THE EFFECT OF EARLY INSTITUTIONAL REARING ON THE DEVELOPMENT OF EIGHT YEAR OLD CHILDREN

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INTRODUCTION

Thirty years ago Goldfarb (1945) described grave and persistent cognitive and affective defects in children whose first years were spent in institutions, even when they were later reared in private families. Most institutions in the West have enormously improved since then but they still fail to offer children growing up in them the warm, intimate and continuous relationship with a mother-substitute regarded by Bowlby (1951) as a necessary condition for healthy development. From the point of view of social policy it is important to know whether this method of early rearing produces lasting and undesirable effects. For psychologists, the development of children transferred from such institutions to private families throws valuable light on the general issue of the extent to which early experiences determine later behaviour.

Earlier studies have described the development of a group of 65 children whose first years had been spent in residential nurseries (Tizard and Rees, 1974; Tizard and Rees, 1975). These were all the 4½ year old children in the care of three voluntary societies who fulfilled the following criteria; healthy full-term babies, admitted before the age of 4 months and continuously institutionalized until at least the age of 2. Between the ages of 2 and 4, 24 of the children had been adopted, and 15 had been restored to their natural parents, whilst 26 remained in institutional care. The institutions were in many ways of high quality—the staff-child ratio was generous, and toys and books were plentiful. However, close personal relationships between adults and children were discouraged, and the care of the children had passed through many hands—on an average 24 different nurses had worked with the children for at least a week in their first 2 years of life, and by the time the children were 4½, the figure had increased to 50.

At 4½, the institutional and restored children were reported to have no more behaviour problems than a comparison group of London home-reared children, whilst the adopted children were said to have fewer behaviour problems. Most of the adopted children were said to have formed close attachments to their new parents. However, a minority of both institutional and ex-institutional children were said to be markedly attention-seeking, "over-friendly" to strangers, and indiscriminately affectionate. The majority of the institutional children were described

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as either uninterested in adults, or inclined to attach themselves to anyone who took an interest in them.

Twenty-six of the children had been assessed at the age of 2 whilst still in institutions. At this age, their language development had been somewhat retarded (Tizard and Joseph, 1970). By the age of 4½ the mean WPPSI I.Q. of the institutional children was 105, and children adopted from these institutions at an average age of 3 years had a significantly higher mean I.Q. of 115. This difference did not appear to reflect selective placement by I.Q., or heredity. The I.Q.s at two of the children subsequently adopted were no higher than those of the remaining children, and the occupations and education of their biological parents were if anything inferior. Most of the adopted children, had, indeed, been “adoption rejects”, in the sense that they had not been offered for adoption in infancy because of a family history of epilepsy or mental illness, or because they were of mixed race. Nor did the higher I.Q.s of the adopted children represent simply a response to removal from the institutional environment—children restored to their natural mothers, who were predominantly working-class, had a slightly lower mean I.Q. (100) than the institutional children. There was no difference between the I.Q.s of the white and non-white children in any of these settings (Tizard and Rees, 1974).

The significance of these findings for the future development of the children could hardly be assessed with confidence at the age of 4. But because marked changes had already occurred in the adopted children, it seemed reasonable to expect that the “normalization” process would continue and the cognitive improvement would be sustained. The development of the institutional children was more in doubt. If, as seemed likely, an important factor in their personality development was the large number of staff changes, then one would expect an increasing deviance in their behaviour. Children who left the institutions, however, might be expected to “normalize”, unless, indeed, Bowlby (1951) was correct in arguing that mothering is useless if provided after the first 2 or 3 years of life.

We therefore decided to revisit the children after they had reached the age of 8: by this age we would also be able to avail ourselves of evidence from their teachers, and discover how the children coped with their peers, other adults, and the learning demands of the school.

WHEREABOUTS OF THE CHILDREN AT 8 YEARS

By the age of 8, only eight of the 65 children remained in institutional care, and one of these had had a period in a foster home. Of the other children who had been in institutions at 4½, seven had since been adopted, four were in foster homes and seven had been restored to their natural parents. We were able to interview only 51 of the 65 children whom we had interviewed at the age of 4; eight parents refused permission, and six had emigrated. Table 4 shows the placement of the remaining children. The mean WPPSI I.Q. at 4½ of the 14 children whom we were unable to test at 8 was 109, S.D. 9·4: this was not significantly different from the mean of 107, S.D. 12·8, of the remaining children nor were there any significant differences within the different groups. Only 18 of the 51 children were girls. This is because fewer girls than boys spend their first 2 years in institutional care.
Reasons for placement at 8 years

Table 4 shows that there was no evidence that the children's I.Q.s at 4½ determined whether or not they were subsequently adopted. The mean WPPSI I.Q. at 4½ of the children who remained in the institutions was not significantly different from that of the children who left the institutions after the age of 4½. However, the children fostered or adopted into manual homes after the age of 4½ tended to have had lower I.Q.s at 4 than children placed in non-manual homes (Table 5).

The major factors determining whether a child was fostered or adopted were the mothers' wishes and the child's skin colour. The children who remained in institutions were those whose mothers would neither release them for adoption nor reclaim them, or black children for whom no adoptive homes had been found. Only two of the seven children who had never left the institution by 8 were white.

Parents of later adopted and restored children

As was the case with the couples who adopted 2–4 year olds, the couples who adopted the older children were older and of higher social class than the natural parents who reclaimed them. They were middle-aged childless couples who either felt too old to undertake the care of an infant, or who were considered too old to do so by the adoption agencies. The mean age of the adoptive mothers of the older children at the time of the child's birth was 37.6 years, compared with a mean of 21.5 years for the natural mothers of the restored children. All the adoptive couples and all but one of the parents who reclaimed their children were white. Two of the five adoptive fathers of the older children were in professional occupations (social class 1), one was a clerk, and two were skilled manual workers. All the step-fathers of the restored children were manual workers.

Comparison groups. When the children were 2 and 4½ we compared their development with that of a group of 30 London home-reared working-class children. This seemed an appropriate comparison, since most of the study children had been born to working-class mothers; all but one family, who had emigrated, agreed to be reinterviewed. However, because 17 of the 25 adoptive fathers were non-manual workers, we decided to interview as well a group of 20 middle-class mothers of 8 year olds in two local schools. Only one mother whom we approached declined to be interviewed. These mothers were in no sense a proper sample, and this group was not included in the main statistical analysis, but we hoped that their answers would give us some indication of whether behavioural differences between adoptive and London working-class children were due to social class or adoptive status. Lack of resources made it impossible to test these children or carry out a full assessment of them.

Size of family. The mean number of children per family (excluding children aged 18 or older) was 1.9 in the case of all adopted children, 2.7 in the case of all restored, and 2.1 in the case of the London comparison group (F = 3.7, P < 0.05).

Institutional staffing at eight. The institutional children were no longer living in residential nurseries, but in all-age homes containing from 6 to 19 children. One child was in a special unit for disturbed children. Because the homes contained very few, if any, children under school-age the staff ratio was less favourable than...
in the nurseries, ranging from one child care worker to two children in the case of the special unit to 1:3 or 1:4 elsewhere.

It was not always possible to discover how many staff had worked with the child since he was 4½. In the case of four children, five, six, 15 and 17 staff had worked with the children for at least a week in the past 3½ years. This meant that a total of 11, 39, 58 and 80 staff, respectively, had worked with these four children for at least a week since they had entered institutional care in infancy. In the case of the other three children, high staff turnover and the reorganization of the nursery into all-age homes meant that not only were there no records such as a staff book available, but that none of the present staff had been there long enough to be able even to give an estimate. The numbers must, however, have been very high, and the total number of staff who had cared for these children since infancy was probably around 80. Four of the institutional children were visited by relations about once in 3 months, the others had not been visited for several years.

**ASSESSMENT PROCEDURE**

All the interviews were carried out by one of the authors (J.H.) and with the permission of the mother, tape-recorded. Several hours were spent by the interviewer in each home or institution. During this time the WISC I.Q. (Wechsler, 1949) and Neale reading tests (Neale, 1966) were given to the child, ratings were made during testing, and the mother, or housemother, was interviewed.

**Ratings of child's observed behaviour.** Seven rating scales were used to rate the child's behaviour during testing. These scales included five used in our 4 year old assessment, for co-operativeness, restlessness, concentration, talkativeness and friendliness (Tizard and Rees, 1974) and two for anxiety and disinhibition, developed by Rutter and Graham (1968). Each point on the scale was anchored to specific activities, e.g. the rating for co-operativeness depended on the number of times the child refused or had to be coaxed to do a test item.

The correlation between the ratings of two investigators who assessed a pilot sample of 20 children during shortened WISC testing was $r = 0.81$ for co-operativeness, 0·87 for restlessness, 0·64 for concentration, 0·87 for anxiety, and 0·82 for friendliness. There were no disagreements on the ratings of talkativeness and disinhibition.

**Evidence from the parents**

**Behaviour problems.** The child's mother, or the housemother most familiar with him, was interviewed using questions based on those in the Rutter Parent Questionnaire (Rutter et al., 1970). The questions covered the following areas: complaints of headaches and stomach-aches; control of bladder and bowels; appetite; food fads; sleeping difficulties; restless and fidgety behaviour; concentration; impulsiveness; thumb-sucking, nail-biting, stammering and nervous tics and habits; stealing and truanting; fears, worries and unhappiness; irritability and tantrums; over-fussiness and rituals; disobedience. In addition, detailed questions were asked about the child's relationships with other children, with sibs, and with strange adults.
The mother was asked to describe the child's behaviour in each area, with supplementary questions where necessary, and on the basis of her replies the interviewer rated each of the 36 areas on a three-point scale according to the frequency and severity of symptoms. A sample of 10 tape-recorded interviews were re-rated by the senior author. Disagreements, which did not amount to 1 per cent, were resolved by discussion. "Blind" ratings of tape-recordings were not possible because incidental remarks, the mother's accent, etc., usually made it clear to which group the child belonged.

Clinic referrals. We asked whether the child had ever been referred to a doctor or a clinic for a behaviour problem.

Affectional bonds. The mother or housemother was asked a series of questions designed to elicit whether the child was particularly attached to, or affectionate towards, or clinging to, any particular adults; these questions related to whether the child wanted a particular adult at bed-time, or if he was ill; whether he objected or was upset if parents or housemother went away for the evening or for a few days; the extent to which the child wanted to be with, or followed, particular adults, and to whom he showed affection. We also asked whether the mother believed that the child was closely attached to her, how he got on with his father, and whether she herself felt deeply for the child.

Joint activities. We asked whether and how often the parents played with the child, or read to him, went shopping or on other expeditions with him, helped him with schoolwork, or let him help them around the house or garden.

Reports from teachers. We showed the mother or housemother a copy of a questionnaire, consisting of the Rutter "B" scale for teachers (Rutter et al., 1970) together with some supplementary questions, and asked her for permission to send the questionnaire to her child's school. It was stressed that no mention would be made of adoption or institutions in the accompanying letter, but that the questionnaires would be presented as part of a longitudinal study of child development. Two adoptive parents refused permission and the teachers of two London children did not return the forms. We asked each teacher to complete a second questionnaire for the same sex classmate nearest in age to the study child. A comparison group was thus formed for each group of children, in addition to the London comparison group.

RESULTS 1. SOCIAL AND EMOTIONAL DEVELOPMENT

The main comparisons have been made between all adopted children \(n = 25\), all restored children \(n = 13\), children who had been continuously in institutions since infancy \(n = 7\) and the London comparison group \(n = 29\). Children with multiple placements are not included in these groups: since only three fostered children had not had multiple placements data on them are not presented. Because the numbers in each group are small, separate analyses of boys' and girls' behaviour have not been made.

Ratings of observed behaviour. At 4, both adopted and restored children had been rated as significantly more friendly and more talkative than the other children, and the restored children had been significantly more attention-seeking. By 8, the differences were much reduced. Significant differences between the groups remained on
ratings for co-operativeness, anxiety, friendliness, and attention-seeking, but they were mainly due to the behaviour of two extremely anxious and hostile institutional children, and to a tendency for the restored children to be more friendly, "over-friendly" and attention-seeking than the other children.

Evidence from the parents

Behaviour problems. Each of the 36 "problem areas" were rated 0, 1 and 2 according to the frequency and severity of the child's problems. The mean "total" problem scores of the various groups ranged from 11.4 to 13.3 and were not significantly different. This remained true if "neurotic" and "anti-social" symptoms were looked at separately. Only six questions significantly differentiated the restored and adopted children from the London working-class children (Table 1). The parents of the

<table>
<thead>
<tr>
<th>Problem</th>
<th>Adopted (%)</th>
<th>Restored (%)</th>
<th>Institutional (%)</th>
<th>London comparisons (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Nervous&quot; stomach aches</td>
<td>12 (N=25)</td>
<td>46 (N=13)</td>
<td>0 (N=7)</td>
<td>21 (N=29)</td>
</tr>
<tr>
<td>Stutters</td>
<td>4 (N=25)</td>
<td>23 (N=13)</td>
<td>0 (N=7)</td>
<td>21 (N=29)</td>
</tr>
<tr>
<td>Nervous habits</td>
<td>8 (N=25)</td>
<td>58 (N=13)</td>
<td>14 (N=7)</td>
<td>7 (N=29)</td>
</tr>
<tr>
<td>&quot;Over-friendly&quot;</td>
<td>32 (N=25)</td>
<td>46 (N=13)</td>
<td>14 (N=7)</td>
<td>10 (N=29)</td>
</tr>
<tr>
<td>Poor sib relationships</td>
<td>36 (N=25)</td>
<td>69 (N=13)</td>
<td>17 (N=7)</td>
<td>44 (N=29)</td>
</tr>
<tr>
<td>&quot;Not very sensible&quot;</td>
<td>40 (N=25)</td>
<td>17 (N=13)</td>
<td>29 (N=7)</td>
<td>20 (N=29)</td>
</tr>
</tbody>
</table>

restored children more often reported "nervous" stomach aches, "nervous" habits, e.g. picking and scratching, and stuttering. Both restored and adopted children were more often than other children described as "over-friendly", and restored mothers more often reported very bad sibling relationships than did other mothers. More mothers of adopted children than of restored or London working-class children described their children as "not sensible enough to leave on their own". This characteristic, however, appeared to be related to social class; just as many middle-class comparison children were judged "not sensible" by their mothers.

Referrals to doctor or clinic. Sixty-two per cent of the restored children, compared with 21 per cent of the London working-class children, 5 per cent of the middle-class comparison children, 8 per cent of the adopted children and 29 per cent of the institutional children had been taken to their general practitioner or a Child Guidance Clinic because of behaviour problems ($\chi^2 = 17.8, d.f. 4, P < 0.01$). This finding does not appear to accord with the lack of significant mean differences in the problem scores reported by the various parent groups. However, half of the restored children had been referred to clinics by their teachers, not their parents, because of behavioural problems at school.

Affectional bonds. In answer to a direct question the great majority of adoptive and London mothers (84 and 90 per cent, respectively) said that they felt that their child was closely attached to them, but this was true of only 54 per cent of the mothers of the restored children and 43 per cent of housemothers of institutional children ($\chi^2 = 14.9, d.f. 6, P < 0.025$).

It was equally true that a much larger proportion of adoptive than restored
mothers felt closely attached to their child. Three of the 25 adoptive mothers made it clear that they were dissatisfied with the adoption, and that they had little positive feeling for the adopted child. A fourth mother did not express herself in these terms, but nevertheless almost all the remarks she made about her child were critical or disparaging. However, a majority of the natural mothers of the restored children—eight out of 13—said that they did not feel deeply for him, and did not love him as much as their other children. If we had been able to interview all these mothers the proportion might well have been larger since three of the natural mothers who had expressed definite dislike of their child when he was 4 had meanwhile emigrated, in one case, or given up his care, in two cases. Further, of the eight restored children who had acquired a step-father, only three were said to be on good terms with him, compared with 19 out of 25 adopted children.

Very few children in any group tended to follow their mothers around, or protest if she went out at night, and very few appeared to be clinging. However, both the adopted and institutional children were unusually affectionate; 48 per cent of adopted children and 43 per cent of institutional children often wanted a cuddle, compared with 17 per cent of London children and 8 per cent of restored children. Restored children were in fact, the least cuddly group, 54 per cent of them never wanted a cuddle, compared with 28 per cent of London children, 16 per cent of adopted children, and 14 per cent of institutional children ($\chi^2 = 13.4$, d.f. 6, $P < 0.04$). At the age of 4 some institutional and ex-institutional children had been indiscriminately affectionate, and had allowed strangers to put them to bed and comfort them if they were hurt. By 8, indiscriminately affectionate behaviour was very rare, but institutional and ex-institutional children were still more likely than London children to allow a stranger to put them to bed, whilst London children were more likely to try to insist that one of their parents put them to bed ($\chi^2 = 26.4$, d.f. 9, $P < 0.002$).

Changes in affectional relationships of children who left the institution after the age of 4½

Marked changes had occurred in the affectional behaviour of the children who had left the institution since our last visit.

Of the nine children adopted or restored to their natural parents after the age of 4½, three had been described as very affectionate and closely attached to their nurse when they were 4½. None of these three children were thought by their parents at 8 to be either affectionate or attached to them. But of the six children whom the nurses had not considered closely attached to anyone, five were said to be closely attached to their mothers at 8. Two children who had not been considered at all affectionate when in the nursery were now considered to be so: the other children were considered affectionate on both occasions.

Joint activities. The adoptive parents were much more likely to play with their children than the other groups of parents. Ninety per cent played with their child sometime during the week, compared with 72 per cent of parents of London children, 65 per cent of middle-class "control" parents, 46 per cent of parents of restored children, and 57 per cent of houseparents ($\chi^2 = 13.3$, d.f. 6, $P < 0.04$). They were also more likely to help their children with schoolwork, and engage them in joint household activities, but these differences were not significant. Reading aloud no
longer differentiated the parent groups; a minority of all parents read to their children; in the case of the adopted children, this was because many now preferred to read to themselves.

Evidence from teachers: Rutter 'B' scale. A score of nine or more on this questionnaire is usually taken as a cut-off point for psychiatric screening (Rutter et al., 1970).

Table 2 shows that all the institutional and ex-institutional groups, but none of the comparison groups, including the London working-class group, had mean scores of over nine.

Table 2. Rutter et al. (1970) Teachers' Scale problem scores for different groups of children

<table>
<thead>
<tr>
<th>Group</th>
<th>Total problem score</th>
<th>“Neurotic” items</th>
<th>“Anti-social” items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>London comparisons</td>
<td>27</td>
<td>5.4</td>
<td>5.4</td>
</tr>
<tr>
<td>Their classmates</td>
<td>27</td>
<td>4.1</td>
<td>5.5</td>
</tr>
<tr>
<td>All adopted</td>
<td>23</td>
<td>10.0</td>
<td>7.8</td>
</tr>
<tr>
<td>Their classmates</td>
<td>23</td>
<td>3.5</td>
<td>3.6</td>
</tr>
<tr>
<td>All restored</td>
<td>13</td>
<td>13.7</td>
<td>7.2</td>
</tr>
<tr>
<td>Their classmates</td>
<td>13</td>
<td>3.1</td>
<td>3.7</td>
</tr>
<tr>
<td>Institutional</td>
<td>7</td>
<td>9.9</td>
<td>9.8</td>
</tr>
<tr>
<td>Their classmates</td>
<td>7</td>
<td>4.1</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Differences between the institutional and ex-institutional groups and their comparison groups on both the total problem score and the anti-social items of the scale were large and significant. The groups were not significantly differentiated by the neurotic items. The institutional and ex-institutional groups also differed significantly from the London working-class group on the total problem score ($F = 5.1, P < 0.003$) and the anti-social scale ($F = 4.7, P < 0.005$) but not on the neurotic scale.

Table 3 lists the specific items on the Rutter 'B' scale which significantly differentiated the ex-institutional children from their classmate comparisons.

The items fall into three groups—restless behaviour; poor peer relationships, and disciplinary problems. Of course, all the adopted and restored children were not described in these terms. The behaviour listed in the table was said to be “somewhat” or “certainly” true of between 48 and 61 per cent of adopted children, depending on the item, and between 54 and 77 per cent of restored children.

Attention-seeking behaviour in the classroom. We asked all the teachers two additional items about attention-seeking behaviour, which were not included in the Rutter Scale: did the child try more than most children to get attention from strangers entering the classroom, and did he try more than most children to get a lot of attention from his teacher. Both the institutional and ex-institutional groups were more often described as attention-seeking than the London children. Fifty-two per cent of adopted children, 69 per cent of restored children and 43 per cent of institutional children were said to seek attention from a stranger, compared with only 7 per cent of London children (Table 3).

Almost identical proportions were said to seek attention from the teacher more often than other children.

Both adopted and restored groups were also significantly more often described as seeking attention in these ways than their classmate comparisons, but this was not
Table 3. Items on Teachers’ ’B’ Scale Questionnaire on which adopted and restored children differed from classmate comparisons

<table>
<thead>
<tr>
<th>Somewhat or very true</th>
<th>% Adopted children so described (N = 23)</th>
<th>% Restored children so described (N = 13)</th>
<th>% London “controls” so described (N = 27)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very restless</td>
<td>69*</td>
<td>77*</td>
<td>22</td>
</tr>
<tr>
<td>Squirmy, fidgety child</td>
<td>69**</td>
<td>62*</td>
<td>22</td>
</tr>
<tr>
<td>Often damages or destroys property</td>
<td>22</td>
<td>46*</td>
<td>20</td>
</tr>
<tr>
<td>Frequently fights or is quarrelsome</td>
<td>48*</td>
<td>46*</td>
<td>29</td>
</tr>
<tr>
<td>Not much liked by other children</td>
<td>44*</td>
<td>54**</td>
<td>30</td>
</tr>
<tr>
<td>Tends to be on own</td>
<td>52</td>
<td>69*</td>
<td>33</td>
</tr>
<tr>
<td>Irritable, touchy</td>
<td>57*</td>
<td>54*</td>
<td>22</td>
</tr>
<tr>
<td>Frequently sucks thumb or finger</td>
<td>26*</td>
<td>23*</td>
<td>4</td>
</tr>
<tr>
<td>Is often disobedient</td>
<td>48**</td>
<td>77**</td>
<td>15</td>
</tr>
<tr>
<td>Cannot settle to anything for long</td>
<td>48**</td>
<td>69**</td>
<td>26</td>
</tr>
<tr>
<td>Often tells lies</td>
<td>39*</td>
<td>69**</td>
<td>22</td>
</tr>
<tr>
<td>Resentful or aggressive when corrected</td>
<td>61**</td>
<td>62**</td>
<td>19</td>
</tr>
<tr>
<td>Seeks attention from strange adults</td>
<td>52**</td>
<td>69**</td>
<td>7</td>
</tr>
<tr>
<td>Seeks attention from teacher</td>
<td>45**</td>
<td>69**</td>
<td>15</td>
</tr>
</tbody>
</table>

*Significant beyond 0.05 level.
**Significant beyond 0.01 level.

true of London children or institutional children. We also asked teachers about the ways in which the children sought attention. The most common attention-seeking behaviour was not “naughtiness” but what the teachers saw as an excessive number of social approaches,—e.g. “He tells you unnecessary things just to get attention”; “Persistent conversation, usually about self, family and possessions”; “Tries to help when not asked”.

Special characteristics of later adopted and restored children and of children with earlier fostering breakdowns

Most of the children in our study had left the institution between the ages of 2 and 4. However, five children had been placed for adoption at the ages of 4 1/2, 5, 5 4/5, 7 and 7 1/2 years, three children had been restored to their parents between the ages of 4 1/2 and 5 years, and one at 7 years. Three of these five later adopted children had very high Rutter teacher problem scores—16, 17 and 20 and very high parent problem scores, and two had very low teacher and parent problem scores. Three of the four late restored children had high Rutter teacher problem scores, 11, 14 and 19, and high parent problem scores, whilst one child had very low scores. Four of the five adoptive mothers of these children believed that the child was closely attached to her, but this was true of only one of the four natural mothers of the restored children. Four of the five adoptive mothers played with the child every day, but this was not true of any of the mothers of the restored children.

Five of the adopted children had been fostered elsewhere and returned to care before being placed for adoption, an experience often believed to cause lasting psychological damage. We were unable to visit one of these children when he was 8. Of the other four, all were said to be closely attached to their adoptive parents, and all the parents seemed to return their affection. Two were children with many
problems (Rutter teacher problem scores of 23 and 20), and three were considered "over-friendly" by their parents and attention-seeking by their teachers.

Relationship between variables

Teachers' and parents' complaints

For the whole group of 74 children on whom both sets of information were available the correlation between the child's total problem score as perceived by the parent and by the teacher was +0.30, \( P < 0.001 \). The relationship was low and not significant for the London and the restored children: for the adopted children it was +0.69, \( n = 23 \), \( P < 0.001 \). In general, agreements on individual items between adoptive mothers and teachers were higher than those between the other groups of mothers and teachers: on 10 items there was a negative relationship between the opinion of the mothers of the restored children and the teachers, but this was true in the case of only one item, "worrying", for adoptive mothers and teachers.

Ratings during testing and parent and teacher ratings

Few of the relationships between the ratings of the child's behaviour during testing and the teacher's or mother's description of the child's behaviour were significant. This was probably because most children behaved very "normally" during testing. The relationships were closest in the case of the institutional children, some of whom were difficult to test because of their hostility or anxiety.

Relationship between problems at 4½ and 8 years

Twenty-eight of the questions put to the parents when the children were 4½ and 8 were similar. The answers of the different groups of parents and nurses remained significantly the same for only six questions—sleep disturbances, sibling relationships, frequency of worries, demanding one or two particular people for comfort, friendliness and over-friendliness and tending to follow around after one or two particular people.

The correlation between the children's total problem score as reported by the parent at 4½ and 8 years was +0.33, \( P < 0.01 \) for all 79 children; for the separate groups, the correlation was only significant for the restored children (0.63, \( P < 0.05 \)) and the adopted children (0.39, \( P < 0.05 \)).

Problems at 8 in relation to earlier institutional reports

The children's case notes in the institution contained six-monthly reports on their progress. Whilst these were usually couched in neutral or positive terms, e.g. "A normal healthy child, developing satisfactorily", they sometimes included remarks which suggested that the child was a management problem, e.g. "very strong-willed, constantly looks for attention". The eight adopted children whose last report before leaving the nursery included such a comment had a significantly higher mean teacher problem score at age 8 (mean 18.5, S.D. 3.9) than the other adopted children (mean 7.0, S.D. 5.5, \( t = 5.3, P < 0.001 \)). They also had a significantly higher parent problem score at 8 (mean 18.9, S.D. 6.3) than the other adopted children (mean 9.8, S.D. 5.6, \( t = 3.7, P < 0.01 \)).
After placement in their new homes, the families had been visited by social workers. In 9 cases the social workers reported that the child was a management problem at that time, usually because of frequent tantrums. (Seven of these children also had unfavourable nursery reports.) The mean teacher problem score at 8 years of these nine children was 17.3 (S.D. 6.0) significantly higher than that of the other adopted children (mean 6.6, S.D. 5.0, \( P < 0.001 \)). The mean parent problem score of these children was also significantly higher (mean 19.3, S.D. 5.8, compared with mean 8.9, S.D. 4.7, \( P < 0.001 \)).

Age at leaving the institution in relation to other variables

The relationship between age at leaving the institution and Rutter teacher problem scores, parent problem scores, “over-friendliness”, and whether or not the child was considered by the mother to be attached to her were all very small and not significant, except in the case of the restored children where there was a tendency for the later placed children to be less attached to their mothers (point-biserial correlation coefficient \( r = 0.46, P < 0.056 \)).

Relationship between attachment and other variables

There was a significant relationship between whether or not the mother or housemother said the child was closely attached to her, and the frequency with which she played with the child, in the case of the adopted children (\( \chi^2 = 11.8, d.f. 2, P < 0.002 \)), and the institutional children (\( \chi^2 = 6.0, d.f. 2, P < 0.05 \)) but not for the other groups. However, only two of the 13 mothers of restored children played with them frequently. Whilst half of the over-friendly children were said to be closely attached to their mothers, there was a significant tendency for the unattached children to be more often over-friendly than the attached children (\( \chi^2 = 5.2, d.f. 1, P < 0.025 \)).

Of the three institutional children said to be closely attached to their housemothers, one had been with the same houseparents in an all-age home since infancy, and two had been with the same houseparents since transfer to an all-age home at the age of 4½. The four non-attached children had witnessed many staff changes. Only one of these children was over-friendly and attention-seeking; one was somewhat withdrawn, whilst two were very hostile to both adults and children.

RESULTS 2: I.Q. AND READING SCORES

WISC scores by placement

Table 4 shows that the institutional and earlier restored groups were still of average I.Q., and the earlier adopted children still had above average I.Q.s. The differences between the I.Q.s of the six largest groups were statistically significant (\( F = 3.2, P < 0.01 \)). Differences in variance between the groups, as assessed by Bartlett's test, were not significant. Comparisons between the I.Q.s of pairs of groups showed that the overall significant difference was due mainly to the higher I.Q.s of the earlier adopted children. Very similar results were obtained by analysing the scores on the verbal and performance scales separately, although differences were
only statistically significant on the verbal scales. Sex differences were not significant.

Table 4. WPPSI and WISC I.Q.s of children tested at 8

<table>
<thead>
<tr>
<th>Group</th>
<th>WPPSI I.Q.s at 4½</th>
<th>Full Scale I.Q. at 8 years</th>
<th>Verbal I.Q. at 8 years</th>
<th>Performance I.Q. at 8 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>S.D.</td>
<td>Mean</td>
</tr>
<tr>
<td>Adopted between 2 and 4</td>
<td>20</td>
<td>116-1</td>
<td>11-6</td>
<td>115-0</td>
</tr>
<tr>
<td>Restored between 2 and 4</td>
<td>9</td>
<td>98-2</td>
<td>10-4</td>
<td>103-4</td>
</tr>
<tr>
<td>Adopted after 4½</td>
<td>5</td>
<td>104-6</td>
<td>12-2</td>
<td>100-6</td>
</tr>
<tr>
<td>Restored after 4½</td>
<td>4</td>
<td>98-8</td>
<td>9-7</td>
<td>93-0</td>
</tr>
<tr>
<td>In institution throughout</td>
<td>7</td>
<td>105-1</td>
<td>10-4</td>
<td>98-6</td>
</tr>
<tr>
<td>Fostered after 4½</td>
<td>3</td>
<td>102-7</td>
<td>8-5</td>
<td>94-7</td>
</tr>
<tr>
<td>Several placements</td>
<td>3</td>
<td>98-0</td>
<td>10-1</td>
<td>97-3</td>
</tr>
<tr>
<td>London comparison</td>
<td>29</td>
<td>111-9</td>
<td>11-7</td>
<td>110-4</td>
</tr>
</tbody>
</table>

I.Q. changes between 4½ and 8 years

The mean I.Q.s of most groups had remained relatively constant over the previous four years. The I.Q.s of six of the seven institutional children had fallen by an average of 6-6 points. The later adopted children had not increased in I.Q. since leaving the institution. Because of the interest of the finding the scores of all the children who did not leave the institution until after the age of 4½ and who could be tested at the age of 8 are set out in Table 5. Only one child, the earliest to move, had substantially increased in I.Q. Ten of the 14 children had decreased in I.Q.

Table 5. I.Q.s of children who left the institution after 4½ years

<table>
<thead>
<tr>
<th>Type of placement</th>
<th>WPPSI Full-scale I.Q. at 4½</th>
<th>WPPSI Full-scale I.Q. at 8</th>
<th>Age at leaving Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adopted into non-manual family</td>
<td>1</td>
<td>107</td>
<td>125</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>111</td>
<td>104</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>114</td>
<td>107</td>
</tr>
<tr>
<td>Adopted into manual family</td>
<td>1 Too shy to test</td>
<td>84</td>
<td>5 yr 2 months</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>87</td>
<td>83</td>
</tr>
<tr>
<td>Fostered into non-manual family</td>
<td>1</td>
<td>106</td>
<td>92</td>
</tr>
<tr>
<td>Fostered into non-manual family, then returned</td>
<td>1</td>
<td>109</td>
<td>106</td>
</tr>
<tr>
<td>to institution at 8 years</td>
<td>1</td>
<td>93</td>
<td>90</td>
</tr>
<tr>
<td>Fostered into manual family</td>
<td>2</td>
<td>109</td>
<td>96</td>
</tr>
<tr>
<td>Fostered into manual family at 6 years 9 months after earlier restoration at 4½ years</td>
<td>1</td>
<td>89</td>
<td>88</td>
</tr>
<tr>
<td>Restored into manual family</td>
<td>1</td>
<td>101</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>111</td>
<td>114</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>95</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>88</td>
<td>69</td>
</tr>
</tbody>
</table>

I.Q., race and social class of family placement

Table 6 suggests that a major factor in determining the higher mean I.Q. of the adopted children is the larger proportion of adoptive than natural fathers who are non-manual workers. There is also a consistent trend for the black children wherever
placed to have higher I.Q.s than the white children. However, the cell sizes are too small for statistical analysis to be appropriate.

**Table 6. I.Q.s at 8 Years by Social Class, Type of Placement, and Race**

<table>
<thead>
<tr>
<th>In Institutions</th>
<th>Adopted and fostered*</th>
<th>Restored to natural parent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>White in Institutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>95:7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>97:8</td>
</tr>
<tr>
<td>Black in Institutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>101:8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*One child placed only a few weeks before testing was omitted.

**Joint child–adult activities and I.Q.**

When the children were 4½ we found small but significant associations between certain kinds of experiences provided for them, e.g. being read to, and their I.Q. At 8, we asked about the frequency with which the parents played games with the child, engaged him in joint household activities, e.g. cooking, helped him with school work, and read to him. Most of these activities are not necessarily very intellectual, and we were mainly interested in them because of the opportunity they provided for an attachment to develop between adult and child.

Nevertheless, because joint adult–child activity also provides an opportunity for verbal learning to occur it seemed possible that there might be an association between the child's I.Q. and the amount of such activity. For the whole group of 74 children there was a small correlation between WISC I.Q. and the frequency with which the parent played with the child ($r = 0.23$, $P < 0.025$). This was mainly because the adopted children tended to have higher I.Q.s and to be played with more, and was not true within each group.

**I.Q. and attachment to mother-figure**

There were significant point-biserial correlations between the mother or housemother's belief that the child was attached to her and the child's I.Q., not simply overall, which could be accounted for by the fact that the adopted children tended to be both attached and of higher I.Q., but also within the separate groups. The correlations were $r = 0.34$, $P < 0.05$ for adopted children and $r = 0.59$, $P < 0.02$ for restored children, and $r = 0.50$, $P < 0.12$, for institutional children. (Since almost all the London working-class children were attached to their mothers, significant correlations were not found within the comparison group.)

**Behaviour problems and I.Q.**

For all 74 children, there was a significant negative relationship between I.Q. and number of teacher-reported problems ($r = -0.28$, $P < 0.008$). There were also significant negative relationships between I.Q. and number of parent reported problems for all 74 children ($r = -0.39$, $P < 0.001$), and for the adopted and restored groups separately ($r = -0.56$, $P < 0.002$, and $r = 0.79$, $P < 0.001$).
I.Q. and biological parentage

No I.Q.s were available for either the biological or adoptive parents, and information on the education and occupation of the biological parents was incomplete. So far as it goes, the evidence does not suggest that the above-average I.Q. of the adopted children was due to the selective placement of children of "superior" background into non-manual families—the great majority of all the biological fathers were manual workers. Of the 30 biological fathers of adopted and fostered children, only four were known to have been in non-manual occupations. Two of their children (WISC I.Q.s 104 and 113) had been adopted into non-manual homes and two had been placed in manual homes (I.Q.s 90 and 133).

The mean WISC Full-scale I.Q. of the 12 children of manual workers adopted into non-manual homes was 116.9, S.D. 9.3. (Another child who had only been fostered 6 weeks when tested was omitted from the analysis. All the other children had been placed at least a year before.) The other nine children of manual workers had been fostered or adopted into manual families; their mean WISC Full-scale I.Q. was significantly lower at 98.8, S.D. 13.4 ($t = 3.6$, $P < 0.01$).

Reading scores. The Neale Analysis of Reading Ability gives separate scores for reading speed, accuracy and comprehension. Since for each group the means of these three scores were very similar they were averaged for each child. The order of the reading scores of the different groups of children was almost identical to the order of their I.Q.s. The earlier adopted children were the best readers, with a mean reading age more than 5 months in advance of their chronological age, whilst children restored to their mothers after the age of 4½ were the poorest readers, with a mean reading age more than 7 months below their chronological age. However, because the variance in most groups were large, these differences were not significant.

Reading scores, behaviour problems and attachment to mother figure

As was the case with I.Q.s, taking all groups together there was a significant association between higher reading scores and lower scores on the teachers' and parents' behaviour problem scales ($r = 0.33$, $P < 0.002$ and $r = 0.25$, $P < 0.016$, respectively). Taking the groups separately, the association was only significant within the London comparison group ($r = 0.38$, $P < 0.002$) for I.Q. and teacher problems although it lay in the same direction in all groups. As with I.Q., there was a significant point biserial correlation between reading scores and attachment to mother for all the ex-institutional children ($r = 0.33$, $P < 0.01$) but not for the London comparison group.

DISCUSSION

At the age of 8, there were marked differences between the ex-institutional groups. Children adopted before the age of 4 had a mean I.Q. of 115, compared with a mean of 103 for children restored to their natural families at a similar age. This adopted group also had a reading age 10 months in advance of that of the restored children. These cognitive measures appeared in the main to be related to the social class of the home in which the child was living, but there were also significant associations within each group between cognitive measures, attachment to the mother, and a relative lack of behavioural problems. From our evidence one can
only speculate as to how these factors were inter-related—it is possible, e.g. that those children who from the start presented their parents with severe behaviour problems less often developed mutual attachments with them and in consequence spent less time with them and received less intellectual stimulation.

There was also a large difference in the reported behaviour of adopted and restored children. Nearly two-thirds of the restored children, but only 12 per cent of the adopted children had been referred by a parent or teacher to a Child Guidance Clinic. The only difference between the kinds of problem reported by the adoptive mothers and their middle-class controls was the greater frequency of attention-seeking and "over-friendly" behaviour in the adopted children; but the restored children were said by their mothers not only to be attention-seeking and over-friendly, but also to have nervous tics and a variety of nervous habits, nervous stomach aches and to stammer more often than their working-class controls.

Further, whilst 21 of the 25 adoptive mothers believed their children were closely attached to them, only a half of the natural mothers believed that the child was attached to them. There was no evidence to suggest that the adopted children's attachments were "insecure", e.g. they were no longer particularly clinging toward their parents, as most of them had been when first placed.

The first conclusion which it seems reasonable to draw is that the subsequent development of the early institutionalized child depends very much on the environment to which he is moved. This seemed to be as true of attachment behaviour as of emotional problems and cognitive development. One child who had been disliked by the nurses and had seemed uninterested in them at 2 and 4½ years was adopted at 7 and at 8½ seemed to have developed a close affectionate relationship with both parents, though holding aloof from other adults and from children. Another child who had a close affectionate relationship with the matron of a small home was restored at 5: at 8 she and her mother seemed indifferent to each other.

The adoptive and natural parents differed in a number of respects, quite apart from social class. The adoptive parents, having very much wanted a child, were willing and happy to devote a great deal of time to him. The mothers of the restored children, who had left their child in care for several years, had been ambivalent or definitely reluctant to take him back. Moreover, the restored children tended to have more siblings, especially younger siblings, who occupied the mother's time and for whom she often openly expressed a preference. Further, whilst both adoptive parents were usually affectionate and welcoming, many restored children returned to a step-father who was indifferent or even hostile to them, or showed an open preference for his own children.

The later the child was restored, the less likely was it that a mutual attachment had developed. This was not true of the adopted children, and it appears to reflect the fact that the longer the mother left the child in care, the less room she had for him in her life. Few natural mothers played with their children, and they expected the child to be very independent, e.g. most of the restored children but only one adopted child regularly put themselves to bed. The adoptive mothers on the other hand spent a great deal of time playing with the children, and seemed ready to accept and even enjoy dependent behaviour patterns more appropriate in younger children. This was probably not only because they had very much wanted a child,
but because most had asked for a child younger than the one placed with them.

Nevertheless, there were resemblances between the two groups of ex-institutional children. A half of the restored children and a third of the adopted children, but very few home-reared children, were considered by their mothers to be over-friendly to strangers and attention-seeking. At school, the teachers found both groups of children much more of a problem than their parents did.

The major complaints were with respect not only to attention-seeking behaviour, but also restlessness, disobedience, and poor peer relations. However, it seemed to us possible that all the children’s problems at school stemmed not from a conduct disorder of the usual kind, but from two basic characteristics, both concerned with their social behaviour—an almost insatiable desire for adult attention, and a difficulty in forming good relationships with their peer group, although often they got on much better with younger and older children. Indeed, several of the parents suggested to us that the children’s restlessness and disobedience at school, which was very much more marked than at home, were secondary to attention-seeking. As one mother put it, “I think her teacher doesn’t praise her enough—praise is what she’s seeking all the time. I know they can’t always single her out for attention, but the time when she was in least trouble at school was when she was in a small class”.

These findings appear to suggest that up to 6 years after leaving the institution some children still showed the effects of early institutional rearing. Other explanations of the findings are of course possible. First, there is the possibility that these children were genetically predisposed to emotional instability. In support of this, one could point to the fact that many had been left for at least 2 years in the institution either because their family psychiatric history was considered suspect (in fact, none had a history of schizophrenia) or because their mothers could not decide either to reclain them or to offer them for adoption. A genetic hypothesis is very difficult to test in any direct way. The best evidence might come from a comparison with children born to the same parents but reared at home. A finding that such children had a much lower rate of behavioural difficulties would be strong evidence against the genetic hypothesis. However, only two of the children had such a sibling.

Second, one could argue that the mothers of all these children must have been under considerable stress during pregnancy, and during and after childbirth, and that this stress in some way led to the children’s subsequent difficulties. If it were this factor, rather than early institutional rearing or a particularly unstable genetic inheritance which was responsible for our children’s problems, then one would expect to find similar disturbance in other adopted children, who had not been reared in institutions. The most comprehensive study of adopted children in Britain is that of the National Child Development Study, on the children in the 1958 birth cohort who had been adopted (Seglow et al., 1972). Most of these children were placed in the first 6 months of life, and only 3 per cent after the age of 2. Twenty-five per cent of the adopted 7 year old boys were considered maladjusted by their teachers, using the Bristol Social Adjustment Guide, compared to 17 per cent of boys in the whole birth cohort. However, the difficulties were largely in the sphere of peer relations; attention-seeking behaviour, and restlessness were not significantly
greater in the adopted group. A Swedish survey of adopted children, who again were almost all adopted in the first few months of life found that at age 11, 20 per cent of the adopted boys, compared with 10 per cent of their classmates, were considered to have behaviour problems at school (Bohman, 1971).

It seems likely that the ex-institutional children in this study more often had problems at school, and of a particular kind, than children adopted in infancy, and that an explanation simply in terms of the effects of maternal stress before and after the child’s birth is not adequate. Another possible explanation is that some aspect of their present situation could account for their behaviour. The environment of the adopted and restored children was so different, however, that it is difficult to see a common element which could be responsible. A third of the children were black or of mixed race, and it could be argued that this fact may have led to problems at school, but in fact these children had no more nor less problems than the white children. It could be argued that the frequency of attention-seeking behaviour might be related to the children's position as the only or youngest child of middle-aged indulgent parents. However, this behaviour was shown just as frequently by children adopted by younger couples, and similar and even more pronounced behaviour was found in children restored to large and impoverished families where the child was more often neglected than indulged. Finally, the evidence of the children’s case notes showed that the most difficult children had generally already been identified as such in the nursery.

Whilst, therefore an explanation for the children’s behaviour in terms of their current environment cannot be ruled out, it is difficult to think of one which could account for the data. It seems more likely that the common difficulties of many of the restored and adopted children were due to their institutional experiences, perhaps in interaction with genetic or biological factors. The multiple and ever-changing caretaking which these children had experienced—on an average 50 different caretakers by the age of 41—must be unique in the history of child-rearing, and it would be surprising if it had not at the time affected the children’s social development. It also seems likely that attention-seeking and “over-friendliness”, once established, are difficult behaviours to modify. It is important to note that only perhaps a half of the adopted children and three-quarters of the restored children had particular problems. Nothing in our data, e.g. with respect to the number of institutional caretakers or the characteristics of the families the children entered, explains why this should be so, but our measures of the two environments were certainly crude.

It was not, of course, the case that most of the ex-institutional children were “affectionless”, or showed the grave defects described by earlier authors. Twenty out of the 25 adopted children seemed within a year of leaving the institution to have formed a close mutually affectionate relationship with their new parents. It was rather with other adults and with their peers that about a half of these children had problems. Whether or not the child became attached to his new parents seemed to depend not on the relationship he had had with the nurses in the institution but largely on the willingness of the new parents to accept a dependent relationship and to put a lot of time and effort into developing it.

These findings appear, then, to lend some support to the notion that early
experiences may play a critical role in some aspects of later development. It should be noted, however, that we did not study children who entered institutions at the age of 2 or 3—it may be that exposure to similar experiences at any time during the early years of dependency could have similar developmental effects.

The cognitive findings also give a limited support to the notion of a critical period. Of the 10 children tested at the age of 2 and later adopted before the age of 4, all had increased in I.Q. by the age of 4½ years, most very markedly. But of the children adopted or fostered after the age of 4½ only one, the first to go, increased in I.Q. Since the number placed in non-manual homes was very small the finding is of limited significance, and difficult to interpret. It may be the case that it is more difficult to increase I.Q. as the child grows older merely by placing a child with middle-class parents. This may be in part because he spends more time at school and playing with other children than does a younger child, and there is less opportunity for the intensive informal "tutoring" characteristic of middle-class families to occur. It may also be more difficult by this age, without special educational measures, to alter the child's style of interacting with adults. Since what he learns depends in part on his own contribution to an encounter, e.g. the kinds of questions he asks, his response to a changed environment will be determined not only by the characteristics of the new environment but by his own previous environmental and biological history. It is also possible that the considerable confusions in the minds of many of the older children about their own identity hindered the use they could make of new experiences.

From a policy point of view, it is important to note that the great majority of the adoptive parents appeared to be deeply attached to the children. For the adoptive parents, the crucial aspect of the adoption was the development of a mutual attachment—if this was present, they were prepared to tolerate difficult behaviour or educational backwardness.

Because only seven children had remained in institutions throughout, very limited conclusions can be drawn from this study about the effect of continual institutional care. Our initial prediction that these children would become more deviant by the age of 8 was only partially confirmed. For two children, the move from their residential nursery to exceptionally stable all-age homes meant that for the first time they experienced continuity of care with a housemother who took a particular interest in them, and both houseparents and teachers considered that these children had at present few problems. However, six of the seven were said by their teachers to be less popular than other children in their class. Their I.Q.s ranged from 88 to 113; only one child had an I.Q. below 91. Nor were they as a group educationally retarded—one child was not reading, but the others had reading ages near or above their chronological age. In all but one case, this level of cognitive development had been achieved despite the lack, not only of a permanent mother figure but of any continuing contact with an adult. One child who had been in the same all-age home since infancy had been looked after by only 11 different staff, but for the other children the numbers ranged from 40 to a conservative estimate of 80. At the age of 8, as at 4½, we found no evidence of a relationship between the child's I.Q. and the number of staff who had looked after him.

Not only the institutional group, but also the restored group, contain a very
small number of cases. But because of the almost total lack of information about the
development of children restored from institutions to their natural parents the data
require consideration. Our study suggests that a policy of allowing parents to leave
their children in institutions for a number of years, or of putting pressure on reluctant
parents to reclaim their children, may not be in the best interests of the child. On all
our measures, restored children tended to have fared worse than the children released
for adoption. The social implications of the study, together with much additional
information, is discussed further elsewhere (Tizard, 1977).

Two methodological problems have to be acknowledged. First, as discussed earlier,
a possible source of bias was the fact that both authors could not avoid knowing to
which group the children belonged. Second, they depended for the account of the
child's behaviour at home, and his relationship with his parents, on his mother's
account. Again, this seemed in practice unavoidable (e.g. few parents would have
tolerated the child being interviewed) but the possibility of a variety of biases on the
part of the different groups of parents and houseparents is evident.

Finally, it should be noted that the children are still very young, and that it is
too soon to come to any conclusions about the long-term effects of their early
experiences.

SUMMARY

Fifty-one children who had spent their first 2–7 years in institutions, and who had
been previously visited at the age of 4½ years, were reassessed at the age of 8. Seven
children had never left the institutions, the rest had been adopted, fostered, or
restored to their biological parent. The children's behaviour during psychological
testing was assessed, and information was obtained from their parents and teachers.
According to the parents' reports, the ex-institutional children did not present any
more problems than the comparison groups. The teachers, however, found many
differences between the ex-institutional children and their classmates. Despite very
frequent staff changes, the institutional children were not retarded. The adopted
children had the highest mean I.Q. and reading achievements; this finding appears
to be related to the higher social class of the adoptive parents and the poorer emo-
tional adjustment of the children restored to their biological families.

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