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THE BEHAVIOUR OF DOWN'S, CHINESE AND NON-HANDICAPPED CHILDREN DURING A FIRST ENCOUNTER

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INTRODUCTION

Sinson and Wetherick (1981a, 1982) observed children with Down's Syndrome individually in home, playgroup, nursery and school environments and it appeared that the hypothesised conventions of mutual gaze might only apply at first meetings between individuals unknown to each other. Observations in the home showed no mutual gaze between children with Down's syndrome and their siblings, but also none between the normal siblings as they played. Mutual gaze was not observed in either home or school environment between familiars. This finding was supported by the experimental observations of groups of three-year-old children who had an unknown non-handicapped or Down's child introduced into the group and mutual gaze was observed. The evidence was that interactions between non-handicapped and Down's children failed at the outset in this situation, although sibling interaction in families containing a Down's child was satisfactory and apparently unaffected by the condition of the Down's child.

Advances in understanding of the normal child's behaviour seemed most likely to follow from detailed observations of non-handicapped children meeting a Down's child for the first time. Sinson and Wetherick (1986) designed a situation which posed the fewest possible problems for the normal child, so maximising his confidence in the interaction. Encounters were videotaped between 104 non-handicapped children aged $2\frac{1}{2}$ to 6 and Down's children aged 3 to 6. Each non-handicapped child met one Down's child only of the same sex. The Down's children again showed themselves able and willing to interact with the non-handicapped child but the non-handicapped children were clearly aware of the Down's child's abnormality (though without relevant previous experience) and their behaviour showed evidence of the exaggeration and prolongation of patterns of behaviour involving gaze that are normal between children meeting for the first time, but quickly disappear in a non-handicapped/non-handicapped encounter. Distortions were also observed in patterns of play and vocalisation.

Only the youngest Down's children (three-year-olds) were acceptable to the non-handicapped possibly because they were classified as 'babies' and treated accordingly. This may explain why the earlier study found no problem in interactions between Down's children and their normal siblings in the family situation.

Parents of the non-handicapped children felt that the interactions they had observed between their own child and the Down's child were not typical of those that would have occurred between two non-handicapped children meeting for the first time. To prove the point the author returned to a proportion of the homes accompanied by a non-handicapped child of the same age and sex as the child with Down's Syndrome that had visited and replicated the situation.

At this stage it was also decided to extend the project to include a visit by a Chinese child to see if the parents claim that the Down's child looked "different"

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had any substance. It was planned to use pre-school Chinese children, who in view of their facial characteristics would provide a direct control for the Down's children used in the study. This became a problem when it was discovered that there were no pre-school Chinese children in any of the local pre-school provisions. It appeared Chinese children were kept within the family until school age because the mothers all worked at either restaurants or "take-aways" where they also lived. The children only spoke Chinese until school age — and none of the mothers spoke much English — or were prepared to take time off work to take their children to playgroups. They were also not prepared to participate in research in the English community.

METHOD

Subjects

Two non-handicapped white English children, male aged 4½ and female aged 3 years old, were used as guests and met the sixteen non-handicapped children who had already met a Down's child of the same age and sex in the previous project. Two English speaking Chinese children were also used as guest children, male aged 4½ and female aged 5½ years. They also met the sixteen non-handicapped children who had met previously both Down's and non-handicapped guest children. When found, the Chinese subjects proved somewhat difficult as the experimental design was complicated by the fact that both mothers had to be present. It was difficult to find Chinese mothers that could talk to their children in English or children who could speak English. It became evident that the Chinese interchanges between mother and child worried the normal children. The English mothers did not seem altogether at ease with these two obvious strangers in their homes with whom they could not communicate. Several Chinese subjects were videoed and rejected for this reason before suitable Chinese children were found.

Equipment

A JVC VHS video recorder; an extension microphone; domestic lighting as available in the various homes. A JVC colour camera with 6:1 zoom lens and integral microphone which was operated by the author.

Procedure

Each guest child and mother was taken in the author's car to the homes of eight normal children of the same sex aged 2½, 3, 3½, 4, 4½, 5, 5½ and 6. The children were asked to play with a Fisher Price Fire Station and to set it out ready for a fire as a picture would be taken of it when they had finished. This explained the presence of the camera, which was usually situated in the doorway of the room and was not obtrusive. Older children were also told that the author was seeing if the toy was suitable for playgroup and were asked their opinion at the end of the session. The complete 15 minute session was videotaped. Any effects of age (within the range studied) on behaviour in this situation could in principle be detected.

Each normal child met a Down's child of his or her own sex. There is evidence that cross sex interactions sometimes produce different results on play encounters, but the prime interest in this study was to record gaze and in similar work by Jormakka (1976), Exline (1971) and Baxter (1979) no sex differences were found in frequency of looking at the face of the other child.

Results

Each of the 48 fifteen minute tapes was replayed and the non-handicapped child's behaviour was scored under four headings.

1. The amount of time spent looking at the face of the guest child. (A permanent Multi-X record was made, to enable amount of gaze to be scored cumulatively and also accurately located within the 15-minute session).
2. Amount of time playing with the toy.
3. Amount of time spent in cooperative play with the guest child.
4. Amount of time spent talking — distinguishing between talk only to the adults present and talk which also involved the guest child, however briefly.

Scoring

Scoring was carried out by the author and one third of the 148 tapes (also used in Sinson and Wetherick, 1986) were rescored independenly by an independent scorer. A satisfactory measure of agreement was obtained between scorers.

On Score 1 (time spent looking) the independent scorer scored an average time of 58.0 secs which is 14% higher than the first author's average of 50.8 secs. But the results of the two were highly correlated ($r^s=0.90$). There is necessarily a subjective element in judging from a videotape whether or not a child is looking at another child.

On Score 2 (time spent playing with toy) there is again a subjective element — what constitutes 'playing' — but the independent scores average of 10'48.4" was only 2% lower than the author's (11'02.5") and the scores were again highly correlated ($r^s=0.85$).

On Score 3 (time spent in co-operative play) the correlation was effectively $r^s=1.0$. According to the author, 23 out of the 34 tapes rescored by the independent scorer showed no evidence at all of co-operative play. The independent scorer agreed with this assessment. The author scored an average of 21.5" of co-operative play for the 11 tapes on which she judged that such play had occurred. The independent scorer scored an average of 17.1" for the same tapes.

On Score 4 (time spent talking) the correlation was again effectively $r^s=1.0$. Seven tapes were agreed to show no evidence at all of talk. The difference in the mean scores obtained by the two scorers was very small for the 27 tapes that did show evidence of talk — 0.44 secs (1.2%).

In the following analyses the scores obtained by the author were employed, since the sample rescoring showed no evidence of differences substantial enough to be relevant to the conclusions drawn.

1. Time spent looking at the face of the guest

Two groups of eight normal children (one group male and one female) met a normal child of the same age and sex as the Down's children they had already met and a similar Chinese child. The male group's average looking time was 16.1 secs for the non-handicapped guest, 49.6 secs for the Down's guest and 13.7 secs for the Chinese guest. The female group's averages were 11.2 secs, 72.5 secs and 9.25 secs, respectively. Looking occurred only in the initial stages of the non-handicapped/non-handicapped and non-handicapped/Chinese interactions but continued throughout the non-handicapped/Down's interactions.

2. Amount of time spent playing with the toy

Both the male and female groups played for almost the whole period (13-14 mins) when the non-handicapped and Chinese guests were present but only for 10-11 mins when the Down's guest was present. The non-handicapped guest was however, always encountered second and the Chinese last. A three and a half year old girl played only 5 minutes with non-handicapped and Chinese guests present and only 2.57 with the Down's guest. A four and a half year old boy played 11 mins. with the non-handicapped guest present and only 3 and 4 mins with Down's and Chinese guests.

3. Time spent in cooperative play

In the non-handicapped/non-handicapped encounters the amount of cooperative play in the male group was 406 secs (6 contributing) and in the female group 557 secs (6 contributing). In the non-handicapped/Down's encounters the amount of cooperative play in the male group was 43 secs (1 contributing) and in the female group 231 secs (6 contributing). In the non-handicapped/Chinese encounters the amount of cooperative play in the male group was 360 secs (5 contributing) and in the female group 67 secs (4 contributing).

Table 1

Total time (in mins and secs) of interaction between two groups of eight non-handicapped children and a non-handicapped, Down's or Chinese guest child.

Type of Guest	Time Looking at Guest	Time playing with toy	Time in co-op. play	Time in vocalisation
Non-handicapped	2'09"	111'08"	6'46"	8'22"
Down's	6'37"	87'33"	0'43"	2'34"
Chinese	1'50"	98'50"	6'00"	3'39"

Male/Male Interaction

Type of Guest	Time Looking at Guest	Time playing with toy	Time in co-op. play	Time in vocalisation
Non-handicapped	1'30"	104'11"	9'17"	5'41"
Down's	9'40"	84'27"	3'51"	4'21"
Chinese	1'14"	93'56"	1'07"	2'15"

Female/Female Interaction

4. Time spent talking; either to adults only or adults and the guest child

The amount of talk in the normal/normal encounters was 502 secs for the male group and 341 secs for the female group. There was no case of talk being directed solely to an adult and all the normal children contributed. In the non-handicapped Down's male encounters the amount of talk was 154 secs — all directed to an adult; in the non-handicapped/Down's female encounters there was 76 secs of talk directed solely to an adult and 185 secs directed at least in part to the Down's child. Only 2 non-handicapped normal children contributed to the latter total. In the non-handicapped/Chinese male encounters the amount of talk was 219 secs and 135 secs for the female group. Most of the talk was to the adults and the children showed a marked reluctance to talk to the Chinese children.

Table 2

Individual Scores in minutes and seconds of male children meeting non-handicapped, Down's and Chinese guests.

MALE CHILDREN

Age and Type		Look at S	Play with toy	Co-op Play	Vocalisation
2½	N	0.32	13.10	0.0	0.0
2½	D	1.7	14.35	0.0	0.0
2½	C	0.23	11.10	1.48	0.10
3	N	0.12	12.35	0.0	1.22
3	D	0.14	12.39	0.0	0.35
3	C	0.09	12.35	0.0	0.12
3½	N	0.17	15.00	0.28	1.36
3½	D	0.39	14.50	0.0	0.33
3½	C	0.10	13.04	0.0	0.28
4	N	0.17	14.50	0.30	0.48
4	D	2.06	7.05	0.0	0.30
4	C	0.14	12.35	0.11	0.27
4½	N	0.07	11.54	1.13	0.20
4½	D	0.51	3.45	0.0	0.18
4½	C	0.23	4.46	0.0	0.20
5	N	0.14	14.28	0.26	0.15
5	D	0.30	8.48	0.0	0.10
5	C	0.09	14.53	1.03	0.17
5½	N	0.12	15.00	3.43	4.08
5½	D	0.46	10.46	0.0	0.26
5½	C	0.9	15.00	0.37	1.42
6	N	0.18	14.10	0.26	0.11
6	D	0.29	14.56	0.43	0.02
6	C	0.13	4.47	0.34	0.03

N=Non-handicapped D=Down's C=Chinese

Table 3

Individual Scores in minutes and seconds of female children meeting non-handicapped, Down's and Chinese guests.

FEMALE CHILDREN

Age and Type		Look at S	Play with toy	Co-op Play	Vocalisation
2½	N	0.10	14.00	0.0	0.06
2½	D	1.57	10.40	0.0	0.25
2½	C	0.06	10.01	0.0	0.04
3	N	0.10	15.00	0.46	3.21
3	D	0.44	13.50	0.30	2.14
3	C	0.08	15.00	0.10	0.45
3½	N	0.23	5.30	0.16	0.54
3½	D	2.30	2.57	0.0	0.03
3½	C	0.27	5.05	0.0	0.38
4	N	0.09	15.00	0.30	0.20
4	D	0.56	12.25	3.04	0.20
4	C	0.05	13.37	0.04	0.14
4½	N	0.12	14.34	4.15	0.10
4½	D	0.22	8.34	0.03	0.11
4½	C	0.07	14.00	0.0	0.48
5	N	0.10	12.50	0.0	0.09
5	D	1.03	9.09	0.59	0.11
5	C	0.15	12.12	0.37	0.20
5½	N	0.10	12.16	0.26	0.11
5½	D	0.43	14.25	0.11	0.51
5½	C	0.02	12.00	0.16	0.04
6	N	0.07	15.00	3.05	0.30
6	D	1.25	12.21	0.04	0.06
6	C	0.04	12.00	0.0	0.06

N=Non-handicapped D=Down's C=Chinese

DISCUSSION

In the light of the results of Sinson and Wetherick (1986) which highlighted the unwillingness of the non-handicapped children to talk to, play cooperatively with or interact in any way with the Down's guest, the results of the replicated interactions with the non-handicapped guests indicate that the parents' fears that the Down's interactions were untypical were fully justified. The findings for both non-handicapped and Chinese guests showed considerable differences to those of the Down's guests.

The first finding was that gaze (analysed as before on the multi-X machine) followed the pattern expected between newly introduced young normal children as described by McGrew (1972), Jormakka (1976) and Sinson & Wetherick (1986)

being observed between the home child and both the non-handicapped and Chinese guests and occurring briefly as expected and only in the initial stages of the interaction. Most home children looked less at the Chinese guests than at the non-handicapped guests and seemed in some way to be able to instantly categorise them as 'different'. This appeared to be a non-threatening difference and did not elicit a constant need to keep in direct eye contact with the mother as observed when playing with the Down's visitors.

The second finding was that with both non-handicapped and Chinese guests the home child played with the toy for most of the session as before, but with the non-handicapped guest the play was notably more relaxed and creative. This fact is well illustrated in the edited videotape of the sessions (Sinson & Wetherick, 1985). The play with the Chinese guest present seemed not to have the spontaneity of the non-handicapped encounter and this was also reflected in the quality of the vocalisations.

The third finding was that cooperative play occurred more often with both the non-handicapped and Chinese guests than with the Down's guest. The home child was obviously more relaxed in the presence of both these visitors. One particular Down's child had all his toys systematically removed by the home children, but this type of behaviour was not observed in the same home children when playing with either the visiting non-handicapped or Chinese guest.

The fourth finding was that language occurred more frequently between the home and visiting non-handicapped children. There was little or no language addressed to the Chinese guest and this was echoed in the stilted interchange between the two mothers. Although the Chinese mothers spoke good English it was heavily accented and there was evidence that the English mothers were far less at ease with the Chinese mothers than with the mothers of the Down's children. The trivial conversation that formed the background to the experimental sessions with both non-handicapped and Down's guests was missing from the Chinese sessions. The mothers of the home children felt unable to enter into the usual discussion about clothes and food with the Chinese mothers. It was also interesting that the Chinese mothers rarely ended up sitting on a couch next to the home child's mother, whereas the mothers of the non-handicapped and Down's guests invariably shared a couch with the home mothers. There was however no physical backing off by the home children with the Chinese guests as there had been with the Down's guests. The video tapes show many instances of the Chinese guests playing in close proximity and physical contact with the home child — although usually silently, whilst any comments on the game were addressed by both children to their mothers (in English) rather than to each other. It was more usual for the home children to address this type of comment to the visiting non-handicapped child in the previous sessions.

A pamphlet issued by the then Ministry of Education in 1963 points out that "Young children seem to be quite unconscious of colour differences and there is no more pleasing sight than to watch in some of our primary schools groups of children of different racial origins playing happily together". There is conflicting evidence starting with Lasker (1929) in his book "Race Attitudes in Children" and continuing through most American research into childrens attitudes that as far as a simple black/white colour distinction goes, children from the age of three years old are well able to make a distinction and respond to differences in skin colour. There are however very few studies of ethnic awareness in very young children. There have been many studies showing that children are able to differentiate between

black and white dolls but these are mainly American and concentrate on Negro awareness (i.e. Horrowitz, 1936; Clark and Clark, 1947; Goodman, 1952, Stevenson and Stewart, 1958). In England much of this type of work has been replicated in studies such as Pushkin (1967). There has however been little or no work on ethnic awareness regarding young Chinese children. This may well be due to the paucity of Chinese children in local authority pre-school provisions in England.

Work by Laishley (1971) on skin colour awareness in London nursery school children showed that perception of skin colour by children ranging from three to five years of age did not appear to be negatively evaluated in a group of 61 white, 4 coloured and 3 light skinned children of mixed parentage.

There would seem to be clear evidence that the difficulties experienced when non-handicapped children meet Down's children are **not** present when non-handicapped children meet unknown non-handicapped white or Chinese children for the first time, as can be demonstrated in the videotapes where they are to be seen playing co-operatively and talking happily to each other.

SUMMARY

Earlier studies by Sinson and Wetherick of the introduction of Down's children into groups of non-handicapped children of the same age showed that the Down's child remained socially isolated in the group. Sinson and Wetherick (1986) showed that non-handicapped children were clearly aware of the Down's child's abnormality (although without relevant previous experience) and their behaviour showed evidence of the exaggeration and prolongation of patterns of behaviour involving gaze that are normal between children meeting for the first time but quickly disappear in a non-handicapped/non-handicapped encounter. Distortions were also observed in patterns of play and vocalisation. This study confirms these findings and extends the work to a consideration of Chinese/non-handicapped and non-handicapped/non-handicapped encounters in children aged $2\frac{1}{2}$-6 years and provides clear evidence that the difficulties encountered when non-handicapped children meet Down's children are **not** present when non-handicapped children meet either Chinese or other non-handicapped children for the first time.

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