

STUDENTS' ETHNICITY,
TEACHERS' EXPECTATIONS,
AND THEIR EFFECTS ON STUDENTS' PERFORMANCE

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Master of Education

by

Andrew L. Bursa

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ABSTRACT

This study focussed on the relationships between ethnicity, teachers' expectations, and students' performances. Generally, the study was concerned with the extent to which teachers' expectations mediated between a number of background student characteristics, ethnicity, socioeconomic status, and academic aptitude, and such performances as overall grade averages and achievement test scores.

These theoretical linkages were arranged within a causal model which assumed that both normative and cognitive expectations caused three different types of achievement represented by overall grade averages, standardized achievement in English and standardized achievement in Mathematics. It also assumed that ethnicity had both direct and indirect effects on these achievement measures and that the expectations of teachers mediated the effects of ethnicity, and other ascribed factors, on the achievement measures.

Multiple regression analysis was used to examine the relationships between the total of thirteen independent, intervening, and dependent variables within the theoretical model.

The Carnegie Human Resources Data Bank (1959-1960) provided the sample of students who spoke either French or Yiddish as the main language in the home. This included 177 Yiddish-speaking students and 2,576 French-speaking students.

The study found Yiddish-speaking students to have an advantage over French-speaking students in all three measures of academic achievement. Moreover, the effects of ethnicity were mediated through the expectations of

teachers to a considerable degree for all three student achievement measures. Nevertheless, the overall effects of bias due to ethnicity were small.

While this study largely vindicated teachers from any gross bias based on ethnicity, it did show that ethnic favoritism continues to play a limited although significant role within the classroom.

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"Oft expectation fails, and most oft there
Where most it promises; and of it hits,
Where hope is coldest and despair most fits".

Shakespeare (1605)

All's Well That Ends Well

CHAPTER 1

INTRODUCTION TO THE STUDY

The Problem

This study proposes to examine the relationship between the ethnicity of students, the effects that this may have on the expectations of teachers, and the effect that expectations have as mediation variables upon the academic performances of students.

Specifically, the study proposes to examine data obtained from the Carnegie Human Resources Data Bank, a five year panel study of practically the total population of students (90,719) enrolled in the first year of high school, Grade 9, in the Province of Ontario at the beginning of the 1959-1960 academic year. The subjects for the present study represent the students who spoke either French or Yiddish as their main language at home. The total number of Yiddish-speaking students was 177. The total number of French-speaking students was 2,576.

The evidence that significant others, especially teachers, have important effects upon the performances and eventual achievements of students (Finn, 1972; Garner and Bing, 1973; Rosenthal, 1976; Williams, 1976) suggests that schools do play a major role in perpetuating the social stratification system, in part, because of the assumption by teachers that certain students learn, and their resulting fulfillment of this expectation and, at the same time, other children will not learn as the result of negative expectations.

Significance of the Study

Historically the role of educational institutions has been to allocate individuals to positions commensurate with their abilities, performances,

and their own educational plans. Since these positions are often of differential power, prestige, income, and satisfaction, the necessity that this allocation be congruent with appropriate criteria seems evident. Within the context of a largely pluralist Canadian society where many ethnic groups and both sexes are employed, vertical social stratification along the lines documented by Porter (1975) combined with horizontal mobility characteristics of runaway North American consumerism as suggested by Toffler (1970) may result in pressures leading to political secession along the most powerful ethnic lines (Laurin, 1978)

Despite the popular myth that Canada is an open society in which opportunity is available to all, empirical evidence on the ethnic stratification system in Canada indicates that various ethnic immigrant groups have unequal access to the occupational structure. There is considerable evidence of differences in the social stratification system in terms of inequalities in both opportunities and attainment (Porter, 1965: 60-103; Richmond, 1967; King, 1968; Anisef, 1975; Ashworth, 1975; Clement, 1975, 332-337; Denis, 1978; Li, 1978; Clifton, 1979a, 1979b). Despite some evidence that the pattern of occupational status positions among the larger ethnic and immigrant populations have systematically declined with time, (Royal Commission in Bilingualism and Biculturalism, 1967: vol.IV, 40-41; Kalbach and McVey, 1971: 209; Darroch, 1979) the overwhelming evidence indicates that in Canada, as in most culturally plural societies, ethnic identity is a determining factor with respect to one's position in the stratification hierarchy.

Since expectations for the behavior of others are an integral part of

social interaction, the link between teacher expectations within the school may play a major role in perpetuating the social stratification system (Rist, 1970; Katz, 1971; Carnoy, 1974; Bowles and Gintis, 1976). Often stratification is based on those ascribed characteristics of students that vary across subpopulation groups and are essentially irrelevant to student performance such as physical appearance, sex, skin color, clothing, dialect. Moreover, these factors often appear to influence through the medium of differential teacher expectations the characteristics that students take on as a result of their achievements within the school which also vary across subpopulation groups such as academic performance, educational ambitions, program of study, behavioral conformity, etc. The "reign of error" (Merton, 1957; 423) that resultingly begins the cycle conditions the nature of teacher student interaction in such a way that an initially false definition of the situation may become true.

Numerous and varied studies have been conducted on the effect of the self-fulfilling prophecy (Rosenthal, 1978). Most of these studies have dealt with research in the behavioral sciences (Rosenthal, 1976), some in the healing professions (Heller and Goldstein, 1961), and some studies in industrial and everyday life situations (Jastrow, 1900; Chapman and Chapman, 1967). The original "Oak School Experiment" (Rosenthal and Jacobson, 1968), later known as "The Pygmalion Experiment", prompted a number of subsequent replication studies dealing with the effect of teachers' expectations on the achievement of students (Jacobs, 1970; Brown, 1970). Most of this research dealt with contrived rather than natural classroom situations. Most often, deception was used to induce the Pygmalion effect. When there were naturalistic studies of actual classroom situations conducted (Brophy and Good, 1970;

Seaver, 1971), these were characterized by rather limited sample populations. A significant departure from the previous studies was in the work of Rosenthal and Rubin (1978) which combined the quantified results of the latest studies to measure the overall significance of the expectancy effect.

There appears, however, to be a paucity of empirical studies in a natural setting dealing with noncontrived school situations over complete school system populations (Williams, 1976; Clifton, 1979a, 1979b). In view of the pluralist composition of Canada and the problems inherent therein, a study examining the expectancy effects of teachers on the achievement of their pupils with respect to the variable of student ethnicity over a whole provincial cohort, should provide some valuable insights to a problem of considerable national importance. The need for extended studies upon the mediating effect of teachers' expectations through such variables as the ascribed characteristic of ethnicity upon the achievement of students is apparent. Furthermore, it is of considerable importance to discover the relative magnitudes of the various singular and combined effects so that the "vicious circle" (Brophy and Good, 1974; 129-160) of ethnicity, expectations, and performance limiting the achievement of some students may be broken.

Discussion of Fundamental Concepts

The concepts related to the proposed study have their antecedents in antiquity. Both ancient and modern literature contain literacy and theatrical works dealing with the effect of expectations upon the final outcome of a previously defined situation. Modern socio-philosophical works describe some of the principles defining situations and the connection of expectations to this definition. As well, the research literature of our own century has continued to be fascinated by the effect, in contemporary situations, of what

has come to be known as the self-fulfilling prophecy.

The self-fulfilling prophecy came to us in the legend of Pygmalion from the depths of Greek antiquity proclaiming through intuitive soundness that man imbues the object of his love with the qualities that he himself would desire to possess. One can well imagine the consternation in the court of King Pygmalion of Cyprus, the legendary son of Clix and the grandson of Agenor, when his previous aversion to women and dedication to art changed to unrequited passion for the ideal female whom he had masterfully carved in ivory and his subsequent desire for her as a beloved woman (NASO, C.AD.1). To his good fortune, "deus ex machina" was a favorite denouement of the ancient dramatists and Venus-Aphrodite, the presiding love deity, gave life to the object of Pygmalion's passion so that he could father Paphos, founder of the city of that name in Cyprus.

Nineteen centuries later, William S. Gilbert (1871) brought the story to public attention in his play, Pygmalion and Galatea. George Bernard Shaw (1916) interpreted Pygmalion as a masterpiece of theater. Eliza Doolittle, the Cockney flower-girl turned English grand dame through the semantic pre-occupation of Professor Henry Higgins, was the reincarnation of Galatea that eventually made a world musical career as My Fair Lady and through the medium of celluloid and eventually the cathode tube, has embedded herself in our contemporary collective consciousness.

In what appears to be a highly unethical way, placebo effects in medical treatment serve to underscore the role of the self-fulfilling prophecy in the medical sciences. "Undesire-side-effects" of medications have been investigated by Gregory Pincus (1966) of the Worcester Foundation for Experimental Biology. Here Pincus performed several experiments on the use of oral contraceptives

which led him to the conclusion that these reported side-effects were, in all likelihood, placebo effects. Pincus' study made use of three groups of women. The first group received the usual warnings that the contraceptive drug might cause undesirable side-effects. The second received a placebo instead of the real contraceptive but was told to watch out for side-effects. In the third group, the women received the real contraceptive without any warnings about possible side-effects. The test group that had received the actual medication but had not been led to expect side-effects reported nausea, vomiting, headache, vertigo, gastralgia, and general malaise in six percent of the cases. The two groups of women who had been warned about side-effects reported that these negative effects occurred about three times that often. The same degree of side-effects was shown by the women who had received the placebo with warning as occurred in the women who had received the real drug with warning. In considering the symptom of amenorrhea, the side effect was reported three times more often when the placebo was administered than when the drug itself was administered with the usual warning. Amenorrhea was not reported at all when the drug was administered without the usual cautions. It was the continued incidence of the Pygmalion effect, under a variety of forms and circumstances that led to continued studies of this phenomenon.

Within the present century, some sociologists have elevated the notion of the self-fulfilling prophecy to a central part of social reality: "If men define situations as real, they are real in their consequence". (W. I. Thomas, 1928: 527). This statement was further expanded upon by Florian Znaniecki (1952: 242-243) to encompass attitudes as well as behavior as definitions of situations. In this conception of a situation, the human

agent is seen as having defined it through some kind and degree of reflection and deliberate thinking. As such, the seeds of the self-fulfilling prophecy are found in the course of every conscious human action where thinking goes on. It is there that the values that the agent is using influence the changes he tends to initiate. It is in this deliberation that the purpose of the action is formed.

Within such a context that attitude may be considered as that reflection of the individual human consciousness which defines the situation. The defining quality of attitude is expanded to include unconscious evaluations and is limited to the universe of interpersonal relationships (Finn, 1972: 390). That this is more than "wishing can make it so", as has been suggested by some (Yunker, 1970), can be seen in the distinction between the concept of expectation and of such related concepts as aspirations, hopes, and desires. Accordingly, expectancy is defined as a conscious or unconscious evaluation which one person forms of another or of himself which leads the evaluator to treat the person evaluated in such a manner as though the assessment were correct. Furthermore, he will anticipate that the person evaluated will act in a manner consistent with the assessment. Here it is the anticipation that shapes the outcomes and distinguishes expectations from mere hopes and desires as well as from aspirations. In addition, while the concept of aspiration implies a desire for some goal, expectation incorporates the consideration and assessment of empirical factors. Thus, behavior resulting from given expectations reflects conscious or unconscious estimates of the achievement made under the circumstances given.

It is only when the agent halts his action in order to reflect upon the practical problems that he is facing that such deliberate thinking, in his

own experience, becomes separated from his effective performance. In the process of reflection, the agent does not try to introduce any changes in the empirical reality given him. The reflection generally consists of surveying the values which appear practically important to him and certain factual relationships between them. The agent anticipates the positive or negative possibilities which these factual relationships may involve and considers what should be done to actualize the positive possibilities and/or prevent the possibility of negative performance. It is this combination of interrelated values, with its inherent possibilities to be actualized or prevented that constitutes the definition of the situation with which the human agent at the end of his reflection has to deal.

That the effect of the final decision reached by such reflection is not trivial has been the conclusion of a study examining the results of the 345 latest studies of interpersonal self-fulfilling prophecies. Rosenthal and Rubin (1978) compared the magnitude of the expectancy effects obtained in the latest experiments, both positive and negative, and found that the net mean effect was highly significant. Furthermore, they showed that it was unlikely that there existed enough unretrieved studies to overwhelm the studies that were available. In order to have made the combined results of the available 345 studies insignificant, it would have been necessary for file drawers to have been crammed with the unpublished results of over 65,000 studies of interpersonal expectancy effects.

Advantages of the Study

Although the present study and its data source have a number of limitations that must be considered, there are at least four distinct advantages that this study provides with respect to its analysis of ethnicity, teachers'

expectations and academic achievement. In the first place, the data sample contains a variable which can be used to measure ethnicity. Other recent and extensive studies (Breton, 1972; Porter, Porter and Blishen, 1973) do not have a corresponding measure. Furthermore, because of the extensiveness of the Carnegie study, substantial numbers of students were included who were representative of different ethnic groups.

Secondly, despite the fact that these data were collected twenty years ago and it is not certain whether the results are applicable at the present time, it does possess distinct historical validity for the Province of Ontario where it was representative of the total population of students in Grade 9 during the 1959-1960 academic year. Furthermore, when more recent longitudinal data on sufficiently large ethnic subsamples are collected, the results of this study will have laid a historical foundation for further comparisons.

The third advantage is provided by the fact that the data of this study were collected over a number of years and the variables were measured at different periods during the students' academic careers. Thus, there is a rough correspondence between the time-ordered variables and the causal order of the theoretical model (See Figure 1).

Limitations of the Study

The limitations of this study deserve scrutiny.

There is a limit to the generalizability of effects from this data due to the fact that it was gathered more than twenty years ago. Although this should not detract from the historical significance of the study, conditions may have changed markedly since the original data was gathered. There is evidence that this change would have been fairly gradual (Darroch, 1979) in

the sense of the vertical ethnic stratification investigated by Porter (1975) while the horizontal mobility characterizing the age of Future Shock (Toffler, 1970) could have tended to diffuse the original effect of ethnicity. Thus, although the original data may be of historical significance, any accuracy in generalizability would necessarily await verification in future studies of more immediate data.

This study measures ethnicity in terms of language, a fact which may lessen the significance of the study. Although language has been considered as an essential expression of a culture and ethnicity by the Royal Commission on Bilingualism and Biculturalism (1967), original and distinctive cultural traits are retained by some groups despite their adoption of another language. Thus, some students whose main language in the home may have been designated as English may still have been viewed by their teachers as being either Jewish or French. This would, perhaps to some extent, limit the size of an otherwise greater original sample of Jewish and French students. In other words, students, according to the measure of ethnicity used in this study, may not be included within the sample of Yiddish-speaking and French-speaking students although teachers may still view them as being either French or Jewish despite their having adopted English as the language spoken in the home.

The fact that this is a secondary analysis of data limits this study to the extent that it does not allow for the custom tailoring of variables to fit broader models for the transmission of teacher expectancy effects such as that of Braun (1976). The secondary nature of the data limits this study, as well, to the record of teacher expectations for students as an aggregate consensus expression of the whole group after initial consultation. This may have resulted in the loss of what may have otherwise been recorded as

individual teacher expectations.

Insofar as achievement is limited to the effects on students' learning as expressed in overall student marks, and the results expressed in two standardized tests, one of English and the other of Mathematics achievement, there is no way of extracting the effect of previous teacher expectations that may have affected these results. In addition, the vicious circle of negative teacher expectations and resulting student performances seem to have the greatest effect in the early elementary grades (Rosenthal and Jacobson, 1968). The data does not include elementary (Grades K-6) or some junior high (Grades 7-9) expectations. This limitation further affects the generalizability of any results in that the high school students studied may not be representative of the whole student population.

Since there are many more French-speaking students than Yiddish-speaking students, unequal cell sizes for statistical analysis will result. Also, the considerable differential in attrition rates between Yiddish-speaking and French-speaking students would seem to lessen the effect of any negative expectancies with respect to the remaining "superior" French-speaking students.

Since the data were collected over a number of years, there was only a rough correspondence between the time ordered variables and the causal order of the theoretical model. Thus, ethnicity was measured in the ninth grade while academic achievement was measured in the eleventh grade. This is another limitation of the data which does not correspond exactly to the purpose of this study.

This study made use of testing material that was administered in the English language. Many of the students whose main language was French may have attended French language schools. This may have been a limiting factor

as to the students' performances on these tests. Since there was no indication within the data as to which students attended the different kinds of schools existing within the province of Ontario at that time, a further limitation of the study is encountered.

Overview of the Study

Chapter 1 introduces the subject of the study and various contexts in which it becomes a problem. The historical, social, and individual significance of the study are discussed. The origins of the key concepts related to the study and their definition are presented. This is followed by a consideration of the most significant advantages and disadvantages of the study.

Chapter 2 is a review of the literature. Early evidence of the effects of the self-fulfilling prophecy is examined in the first part. The second part deals with the original Pygmalion in the classroom study. Observational studies of the expectation effects in the natural setting are reviewed in the third part. The fourth part is concerned with ascribed characteristics, different expectations, and different performances, and presents the theoretical model of the present research.

Chapter 3 is concerned with the methodology of the study. It presents the sample, the variables and the method of statistical analysis used.

Chapter 4 presents the findings of the study. These are divided into seven parts: zero-order correlation coefficients; relationships between four independent variables and teachers' expectations; relationships between four independent variables, two intervening variables, and teachers' expectations; relationships between four independent variables and the academic evaluations of students; relationships between four independent variables, two intervening

variables and academic evaluations of students; relationships between four independent variables, six intervening variables, and academic evaluations of students; and direct and indirect effects of ethnicity on performance.

Chapter 5 concerns itself with a summary of the study, a discussion of the findings, and the implications of this study for education.

CHAPTER 2

REVIEW OF RELATED LITERATURE

Apart from its origins in antiquity and its literacy, theatrical, screen, and television career, the Pygmalion effect of interpersonal expectancy has been found operative during the present century in situations involving the world of work, everyday life situations, psychological research, the medical sciences and teacher-student relationships. In a philosophical context, it is difficult to envision a situation where the effect of expectancy may not be found.

Early Evidence of the Effects of the Self-fulfilling Prophecy

Rosenthal and Jacobsen (1968) cite an instance exemplifying the importance of the self-fulfilling prophecy in every day life situations as well as instructional practices. In this case, James Sweeney, who taught industrial management and psychiatry at Tulane University where he was responsible for the operation of the Biomedical Computer Center. Sweeney held the expectation that a poorly educated Negro, George Johnson, could learn to be a computer operator. Johnson was a former hospital porter who became a janitor at the computer center where in the morning he swept and in the afternoon he learned about computers under Sweeney's tutelage. As he was progressing on his study of computer operations, it was brought to his attention that one had to have a particular score on an IQ test in order to be a computer operator. Johnson took the test and found that he should not even be able to learn to type, let alone operate a computer. Through Sweeney's conviction, persistence, and pressure on the university administration, both he and Johnson were allowed to run the computer center.