Predicting the Population in Institutions for Delinquent Children and Youth

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Administrators of every public correctional institution are plagued by the question, “What ten-years-hence population must we plan for?” The authors here show how they tried to answer the question for Minnesota.

Dr. Rose is Professor of Sociology at the University of Minnesota. Formerly he taught at Washington University, and conducted research for the War Department and the Carnegie corporation. Among his publications are Theory and Method in the Social Sciences (1954), and “Does the Punishment fit the Crime: a Study in Social Valuation,” Am. Jour. of Soc., 61 (Nov. 1955), 247–259.

Dr. Weber is a member of the staff of the U. S. Children’s Bureau. He was formerly Director of Diagnosis and Treatment of the Youth Conservation Commission of Minnesota. His latest publication in this Journal was “Explorations in the Similarities, Differences and Conflicts between Probation, Parole and Institutions, (48, 580-589, March-April, 1958.).—Editor.

The rapid increase in the youthful population and the changing character of juvenile delinquency make it highly important for state authorities to make predictions of the number of committed young people they will have to handle in the foreseeable future. Educational institutions, especially the universities, have been devoting a considerable amount of effort and money to estimating the population they will be serving in the coming years. For the same reasons, those responsible for penal institutions would be well advised to do likewise. Partly to meet a request of the State Legislature’s Interim Commission, but mainly because it felt the need of a predictive study to accomplish its own planning, the Youth Conservation Commission of Minnesota asked us to do a statistical study which would be the basis of a prediction of needs for institutional facilities for delinquents up to 1970. The techniques of this study are reported in the present article, and they would probably be directly applicable for any other state. The article will be largely based on excerpts from the original report, showing trends in Minnesota but eliminating all of the detailed statistics.

A prediction of the number of delinquent youngsters committed to institutions must be based on two sets of factors: (1) changes in the population under 21 years of age and the proportion of it becoming delinquent; (2) administrative changes in commitment, probation and parole policy. Our method attempts to predict both sets of these changes by extrapolation of present trends, but the two sets of predictions should be understood as having differing validity. Barring catastrophic killing off of a significant portion of the population or drastic economic upheaval which forces unusual migration, it is possible to predict fairly accurately the number of youngsters in the state of Minnesota up to 1970 who will be in the ages when most delinquent acts are committed (12–21 years). It is even possible to predict with a fairly high degree of accuracy, by means of extrapolation of current trends, the proportion of these youngsters who are likely to be arrested for delinquent acts, as changes in the tendency to commit delinquent acts are functions of a host of social conditions which are changing at a fairly steady rate and are not likely to modify their direction of change all at once—barring major social upsets and changes in police policy.

Administrative policy concerning the treatment of juvenile delinquents and youthful offenders is a function of law and of the climate of opinion that are subject to significant change at almost any time. For example, a report to the 1957 Legislature by the Commission on Juvenile Delinquency, Adult Crime, and Corrections calls for immediate expansion of probation and parole services. If

1 See, for example, William T. Middlebrook, How to Estimate the Building Needs of a College or University (University of Minnesota Press, 1958).
2 The full report is available only in typewritten form in the offices of the Youth Conservation Commission in St. Paul, Minnesota.
3 “Children” or “juveniles” refers to those under 18 years of age; “youth” refers to those 18–21 years of age; “youngsters” or “young people” are non-technical terms used to refer to both children and youth.
4 Anti-Social Behavior and Its Control in Minnesota (State of Minnesota, 1957), p. 103.
this should be done, it might reduce the number of delinquents committed at any one time to an institution. It is not possible to predict whether there will be legislation that significantly increases the probation and parole services, and it is not even possible to predict whether such an increase—if provided for in law—would significantly keep delinquents out of institutions. The study is based on an extrapolation of current trends, using existing statistics and reasoned guesses, and it is only as reliable as the data are accurate, as the reasoning is logical, and as current trends remain the same.

But there is no necessary reason why many of the relevant trends should remain the same: Changes in the policies and practices of the legislature, the judges, and of those who handle delinquents can make significant changes in the future number of institutionalized delinquents that cannot be predicted. However, the study ought to provide a base line from which the effects of any future change in policy or practice can be partially estimated. Thus, it is highly unlikely that the number of juvenile delinquents and youthful offenders that will be predicted here as likely to be committed to state institutions in 1970 actually will be there at that time. But the study ought to help make it possible to recognize factors that will create a discrepancy when they occur or are inaugurated. Further, the study provides some basis for judging the needs for institutions in the coming years unless new policies and practices are inaugurated.

Prediction is made by straight-line projection of recent trends. What constitutes “recent” is a matter of arbitrary definition, of course. Extending back the number of years from which data are used increases the stability of the projection but also allows consideration of earlier periods when administrative practices were quite different. For this study, data from 1952 or 1953 begin each series (except that for total population). There are several ways of projecting data; in this report the method of average change from year to year will be used for all arrest, court, institutional, probation and parole data.

Throughout this study, girls are kept statistically separated from boys because each institution for delinquents serves only one sex. In so far as possible also children under the age of 18 will be kept separate from those 18 to 21 years of age, for a similar reason. For some purposes, children under the age of 12 will be ignored as they constitute only a tiny proportion of the institutionalized delinquent population. This study is primarily concerned with delinquents committed to Youth Conservation Commission (YCC) institutions, but it will occasionally be necessary to refer to other state institutions for delinquents run by the Welfare Department. Under Minnesota law, children under 18 can be committed to the YCC only by Juvenile Court (in three metropolitan counties) or Probate Court (in the 84 other counties), except when the juvenile or probate courts transfer a case to District Court. Youthful offenders can be committed to the YCC only by a District Court, either through direct jurisdiction or through transfer from a lower court. Children and youthful offenders can be committed to state institutions only by the YCC, except in the case of those convicted of 1st or 2nd degree murder who can be sent directly to the state prison.

A. PREDICTING POPULATION CHANGES

The first factor of change to be considered is that of population. With the rise in the birth rate beginning in 1940, the child and youth population has increased rapidly and has been creating heavier burdens for all child- and youth-caring institutions. Since the children who will be entering the delinquency age of 12 years in 1970 are born in 1958, it would seem fairly simple to apply the current death rates to them and estimate how many will be left by 1970. The matter is complicated, however, by in-migration to and out-migration from the state. The technique that will be used for predicting the youth population up to 1970 in Minnesota is as follows:

To the child population for 1957, age specific death rates can be applied to reduce the population year by year. To this can be added an estimate of the current in-migration and subtracted an estimate of the current out-migration. The latest age specific death rates are those for 1955, and while these may be slightly too high for the future considering the trend toward decline in the death rate of youth, they are low enough not to create too much error. The State Statistician has calculated a net in-migration into Minnesota of 5,470 persons during the year April 1956–April 1957. This we have

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6 The law is not always followed in original commitment; but when it is not, the case is subject to review by the appropriate court.

4 Population estimates for 1957 have been kindly provided by the State Statistician for Vital Statistics, Mr. Emerson W. Storey.
allocated to the youth population according to their proportion in the population. This is probably not quite sufficient for the future as the net in-migration to Minnesota has been increasing slightly.

Thus our estimates are quite conservative, tending to underestimate the size of the future youth population. Projected estimates made by the U. S. Bureau of Census are not broken down by age and sex, as are required for the purpose here, but comparing our total estimates with theirs suggests that ours tend to under-estimate the future youth population slightly. For example, our prediction for the total Minnesota population up through 18 years of age in 1960 is 1,221,700 persons, whereas the four estimates made by the U. S. Census Bureau are (1) 1,226,000 (2) 1,255,000 (3) 1,244,000 and (4) 1,279,000.

Delinquency statistics generally show higher rates for city youngsters than for country youngsters, although the question has been raised as to whether this represents a true differential in delinquency or merely a different procedure for handling delinquency. Even if the latter should be the fact, state institutions for young offenders receive a disproportionate share of city dwellers, and this is what is important for our analysis. City dwellers (including suburbanites) have been increasing and farm dwellers have been decreasing, especially since 1940, although rural non-farm population (mostly in small towns and villages) has been increasing rapidly also.

Extrapolating the decrease in farm population from 1957 to 1970, we might estimate that the farm population will have fallen a further 40 percent and the metropolitan population will have risen another 40 percent during this period. Such extrapolations are perhaps particularly hazardous, but they suggest a continuing large shift from farm to urban population. The present urban-rural differential in the rate of juvenile and youthful commitment to state institutions will not be maintained in the face of these population shifts, however, as most of the metropolitan increase is in suburban areas (which have a relatively low commitment rate) and the farm population increasingly includes Indian and Mexican-born farm laborers whose youngsters contribute disproportionately to the commitment rate. In sum, these data on rural-urban shifts suggest that the increase in the number of commitments due to changes in the population will rise faster than the increase in the minor population itself. But little can be said as to exactly how much this will be, and the data to be subsequently presented on trends in arrests and commitments include both the increase in the population and the rural-urban shift.

B. PREDICTING THE NUMBER OF ARRESTS

The number of arrests is a function both of the number of delinquencies and of police practices regarding the arrest of youngsters believed to have engaged in delinquent behavior. These two factors cannot be separated in any prediction, and it should be understood that the prediction is for a combination of them. Reliable data are available only for Minneapolis and St. Paul, but trends were extrapolated to the whole state. The data show that the number of arrests is increasing faster than is the child and youth population, at least in the Twin Cities. Considering changes in the number of arrests only, the population of institutions for delinquents can be expected to increase 131 percent among males up to 18 years of age by 1970, 65 percent among males 18 to 21 years of age, and 62 percent among females up to 18 years of age. The trend for arrests of females 18–21 years of age seems to be downward, but considering the rise in the female youth population, it would probably not be meaningful to project the downward trend in arrests.

C. PREDICTING THE NUMBER OF COURT CASES

As to cases brought before the Juvenile Courts, the percentage increases are greater than those for the child population in general and for the number of arrests of accused juveniles. The data also show a projected increase of 39 percent in the number of males 18–20.9 years of age brought before all District Courts in Minnesota between 1957 and 1970, and a projected increase of 177 percent in the number of females of these ages. The increase for males is quite comparable to that for the growth of the population as a whole (39 and 31 percent increase, respectively) but the increase for females aged 18–20.9 years who appear in Dis-
District Court promises to increase much more than the comparable population growth (177 and 32 percent increase, respectively). At the same time, there seems to be a trend for Juvenile and Probate Courts not to transfer children to District Courts but to judge them themselves. But the number of children appearing in District Court has been very great—ranging between 40 and 61 males and between 6 and 16 females in recent years—so that their gradual disappearance from District Courts cannot relieve those courts very much nor change significantly the trends in total number of children appearing in any court.

D. Predicting the Different Kinds of Dispositions by Courts

A young offender may be given "probation" in three sorts of ways in Minnesota, and probation itself is to be distinguished from parole. Theoretically, probation is given in place of commitment to an institution, while parole is given upon release from an institution. Actually, all three types of probation generally follow lock-up in some kind of local jail, and the third kind of probation—from a YCC reception center which is physically located at the same place as the regular YCC institution—generally does not take place until after the offender has been incarcerated for some weeks. The first kind of "probation"—not officially called that but often followed up by some sort of observation as in the case of the other forms of probation—is by the Intake Division of the Court Services Department (or its equivalent with another name in the three metropolitan counties). It is impossible to tell how many arrested cases released without being brought formally to court are followed up by the social workers in the various public and private agencies, so no effort will be made here to predict trends for this kind of informal "probation."

The second kind of probation is that ordered by the courts. The projected prediction is a 133 percent increase by 1970 for the Hennepin County Juvenile Court, 106 percent increase for Ramsey County Juvenile Court, but a decrease of 31 percent for all the district courts in the state. The figures for the two juvenile courts are almost the same as for the increase in juvenile court case load. The district courts are increasing commitments to the YCC, and decreasing most other kinds of disposition, including probations.

Trends in dismissals by courts are considered next. If Ramsey County experience be taken as typical for all juvenile court jurisdictions, there was a fairly stable number of dismissals from 1953 to 1956, but a jump upward of over 100 percent from 1956 to 1957 that suggests a higher number in the future. A projection up to 1970 suggests a 48 percent increase over 1957. The number of dismissals by district courts has always been small, and is tending to decline.

The courts' tendencies to commit child and youth offenders to institutions other than YCC are then taken up. The prediction for 1970 is for almost 200 percent increase in males so committed by juvenile courts in the two largest counties. For females the percentage increase predicted is almost as large—148 percent. Cases so committed by district courts in Minnesota are so few as to make any prediction meaningless.

Commitments to YCC institutions for the two largest counties show that a 146 percent increase over 1957 figures can be expected by 1970 for the male juveniles. For female juveniles the prediction is for only a 76 percent increase. The increase predicted for juvenile offenders from the other 85 counties (including the metropolitan St. Louis county) is only slightly smaller. For male youthful offenders the percentage increase is expected to be 65 percent by 1970. The number of female youthful offenders committed by district courts is too small to permit of reliable prediction as to trends affecting the committed population. It is to be noted that the increases predicted for commitments to YCC institutions are considerably higher than the increases predicted for the child and youth population generally. They are at least as high as the increases predicted for number of arrests, and possibly higher than the increases predicted for the number of cases appearing in court (because the courts are becoming less inclined, relatively speaking, to dismiss a case presented before them.)

E. Predicting YCC Dispositions, Length of Stay, and Returns

The YCC reception centers are physically located at the state institutions but the offenders are kept apart, given a different treatment, and there is possibly a psychological difference for a child who may have been at an institution but...
was not actually committed to the institution. The YCC may decide to grant probation to a child or youth committed to its care. The trends in probations granted from each of the YCC reception centers show that the increase is greatest for the younger boys sent to Red Wing probably because the facilities there are greatly overcrowded: 165 percent increase is predicted for 1970 for boys from the three metropolitan counties (Hennepin, Ramsey, and St. Louis) and 109 percent increase for boys from the other 84 counties. For girls sent to Sauk Centre, there is a trend toward increase in probations granted to those from the three metropolitan counties, but no change for those from the other 84 counties. For the older boys sent to St. Cloud, there is a slightly increasing trend in probation for those from the non-metropolitan counties. (There were too few older girls put on probation from the Shakopee Reception Center to report.)

After deciding not to grant probation to a child or youthful offender, the YCC orders him or her to one of its regular state institutions. But the strain on the facilities at the reception centers and institutions is not to be measured solely by the commitment rate. One additional factor is the variation in the number of commitments, day by day and week by week. In many respects the strain on facilities (such as beds) and personnel at the installations is better measured by the peak population than by the average population. On the average, the peak population is 40.1 percent greater in 1956–57 than the average daily population at all YCC installations. In general, the peak is reached in April or May at the institutions for juveniles, as there is a tendency to let children close to being paroled to be held until they finish a school year. There is a very slight relief created by the inactive population—that is, those hospitalized, those on home visits, and runaways. The average inactive population is only 4.4 percent of the peak population, and 6.2 percent of the average daily population in 1956–57, for all institutions taken together. But there is practically no correlation between the inactive population on any given day and the daily size of the active population, so the inactive population creates practically no relief to the problems created by peak load.

Another factor affecting use of YCC facilities and personnel is the duration of stay under YCC supervision. Naturally, the length of stay in an institution is greater for violators of probation or parole, and the length of stay on probation is greater for non-violators. Two different sets of YCC personnel handle the installations and the probation and parole supervision, so that when projection of trends are made for either number of commitments or length of stay, the separate effect on these two divisions of personnel must be considered.

For the younger boys (at Red Wing) who do not violate probation or parole, the length of stay in the installations and on probation and parole is sharply downward. This is probably as it should be, but two observations need to be made: (1) The length of stay in an installation will reach a natural minimum true for the Training School at present. For the Reception Centers the length of time could be reduced if there were adequate professional staffs to study the boys. Under better staffing, they could be “processed” in six weeks whereas now the study averages 10–12 weeks. This, however, would not reflect itself in a direct reduction of population because many of the Reception Center cases are transferred to the Camp or institution anyway. Observation, testing, and processing require some time and cannot be expected to go down indefinitely so that some of the savings in space and personnel now being made cannot be extended much more. (2) Even when a boy has been “cured” of delinquency, he must be helped and observed on probation or parole, so that a certain time on probation or parole is desirable even for the better “risks”; for this reason, the “savings” of YCC personnel working with boys on probation or parole probably cannot, or should not, be extended much more than they already have been.

The observations just made may help to explain why length of stay in installations or on probation or parole is not moving down for all children and youthful offenders who do not violate probation or parole: The length of stay may already have reached its natural or desirable limit, and is now turning upward in correction of excessive “cutting.”

For those who do violate probation and/or parole a downward trend in length of stay at a reception center is probably indicated as not desirable and an upward trend in length at an institution may be desirable, in terms of doing something

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for the offender and in protecting the public from offenders. The fact is that there is a downward trend in length of stay at the reception centers. The trend toward a shorter stay on probation for all categories of offenders reflects the increasing tendency toward delinquency (those who violate probation now are violating sooner). Or, it reflects the growing pressure on YCC authorities, who seem to be increasingly placing offenders on probation who are not good risks (probably in an effort to avoid excessive overcrowding in institutions). In either of these cases, the downward trend in length of stay on probation, for those who violate probation, is not a good thing; it also does not relieve the burden of work on YCC personnel as it shifts the burden to those who work in institutions or with parolees. A third possibility is that the trend toward a shorter stay on probation is due to the recent increase in the number of parole agents, who thus are probably more quickly aware of probation violations.

The upward trend in length of stay on parole, for those who violate probation or parole, may simply reflect what has just been said: When offenders more rapidly and increasingly violate probation, they have to be watched a longer time on parole. Since all institutionalized offenders leave their institutions by way of parole, it can be seen from these data on increasing length of stay on parole that the future is likely to bring an increasingly heavy burden on parole officers. The extent of future burden is suggested by the ratios of the projected figure for 1970 over the actual figure for 1957.

It is not possible to say with any strong basis in factual knowledge just how long a commitment should be. Experts differ in their opinion. But the following considerations should be borne in mind when considering the question:

1. Those committed to YCC and other state institutions are usually the more difficult cases, although judges differ in their tendencies to commit to the YCC. As we have noted in the course of this report, there is a peeling off from the total number of those who violate the law at the time of arrest by the police, at the time of consideration as to whether a violator should be brought into court by the county attorneys and the social workers in the departments of court services, at the time of judgment by the judge, at the time of transfer out of the reception centers by the YCC and its recommending personnel. Those who "pass" through all these peeling-off processes are likely to be the "more serious" cases, in terms of prognosis for their recidivism and seriousness of their offense.

2. The YCC—both the commission and the professional personnel—have to keep in mind two separate but related interests: how to do most for the child or youth so that he will not commit delinquent acts again, and how to protect the general public from offenders. The YCC has not only the power to segregate the offender from the public and to "punish" him, but also some opportunity to "cure" him. YCC personnel include trained social workers and psychologists as well as teachers, and they have recourse to studies made by sociologists, psychiatrists and psychologists. Often they can do something for the children and youth in their charge, if they have enough time to put their techniques into full operation.

3. YCC installations have places for only so many inmates, and only so much flexibility is possible through putting additional beds in corridors, by building new dormitories or cottages. There is only so much money for personnel, and qualified personnel often cannot be readily hired. The YCC cannot control the number committed to its charge; it can adjust to the number of its facilities and personnel only by modifying length of stay and by varying the number of probations and paroles it grants in any given period.

The average length of stay for all boys in the State Training School at Red Wing was about eight months. After stating that no definite answer could be given to the question concerning an optimum average length of stay, the superintendent of the school wrote:

"I believe an average stay from 12 to 14 months would be needed to give each boy the help he may need. I do not want to indicate that all boys should be here that length of time; however, most, if not all, boys coming here are in need of some type of treatment, and many if not most of them have long and established patterns of behavior. It is foolhardy for us to even think we can change these well-established behavior patterns in 6 or 7 months."11

The acting superintendent of the Home School for Girls at Sauk Centre reported that the average length of stay

"is becoming shorter as the institution population increases. In my opinion, this trend should be reversed if anything. The individual treatment certainly suffers when the population increases without a corresponding increase in staff members. Perhaps a longer period of time would offset this somewhat.

The situation is only slightly less serious in the case of parole. The percentage increase by 1970 over 1957 in percentage violating parole is expected to be 59 percent for the younger boys, 46 percent for the younger girls, 83 percent for the older boys, and several hundred percent for the older girls.

The figures reported here are expected percentage changes in percentage violating probation or parole. Another technique for examining the same data is to consider the expected percentage changes in the raw number of those violating probation or parole. The changes predicted for 1970 by this technique are in the same direction and approximately the same relative order as for the first technique, although the specific figures differ.

F. SUMMARY AND CONCLUSION

The factors to be considered in predicting the future needs for space and personnel of state institutions are so numerous, and their interrelationships so complex that it is impossible to arrive at a single figure that will predict the needs of 1970. The cautions suggested at the beginning of this paper, concerning the validity of projections, should be reviewed. A summary glance at the major findings of this report, however, will help us in arriving at a synthesis.

(1) There is highly likely to be a population increase of those under 18 years of about 50 per cent by 1970, and of those 18–21 years of about 31 percent. Pertinent to a prediction of delinquency, however, is the second demographic fact that the urban (particularly the suburban) population is continuing to increase rapidly and the farm population to fall rapidly; this will tend to raise the commitment rate as urban areas have more commitments.

(2) For the Twin Cities alone, male juveniles arrested are increasing to the extent that an increase of 131 percent is predicted by 1970. For female juveniles, the figure is 62 percent, and for male youths 65 percent. Thus the predicted increase in urban arrests is higher than the predicted increase in population.

(3) Court cases are also bounding upward: if the present trend continues until 1970, the prediction is for a 152 percent increase for Hennepin County male juveniles, 144 percent increase for Hennepin County female juveniles, a 79 percent increase of the juveniles in Ramsey County, a

39 percent increase for all Minnesota older boys and a much larger increase for the older girls.

(4) Probations ordered by court are increasing at about the same rate as the increase in court cases. Outright dismissals, however, are much lower. Commitments to non-YCC institutions (data from juvenile courts in the two largest counties only) are increasing most rapidly of all.

(5) Commitments to YCC institutions are going up at a rate more rapidly than population, and about as rapidly as the rate of arrests or court cases. For the two largest counties, the juvenile court commitments are tending toward a 146 percent increase for males by 1970, 67 percent for females. For the other 85 counties, the expected increase will be 101 percent for males and 59 percent for females by 1970. For the youthful offenders 18–21 years of age, the increase is 65 percent by 1970.

(6) The YCC is granting probation from its reception centers and parole from its institutions at about the same increasing rate as it is taking in committed juveniles (for youthful offenders, the probation and parole rate increase is somewhat lower).

(7) The peak population for all YCC installations is about 40 percent higher than their average daily population. This peak usually occurs in spring. The inactive population is only about 4.4 percent of the peak population.

(8) Probably under the pressure of increasing commitments and of not-so-quickly expanding facilities and personnel, the length of stay at most YCC installations is falling, as is the length of stay on probation, especially for those who do not violate probation or parole. The length of stay on parole is moving upward in most categories of those who have violated probation or parole. These trends predict relatively greater burdens on the YCC in the future.

(9) Violation of probation and parole is increasing considerably, except in the case of the younger girls (for whom violations are decreasing). The upward trend may well reflect the progressive insufficiency of the facilities and personnel of the YCC.

It is understood that any change of practice or policy—for example, in committing or assigning to probation—will necessarily change these predictions. Looking at the facts together, one cannot but arrive at the conclusion that the burden on the YCC will increase considerably during the coming years. To maintain facilities and personnel at their present quality the YCC must double itself by 1970. No significant further relief can be expected from a policy of increasing the proportion put on probation, for probation is already increasing at about the same rate as commitments, and violations of probation are going upward (except for the girls under 18 years of age). It may be that some significant new treatment or procedure in handling delinquents will possibly reduce future costs—such as the already promising work camps at Willow River and Thistledew or as conceivable local centers which “commit” the more reformable delinquents only during evening and night hours. But these are only possibilities. If there is to be a serious effort to protect the public and to reform at least the more “reformable” delinquents, facilities and personnel will have to be kept at least to their present level—which means a doubling of real costs by 1970.

In considering “present quality,” it must be recognized that some of the installations are grossly overcrowded and significantly understaffed for the present population, as pointed out by the Legislative Interim Commission Report to the 1957 Minnesota Legislature (op. cit.).