowing how he got there. Together, characteristics like these point to a child who is not wholly responsive to the usual systems of sanctions and rewards. Messages do not get through to him in quite the way they were intended, with the result that some of the factors which might restrain a normal child from committing a delinquent act might not restrain the learning disabled child. In short, this type of child starts out with one strike against him when exposed to opportunities for committing delinquent acts. The basic steps of this "susceptibility" rationale are recapitulated below.



The two chains of reasoning summarized above capture the major arguments currently being used to link LD with delinquency. The bulk of the full

⁷ "The Hypothesized Causal Sequence," esp. 26-27.

report is devoted to an examination of the evidence for and against. The principal findings are outlined below.

THE CASE FOR A LINK

The evidence which proponents offer in support of the LD/JD link takes two forms: the observational evidence of practitioners who work with delinquents, and some quantitative studies.

Of the two types, the observational data are at the same time less systematic and more persuasive.⁸ In effect, the counselors, correctional staff members, and psychologists whom we consulted were reporting case studies of the sequences of events we have outlined. The children they see in the course of their work *are* in the process of being labeled as problem children; they *are* experiencing school failures and contemporaneously committing delinquent acts; they *are* showing up in juvenile courts just following dropout from school. Moreover, these practitioners report that their client youth give self-reports of "reasons why" which fit the rationales: children who say that their sets of friends have changed because they are isolated by academic and social failure; who say they are dropping out of school because of failures; and who convey their sense of getting even with their school failures by committing delinquent acts.

The difficulty with these accounts is their intractability to systematic examination. Many experienced, perceptive observers report that the phenomena supporting an LD/JD link characterize large groups of delinquents. But it is as easy to find other experienced and perceptive observers who report that these phenomena are rare. This is not a new observation; and in response to it several proponents of the causal role of LD have conducted quantitative studies which purport to demonstrate a statistical relationship between the learning disability and delinquent behavior. In the course of this study, an extensive effort was made to examine the text of each of these research reports. Every reference cited in other literature reviews

⁸ "The Case for a Link," 28-32.

of the link was examined. Additional published and unpublished studies were obtained independently in the course of our own literature search. And the result of our appraisal is that, with few exceptions, *the quantitative work to date has been so poorly designed and presented that it cannot be used even for rough estimates of the strength of the link.*⁹

This is a harsh conclusion. Because of that, and because the quantitative studies are cited so frequently as proof that the relationship exists, the full report contains extremely detailed analyses of each study, the methods used, and the conclusions drawn. Without going into the technical basis for them, the following findings emerged.

First, as in so many areas of delinquency research, the classic longitudinal test of the LD/JD link is far in the future: no study has even been started which will compare the development of a set of LD children and a comparable set of non-LD children. The existing work is *ex post facto*, subject to all the barriers to interpretation which that situation entails.

Second, *no study has yet been conducted which even claims to demonstrate that the average delinquent is more likely to suffer from learning disabilities than his non-delinquent counterpart.* That is, no study has diagnosed LD among a non-delinquent population, diagnosed LD among a *general* delinquent population, then compared incidence between the two groups. Only two small-sample (N=15, N=46) studies have used a non-delinquent control group at all, and in both of these cases the delinquent sample was comprised of institutionalized youth--neither included the institutionalized delinquent's more numerous counterparts who are on probation or who have been diverted from adjudication.

Third, even if the comparison between delinquents and non-delinquents is ignored, *no estimate of the incidence of LD can be derived from the*

⁹ "The State of the Quantitative Evidence," 46-60, and Appendix C, "Technical Summaries of the LD/JD Studies." It should be noted that an ongoing study of LD among delinquents being conducted by the General Accounting Office was not available for review at this time.

existing studies. The problems are *definitional* (different studies using different definitions of LD), *diagnostic* (studies failing to employ tests which fit their definition of LD), *procedural* (subjective diagnoses being conducted by the same person who set out to prove that delinquents are learning disabled), *analytic* (inappropriate or simply inaccurate use of statistical tests) and *presentational* (failure to tell the reader enough to let him interpret the author's results). And with the exceptions noted below, the studies suffered from more than one of these problems. Some suffered from all of them. It should be emphasized that the technical issues are fundamental ones. The conclusion is not that the estimates of LD incidence may be off-base by a few percentage points, but that they are simply uninterpretable.

Nonetheless, there are some things to be learned from the set of existing studies, despite the overall weakness of the evidence. Two studies¹⁰ demonstrated a statistically significant difference between samples of *institutionalized* delinquents and non-delinquents on some tests for perceptual and perceptual-motor disorders.¹¹ The test results are equivocal and sometimes conflicting, and institutionalized delinquents are a special case--generally, fewer than one apprehension in ten results in institutionalization.¹² But

¹⁰ I. Hurwitz, R.M.A. Bibace, P.H. Wolff, & B.M. Rowbotham. Neuropsychological function of normal boys, delinquent boys, and boys with learning problems. *Perceptual and Motor Skills*, 1972, 35, 387-394; and Allan Berman. A neuropsychological approach to the etiology, prevention, and treatment of juvenile delinquency. Unpublished manuscript, 1975.

¹¹ "Statistically significant" as used here means that the difference in test scores of the delinquent and non-delinquent samples would be expected to occur by chance less than five times out of a hundred, if the true difference were zero. It does not imply a large difference, only a difference greater than zero.

¹² E.g., in the Philadelphia cohort study, the proportion of institutionalizations was 6.4% of apprehensions. (Marvin E. Wolfgang et al. *Delinquency in a Birth Cohort*. Chicago: University of Chicago Press, 1972, p. 219).

a kernel of usable evidence is there. A third study¹³ applied a screening test for LD on a sample of non-institutionalized, first-adjudication delinquents, and also estimated the proportion of this sample who were achieving below expectation in school. Twenty-two percent of the sample were *both* suspected LD and underachieving. No control sample was tested, nor can the possibility of over-diagnosis be ignored, but the twenty-two percent can plausibly be argued to exceed expectations for a normal population.

Adding up the fragments from these and other studies, it appears that *even though most of the quantitative studies can be criticized for not grappling with learning disabilities as such, they suggest patterns of learning handicaps*. The studies may not have proved what they set out to prove, but they suggest that something is out there which deserves systematic investigation.

THE CASE AGAINST A LINK

The case for the LD/JD link was made almost exclusively by practitioners who work with delinquent youth. The academic consultants who specialize in delinquency were unanimously skeptical that a significant causal relationship exists. Their skepticism was based on two types of objection: the general state of causal explanations for delinquency, and some more specific existing evidence which casts doubt on some of the causal links between LD and delinquency.

LD and Causal Explanations for Delinquency.¹⁴ Put in very summary form, the specialists on delinquency objected to the notion that any one cause accounts for a significant portion of delinquent behavior. Regardless of their differences in approach--and the consultants virtually spanned the

¹³ M.K. Stenger. Frequency of learning disabilities in adjudicated delinquents. Unpublished Master's thesis, University of Missouri at Kansas City, 1975.

¹⁴ "LD and Causal Explanations in General," 34-35.

range of schools of thought--they were in agreement on one point: one of the few things known for sure about delinquency is that its causes are multivariate and complex.

Moreover, it was stressed that the importance of other causal factors has already been documented. Given what is already known about the importance of poverty, the broken home, social disadvantage, cultural alienation, emotional disorders, socialization by delinquent peers, or any of a number of other variables, the argument that LD is a primary cause of a major part of the delinquency problem is extremely dubious on its face--we are accumulating more "primary causes" than the number of delinquents will bear.

To get around this objection, it was argued, the proponents of the LD/JD link are driven toward one of two alternatives. The first is to argue that LD can be a critical *catalyst* of delinquent behavior, interacting with other potential causes. The second alternative is to argue that the socio-economic factors which are said to cause delinquency actually cause LD, which in turn causes the delinquency. Either alternative produces the same question: how much of the variance can be attributed to the causal influence of the learning disabilities? Or less formally, to what extent are LD and delinquency symptoms of the same disease? Even if it is assumed for the sake of argument that (for example) pre-school environmental disadvantages can cause genuine LD, and that LD can increase the likelihood of delinquency, it is also an odds-on bet that the same home is having many other deleterious effects on the child. So, it was asked, even if the child is treated for his learning disabilities, how much difference will it make? The rationales linking LD and delinquency comprise one very small segment of a very large causal map.

*Specific Links in the Rationales.*¹⁵ At a few points, the logic of the rationales intersected with some reasonably concrete findings from other work on delinquency, which shed further light on the credibility of the link. They may be summarized as follows.

¹⁵ "The Rationales and Existing Evidence," 35-42.

The association between school failure and delinquency. No argument. This relationship was one of the first to be documented in the study of delinquency. But among the consultants there was no consensus on the strength of the *causal* aspects of the relationship.

The effects of labeling. Consultant opinion diverged widely on the subject of effects of labeling children. Some argued that it is intrinsically wrongheaded and harmful; others argued that it is *inaccurate* labeling that produces harmful effects; still others emphasized that children are labeled in many ways simultaneously, with labels of mixed valence (e.g., the class brain who is clumsy at sports), and that socialization of the child is not governed by any one of them. The only point of even moderate consensus was that the literature on this topic leaves much to be resolved.

School dropout and delinquency. There is increasing doubt that dropout has the causal effect on delinquency which one of the LD/JD rationales assumes. A major longitudinal study has shown that dropouts do indeed have higher rates of official and self-reported delinquency than non-dropouts; but that the highest rates of delinquent behavior occur *prior* to dropout.¹⁶

Personality characteristics and delinquency. For many years, it has been common practice to administer a variety of intelligence and personality tests to adjudicated delinquents as part of the correctional process. Several classification and analytic groupings have been developed, and they typically include categories which correspond to the personality ascribed to the severely learning disabled child in what we have called the "susceptibility" rationale. The finding seems to be consistent across different classification systems that the configuration of personality characteristics which is said to make the LD child especially susceptible to delinquency is found in a minority of delinquents. The subset of that minority which is actually learning disabled is not known.

¹⁶D.S. Elliott and H.L. Voss, *Delinquency and Dropout*. Lexington, Mass.: Lexington Books, 1974.

CONCLUSIONS AND RECOMMENDATIONS

The full report contains conclusions and recommendations grouped under three headings. The first of these, *the state of the evidence*, includes our summary reading of the state of knowledge about LD's role in causing delinquency. The second heading, *program recommendations*, deals with next steps which appear to be warranted by the evidence. The third heading, *procedural issues*, highlights some measures which the OJJDP might wish to consider when implementing a program of LD-related activities.

1. *The State of the Evidence.* As we have indicated, the case for the LD/JD causal relationship is weakly documented. It has been made, to the extent that it has been made at all, primarily through the observational evidence of professionals who work with delinquent youth. The academic authorities on delinquency who were consulted for this study were skeptical that LD is a decisive factor in any significant proportion of cases, and collateral data about the known causes of delinquency and about personality characteristics generally tend to support these doubts. But it is in no sense accurate to claim that the LD/JD link has been *disproved*. No study has set out to compare LD among delinquents and non-delinquents and discovered that the incidence rates are equivalent. And there is a kernel of usable quantitative evidence that *does* support the existence of unusually high rates of perceptual disorders among delinquents. It is equivocal, limited to small samples, not nearly as ample in quantity or scope as its advocates often claim, but it exists nonetheless.

Beyond this evidence, there are indications in these and other studies that strange patterns of learning handicaps exist among institutionalized delinquents, even if they are not learning disabilities strictly defined. By "handicaps" we include problems such as hearing loss, ocular impairment, or motor dysfunction--problems that share with LD (strictly defined) a clinical meaning and a susceptibility to solutions, either through direct treatment or through classroom methods that work around the deficit. Thus, they are distinguishable from the all-embracing set of "learning problems" which undoubtedly characterize virtually all delinquents, but which call for the much more elusive

solutions of better teachers, better schools, and more supportive parents.

We urge the importance of the distinction. The child who grows up in a home without books may well be suffering from a barrier to learning which is just as disabling as the one facing a dyslexic child. But to put the two children under the same label obscures important questions about what to do for each of them, with what priorities. That large numbers of delinquents have severe learning problems is not news. That large numbers have learning disabilities and handicaps of the narrower type we have described *would* be news, and news with important policy implications for the OJJDP.

One option for the Office is to ignore the existing scattered evidence until it has been filled out and expanded. But this would probably mean a very long wait. The prospect is for more of the same: inconclusive studies which confirm the convictions of the faithful without persuading the skeptics. In this sense, for the OJJDP to adopt a wait-and-see attitude is probably tantamount to foregoing systematic exploration of the relationship of learning handicaps to delinquency.

2. *Program Recommendations.* An examination of LEAA spending over the past four years reveals that substantial sums have already been expended in support of LD-related programs.¹⁷ They may have been usefully spent; they may have been wasted; but whatever their real effects, it is clear that the projects added very little to LEAA's understanding of LD's role in delinquency. The need for a coherent, carefully designed strategy is acute. And the first step is a simple one:

The OJJDP should not accept or reject LD-related grant applications on a case-by-case basis, until a program strategy has been prepared and announced.

This moratorium should not apply to projects which have only a peripheral LD component. But it should be applied across the board to applications which have the diagnosis or treatment of LD as their

¹⁷ Appendix D, "An Inventory of Demonstration Projects Linking LD and Delinquency."

main purposes. Definitions, designs, and implementation features for this type of project will have to be decided by the Office, not by choosing among random grant applications.

This points to the second basic guideline: for the immediate future,

The OJJDP's interest in learning disabilities should fall in the research and evaluation sector, *not* in program applications.

LD and related learning handicaps are phenomena of potential importance to the Office, and every effort should be made to ensure that money is directed toward *learning* about them. This does not exclude demonstration projects; on the contrary, evaluation of a few carefully designed demonstrations could help answer some basic questions. But the appropriate time for broad applications is still in the future.

If research is warranted, what research? If demonstration projects are warranted, what demonstration projects?

Answers to these questions depend heavily on the OJJDP's policy priorities and resources. To the extent that the Office has a full docket of promising, fundable projects, LD-related efforts should take a relatively low priority. But as one proponent of the LD/JD link pointed out, the competition is not that impressive--there are no panaceas nor even very many new ideas for preventing delinquency and rehabilitating delinquents. The OJJDP has very few sure things on which to put its money. Below are outlined four efforts which we believe merit serious consideration. Two of them could be funded independently; the other two are appropriate for inter-agency collaboration.

The first of these efforts, a minimal response which could be fit within almost any ordering of the OJJDP's priorities, is *research to determine the incidence of learning handicaps, including LD strictly defined, among a few basic populations: the chronic juvenile offender, the first-time (or perhaps status) offender, and the non-delinquent.*

The expense and sample size for this effort would depend on the precision with which incidence needs to be measured, and the degree of generalizability which is desired. The essential point is that the research be designed and executed in such a way as to provide statements of comparative incidence which can stand up to scrutiny. This effort could appropriately be financed solely by the OJJDP.

The second effort which is suitable as an independent project of the Office is *a demonstration project to test the value of diagnosing and treating LD, as an aid to rehabilitation of serious juvenile offenders.* Available data on this issue are sparse but provocative. Informal reports of the experiences of the Lathrop Park program, Project New Pride, and the Colorado Youth Services indicate that they have achieved higher success rates than usual, and that special attention to LD-like learning problems has played an important role in this success.¹⁸ And independently of the data, it seems inarguable that if a delinquent is seriously learning disabled, knowing that fact and acting on it is important if a sensible treatment approach is to be developed. Perhaps the existence of the disability means that special educational programs are needed; perhaps it means that some kinds of vocational training are appropriate and others are not; perhaps it simply means that the staff of the facility can better understand and respond to the youth's behavior. A broad range of remedial approaches might be proposed; ideally, the demonstration project would investigate several of them.

Note that this project could have high value even if it is found that LD is *not* a major cause of delinquency. Regardless of LD's causal role, the populations of the nation's juvenile facilities can be presumed to include at least as many seriously learning disabled youth as the population at large. If the studies to date are even pointing in the right general direction, the proportion is probably higher, if only for correlational reasons. Given that, and given that LD is a genuine handicap, diagnosis and treatment should be part of a sound rehabilitation program.

¹⁸ Abstracts of these programs are given in Appendix D.

In terms of projects to be sponsored by the OJJDP independently, we believe that the two efforts just described--carefully designed, adequately financed, competently executed--should comprise the extent of the initial program. In terms of the OJJDP's overall interest in LD, two more projects deserve attention as potential collaborative efforts with other agencies.

The first of these is a *national inventory of learning handicaps among youth* which would permit profiles of critical populations and age groupings. The OJJDP's interests in learning handicaps are not limited to a comparison of adjudicated delinquents versus non-delinquents; the Office's responsibilities for prevention programs require information on a wide variety of vulnerable youth populations. And there are complementary needs from the educator's standpoint. The consultants on LD for this study repeatedly emphasized the many ways in which their work is hampered by lack of adequate epidemiological data. These considerations argue for a collaborative effort among the OJJDP and the appropriate agencies of the Department of Health, Education and Welfare. The advantages of uniform instrumentation, combined sampling designs, and shared financing are obvious. We stress, however, the need to focus on clinical phenomena on which there is reasonable consensus among the professionals, and avoid yet another catch-all survey of "learning problems."

A second high-priority prospect for collaboration would be a *demonstration project to identify and treat learning disabilities in an inner-city elementary or pre-school, with thorough followup research*. Several consultants, including some who were generally dubious about the causal effects of LD on delinquency, did see a strong possibility that LD could have much more potent effects when it occurs in an inner-city environment with parents who perhaps have never heard of LD, than when it occurs in a suburb with parents who are not only aware of LD but are eager to use it as an explanation for their child's problems. Findings about what happens when LD is found and treated early in the high-risk inner-city environment could have high utility for shaping delinquency prevention strategies. But because it

would also have high intrinsic educational value, a shared sponsorship would seem appropriate.

The two collaborative efforts described above by no means exhaust the number of useful possibilities. As a general injunction, we suggest that

Because prevention of delinquency overlaps so many areas of education, employment, and physical and mental health, *the OJJDP should identify and follow ongoing Federal projects related to LD among the youth populations which are most vulnerable to delinquency.*

Preferably, the OJJDP should become aware of these projects during their planning phases. In some cases, the OJJDP may simply wish to know what is being done; in others, to make the sponsoring agency aware of the delinquency implications of the project; in still others, to collaborate fully. In the case of the two projects we have suggested, it appears appropriate for the OJJDP to make the initial overtures.

Before leaving program recommendations, one final point: The causal issues raised by the LD/JD topic represent yet another instance of the need for a thorough, multi-year longitudinal study of the development of children in relation to their ultimate delinquent behavior or lack of it. The LD questions alone do not justify such a study, but they cannot genuinely be resolved without one. The same point is true, of course, of most of the other unanswered questions about the sources of delinquency.

3. *Procedural Issues*. The fields of LD and delinquency both deal with children in trouble. They tend to attract people who care about children and who measure their success in terms of children helped, not just children studied. This is an extremely desirable state of affairs for staffing treatment programs; it is not so desirable for staffing dispassionate research and evaluation.

The problem is compounded by the growing public and political interest in LD and delinquency. Pressure on the OJJDP is building--not to conduct

baseline research, not to conduct carefully structured demonstration tests, but to get something done, now, to apply diagnosis and treatment of LD to delinquents.

These two factors--the nature of the people who are most interested in LD and delinquency, and the nature of the pressure on program choices--have important implications for executing the kinds of limited, targeted, detached efforts which we have recommended. The principal implication, and one which we emphasize, is that

The ordinary RFP or grant application process will not produce the kind of product that is required, if lessons are to be learned about the relationship of LD to delinquency.

If, for example, the OJJDP decides to sponsor a survey of LD incidence among delinquents and issues a general statement of the problem in an RFP, we predict that the end result will be to perpetuate the confusion. The contractor will use its definition of LD, its diagnostic battery, its experimental design, all of which will be critiqued after the fact and lead to calls for still another survey. Part of the reason is likely to be substantive: the highly charged nature of the LD and delinquency issues inherently increases the chances of tendentious research, or research that is extremely vulnerable to charges of bias. A second reason will arise from the OJJDP's own lack of identification with the results. Insofar as the research deals with Professor X's approach to LD, and that approach is not congenial to certain critics, the OJJDP will tend to keep the books open indefinitely.

So for substantive reasons, we would argue that

In the planning of research and evaluation projects relating to LD, the OJJDP has a central role as honest broker; one which cannot be passed on to a grantee or contractor.

This is not to say that the OJJDP has a natural image of being above the battle. But it is in a position to provide funds for thorough, carefully

designed investigations and to act as a guarantor of the integrity and competence of the research. Perhaps even more importantly, the OJJDP is in a position to act as an arbiter of what facts are really at issue.

And for ensuring that the OJJDP is ready to use the results of the LD-related efforts it sponsors, we emphasize that

The OJJDP should first reach internal decisions about the precise nature of the objectives of the research, the definitions of terms, and acceptable standards of design. A good statement of the research problem is not enough,

nor is the usual degree of guidance which is provided to contractors. The program of applied research and evaluation we have proposed is one instance when a substantial degree of central control is not only appropriate but essential.

There are several potential mechanisms for reaching these decisions. Common to all of them should be a way for the OJJDP to tap the services of persons who are leaders in research on LD and research on delinquency. As the consultants were identified for this study, it was apparent that the dialogue about the LD/JD link has been conducted largely without their involvement. If any program is to be undertaken, it will be appropriate to move away from general policy-oriented appraisals (including ones like this), and from the clamor of partisans of each side of the issue, and obtain technical advice on some exceedingly technical points which must be resolved. The objective is to develop procedures whereby the OJJDP can contribute to the accumulation of practical knowledge, on a topic that has thus far generated more heat than light.

ADDENDUM

"LD": AN OVERVIEW

The full report includes a "primer" on learning disabilities for the reader to whom "dyslexia" and "strephosymbolia" are not everyday words.¹ The primer is summarized here--in effect, a summary of an already simplified presentation. The summary is intended to give the naive reader an introduction to some basic vocabulary, and to provide a quick look at some of the issues which have made LD one of the livelier topics of debate among educators and psychologists. "LD" is an extremely elastic term, and some acquaintance with the nature of the elasticity is important in making sense of the discussion of the LD/JD relationship.

SYMPTOMS AND TYPES

There are many ways to define the boundaries of the LD domain and few elements of complete agreement. But three diagnostic terms have gained wide usage: dyslexia, aphasia, and hyperkinesia. A very brief review of each is a useful baseline for understanding the general nature of the disabilities in question.

Dyslexia. The most widely publicized form of LD is probably dyslexia. It usually refers to reading problems: the child confuses the written symbols "d" and "b", for example, or mixes letters (e.g., reads "shop" for "hops"). But dyslexia can embrace a variety of problems in the visual processing of language. In its extreme forms, it can produce nearly total inability to absorb meaning from written symbols, even though the victim of it may be able to understand *spoken* information with normal or even above normal intelligence. Overlapping terminology includes specific reading disability, primary reading retardation, strephosymbolia, and dysymbolia.

Aphasia. Aphasia is a broader term than dyslexia, and encompasses language processing difficulties which can also be called dyslexic. But the basic distinction

¹"A Primer," 11-18.

is that aphasia deals with auditory and speech deficits in addition to some visual ones. In milder forms, the child may be unable to vocalize a word he knows, until someone has said it for him. When spoken to, the child may be unable to process spoken language at a normal speed. He may lose track of spoken instructions after the first few words, and thereby do part of a task precisely as told and then completely ignore (or misconstrue) the rest of it. In a severe case, the child may be unable to use language comprehensibly. Overlapping terms for aphasia are congenital auditory imperception, congenital aphasia, and developmental language disability.

Hyperkinesis. The core meaning of hyperkinesis is abnormally excessive muscular movement. Hyperkinesis is *not* synonymous with "hyperactivity." The problem of the hyperactive child can be wholly emotional and psychological in origin; the hyperkinetic child is thought to have problems which will eventually be traceable to neurological origins. The distinction can be a fine one, as in so many of the etiological issues surrounding LD. Obviously, too, mild cases of hyperkinesis blend easily into the normally frenetic behaviors of children. But genuine hyperkinesis can seriously impair learning and warrants inclusion as a learning disability. When it is literally impossible for a child to remain attentive for more than, say, a minute at a time, he is going to experience extreme difficulty in absorbing information in the ordinary classroom setting. In addition to a short attention span, hyperkinesis can be characterized by symptoms of impulsiveness, irritability, social awkwardness, and clumsiness.

The descriptions above are intended as a non-technical introduction to LD symptoms. But it should be emphasized that these syndromes seldom appear in isolation. A common characteristic of the learning disabled child is that he exhibits more than one type of disorder. He reverses letters *and* is clumsy *and* has a short attention span. Or the disorder may be interactive, involving more than one of the senses--the child can read in a quiet room, but not in one with even minor background noises. The multiple-disorder, multi-modality characteristic is one reason that an umbrella term like "LD" is useful. But when the ambiguities about *type* of LD are combined with confusion about whether mild symptoms can legitimately

be tagged as LD, the question arises: is it possible to diagnose LD reliably, even under the best of conditions?

Among the consultants interviewed for this study, there was a broad consensus that reliable diagnosis is possible, if a skilled diagnostician is in charge. By determining patterns of behavior, combining the results of a variety of tests, and running these data through the mind of an experienced observer of LD children, a learning disability can be distinguished from general retardation, emotional disturbance, and (in nonclinical language) ordinary contrariness or lack of motivation.

But it was as strongly and widely agreed that reliable diagnosis cannot yet be conducted by nonspecialists using standardized instruments. There is as yet no set of tests for learning disabilities which can be administered with the ease and routinization of an IQ test or a College Board examination. Or to put it another way: no test battery which has learning disabilities as its construct has achieved wide acceptance among professionals in the field. Very few have even been attempted.

This state-of-the-art of LD diagnosis raises two important implications which figure throughout the discussion of the LD/JD link. The first of these derives from the subjectivity of the diagnostic process. *Symptoms of LD can be found in nearly anyone, given an expectation that they will be found.* LD poses yet another instance of the problem which scientists forced to make subjective judgments have always faced, of tending to find what one is looking for. The second implication derives from the unavailability of adequate standardized procedures for diagnosing LD. As it happens, a great many people and institutions are currently conducting diagnosis of LD. In many states, entire school populations are supposedly being screened. To put it very simply, the amount of diagnosis which is being attempted is far out of proportion to the number of competent diagnosticians. Several consultants were emphatic about the dangers associated with this; if nothing else, it argues for some skepticism when reading published estimates of LD incidence among a large population of children.

More generally, the consultants on LD expressed in one form or another the opinion that, as one put it,

"there is not one iota of adequate epidemiological data" on the incidence of LD: no one knows what proportion of U.S. school children suffer from learning disabilities, at what levels of severity. There are estimates--the median range estimated by the consultants was five to ten percent of elementary school children, with about 80 percent of those being male--but they are only estimates.

SOME DISSENTING VIEWPOINTS

The preceding introduction to learning disabilities has assumed that the term is a meaningful one. It is an assumption which many would dispute. LD has become an exceedingly hot issue in the past decade, characterized by debates which appeal as often to ideology as to data. Any appraisal of the arguments linking LD with delinquency should be conducted with some of the basic points of controversy in mind.²

Objections to popular usage. "Learning disabilities" as a term has become encrusted with several connotations which have very little to do with the original concept or its utility.

The first of these is the generality of the term, leading to what could best be described as intellectual affront at having to use it at all. "It is a kitchen sink term," was one consultant's response; another called it "a garbage can concept." All of the dissenters made the general point in one way or another: LD is only a label; its increasing use as a diagnostic term is illegitimate.

Some attacked LD as an essentially political creation, attached to children in numbers that maximize local school subsidies for special education programs. In California, for example, a school is said to receive an additional \$620 per year for each child diagnosed as EMR (educable mentally retarded), and \$1,800 for each child diagnosed as learning disabled. "Labeling kids as LDs has become a lucrative business," was one consultant's comment.

Others pointed to its use as a social euphemism--now middle class parents have a non-pejorative

² "An Approach to Definition for This Study," 18-20.

alternative to calling their children retarded, or emotionally disturbed, or slow learners. "LD" makes parents feel better, some consultants argued, without usefully describing the needs of their children.

Still another group pointed to misuses with racist implications. In states which have an 80-point IQ cutoff to distinguish retardation from LD, it happens suspiciously often that EMR classes end up being all-black while the LD classes are all-white.

Issues of conceptual validity. The above criticisms are not of what LD was originally intended to mean, but of how it has been used. There were also real differences about the conceptual validity of the term.

The first major controversy about LD is the extent to which it exists independently of diagnoses and definitions. For all practical purposes (to take one common example), dyslexia does not exist until society creates the conditions which make it necessary to read. And if the word "school" is substituted for "society", it was argued, a variety of other symptoms of LD should be seen not as disabilities but as behaviors which do not match school norms. Insofar as these norms have weak external validity, they arbitrarily impose the negative connotations of disability.

A second major issue was the extent to which learning disabilities are developmental phenomena. It was commonly agreed by the consultants that LD symptoms tend to disappear or moderate in adolescence. The implications of this, some consultants argued, are too often ignored. If in fact there is nothing "wrong" with the child except that his developmental timing is out of synchronization with some members of his age group, the learning disabled label is unfair to the child and an obstacle to clear thinking on how to deal with his problems.

A third source of conceptual argument is the etiological vagueness of LD. A conservative definition of LD rejects phenomena which are caused by environmental disadvantage and restricts itself to phenomena which have the outward characteristics of a neurological disorder. But very little progress has been made in tracking the symptoms back to the

hypothesized neurological bases. Thus, when a definition of LD tries to employ etiological characteristics as a means of distinguishing "LD" from "not-LD", it leaves itself open to a number of theoretical objections. A principal one is the charge that the assumption of an organic cause triggers further assumptions that we should be looking for ways to "treat" and "cure" LD with medication and new instructional techniques. This quasi-medical model, the critics charge, is an unrealistically antiseptic approach. It ignores the many ways in which LD phenomena do interact with the environment and with institutional norms.

The several conceptual objections to the LD label are grounded in a common concern for the children who are labeled with it. For while "learning disability" may be a non-pejorative term in parents' eyes (or at least socially more acceptable than the alternatives), it is not neutral to or for the child. "It is used against socially failing kids," was one comment, and it typifies the concern expressed by other consultants that children are bearing the consequences of institutional failures to view LD symptoms in the proper social and developmental frameworks.

Against this is what might be termed the mainstream viewpoint of LD, argued on these terms: there exist perceptual and integrative disorders in children which differ in kind from the many other ways in which a child may be handicapped by his background, his general intelligence, his physique, or his personality. They are not artifacts of tests; they have an objective reality. They cannot safely be left to developmental catch-up; early treatment is indicated. They cripple the child's ability to succeed in the academic setting and, "artificial" or not, that setting is a crucial one in preparing the child to succeed as an adult.

END