

# Ethnicity, Teachers' Expectations, and Student Performances in Ontario Schools

Rodney A. Clifton<sup>1</sup>

st. john's college, university of manitoba

Jeffrey W. Bulcock

memorial university of newfoundland

This research examines the extent to which differences in achievement between Yiddish-speaking and French-speaking students are accounted for by the expectations of their teachers. A causal model incorporating both normative and cognitive expectations of teachers is used. The results suggest that teachers base their expectations on the intellectual ability and previous performance of students rather than upon their ethnicity. Moreover, the data indicate that expectations affect the teachers' assigned grades to a greater degree than they effect achievement on standardized examinations.

Dans quelle mesure les différences entre les résultats scolaires d'étudiants parlant Yiddish et d'étudiants francophones s'expliquent-elles par les attentes des enseignants? Tel est le sujet de cette recherche qui fait appel à un modèle causal intégrant les attentes normatives et cognitives des enseignants. Les résultats donnent à penser que les enseignants fondent leurs attentes sur les aptitudes intellectuelles et le rendement antérieur des étudiants plutôt que sur leur identité ethnique. Les données recueillies indiquent en outre que les attentes des professeurs ont davantage d'incidence sur les notes accordées que sur les résultats obtenus lors d'examens normalisés.

Within Canada, the examination of stratification and mobility has traditionally been related to both class and ethnicity. In fact, Porter (1965) argued that ethnicity was a major cause of class structures. It has been argued by Porter and others that there are two ways ethnicity either hinders or facilitates upward mobility. The most common theme has been that ethnic subcultures shape the development of abilities and aspirations in order to preserve culture-specific values and attitudes. That is, children socialized within ethnic subcultures develop abilities and aspirations which predetermine educational achievement and which, in turn, ultimately match certain occupational status positions within society (Blisshen, 1970, p. 120; Breton & Rosenborough, 1968, p. 4).

The second most common theme has been that the channels for upward mobility have been blocked for certain ethnic groups. That is,

certain ethnic groups have not been able to move up the socioeconomic status system because members of more established groups have discriminated against them (Darroch, 1979, p. 3; Li, 1978). In this respect, a number of American scholars (Bowles & Gintis, 1976; Carnoy, 1974; Dusek & Joseph, 1983; Rist, 1970) have argued that schools play a major role in perpetuating the existing social stratification system, in part because teachers assume that children from certain ethnic groups and middle social class positions can learn more and faster than those from other ethnic groups and lower social class positions.<sup>2</sup>

The second theme has not been examined explicitly to determine its relative importance in comparison with the first theme. Nevertheless, empirical evidence gathered in the 1950s (Porter, 1965, p. 90) indicated overrepresentation of British, Jewish, German, and other northern European groups in the upper levels of the occupational structure in Canadian society and underrepresentation of French, Italian, and Native Indian and Inuit groups. More recent research on ethnic immigrants in Toronto (Li, 1978), has illustrated that Jewish and British adults have very high educational and occupational achievement and that their occupational achievement was largely the result of educational achievement. Similarly, previous research on the data used in the present study (King, 1968) showed that Yiddish-speaking students had much higher performances and a much higher retention rate than Dutch-, English-, Hungarian-, and Polish-speaking students, while the performances and the retention rate for French-speaking students were substantially lower than for all other groups. The differences between the ethnic groups were maintained even when size of community, father's and mother's education, father's occupation, and the number of children in the family were controlled.

The previous research suggests that, even though ethnicity has been an important factor in the analyses of the occupational stratification system in Canada, it has not generally been included in the analysis of how education fits into the occupational stratification system (Breton, Burnet, Hartmann, Isajiw, & Lennards, 1975, p. 83; Darroch, 1979, p. 17). In this respect, Darroch has stated that his reanalyses of Porter's data

reinforce the ... conclusion that the question of the salience of ethnicity for stratification requires a good deal more specification than is implied by the broad notion of a country in which ethnic pluralism is a primary aspect of class and status structures. (1979, p. 13)

The present study attempts to be more specific by examining both of the themes as they relate to ethnic stratification within the educational system. It is hypothesized that ethnicity has both direct and indirect

effects upon educational performances. It may be related to ability, aspirations, and previous performances, and the educational system may simply sort students on these criteria. Moreover, teachers may hold differential expectations based upon ethnicity, and these expectations may affect the performances of students. Specifically, the main concern of this research is with the relationships between ethnicity, teachers' expectations, and educational performances when the effects of ability, aspirations, and a number of other theoretically relevant variables have been considered.

#### A MODEL OF TEACHERS' EXPECTATIONS

Previous research on teachers' expectations has been largely concerned with bivariate relationships rather than multivariate relationships (Dusek & Joseph, 1983, p. 342). That is, researchers have often examined the effects of certain ascribed statuses, such as ethnicity or socioeconomic status, on the expectations of teachers, but they have often neglected to control for important achieved statuses such as the ability, aspirations, and previous performances of the students which may covary with the ascribed statuses (see Clifton, 1981a; 1981b; Clifton, Perry, Parsonson, & Hryniuk, 1986). Thus, it is important to develop and test a more comprehensive model of teachers' expectations which separates the effects of ascribed statuses from those of achieved statuses (Brophy, 1983, p. 637). In this research, teachers' expectations which are based upon ethnicity, sex, and socioeconomic status are distinguished from teachers' expectations which are based upon intellectual ability, assigned grades, and academic aspirations.

In an extensive review of 345 studies, Rosenthal and Rubin (1978) suggested that the expectations of experimenters for the behaviour of their subjects and the expectations of teachers for the performance of their students are communicated both verbally and nonverbally. In most cases, when researchers or teachers expect certain levels of performances from their subjects or students, they communicate these expectations in such a way that neither the researchers, teachers, subjects, nor students know exactly how the information is transferred (Rosenthal, 1976). Moreover, the subjects and students often do not know how or why they internalize the expectations so that their behaviour is affected.

A number of researchers (Brophy, 1983; Brophy & Good, 1970; Rosenthal, 1976) have postulated theoretical linkages which may help explain how expectations operate within classrooms. First, it is postulated that a climate is established within classrooms so that differential expectations for performances are established and accepted by both the

students and the teachers. Second, the teachers develop expectations about the students which are based upon both the ascribed and the achieved statuses of the students. Third, these expectations influence the teachers' behaviour towards the students. Fourth, the students interpret the behaviour of the teachers. Fifth, in response to differential treatment, each student tends to exhibit behaviour which complements and reinforces the teachers' expectations. Sixth, each teacher interprets each student's responses which reconfirms the original expectations. Seventh, students interpret their own responses to the teachers' action which further reconfirms the original expectations. Finally, over a period of time, the achievement levels of the students and the social organization of the classrooms reflect, to some degree, differences in the expectations of the teachers.

Within classrooms, it is possible to distinguish between two interrelated dimensions of the educational enterprise. There is an instructional dimension that pertains to knowledge and skills, and there is a social control dimension that pertains to the management of social interaction (see Bidwell, 1972; Parsons, 1959). Report cards, which are issued to students and their parents, and cumulative records, which are consulted by teachers and other professionals in the schools, convey teachers' assessments of both student instruction and social control. Since both dimensions are seen as important, it is logical to assume that teachers consider each of them in developing expectations for their students.

From this perspective, two types of expectations may be identified: normative expectations and cognitive expectations (Clifton, 1981a; 1981b; Williams, 1976). Normative expectations concern the way in which students are seen, by their teachers, as meeting the behavioural standards of the classroom whereas cognitive expectations concern the way in which students are seen as meeting the academic standards of the classroom. These two different types of expectations have been identified in studies of teachers' expectancies (Brophy, 1983; Dusek & Joseph, 1983; Rubin & Balow, 1979), but apparently only Clifton (1981a; 1981b) and Williams (1976) have integrated the two types of expectations into research on how teachers mediate the relationships between the ethnicity, socioeconomic status, and intellectual abilities of students, on the one hand, and their academic performances, on the other.

This study examines only the most significant empirical linkages which may help explain how teachers' expectations operate within classrooms. Specifically, we examine whether teachers develop differential expectations about their students based upon both ascribed and achieved statuses, and we examine the effects that teachers' expectations have upon academic performances. These linkages are illustrated in Figure 1. One

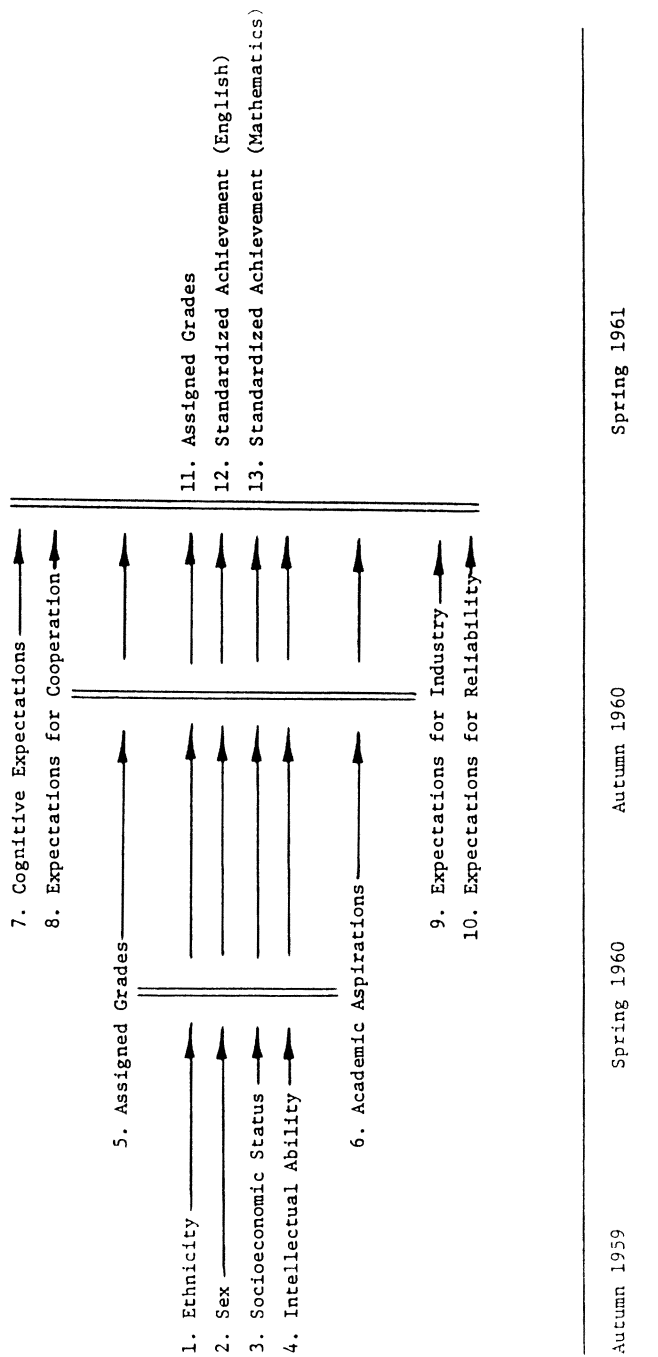


FIGURE 1  
The Theoretical Model

indicator of cognitive expectations and three indicators of normative expectations (expectations for co-operation, industry, and reliability) are assumed to be caused by ethnicity, sex, socioeconomic status, intellectual ability, assigned grades, and academic aspirations, all of which were measured when the students were in Grade 9. In turn, all of these variables are assumed to be causes of three types of academic performances – assigned grades, standardized achievement in English, and standardized achievement in mathematics – all of which were measured when the students were in Grade 10.

Previous research has shown that teachers' expectations affect standardized achievement tests (Braun, 1976; Brophy & Good, 1974; Cooper, 1979; Dusek, 1975). However, even though previous research has focused on standardized achievement tests, it is hypothesized that teachers' expectations, particularly cognitive expectations and expectations for industry, will have stronger effects on teacher-assigned grades because teachers may either consciously or unconsciously bias their grading of tests which they themselves have constructed. Both teacher-assigned grades and standardized achievement tests are included as dependent variables.

West and Anderson (1976) have argued that the literature supports the notion that students' achievement causes expectations, and expectations, in turn, cause achievement. In the present study, teacher-assigned grades are included twice, in Spring 1960 and Spring 1961. As a result, it is hypothesized that grades assigned in the Spring of 1960 effect both normative and cognitive expectations in the Autumn of 1960 and that all of these, in turn, affect both assigned grades and standardized achievement in the Spring of 1961.<sup>3</sup>

It is also probable that the academic aspirations of students play a major role in mediating any relationships between ethnicity, socioeconomic status, and both teachers' expectations and students' achievement (Feldman & Theiss, 1982; Williams, 1972). As a result, this variable, which was measured when the students were completing Grade 9, is incorporated into the model.

There is substantial evidence that both ethnicity and socioeconomic status affect the expectations of teachers (Dusek & Joseph, 1983; Feldman & Orchowsky, 1979; Marwit, Marwit, & Walker, 1978). The model presented here hypothesizes that these two variables as well as intellectual ability, measured when the students began Grade 9, affect not only normative and cognitive expectations but also all of the other variables. That is, it is hypothesized that socioeconomic status, intellectual ability, and ethnicity have both direct and indirect effects upon student achievement. Part of the indirect effects is via assigned grades in Grade 9

and academic aspirations, and part is via normative and cognitive expectations.

There is also substantial evidence that the sex of the pupils affects various aspects of the academic achievement process (Richer, 1979). Moreover, within the teacher expectancy literature there is specific evidence of differential influence attributed to the sex of pupils (Clifton, 1981a; 1981b; Clifton, Perry, Parsonson, & Hryniuk, 1986; Kehle, 1974).

In sum, the main concern of this research is with the relationships between ethnicity, teachers' expectations, and academic performances when the effects of ability, academic aspirations, and a number of other theoretically relevant variables have been taken into consideration. More specifically, the mediating effects of teachers' expectations between ethnicity and academic performance are the main focus of attention.

#### METHODOLOGY

##### *Data*

Data were obtained from the Carnegie Human Resources Data Bank, a five-year panel study of practically all students (90,719) who were enrolled in the first year of high school, Grade 9, in Ontario at the beginning of the 1959–1960 academic year. Students were classified by their responses to the question, "What is the main language spoken in your home?" On this basis, 79% of the students indicated that they were from English-speaking homes, 5% indicated that they were from French-speaking homes, 0.25% indicated that they were from Yiddish-speaking homes, and almost 16% indicated that they were from homes in which other languages were spoken.

From this data set, only French-speaking and Yiddish-speaking students were selected for analyses. There are three reasons for selecting the students from these two ethnic groups. First, the past research showed that the Yiddish-speaking students had higher performances and a higher retention rate than students who spoke other northern European languages, while the French-speaking students had much lower performances and a much lower retention rate than students from other ethnic groups. This fits the notion that, in Ontario, unlike Yiddish-speaking citizens, the French-speaking citizens represent a "white siege culture" (Breton, et al., 1975, p. 88). Second, even though it may seem logical to compare minority students (French, for example) with majority (English) students, the English-speaking students were not selected because comparisons with Canadian census data revealed that this group represented a variety of ethnic and linguistic origins. That is, a number of

students from other ethnic groups spoke English as their main language at home and, as a result, were classified as English-speaking. Third, the French speaking and Yiddish-speaking students were two relatively large and identifiable ethnic groups represented in the data set.

In total, 4,733 students spoke French and 224 students spoke Yiddish as their main language. Of these, 2,440 French-speaking students (52%) and 172 Yiddish-speaking students (77%) completed Grade 10 in the Spring of 1961.<sup>4</sup> In the analyses, pairwise deletion of missing data was used.

### *Variables*

Complete descriptions of the questionnaires and tests that were administered to the students can be found in Brehaut (1964) and D'Oyley (1964). The following thirteen variables are used in the present study.

#### *Ethnicity ( $x_1$ )*

Students who spoke French as the major language in their homes were coded as 1, and students who spoke Yiddish were coded as 2.

#### *Sex ( $x_2$ )*

Respondents were coded as 1 for males and 2 for females.

#### *Socioeconomic Status ( $x_3$ )*

To create this variable three student-reported measures were summed: father's occupation (an 8-category scale based on Blishen and McRoberts, 1976), father's education, and mother's education (both measured on 5-point scales ranging from *no secondary school* to *university degree*).

#### *Intellectual Ability ( $x_4$ )*

The students' scores on the Canadian Academic Aptitude Test III (non-verbal reasoning) were taken as the indicator of intellectual ability. This test had a range of scores from 0 to 43.

#### *Assigned Grades ( $x_5, x_{11}$ )*

In both Grades 9 and 10, average grades were calculated from the marks assigned by the teachers for all relevant subjects. Assigned grades were obtained from the school records.

### Academic Aspirations ( $x_6$ )

Subjects were asked about their own educational and work plans. Seven responses were provided, ranging from *leave school as soon as possible to obtain a job* to *complete secondary school and enter university*.

### Cognitive Expectations ( $x_7$ )

Teachers were requested to provide a rating of each student's chances of completing Grade 13 successfully. This was a consensus rating assigned by all the teachers who taught each individual student. It employed a 5-point scale which ranged from *much below average* to *much above average*.

### Expectations for Co-operation ( $x_8$ )

Within each school, teachers were requested to rate each student's co-operation with students and teachers. This represented a consensus rating assigned by the group of teachers on the basis of a 5-point scale that ranged from *much below average* to *much above average*.

### Expectations for Industry ( $x_9$ )

This variable was also a consensus rating by the group of teachers of each student's industry in school work. It was rated on a 5-point scale identical to  $x_8$ .

### Expectations for Reliability ( $x_{10}$ )

The teachers also rated, on a 5-point scale identical to  $x_8$ , each student's reliability as indicated by performance on curricular and extra-curricular activities.<sup>5</sup>

### Standardized Achievement Tests ( $x_{12}$ , $x_{13}$ )

Two tests were used: the CATE, a standardized English language achievement test, and the CATM, a standardized achievement test in mathematics. The CATE had a range of scores from 0 to 100 and the CATM had a range of scores from 0 to 30.

### *Advantages of the Data*

There has been considerable research on both the bases of teachers' expectations (Dusek & Joseph, 1983) and the effects of teachers'

expectations upon the performances of their students (Braun, 1976; Brophy, 1983; Cooper, 1979; Dusek, 1975), much of it stimulated by the publication of *Pygmalion in the Classroom* (Rosenthal & Jacobson, 1968). In this respect, both researchers and teachers have been concerned that student performance may be lowered rather than raised if expectations for performances are low (Finn, 1972, p. 387), especially if students are disadvantaged or come from minority groups.

In the context of this research literature, the present data have six advantages. First, the data were collected prior to the publicity concerning teachers' expectations which followed the appearance of *Pygmalion in the Classroom*. Thus, there is little likelihood that the teachers restrained their expectations as they may have in research which followed publication of the book (Brophy, 1983, p. 632; Clifton, Perry, Parsonson, & Hryniuk, 1986).<sup>6</sup> Second, there is an additional advantage in the data's being gathered from the early 1960s because ethnic stratification was more evident in Canadian society than at present (see Darroch, 1979). Third, the data include a variable which can be used to measure ethnicity rather accurately.<sup>7</sup> Fourth, the data were obtained from the total population of students in Grade 9 in Ontario, and generalizations may at least apply to the selected ethnic groups in this province at the time the data were gathered.<sup>8</sup> Fifth, data were collected over a number of years so that the variables were measured at different periods during the students' academic careers (see Figure 1). Very few longitudinal research studies have been conducted in this area (Brophy, 1983, p. 655; Dusek & Joseph, 1983, p. 342). Thus, for this data, it is reasonable to assume that *teachers' expectations*, measured in the Autumn of 1960, mediate between *ethnicity*, measured in the Autumn of 1959, and *performances*, measured in the Spring of 1961. Sixth, in many studies, only the linkages between the characteristics of pupils and the expectations of teachers have been examined, and often only in contrived or laboratory situations (Braun, 1976; Cooper, 1979; Dusek, 1975; Dusek & Joseph, 1983). In the present study, these relationships are examined as they existed within actual school settings.

## RESULTS

The relevant correlation coefficients, means, and standard deviations are presented in Table 1. Ethnicity has positive correlations with all other variables, and the largest correlations are with achievement in both English and mathematics. Analyses of variance examining the relationship between ethnicity and each of the other variables in the model reveal that the Yiddish students have higher mean scores ( $p < .0001$ ) than the French students.

TABLE I  
Correlations, Means, and Standard Deviations for all Variables

|                        | X <sub>1</sub> | X <sub>2</sub> | X <sub>3</sub> | X <sub>4</sub> | X <sub>5</sub> | X <sub>6</sub> | X <sub>7</sub> | X <sub>8</sub> | X <sub>9</sub> | X <sub>10</sub> | X <sub>11</sub> | X <sub>12</sub> | X <sub>13</sub> |
|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|
| Ethnicity              | 1.000          |                |                |                |                |                |                |                |                |                 |                 |                 |                 |
| Sex                    | .006           | 1.000          |                |                |                |                |                |                |                |                 |                 |                 |                 |
| Socioeconomic Status   | .116           | -.022          | 1.000          |                |                |                |                |                |                |                 |                 |                 |                 |
| Intellectual Ability   | .127           | -.001          | .155           | 1.000          |                |                |                |                |                |                 |                 |                 |                 |
| Assigned Grades        |                |                |                |                |                |                |                |                |                |                 |                 |                 |                 |
| (Grade 9)              | .108           | .203           | .181           | .403           | 1.000          |                |                |                |                |                 |                 |                 |                 |
| Academic Aspirations   | .147           | -.032          | .259           | .179           | .278           | 1.000          |                |                |                |                 |                 |                 |                 |
| Cognitive Expectations | .141           | .051           | .181           | .296           | .574           | .301           | 1.000          |                |                |                 |                 |                 |                 |
| Expectations for       |                |                |                |                |                |                |                |                |                |                 |                 |                 |                 |
| Cooperation            | .114           | .100           | .026           | .140           | .342           | .098           | .464           | 1.000          |                |                 |                 |                 |                 |
| Expectations for       |                |                |                |                |                |                |                |                |                |                 |                 |                 |                 |
| Industry               | .129           | .142           | .025           | .162           | .414           | .128           | .583           | .709           | 1.000          |                 |                 |                 |                 |
| Expectations for       |                |                |                |                |                |                |                |                |                |                 |                 |                 |                 |
| Reliability            | .112           | .090           | .044           | .163           | .390           | .117           | .555           | .758           | .740           | 1.000           |                 |                 |                 |
| Assigned Grades        |                |                |                |                |                |                |                |                |                |                 |                 |                 |                 |
| (Grade 10)             | .125           | .163           | .143           | .304           | .677           | .230           | .653           | .425           | .569           | .502            | 1.000           |                 |                 |
| Standardized           |                |                |                |                |                |                |                |                |                |                 |                 |                 |                 |
| Achievement (Eng.)     | .294           | .182           | .186           | .388           | .541           | .296           | .534           | .253           | .325           | .284            | .545            | 1.000           |                 |
| Standardized           |                |                |                |                |                |                |                |                |                |                 |                 |                 |                 |
| Achievement (Math.)    | .229           | -.017          | .140           | .432           | .474           | .174           | .421           | .238           | .294           | .293            | .495            | .518            | 1.000           |
| Means                  | 1.04           | 1.50           | 6.29           | 26.90          | 59.26          | 4.81           | 2.45           | 3.29           | 3.15           | 3.19            | 62.68           | 56.21           | 16.15           |
| Standard deviations    | 0.20           | 0.50           | 2.95           | 8.67           | 14.29          | 1.81           | 1.12           | 0.84           | 0.92           | 0.88            | 11.93           | 12.98           | 5.14            |

Also, both the cognitive and normative expectations are very highly related to assigned grades, standardized achievement in English, and standardized achievement in mathematics. As expected, these performance measures have higher correlations with the cognitive expectation than with the normative expectations, and for the normative expectations they generally have higher correlations with industry than with cooperation and reliability. Moreover, both normative and cognitive expectations have higher correlations with teacher-assigned grades than with the standardized achievement tests.

To identify the direct and indirect effects of the independent and intervening variables upon the dependent variables, a path analysis was undertaken (see Duncan, 1975; Heise, 1975). The path coefficients and  $R^2$ s for both reduced-form and fully recursive models are reported in Table 2, and a path diagram of the fully recursive model is illustrated in Figure 2.

Beginning with cognitive and normative expectations it is observed that the effects of ethnicity are small in both the reduced-form and fully recursive models. However, before assigned grades and academic aspirations in Grade 9 are incorporated, the effects of ethnicity are slightly larger. Specifically, the effects of ethnicity decreased by 40% for cognitive expectations and between 15% and 20% for the three normative expectations.

Nevertheless, past performance has the most powerful effects upon both cognitive and normative expectations of teachers while the second most powerful effect on cognitive expectations is from academic aspirations. This means that what originally may have been interpreted as moderately strong ethnic bias on the part of teachers is, to a large degree, the effect of previous achievement and aspirations. If students have done well and have high aspirations, then, other things being equal, their teachers expect them to complete high school. Moreover, if students have done well, then, other things being equal, their teachers also expect them to be responsible in following the generally accepted norms of the school.

It must be noted, however, that ethnic bias has not been completely eliminated by including assigned grades and academic aspirations within the analysis of teachers' expectations. There are still small but significant effects of ethnicity upon the cognitive and the normative expectations. Moreover, it is not known to what extent academic achievement and aspirations in Grade 9 are themselves biased as a result of the effects of ethnicity in previous years. In any event, the results presented here indicate that when sex, socioeconomic status, intellectual ability, assigned grades, and academic aspirations are controlled, there are differences

TABLE 2  
Path Coefficients and  $R^2$

| Dependent Variables | Predetermined Variables |       |       |       |       |       |       |       |       |          | $R^2$ |
|---------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|
|                     | $X_1$                   | $X_2$ | $X_3$ | $X_4$ | $X_5$ | $X_6$ | $X_7$ | $X_8$ | $X_9$ | $X_{10}$ |       |
| $X_5$               | .045                    | .206  | .122  | .379  |       |       |       |       |       |          | .221  |
| $X_6$               | .104                    | -.028 | .226  | .131  |       |       |       |       |       |          | .098  |
| $X_7$               | .092                    | .054  | .131  | .264  |       |       |       |       |       |          | .118  |
| $X_7$               | .056                    | -.049 | .039  | .053  | .514  | .129  |       |       |       |          | .362  |
| $X_8$               | .097                    | .099  | -.003 | .128  |       |       |       |       |       |          | .039  |
| $X_8$               | .082                    | .031  | -.045 | .001  | .333  | .006  |       |       |       |          | .126  |
| $X_9$               | .110                    | .141  | -.008 | .149  |       |       |       |       |       |          | .058  |
| $X_9$               | .090                    | .060  | -.061 | -.005 | .399  | .023  |       |       |       |          | .186  |
| $X_{10}$            | .091                    | .090  | .012  | .150  |       |       |       |       |       |          | .043  |
| $X_{10}$            | .073                    | .011  | -.036 | .004  | .382  | .009  |       |       |       |          | .158  |
| $X_{11}$            | .078                    | .165  | .094  | .280  |       |       |       |       |       |          | .135  |
| $X_{11}$            | .045                    | .034  | .008  | .032  | .640  | .039  |       |       |       |          | .464  |
| $X_{11}$            | .009                    | .034  | .011  | .019  | .406  | -.001 | .268  | -.051 | .230  | .055     | .601  |
| $X_{12}$            | .237                    | .183  | .110  | .341  |       |       |       |       |       |          | .256  |
| $X_{12}$            | .207                    | .108  | .036  | .180  | .384  | .121  |       |       |       |          | .401  |
| $X_{12}$            | .194                    | .123  | .022  | .163  | .244  | .081  | .314  | -.002 | .005  | -.057    | .455  |
| $X_{13}$            | .171                    | -.016 | .058  | .401  |       |       |       |       |       |          | .221  |
| $X_{13}$            | .156                    | -.092 | .014  | .262  | .369  | -.005 |       |       |       |          | .327  |
| $X_{13}$            | .143                    | -.087 | .011  | .255  | .271  | -.024 | .142  | -.030 | .030  | .061     | .349  |

1, Ethnicity; 2, Sex; 3, Socioeconomic Status; 4, Intellectual Ability; 5, Assigned Grades (Grade 9); 6, Academic Aspirations; 7, Cognitive Expectations; 8, Expectations for Cooperation; 9, Expectations for Industry; 10, Expectations for Reliability; 11, Assigned Grades (Grade 10); 12, Standardized Achievement (English); 13, Standardized Achievement (Mathematics).

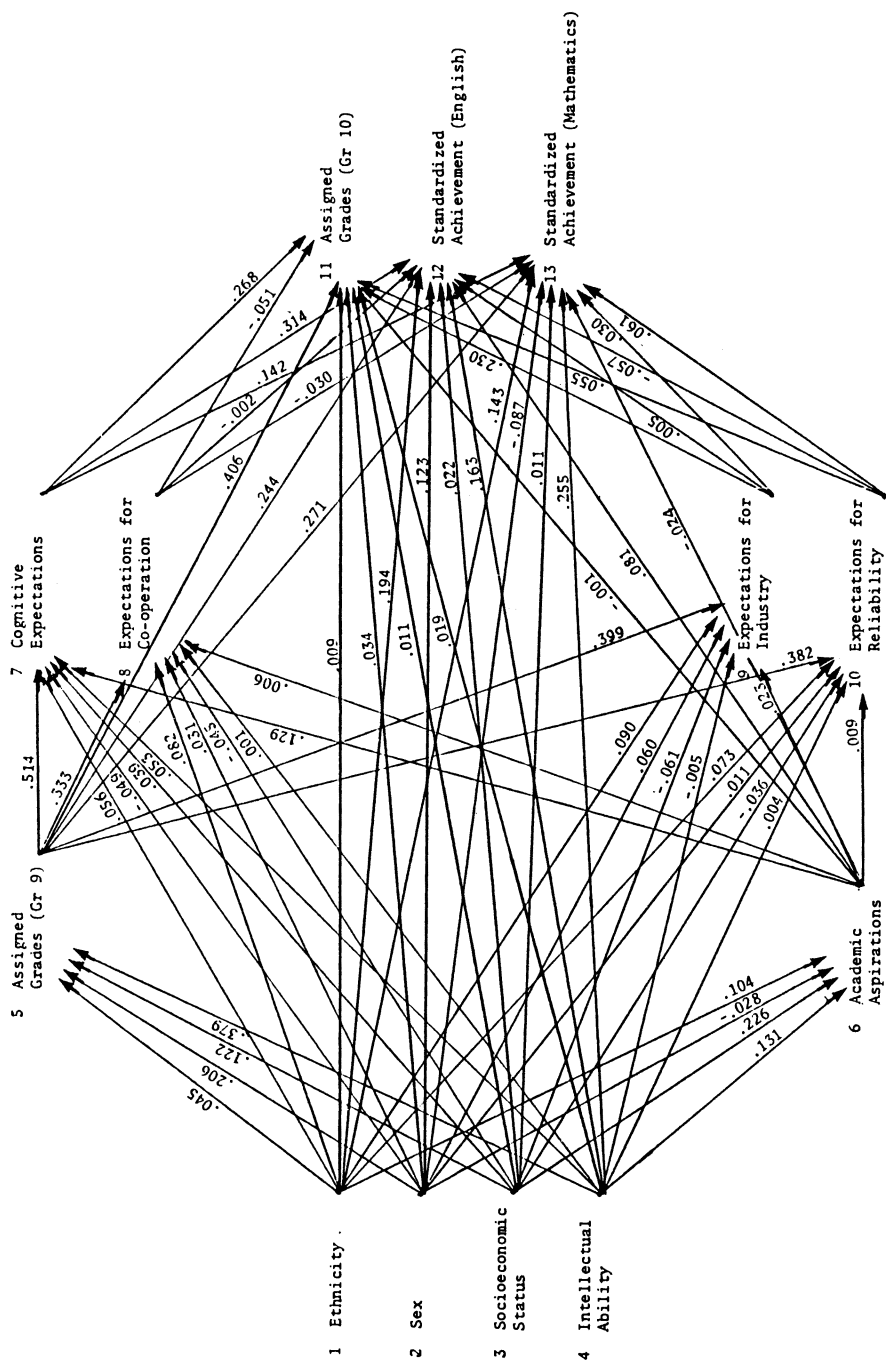


FIGURE 2  
Path Diagram of the Fully Recursive Model

between the Yiddish and French students. Teachers have higher expectations for the Yiddish students than for the French students.

In examining assigned grades in Grade 10, it is observed that the effect of ethnicity is extremely small when the intervening variables, including the teachers' cognitive and normative expectations, have been taken into account. However, when the same intervening variables have been considered, the effects of ethnicity upon standardized achievement in both English and mathematics are relatively strong. Ethnicity has direct effects upon achievement in English of 0.194 and upon achievement in mathematics of 0.143 while it has a direct effect of 0.009 upon assigned grades. In both English and mathematics, the Yiddish students performed at substantially higher levels than the French students.

Conversely, teachers' expectations have stronger effects upon assigned grades than upon standardized achievement in English and mathematics. For assigned grades, the teachers' expectations result in an increase in  $R^2$  from 0.464 to 0.601, while the increase for achievement in English is from 0.401 to 0.455 and the increase in achievement in mathematics is from 0.327 to 0.349. This is understandable because the grades have been assigned by the teachers while the achievement tests have been evaluated independently of the teachers (see Cooper, 1979). Moreover, for both the assigned grades and the standardized achievement tests, cognitive expectations have more powerful effects than normative expectations. However, for assigned grades there is an expectation for industry to an extent which is almost as large as the effect for cognitive expectations. Furthermore, cognitive expectations have more substantial effects upon achievement in English than upon achievement in mathematics.

In order to provide a closer examination of the effects of ethnicity, the direct and indirect effects (Alwin & Hauser, 1975) of all the pre-determined variables are presented in Table 3. In this table, very little of the ethnic effects is mediated through teachers' expectations, and these effects are lower for both standardized achievement measures than for assigned grades. Moreover, it is also noted that very little of the effects of the other two ascribed characteristics, sex and socioeconomic status, is mediated through teachers' expectations. In fact, for these two variables, past performance and aspirations mediate substantially more of the indirect effects than teachers' expectations.

This table also illustrates that past performance has, through teachers' expectations, by far the strongest mediating effects upon all three achievement measures. Moreover, these effects are much stronger for assigned grades than for standardized achievement in English and mathematics. Thus, the data offer little support to common arguments suggesting that teachers' expectations have strong mediating effects

TABLE 3  
*Total, Indirect, and Direct Effects of the Predetermined Variables Upon  
Assigned Grades and Standardized Achievement*

| <i>Dependent<br/>Variables</i> | <i>Predetermined<br/>Variables</i> | <i>Total<br/>Effects</i> | <i>Indirect Effects via</i>       |                                                              | <i>Direct<br/>Effects</i> |
|--------------------------------|------------------------------------|--------------------------|-----------------------------------|--------------------------------------------------------------|---------------------------|
|                                |                                    |                          | <i>X<sub>5</sub>X<sub>6</sub></i> | <i>X<sub>7</sub>X<sub>8</sub>X<sub>9</sub>X<sub>10</sub></i> |                           |
| X <sub>11</sub>                | X <sub>1</sub>                     | .078                     | .033                              | .036                                                         | .009                      |
|                                | X <sub>2</sub>                     | .165                     | .131                              | .000                                                         | .034                      |
|                                | X <sub>3</sub>                     | .094                     | .086                              | -.003                                                        | .011                      |
|                                | X <sub>4</sub>                     | .280                     | .248                              | .013                                                         | .019                      |
|                                | X <sub>5</sub>                     | .640                     |                                   | .234                                                         | .406                      |
|                                | X <sub>6</sub>                     | .039                     |                                   | .040                                                         | -.001                     |
|                                | X <sub>7</sub>                     | .268                     |                                   |                                                              | .268                      |
|                                | X <sub>8</sub>                     | -.051                    |                                   |                                                              | -.051                     |
|                                | X <sub>9</sub>                     | .230                     |                                   |                                                              | .230                      |
|                                | X <sub>10</sub>                    | .055                     |                                   |                                                              | .055                      |
| X <sub>12</sub>                | X <sub>1</sub>                     | .237                     | .030                              | .013                                                         | .194                      |
|                                | X <sub>2</sub>                     | .183                     | .075                              | -.015                                                        | .123                      |
|                                | X <sub>3</sub>                     | .110                     | .074                              | .014                                                         | .022                      |
|                                | X <sub>4</sub>                     | .341                     | .161                              | .017                                                         | .163                      |
|                                | X <sub>5</sub>                     | .384                     |                                   | .140                                                         | .244                      |
|                                | X <sub>6</sub>                     | .121                     |                                   | .040                                                         | .081                      |
|                                | X <sub>7</sub>                     | .314                     |                                   |                                                              | .314                      |
|                                | X <sub>8</sub>                     | -.002                    |                                   |                                                              | -.002                     |
|                                | X <sub>9</sub>                     | .005                     |                                   |                                                              | .005                      |
|                                | X <sub>10</sub>                    | -.057                    |                                   |                                                              | -.057                     |
| X <sub>13</sub>                | X <sub>1</sub>                     | .171                     | .015                              | .013                                                         | .143                      |
|                                | X <sub>2</sub>                     | -.016                    | .076                              | -.005                                                        | -.087                     |
|                                | X <sub>3</sub>                     | .058                     | .044                              | .003                                                         | .011                      |
|                                | X <sub>4</sub>                     | .401                     | .139                              | .007                                                         | .255                      |
|                                | X <sub>5</sub>                     | .369                     |                                   | .098                                                         | .271                      |
|                                | X <sub>6</sub>                     | -.005                    |                                   | .019                                                         | -.024                     |
|                                | X <sub>7</sub>                     | .142                     |                                   |                                                              | .142                      |
|                                | X <sub>8</sub>                     | -.030                    |                                   |                                                              | -.030                     |
|                                | X <sub>9</sub>                     | .030                     |                                   |                                                              | .030                      |
|                                | X <sub>10</sub>                    | .061                     |                                   |                                                              | .061                      |

between ascribed characteristics of students and their achievement. And the evidence suggests that the indirect effects for ethnicity are slightly stronger upon grades which have been assigned by the teachers than upon standardized achievement tests.

Nevertheless, teachers' cognitive expectations and expectations for industry do affect assigned grades, and teachers' cognitive expectations do affect standardized achievement in English and mathematics. Similar findings have been previously reported (Brophy & Good, 1974; Cooper, 1979; Dusek, 1975), but the present study extends past research by showing that the mediating effects are from past performance rather than from ethnicity or, for that matter, from sex, socioeconomic status, or intellectual ability. That is, the data support the argument that teachers base their expectations upon meritorious factors rather than ascribed factors. Furthermore, it is past performance as mediated through teachers' expectations which affects, to the greatest degree, student achievement.

#### DISCUSSION

It has been suggested that in Canada educational institutions may be, in part, perpetuating the vertical mosaic (Porter, 1965) because teachers assume that children from some ethnic groups can learn more and faster than children from other ethnic groups. It is also argued that expectations of teachers play a role in translating the differences in potential between students into differences in actual achievement. Differences in potential may result from the different socialization patterns ethnic groups provide for their children. That is, different socialization patterns may be the mechanism through which ethnicity is related to ability, aspirations, motivation, and values. As well, teachers may develop their expectations for students, at least in part, from the relevant achieved characteristics of students. In turn, educational institutions may sort students on these criteria. These processes may lead, at later periods, to greater variation between ethnic groups in both educational and occupational achievement.

The evidence presented here suggests that teachers base their expectations upon past performance to a much greater degree than upon ethnicity, sex, socioeconomic status, or intellectual ability. The evidence also suggests that teachers evaluate student achievement on the basis of both cognitive expectations and expectations for industry, whereas the performances on the standardized achievement tests are influenced mainly by cognitive expectations. The fact that student achievement is evaluated with both cognitive and normative criteria suggests that, to some degree, ideas about meritocratic processes are not completely

consistent with what happens in schools (see Dreeben, 1968). In a purely meritocratic system, teachers would evaluate the academic performance of students entirely upon their cognitive expectations which, in turn, would be based upon their past performance and perhaps not even on their intellectual ability. Nevertheless, it must be remembered that the effects of ethnicity, as mediated through teachers' expectations, are relatively small, and it is within this context that meritocratic factors may not be operating in schools.

The present data are limited to high school students in Grades 9 and 10, and it is possible that teachers' expectations had much greater effects before the students reached high school. That is, the linkages between ethnicity, intellectual ability, past performances, cognitive and normative expectations, assigned grades, and standardized achievement observed here may have been the result of the expectations of teachers in previous years. Perhaps ethnicity, via teachers' expectations, has cumulative effects upon abilities, aspirations, and performances throughout the students' academic careers (see West & Anderson, 1976), and significant portions of the effects from abilities, aspirations, and performances, as measured in this research, are indirect effects that have previously resulted from ethnicity. In fact, Rist (1970) suggests that the indirect effects of ethnicity, through teachers' expectations, are much greater in the first few years of school.

From another perspective, the analyses illustrate that ethnicity is related to intellectual ability, academic aspirations, and standardized achievement in both English and mathematics. This suggests that ethnicity has important direct and indirect effects upon educational performances as measured by standardized achievement tests, but the indirect effects are not, to any great extent, the result of teachers' expectations. Rather, some of the effects are directed through other factors which may be, to some degree, endemic within the subcultural backgrounds of the children. That is, children may be socialized within ethnic subcultures so that their abilities, aspirations, motivation, and values are shaped to fit into certain educational and occupational status positions within society (Blisshen, 1970, p. 120; Breton & Rosenborough, 1968, p. 4). The differences in achievement between the French- and Yiddish-speaking students in this study may reflect, to some degree, differences in subcultural backgrounds.<sup>9</sup>

#### NOTES

<sup>1</sup> An earlier version of this paper was presented at the 1984 Annual Meeting of the Canadian Society for the Study of Education.

<sup>2</sup> Another aspect of this perspective, of course, is that schools exhibit certain modes of

cultural capital, including teachers' expectations, the curriculum, and more particularly the "culture of positivism" (Giroux, 1981) used to legitimate both the curriculum and the action of teachers. It would be useful to empirically examine this broader perspective, but our data are inadequate for such analyses. Nevertheless, Livingstone (1983) has recently examined education in Ontario from this perspective.

- <sup>3</sup> When the students entered Grade 10 in Autumn 1960, the majority of their teachers already knew them from the previous year. In Ontario, high school teachers specialize in subject areas and may teach students from Grade 9 to Grade 13. In this respect, over 85% of the students who did not drop out of school or move to another province or country remained in the same school for both the 1959–1960 and 1960–1961 academic years. Also, teachers generally review the cumulative records of their students who have recently transferred to the school. Thus, it is usual for teachers to have considerable information about their students' previous performances.
- <sup>4</sup> The other students dropped out of school or moved to another province or country, with the majority dropping out or moving during July and August. As noted previously, the retention rate for the French-speaking students was the lowest of all the ethnic groups while the retention rate for the Yiddish-speaking students was the highest (King, 1968).
- <sup>5</sup> For all expectation measures, it must be recognized that considerable between-teacher differences may be obliterated by averaging the responses. This probably increases the reliability of the expectations and it probably attenuates the relationship between the expectations and the other variables in the model. As such, the estimates provided in this paper are probably conservative.
- <sup>6</sup> In fact, Brophy (1983, p. 646) notes that simply making teachers aware of the possible effects of their expectations upon students may induce them to change these expectations.
- <sup>7</sup> The Canadian census uses a similar measure to distinguish between ethnic groups. Moreover, recent large-scale research on related aspects of the education of Canadian students did not include any measures of ethnicity (see Breton, 1972) or included so few subjects that it is impossible to estimate the effects of ethnicity upon relevant dependent variables (see Porter, Porter & Blishen, 1973; Porter, Porter & Blishen, 1982).
- <sup>8</sup> Since the data were collected in the 1950s and 1960s, it is not known if the results are still applicable. Perhaps the effects of teachers' expectations upon student performance will never be adequately known because of the publicity this type of research has received and a resulting unwillingness of teachers to divulge such information to researchers.
- <sup>9</sup> One of the reviewers noted that during the early 1960s many of the French-speaking students would have had to transfer to English-speaking high schools. From this perspective, the reviewer argued that their lower performance *is not* endemic within their subcultural backgrounds but *is* endemic within the culture of the English high schools. We do not have evidence which would unequivocally confirm or deny the proposition that the French-speaking students transferred to English high schools, but the evidence we have presented does not seem to support the reviewer's argument. First, when we reported the effects of ethnicity upon academic performances in Grade 10, we had already controlled for both intellectual ability (measured by a non-verbal test) and academic performances, both of which were measured in Grade 9. Second, the differences between the French- and Yiddish-speaking students are evident, and almost equal, for performances in both English and mathematics. This is difficult to understand, given that the cultural content of the standardized English test is substantially greater than the cultural content of the standardized mathematics test. Third, it must also be remembered that some of the Yiddish-speaking students may have transferred from Yiddish- or Hebrew-speaking schools to English-speaking schools. Thus, it seems that the differences between the French- and Yiddish-speaking students must result from more than simply the cultural and language factors within the English high schools. Finally, even if the socialization process operates as this reviewer argues, then it *may be* that the French schools simply

reinforce the subcultural abilities, aspirations, motivation, and values endemic within the students' families. This is not unreasonable and is completely consistent with our interpretation of the evidence.

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Diese Forschungsarbeit untersucht des Ausmaß, in welchem Leistungsunterschiede zwischen jiddisch- und französischsprachigen Schülern auf die Erwartungen ihrer Lehrer zurückzuführen sind. Ein Kausalmodell, welches sowohl normative und kognitive Lehrerwartungen berücksichtigt, wird benutzt. Die Ergebnisse weisen darauf hin, daß Lehrer ihre Erwartungen eher auf die intellektuellen Fähigkeiten und früheren Leistungen der Schüler als auf ihre ethnische Herkunft basieren. Außerdem deuten die Ergebnisse darauf hin, daß Erwartungen die durch die Lehrer vergebenen Noten in einem größeren Maße beeinflussen als die Leistung in festgelegten Standard-Prüfungen.

Esta investigación examina hasta qué punto las expectativas de los maestros influyen la diferencia en los logros entre alumnos de habla Yiddish y los de habla francesa. Se usó un modelo causal incorporando expectativas tanto normativas como cognoscitivas. Los resultados indican que los maestros basan sus expectativas sobre la habilidad intelectual y desempeño previo de los alumnos más que en su origen étnico. Además, los datos indican que las expectativas afectan las notas que dan los maestros en un mayor grado de lo que afectan el desempeño frente a exámenes estandarizados.

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Rodney Clifton is a professor at St. John's College, The University of Manitoba, 400 Dysart Rd., Winnipeg, Manitoba R3T 2M5.

Jeffrey Bulcock is a professor in the Faculty of Education, Memorial University of Newfoundland, St. John's, Newfoundland A1B 3X8.