To investigate the effects of contacts with people from other cultures, students in nine Canadian secondary schools with differing ethnic population densities were compared. The first focus of the study was the development of cross-cultural understanding. Three measurement instruments were administered to eleventh grade English and history classes to show that cross-cultural contacts, under normal circumstances at least, seem to lead to increased cross-cultural awareness and understanding, but that the progression from understanding to acceptance is much more problematic and needs special nurturing. The second focus of the study was achievement. Information gathered by a questionnaire on students' extra-curricular involvement and their educational and occupational expectations and data on students' grades indicated that cultural diversity within a school fosters a higher level of academic achievement and more demanding educational occupational plans for the future. Footnotes and references are followed by appendices containing role-taking scoring guidelines, tables of scores of the three tolerance measures, and a report of some feedback on the study. (Author/KSM)
CULTURAL CONTACTS, ATTITUDES & UNDERSTANDING

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#119

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CULTURAL CONTACTS, ATTITUDES & UNDERSTANDING

Preface

We gratefully acknowledge the help of the Ontario Ministry of Education in conducting this study through provision of funding through its Grants-in-Aid of Educational Research Programme.

Special thanks are due to the teachers and students of nine City of Toronto schools -- Humberside Collegiate, Oakwood Collegiate, Monarch Park Secondary, Parkdale Collegiate, Central Technical School, Lawrence Park Collegiate, Malvern Collegiate, Riverdale Collegiate, and Danforth Technical School -- for their participation. We hope they benefited from the experience and that they will continue to benefit from the knowledge we gained.
A NOTE ON FORMAT

We attempted to prepare this report in as readable a form as possible without sacrificing scientific accuracy. For some readers, the abstract, which immediately follows this section, may contain all the information they require. For those interested in a more in-depth discussion of the procedures, results, and implications of the study, a general text is provided. Finally, for the professional researcher, technical details and statistical results are contained in an extensive series of footnotes and several appendices inserted after the text so as not to interfere with the flow of the material. It is anticipated that most readers will not attend to these.
ABSTRACT

By comparing students in secondary schools having a relatively large proportion of New Canadians with students in similar schools having fewer New Canadians, it was possible to investigate the effects of contacts with people from other cultures.

The first focus of the study was the development of cross-cultural understanding and favourable attitudes toward other cultures and groups. The conclusions can be summarized as follows:

CONTACT → UNDERSTANDING → ACCEPTANCE

The diagram is meant to express the idea that cross-cultural contacts, under normal circumstances at least, seem to lead to increased cross-cultural awareness and understanding, but that the progression from understanding to acceptance is much more problematic and needs special nurturing.

The second focus of the study was achievement. The results indicate that cultural diversity within a school fosters a higher level of academic achievement and more demanding educational and occupational plans for the future.
CULTURAL CONTACTS, ATTITUDES & UNDERSTANDING

Toronto's schools represent a wide variety of cultural traditions, over 100 countries and 75 languages. Only half of all students in Toronto were born in Canada with English as their mother tongue; the other half, New Canadians, were either born outside of Canada or learned English as their second language. Assuming that a New Canadian brings to his school environment at least some of his cultural heritage, every student cannot avoid some contact with non-Canadian ways of life.

To assess some of the influences of these cross-cultural contacts, two groups of secondary schools were selected with different ethnic composition. One set of four schools has a majority of New Canadians, i.e. are high in ethnic density; the other set of five schools has a majority of Canadians, i.e. are low in ethnic density. Thus nine schools were studied. Eight of the schools were divided into four high density-low density pairs, each pair matched for both type of school (i.e. technical, academic, commercial) and average socio-economic status of the school.

High density schools, on the average, drew 65% of their students from New Canadian groups; low density schools drew 29% of their students from such groups. It is important to realize that the terms "high" and "low" are relative. In virtually any other city, Toronto's "low" density schools would be considered "high." However, comparing students in the two groups of schools does allow us to determine what, in general, the effect of density is.

In a high ethnic density school, a student has the opportunity to know students from many non-Canadian cultures and groups. The
Canadian student can meet New Canadians, and the New Canadian student can meet New Canadians from backgrounds other than his own.

We hoped to find that such contacts within the school lead to a better understanding of what culture is and how it affects thought and behaviour. With better understanding, we felt that greater tolerance for cultural differences might develop. Because these are, either directly or indirectly, important goals of our educational system, it is worthwhile to discover what contributions the students' peer group makes toward their realization.

Notice that we are concerned with two different products of cross-cultural contact -- understanding and acceptance. We felt that the former must precede the latter, i.e. that acceptance cannot occur without understanding. We can diagram the relationship among these variables as follows (where the arrow is read as "leads to"):

CONTACT ——> UNDERSTANDING ——> ACCEPTANCE

We were interested in the ultimate effects of cross-cultural contact on Toronto's citizens, and therefore chose to study Grade 11 students. Eleventh graders, we felt, would be fairly mature and thus representative of the end product of our school system, and yet the sample would not have been as biased by dropping out as if Grade 12 or 13 students had been chosen.

We also felt that the effect of the peer environment could only fairly be assessed by looking at those who had been in the environment for some time, and so only eleventh grade students who had been in the system since at least 1970 were included in the study. This decision had two important consequences: students we were studying had been in the system for at least two and a half years and we also had data on the ethnic background and the student's father's job status from a survey which had been conducted in 1970.
Within each school a specific subject area was selected for data collection with the co-operation of the head of that department. The decision was based both on the relevance of the research topic to the subject area, and on the number of students enrolled in the course. In most schools, English and history classes participated since they were most likely to be able to relate the research project to other parts of their curricula. Both students and teachers were encouraged to discuss the specific content and the general nature of the questionnaires we developed. Many expressed a great deal of interest in doing this. In general, reactions to the research were quite positive, especially when the teachers had some opportunity to learn about the project before actually participating. Many of the students also spontaneously expressed that they found the questions interesting and enjoyable.

Negative reactions also occurred. Students were often afraid that what they wrote would not be kept confidential, especially since student numbers were used as labels. A few students elected not to complete the questionnaires given to them because they felt it would serve no purpose. But in general, the level of co-operation was extremely high. In the few cases where teachers expressed negative attitudes, they had not been adequately informed and resented the loss of class time.

All questionnaires were administered, one class at a time, during December and January and were always completed within the class period. Two separate questionnaires were developed, one to measure understanding and the other to measure tolerance, and each was completed by half of the class at the same time.

A student's ability to understand other life styles was assessed by a cross-cultural role-taking test. Students were given a story about an event that took place in two cultures, and were asked to express how the
people in each situation might think and feel. In each story the first
culture was implicitly Canadian, the second, explicitly non-Canadian. For
each story, a role-taking score was assigned to indicate how well the writer
could project himself into the different characters' positions and cultures.
He had to recognize that a person's thoughts and feelings are influenced
both by cultural norms and by other persons in the situation. Two stories
were scored and a single score was assigned, either the average of the two
scores, or the single score if only one story was completed. A third story
was included to fill in time for those who chose not to write long responses.
This third story was very often not finished. The two stories which were
scored are presented below, together with some samples of high and low scoring
answers. Complete coding and scoring guidelines appear in Appendix A.
Appendix B contains tables of results for the study.

Story A
A mother of two children was offered an interesting job. Even
though her husband's income was barely sufficient to support the
family, she refused the offer. Pretend that you are this woman
telling your husband about your decision. Describe how you feel.
Imagine that you are her husband, and tell how you feel when you
hear your wife's story.

Suppose this happened in a community where every married woman
is expected to work and to help support her family. Pretend that
you are the woman in this second situation telling your husband
about refusing the job. How do you feel?

Again, pretend that you are her husband. How do you feel when
you hear your wife's story.

An example of a high scoring response:

Wife 1: I would feel that I was offered the job so I would have the
right to decide whether to work or not. If my husband was
angry I might be upset or hurt because he didn't respect my
decision.

Husband 1: I would feel hurt that she didn't take the job and yet
she knows how we are financially. I would try and talk
her into taking the job.

Wife 2: I would feel proud that I have refused the job. Then I
wouldn't be just doing what all the other ladies were doing
in the community.

Husband 2: I feel ashamed, I won't be able to face my friends. I'd
feel guilty.
An example of a low scoring answer:

Wife 1: I would be frightened because he might have wanted me to take the job but on the other hand I would think nothing of it because my husband probably doesn't want me to go to work but instead be a housewife.

Husband 1: Well if I the husband wanted her to go to work I probably would be upset but on the other hand if I didn't want her to go to work I would think that she had made the right decision.

Wife 2: Well in one way I could be frightened and in another way I would feel that I had made the right decision and I would stand up to it, but this would all depend on the kind of husband you have.

Husband 2: I would be mad at her for not taking the job but if she would stand up to me with her reasons, I could probably see why she did it.

Story B

A stranger who is very hungry while traveling through a community, enters a house through an unlocked door and raids the refrigerator. The houseowner finds him eating in his kitchen. Imagine that you are this houseowner, and tell how you feel when you find the stranger.

Imagine that you are the hungry stranger. Describe how you feel when the houseowner enters.

Suppose this took place in a community where nothing is owned individually, and all property belongs to everyone in the community. Again, pretend that you are a member of the household, and tell how you feel when you see the stranger.

Again, pretend that you are the stranger in this second situation. How do you feel when you are found?

An example of a high scoring answer:

Houseowner 1: Get out of here before I call the police!! Are you crazy or something. You've got a nerve to raid my refrigerator!! OUT!! Then I'll get vulgar.

Stranger 1: Scared and I'd get out of the house fast. (I won't have the guts to be in this situation.)

Houseowner 2: Oh, so you're hungry. Why did you come through the back, use the front door. Is there anything I can make for you. Everything of mine is yours.

Stranger 2: Thankful.

An example of a low scoring response:

Houseowner 1: May I ask what you are doing, at least you could have bothered to see if there was anybody inside and ask for some food. But since you have made yourself at home when you finish tell me. But next time you are hungry try asking.
Stranger 1: I don't want to steal anything, & please don't call the police I was so hungry and I found the door open that I could not resist it.

Houseowner 2: Oh no. You better get out of here before everybody comes, fast get lost.

Stranger 2: OK. OK. I'm going please don't call the police.

Differences between high scoring and low scoring answers may not be obvious on first reading; however, after some instruction, our two coders reached a high level of agreement in their scoring, and a few comments should help the reader to spot the crucial differences.

Both the high scoring and low scoring responses given here express feelings for both participants (i.e. wife-husband, homeowner-stranger) that we might expect them to have. The students were able to imagine how each might think and feel. But in the high scoring responses, there is a greater change in feeling from situation 1 to situation 2, reflecting the change in culture which has occurred. In the low scoring answers, both wife-husband pairs react in essentially the same way. In the high scoring response to Story B, homeowner and stranger 1 and 2 have different reactions to the taking of food which reflect the different community norms.

The second critical feature of a high scoring answer is that the reactions of the two participants in a setting are "coordinated." By this we mean that the wife's reaction, for example, is a response both to the situation itself and to how she expects her husband to react. This is seen most clearly in wife 1 of the high scoring response. She reacts to the situation by feeling justified in her decision to refuse the job, while at the same time she anticipates her husband's anger and is upset by it.

In the analysis, several factors were considered as potential contributors to role-taking ability: sex, father's socio-economic status, average school socio-economic status, student ethnic background (i.e. New Canadian or Canadian) and school ethnic density (i.e. high density or low density).
Sex and ethnic density were the only factors found to influence role-taking ability. Girls scored higher than boys. The other effect is more interesting since it confirms our expectation. Even though the relationship between school ethnic density and role-taking ability is small, it is in the predicted direction, and indicates that students from high ethnic density schools are better able to understand the feelings and thoughts of other people as well as the influence of cultural setting on these feelings.

Despite this finding, our general impression after reading the responses was that students, although able to understand other cultures, generally were unable to picture themselves as actually belonging to the societies described. Even when they recognized some social consequences of their hypothetical behaviour (e.g., what the neighbours would say), they did not feel personally affected by the different norms. Many felt that they would want to move out of the society, a position which would not likely be held by a group member who had grown up with the cultural rules. The following is an example of this reaction:

Wife 1: I just can't leave the children alone now they need someone to be there so they don't feel rejected or alone.
Husband 1: Yes I think your right the children need a mother now when there still young, we'll get through somehow.
Wife 2: We'll just have to move that's all.
Husband 2: Yes we should, besides I got a good offer for the house.

The second questionnaire was designed to determine whether a school's ethnic environment could influence attitudes. The fourteen items concerned decisions in a hypothetical community about whether or not to permit diversity in various aspects of life. The questionnaire and its introduction is presented below:
Introduction:

We are interested in the ideas that people have about what life in a community should be like -- what sorts of customs should or should not be allowed. Imagine that one thousand families, who are dissatisfied with life in their country, decide to leave and set up their own community on a large faraway island. There are many decisions that must be made, both before they leave and after they arrive, about the way of life they want to establish.

Assume that you are involved in making these decisions and check either a yes or no answer for each of the following questions. Be sure that you answer what you yourself think, and not what you consider might be the right thing to say. There are no right or wrong answers and this questionnaire does not assess your personality or intelligence. For each item space is provide for you to make additional comments, but this is optional.

1. Some of the families involved had recently arrived from Elsewhere (EW) and could not yet speak the same language as the others. Some people thought that they should not be permitted to join the Islanders. Should they be required to stay behind?

2. It was finally decided that they could go along. Some people then recommended that instruction in the schools on the Island be offered in both languages. Do you agree?

3. Even after becoming more fluent in the main language, EW adults want their children to maintain their EW tongue. Is this a good idea?

4. Several adults decide to live together and raise their children in common. In view of the fact that the rest of the people live in single families, should this be allowed?

5. In the EW community, men are responsible for the more rugged physical work and skilled trades. The EW people argue that boys can learn these responsibilities better at home than in school. School beyond age 12 is seen as more appropriate for girls who will, as women, be responsible for the care of children and the cultural activities of the home and community. Should EW boys be released from school at age 12, even though the general school leaving age is 16?

6. Laws against any nonmedical use of drugs are being violated by one part of the population who claim that drug use is an intimate part of their religious experience. Should this religious sect be allowed to continue their rituals involving drugs?

7. Several families in a self-sufficient farming community won't pay income tax because any contribution to the central government violates their religious principles. Should they have to pay taxes?
8. Vaccination against smallpox and polio is compulsory for all children on the Island, but some people don't think their children need this treatment. Should the children be vaccinated against their parents' wishes?

9. Public health regulations were adopted that all fresh foods should be kept refrigerated until sold. One group of greengrocers ignored this law and continued their tradition of selling foods in their natural state at open air markets. Should the greengrocers be allowed to continue their selling practices?

10. After several decades without anyone immigrating to the Island, and after the community is settled, a request comes from over-populated Mars to let several Martian families settle on the Island. Should the Martians with their different patterns of life be allowed to join the Island community?

11. One group of Islanders suggested that the Martians could be given jobs which the Islanders themselves were unwilling to take. Is this a good idea?

12. The Martians finally do arrive. Their children attend regular schools and very quickly begin to adopt the values and behaviour of the Islanders. Martian parents fear the loss or rejection of their tradition. Are the Islanders right in encouraging Martian children to conform to their way of life?

13. Martians are unable to buy the style of clothing they were accustomed to having because Island manufacturers do not produce it. Should the Martians have to conform to the dress patterns of the Islanders?

14. A law against smoking was adopted by a narrow margin but many people ignored the order and continued smoking. Would you recommend enforcing the new legislation?

Students could indicate that they felt the diversity should be permitted or that it should not. There was also space for elaboration; although this was optional, many students chose to comment on their choice of "yes" or "no." These additional comments were sometimes used to qualify their original answers, and the scoring system was designed to take this into account. Thus two points were given for a tolerant answer, one for a qualified yes or a qualified no answer and zero points for an intolerant choice. A total score for the fourteen questions reflects the extent to which a student would tolerate diversity in general. A total attitude scores for the 712 students were analyzed in the same way as role-taking ability, but the results were different.
Three factors contributed significantly to the tolerance for diversity scores: sex, average school socio-economic status, and ethnic background of the student. Girls were more tolerant than boys; we have seen before that they were also more understanding. Students from schools with higher socio-economic status scored higher than those from lower status schools. Finally, New Canadians accepted diversity more than Canadians.

Because the effect for student background was significant, separate analyses were done for the two groups. The analysis for New Canadians revealed that school ethnic density was important. New Canadians in high ethnic density schools had more favourable attitudes toward diversity than did New Canadians in low density schools. This was not true for Canadians. It is interesting that only the attitudes of New Canadians should be influenced by increased contacts with members of other groups while the level of understanding, as indicated by role-taking ability, was influenced for both Canadians and New Canadians.

Of course there is no inconsistency between the role-taking and tolerance results. Understanding would include recognizing both positive and negative features of different cultures. Gaining a realistic impression of various cultures might be expected to increase tolerance in some areas since false stereotypes would be eliminated, but it would not necessarily result in blanket approval of all aspects of different ways of living.

We might modify the diagram on page 2 as follows, with the question mark indicating that the progression from understanding to acceptance, which may be hindered, or facilitated by the presence of other factors, does not necessarily occur. One such factor is undoubtedly personal experience.

CONTACT —> UNDERSTANDING —> ACCEPTANCE

It is possible that the New Canadian's personal experience in actually adapting to a new culture makes him less resistant to attitude change and helps him to proceed from understanding to acceptance.
The finding that New Canadians have greater tolerance for diversity than Canadians is probably also due to the personal experience of the New Canadian. Looking at the scores on the tolerance questionnaire item by item, it becomes evident that, in general, New Canadians only score higher on those items which portray situations in which they might have found themselves at one time or another. The outstanding examples of this are questions 1, 2, and 3 which refer to the general issue of language rights. On the other hand, questions 4, 5, and 6, portraying specific cultural practices which no student is likely to have experienced himself, do not differentiate between Canadians and New Canadians. Thus the greater tolerance of the New Canadian over the Canadian seems to stem from the New Canadian's very personal experience with culture. However, because of this experience he is also able to benefit from the vicarious cultural experience that is available in a high density school.

We also wanted to look at some measure of actual behaviour rather than just paper and pencil tests of understanding and tolerance. The test we used is called the Prisoners' Dilemma Game, a game which has frequently been used to assess personality and attitudinal variables.

In this game there are two players, each with two choices: to play Red or Green. In each round of the game, each player makes his choice and receives points which depend on the choices of both him and his partner. Figure 1 shows the payoff matrix that we used in this study. The numbers represent the number of points that each player gets for the different combinations of choices. Player 1's payoff is the first entry in each cell. Thus, for example, if both players choose Red, both players win 3 points.

<table>
<thead>
<tr>
<th></th>
<th>Player 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>3,3</td>
</tr>
<tr>
<td>Green</td>
<td>5,0</td>
</tr>
<tr>
<td>0,5</td>
<td>1,1</td>
</tr>
</tbody>
</table>

Figure 1. Payoff matrix for the Prisoners' Dilemma Game
Conflict occurs because the choice which offers one player the maximum payoff gives the other the minimum. Player 1 can win the most by playing Green when Player 2 plays Red. He then wins 5 points while Player 2 gets nothing. Player 2 would also win the most, i.e. 5 points, by playing Green. But if both players choose Green, they will each win only one point. Obviously, the best choice all around is to play Red; then each player wins a moderate amount. But in choosing Red, a player must trust his opponent not to double-cross him and choose Green while he chooses Red, thus leaving him nothing.

The game was played for 50 rounds. Players made their choices simultaneously and without talking to one another. In fact, however, there was only one player in each game. A player's actual opponent was the Experimenter choosing a predetermined sequence of moves, a sequence which usually results in an average level of co-operation of 50%, therefore leaving room for individual variability to show up in either higher or lower levels of co-operation.

However, players were told that they were playing against a real partner. Half were told that the partner was another student who had always lived in Toronto (i.e. Canadian); half were told that the partner had only recently arrived in Canada (i.e. New Canadian). As in other aspects of this study, no specific ethnic group was mentioned.

After the 50 rounds, each player was asked to describe what he thought his partner was like by filling in a checklist, choosing which of 24 favourable and 23 unfavourable adjectives he felt described his opponent.

Sixty-four students, selected randomly from the schools in the study, played this game, and 4 factors were under study: school ethnic density, high or low; player's background, Canadian or New Canadian;...
supposed ethnic background, same as or different from the player; and sex. The only consistent effect was for partner, where it was found that higher levels of co-operation were directed toward partners of the same than different backgrounds, i.e. Canadians co-operated more with Canadians and New Canadians co-operated more with New Canadians. This finding indicates that there is some tendency among Toronto students to treat other groups differently from their own.

But are students from high ethnic density schools more favourably disposed toward partners of different backgrounds than students from low density schools? The answer is "yes" for New Canadians and "no" for Canadians. New Canadians in a high density school co-operate as much with partners from a different background as they do with partners from their own background. This is not true for Canadians, who show no differences between high density and low density schools and consistently co-operate more with members of their own group. Thus we have a repetition of the pattern found on the tolerance for diversity questionnaire where New Canadians are affected by the density variable and Canadians are not. Looking at the adjective checklist, we found no differences in the way that students viewed their hypothetical partners, either as a result of their own ethnic background, or the supposed ethnic background of their partner, or the ethnic density of the school. This is a surprising and encouraging result, indicating, as it does, that Toronto students are not willing to ascribe negative characteristics to members of other groups. Canadians and New Canadians were alike on this characteristic; both had equally good opinions of themselves as of others.

We may ask why this is the case when both groups were more willing to co-operate with partners from a background similar to their own than with partners from a different background (except for New Canadians in high density schools). A possible answer is that the Prisoners' Dilemma Game required...
trust while the adjective checklist requires only good feeling. Although a person may have matured to the point where he no longer harbours ill will toward other groups, he may not necessarily feel comfortable in actually interacting with them. Co-operation on the Prisoners' Dilemma Game requires, not only that a person not be suspicious of his partner, but also that he know what his partner's expectations and behavioural patterns are. Indeed the student with more cross-cultural contacts is in a better position to realize how diverse the behavioural patterns from different cultures actually may be.

So far, the consequences of having a majority of New Canadians in a school appear to be favourable. No negative influences were found, and understanding and attitudes (at least for New Canadians) seem to improve with additional contact.

Thus the data we have considered so far suggest that New Canadians are a real asset to the educational system. But does the New Canadian student lose out by associating with so many other New Canadians? In order to answer this, a brief questionnaire was designed asking for students' extra-curricular involvement and their educational and occupational expectations. We also had data on grades earned in the first part of the school year.

An earlier study reported that second generation Canadians had higher levels of academic achievement than did Canadian students. The same was true in the present study. New Canadians as a group had higher average grades than Canadians. Furthermore, students in high ethnic density schools had higher grades than students in low ethnic density schools. Evidently, the academic orientation of the New Canadians had a positive influence on the Canadians.
There were also no indications that New Canadians have lower goals. In fact, their aspirations are significantly higher than Canadians. School ethnic density, again, influences these characteristics. In high ethnic density schools, students have higher educational and occupational expectations, and take part in more extra-curricular activities than do students in low ethnic density schools.

Perhaps the most significant interpretation of these differences is the lack of negative results. New Canadians are not socially isolated and have adopted the educational values of the dominant society. It is possible that New Canadians place such great value on education because they see it as a means to success. When most of the students in a school are New Canadians, and achievement oriented, Canadians are also encouraged to raise their standards.

That is, rather than New Canadians being better off when surrounded by Canadians, as might be expected, the reverse is true. New Canadians provide a generally positive stimulus for each other and for Canadians.

Since all Toronto schools are places where the opportunity for cross-cultural contact can be a positive educational resource, there is no reason it should not be used. For example, in low ethnic density schools the lack of cross-cultural contacts could be compensated for by additional discussion, perhaps calling on the students themselves to inform their peers about their personal cultural experiences and differences. The tolerance for diversity and role-taking questionnaires could be useful instruments in stimulating this type of discussion. The role-taking exercise can easily be extended to other situations which the students themselves have experienced.
It has been suggested that it might be helpful for new arrivals in Canada to be paired with Canadians to aid in their initial acclimatization to a strange culture and language. A buddy system of this type might have an additional advantage for the Canadian, enabling him to broaden his own experiences by learning from his New Canadian friend. The results of the present study suggest that this would be the case.

However, there is a danger in forcing cultural education and contacts. Making students aware of differences which they have previously accepted without question can have unfavourable side effects. Busing in the United States to desegregate schools is an example of forced relationships which have not had the miraculous results that its instigators hoped for\textsuperscript{36}. It was partly for this reason that specific ethnic groups were never mentioned in any of our questionnaire items.

The main thrust of the busing experiments is that the atmosphere in which integration occurs is crucial to its success. Despite possible drawbacks, an aware and accepting staff can do much to augment the natural effects of the peer group. The outcome can be a set of schools which are one step closer to becoming centres of international studies where people from many countries can learn from each other to understand and appreciate their differences and similarities.
FOOTNOTES

1. Wright, E. N. Student's background and its relationship to class and programme in school (The Every Student Survey), 1970.

2. The percentage of New Canadians in every high density (high D) school was greater than that in low density (low D) schools and the average percentages were 65% and 29% respectively. Also see note 3.

3. Each student's socio-economic status (SES) was determined by coding his father's occupation according to Blishen's Scale (1967). These values were recoded on a condensed scale and averaged to provide the socio-economic status for the school. This information was obtained from the survey mentioned in footnote 1.

The fifth low D school, unmatched, was included to increase the range for school SES. No high D school existed at this same SES. The actual percentage of New Canadians and the average SES are presented for each school in the table below.

<table>
<thead>
<tr>
<th>School</th>
<th>Ethnic Density</th>
<th>% New Canadians</th>
<th>Average School SES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 A</td>
<td>high</td>
<td>67</td>
<td>3.02</td>
</tr>
<tr>
<td>B</td>
<td>low</td>
<td>32</td>
<td>3.63</td>
</tr>
<tr>
<td>Pair 2 C</td>
<td>high</td>
<td>66</td>
<td>3.82</td>
</tr>
<tr>
<td>D</td>
<td>low</td>
<td>27</td>
<td>3.94</td>
</tr>
<tr>
<td>Pair 3 E</td>
<td>high</td>
<td>64</td>
<td>4.07</td>
</tr>
<tr>
<td>F</td>
<td>low</td>
<td>43</td>
<td>3.98</td>
</tr>
<tr>
<td>Pair 4 G</td>
<td>high</td>
<td>62</td>
<td>4.78</td>
</tr>
<tr>
<td>H</td>
<td>low</td>
<td>21</td>
<td>5.42</td>
</tr>
<tr>
<td>I</td>
<td>low</td>
<td>21</td>
<td>7.22</td>
</tr>
</tbody>
</table>

4. It turned out that in one matched pair of schools Italian students had more opportunity for contact with New Canadians outside of their own group in the LoD than in the HiD member of the pair. In this particular HiD school, 39% of the total student body is Italian; since all New Canadian groups together comprise 64% of the student body, only 25% (64% - 39%) of the student body is non-Italian New Canadians. In the matched LoD school, however, 39% of the student body is non-Italian New Canadians. We checked whether this same type of reversal occurred in any of the other school pairs with any of the five largest ethnic groups -- Italian, Portuguese, Greek, Chinese, and Ukrainian -- and no other instances of this type of reversal were found. Therefore, with the one exception noted above, the density measure used in this study reflects the opportunity that both New Canadians and Canadians have for cross-cultural contacts.
5. Although ethnic environment was measured for the school as a whole, it has a somewhat different meaning for the Canadian and New Canadian in a particular school. For the Canadian, the density measure represents the proportion of students in the school from all groups other than his own (i.e. all New Canadians). For the New Canadian, however, it is the proportion of students in the school from all groups other than his own except for those who are Canadian. From the perspective of the New Canadian, Canadians constitute an ethnic group. However, they have not been considered such for the purposes of this study. There are so many Canadians in each school, and so many opportunities for contact with Canadian culture outside of school, that the exact proportion of Canadians in a school is felt not to be a significant variable.

If Canadians were considered to constitute an ethnic group to the New Canadian, the differences in ethnic environment between HiD and LoD schools in the study would vanish. With very few exceptions, the percentage of students from any one New Canadian group in a school is less than 10%. Thus there could be no more than a 10% difference in the ethnic environment of a matched pair of schools, a difference which is too small to produce an effect. Failure to demonstrate that ethnic environment has an effect on New Canadians could be interpreted as evidence of the falseness of this working assumption. However, as will be seen, ethnic environment does have an effect, and the assumption is therefore allowed to stand.

6. More favourable attitudes toward different ethnic groups have been positively linked with increased contact by several investigators (e.g., Reigrotski & Anderson, 1959-60; Khatena, 1970; Basu & Ames, 1970).


8. The information available was collected in a Toronto-wide survey (Wright, 1970). Using this data caused all students transferring from other boards, countries or separate schools after Grade 8 to be excluded from the sample. About 40% of all questionnaires collected were eliminated from the study by this procedure.

9. Student numbers were necessary to match questionnaires with student background information.

10. The cross-cultural role-taking test was adapted from a role-taking test developed by Feffer & Gourevitch (1960).

11. For each pair of characters in a cultural setting, a score \( P \) was given for the extent to which the thoughts and feelings of each character were elaborated and co-ordinated with one another. Thus two \( P \) scores, \( P_1 \) and \( P_2 \), were assigned for each story. The ability to change thoughts of feelings for each character in the two different cultures was indicated by two \( R \) scores, \( R_1 \) and \( R_2 \). Because both aspects of the scoring were felt to be important indications of the more general role-taking ability, the multiplicative formula below was applied to derive a single score:

\[
\text{Total score} = R_1(P_1 + P_2) + R_2(P_1 + P_2) = (R_1 + R_2)(P_1 + P_2)
\]

Thus to score highly, all four individual scores had to be high. An exact scoring code is elaborated in Appendix A.
Intercoder reliability between two coders as measured by Pearson's product moment correlation was .91.

Role-taking stories were not judged for the appropriateness of the responses. The coders did not have a set of "acceptable" answers from which to assign scores.

Verbal productivity was also unrelated to role-taking ability. In a randomly selected sample of 25 questionnaires, the Pearson product moment correlation for Story A was .26 and for Story B, -.12, both of which are insignificant. That is, using more words did not consistently lead to higher scores. This feature was considered because Feffer and Gourevitch did find a significantly positive correlation between verbal productivity and scores.

12. Scores on the two stories were significantly related (r = .19, p < .001) as measured by Pearson's product moment correlation. In view of the fact the role-taking ability should generalize across situations, the relationship is rather weak.

13. Several stories were pilot tested with Grade 10, 11, and 12 students and the two which yielded the greatest diversity of responses and scores were selected for the final form of the test. Comments were invited at this stage and most of these indicated positive reactions to the task.

14. These five variables were entered into a stepwise regression analysis in this order, so that the effect of school ethnic density could be determined over and above the other factors.

Since Feffer had also found role-taking ability to be correlated with other measures of intelligence, and since grade point average or academic achievement is correlated with intelligence, its relationship with role-taking scores was measured. When no significant correlation was found, no attempt to control for grades was made, and grades were not included in the regression analysis.

15. For sex, beta = .08 and for density, beta = -.09. Beta (normalized beta weight) is the regression coefficient which would have been obtained if all scores had been converted to normalized scores (mean = 0, standard deviation = 1) prior to the regression analysis.

16. This questionnaire (adopted from Adelson & O'Neil, 1966 and Adelson, 1968) was also pretested, with Grade 10 and 12 students. All 14 items provided a sufficient variety of responses that none were omitted from the final form.

17. This scoring scale does not differentiate between qualified "yes" and qualified "no" answers because they were virtually impossible to separate. Students might check both yes and no, or neither, and include instead a written qualified answer stating their lack of commitment to either alternative. Fewer than 10% of the responses to any item fell in this category.

In some cases, the written response clearly contradicted the choice of yes or no and the written portion was then used to decide on a score.
Before deciding which items to include for analysis, an item analysis was performed. Each item was found to contribute significantly to the total score. The upper and lower 27% of the total scores were selected and the two groups were compared on individual item responses. Since on every item high scorers were more tolerant than low scorers ($r = .27$ to $.57$), all items were included in the total score.

Again, grade point averages were not related to tolerance scores and were excluded from the regression analysis.

For sex, beta = .10; for school SES, beta = .10 and for ethnic background, beta = .10.

For ethnic density for New Canadians, beta = -.13.

Swingle, 1969.

The partner's response strategy was a 90% lag -1 condition; that is, on 45 out of the 50 trials, the partner's choice was the player's choice from the previous trial.

The analysis of variance design was a $2 \times 2 \times 2 \times 2$ completely factorial design with 4 subjects per cell. Sex was included only as a controlling factor since previous studies have often found differences between males and females.

$F_{1, 48} = 4.18, p < .05$.

The three way interaction between ethnic density, background and partner's background was also significant ($F_{1, 48} = 4.05, p < .05$). The discussion which follows in text deals with significant components of this interaction.

$F_{1, 48} = 6.51, p < .05$, for New Canadians.

Prisoners' Dilemma Game can also be interpreted in another way. Cooperation in this game might be a defensive strategy to be employed when one is unsure of how to behave. Competition might therefore be viewed as the sign of a healthy friendship since true friends would not be afraid to compete. Accordingly, increased competition need not be interpreted as a sign of contempt but may be a positive sign. However, the fact that no differences were found in response to the adjective check list argues against this interpretation.

Three separate aspects of the adjective list were investigated: the total number of adjectives checked (the tendency to make inferences of any kind about an unknown person), the total number of favourable adjectives checked (the tendency to make positive inferences), and the proportion of all adjectives checked that were favourable (the relative tendency to make favourable judgements).

Responses to the adjective checklist were analyzed in the same way as the number of co-operative choices.
31. When counting extra-curricular activities, part-time jobs were included and all sports activities were taken together as one activity. This latter decision was based on the relatively short duration of most sports, especially at the intramural level. Furthermore, since the same persons tend to take part in all sports the number of interpersonal contacts is not necessarily much greater for individuals who are on many sports teams.

32. Wright, 1970.

33. Results of the regression analysis for grades:
   - **Sex:** \( \beta = .20 \), girls higher than boys;
   - **Student SES:** \( \beta = .09 \), individuals with higher SES have higher grades;
   - **School SES:** \( \beta = .14 \), schools with higher SES have higher grades;
   - **Background:** \( \beta = .08 \), New Canadians have higher grades than Canadians;
   - **School density:** \( \beta = -.12 \), high D schools have higher grades than low D schools.

34. Results of regression analysis for level of education expected:
   - **Student SES:** \( \beta = .09 \), higher SES individuals have higher expectations;
   - **School SES:** \( \beta = .38 \), students from higher SES schools have higher expectations;
   - **Background:** \( \beta = .08 \), New Canadians have higher expectations than Canadians;
   - **School density:** \( \beta = -.17 \), students from high D schools have higher expectations.

Results of regression analysis for level of occupation expected:
   - **Student SES:** \( \beta = .07 \), students with higher SES expect better jobs;
   - **School SES:** \( \beta = .24 \), students from schools with higher SES expect better jobs;
   - **Background:** \( \beta = .10 \), New Canadians expect better jobs than Canadians;
   - **School density:** \( \beta = -.12 \), students from high D schools expect better jobs than students from low D schools.

Results of regression analysis for extra-curricular activities:
   - **Sex:** \( \beta = .30 \), girls take part in more activities than boys;
   - **Student SES:** \( \beta = .07 \), students with higher SES take part in more activities;
   - **School SES:** \( \beta = .13 \), students from high SES schools take part in more activities;
   - **School density:** \( \beta = -.10 \), students in high D schools take part in more activities.
None of the effects in the present study were very large, possibly for a number of reasons. The measures used might not have been sensitive enough to pick up larger differences that did exist. The students might have reached an asymptote in their level of performance. Low density schools were low only relative to high ethnic density schools, and cross-cultural contacts could have been numerous enough in both sets of schools to result in high levels of tolerance and understanding. Finally, the measure of cross-cultural contacts used was very gross, providing only the potential number of contacts. It is certainly possible for individuals even in a high density school to keep their cross-cultural contacts at a minimal level.

Armour, 1972.
REFERENCES


Armor, D. J. The evidence on busing. The Public Interest, 1972, pp. 90-126.


Wright, E. N. Student's background and its relationship to class and programme in school (The every student survey). Toronto: The Board of Education for the City of Toronto, Research Department, 1970, (#91).
APPENDIX A

Role-Taking Scoring Guidelines

P Score -- measures ability to adopt a perspective; look for expression of emotions, ideas -- seeming appropriateness of the response is irrelevant -- score assesses portrayal of the two characters in one situation

R Score -- measures ability to recognize a change in framework and to operate according to this change -- change must be explicit (scorer) -- score assesses the portrayal of one character in two different situations

P Scoring

1 -- simple restatement; no thoughts or feelings expressed for either character -- question is not answered -- additional facts, descriptions or mere embellishment of original story are given

2 -- simple restatement for one character with elaboration for other, i.e. thoughts, feelings, reasons or justification for behaviour are given; there may be a reference to moral grounds

3 -- elaboration for both characters or for one character plus "I agree" for second or "same as above"

4 -- elaboration for both characters with explicit reference or sensitivity to the other character's thoughts or feelings -- expression of agreement with the other character's position alone is not sufficient

R Scoring

1 -- no sign of change in feelings or thoughts -- words of persistence - still, again, also - alone do not indicate change

2 -- recognition that situation 2 is different from 1 but shows no sign of a change in feelings or thoughts because of this

3 -- explicit recognition of difference in situation through change in feelings or thoughts that would result from the situational change
Miscellaneous

If feelings slightly different, or one set has extra words that could still fit into either set, there is usually assumed to be no change, i.e. R score = 1, e.g., mad/mad and scared.

When in doubt, give the lower R score.

In Story B, if the stranger is unaware that situation 2 is communal, but the writer is aware that stranger would act differently if he knew, assign R = 2; if the writer is both aware and states what the different reaction would be, assign R = 3.

Can role score be different if no elaboration is present? Not generally (R = 1) since criteria for R score = 3 do not apply.

Tone -- sometimes, although the ascribed to an actor in the two situations, are similar, there seems to be a difference in tone. This tone can be taken into account in scoring if the two coders can agree on what the tone implies.

Humour -- score if possible, even if cartoons are drawn.

"I agree..." -- affects P score and R score. For P score, if 1st character elaborates and is sensitive to other's feelings, P = 4; without sensitivity, P = 3. For R score, \( R_1 = 3, R_2 = 3 \) if the statements actually make sense for second character, so R score would depend on individual case.

Rejection -- writer clearly understands new situation but rejects it, e.g., I wouldn't refuse the job; I wouldn't accept date, etc. Procedure: lower score since writer has not adopted a perspective and not put himself into the different role, so P = 1, R's = 1.

Misreading -- writer has assumed that character's actions were other than those given in situation - Code 9's.

Blanks -- code 0's

Uncodeable -- code 0's

Some Examples

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<tr>
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</tr>
<tr>
<td>P = 4</td>
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B -- "Get out of my house!" fight ensues.
   "I am slain" (merely behavioural reaction)

B -- terrified, alarmed, frightened
   "I'm sorry I scared you..." (if stranger's response is appropriate in this circumstance - houseowner really is scared)
### TABLE 1

**ROLE-TAKING SCORES**

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<th></th>
<th>Mean</th>
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<th>Mean</th>
<th>Standard Deviation</th>
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### TABLE 2

**TOLERANCE FOR DIVERSITY SCORES**

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<th>Mean</th>
<th>Standard Deviation</th>
<th>Number of Students</th>
<th>Average</th>
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<td>Mean</td>
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Because feedback was considered to be an important aspect of the research project, the following preliminary report of some of the results of this study was sent out at the end of the school year to the students and teachers who had participated (item numbers refer to the items in the tolerance for diversity questionnaire).

THE EFFECTS OF CROSS-CULTURAL CONTACTS

During the past school year, the grade eleven students in your school took part in a study of the effect of contacts with people of different cultural backgrounds. This study was done by the Toronto Board of Education's Research Department. This is a brief report to inform all those who participated of the preliminary results. (A full report will be available later this year on request from the Research Department.)

The nine schools involved in the study were divided into two groups; four had a lot of students from various ethnic groups (high ethnic) and five had fewer (low ethnic). When a school has more members of different ethnic groups, each student potentially has more contact with different cultures. We were interested in whether the ethnic composition of a school influences the students' ability to understand how people from other cultures might feel and behave in various situations, and influences the students' tolerance for cultural differences.

To measure understanding, a role taking test was completed by half of the students. Students were told a story about an event that took place in two cultures, and asked to express how the people in each situation would think and feel. The maximum score was given when the student was able to understand how the people in the different cultures would feel.

Of the three stories, only the first showed a difference between the two sets of schools. In this story, a wife refuses to take an interesting job even though the family could use the extra money. In the one culture, women with young children generally do not work and in the other, they do. Students in the high ethnic schools were better able to understand how these two different women and their husbands might feel.

In both the hungry stranger and the dating stories, the average scores were not significantly different for the two sets of schools.

A second questionnaire, completed by the rest of the students, contained fourteen items pertaining to tolerance for cultural differences.
Only three items evoked differences between schools that were high and low in ethnic density. The first was the question of maintaining a second language (item #3) -- 76% from high ethnic schools were in favour of an ethnic minority group retaining its language, compared with 68% from low ethnic schools. Overall, 68% from all schools would support school instruction in a second language to assist the minority group (#2). The second discriminating item also showed the high ethnic school students more open to diversity. 47% of these discouraged conformity to the dominant culture by a minority group (#12), while 37% of the low ethnic school students took this point of view. Whether illegal religious drug use could continue (#6) was the third distinguishing item, but in the opposite direction from the two general questions. Fewer high ethnic school students (27%) than low ethnic school students (38%) would consent to this practice.

To the remaining ten items, both sets of schools showed the same responses. Health was considered too important an issue to permit individuals to adhere to their tradition. Specifically, 74% decided that food should not be sold in open-air markets without refrigeration (#9) and 86% felt that children should be vaccinated even against their parents' wishes (#8).

Similarly education and taxation guidelines should not be individually determined. Only 22% would agree to boys' leaving school early in accordance with their cultural heritage (#5), and only 15% would exempt a self-sufficient community from paying taxes (#7).

The question of permitting immigration was interesting. 84% would admit a different language group (#1) but only 69% would allow a hypothetical group of Martians to join the community once it had settled (#10). Furthermore, 41% were willing to give the less desirable jobs to the Martians (#11), and 49% suggested that Martians would have to adopt the dress patterns of the dominant group (#13).

On the remaining two specific questions, individual diversity would be allowed. Communal living was endorsed by 69% of the students (#4), and 63% would not enforce a "no smoking" regulation which was widely ignored (#14).

In general, most students were receptive to cultural diversity, except on specific issues where the health and welfare of individuals could be involved. When the questionnaire was viewed as a whole, the school's ethnic density did not affect the degree of tolerance for cultural diversity.

(Some copies of the questionnaires were included for reference.)