In examining the findings of Pygmalion in the Classroom, an experimental study of the positive effects of favorable teacher expectations on the intellectual development of disadvantaged elementary school students, this review speculates about why the experimental students, whom the teachers expected to improve, and the control students, who were not designated as "spurters", both were able to make gains in their scores on an intelligence test. It is felt that this finding can be attributed to the impact and influence of the experimental students on the controls in the heterogeneously grouped classrooms and to the determination of individual experimental and control students, regardless of the expectations of their teachers. Evidence for this second speculation is based on the finding that not all the experimentals showed IQ gains, some even decreased, and that some control students matched the top IQ scores of the experimentals. (EF)
Outside the Expected

by Harris Dienstfrey

Given the basic proposition of Rosenthal and Jacobson's *Pygmalion in the Classroom*—that expectations alone are enough to sponsor a student's intellectual growth, that if a teacher thinks a student will grow intellectually, the student will—the book's most intriguing findings concern the intellectual gains that seem to have come about for reasons other than teacher expectations. Now, these expectations did have a measurable and significant effect. The students in the study whom the teachers had been told were likely to show an unusual rise in IQ (the experimental students) gained a mean total of 12.22 IQ points, while the students about whom the teachers had been told nothing (the control students) gained only 8.42 points. What Rosenthal and Jacobson call the "expectancy advantage"—the advantage of being expected to do particularly well—thus amounted to 3.80 IQ points.

The study covered grades one through six, but the most substantial intellectual gains—statistically speaking, the heart of the study—occurred in grades one and two, a fact that may say something about the kind of expectancy Rosenthal and Jacobson tapped. But this issue to one side, there seems to have been forces other than teacher expectancies that induced intellectual growth.

For example, Rosenthal and Jacobson note that there was a positive relationship between the gains of the control students and the gains of the experimental students, suggesting that the teachers' positive expectations manifested themselves in classroom behavior. Similarly, there is no way to know how the unfavorable ratings manifested themselves. But if, with Rosenthal and Jacobson, we can make the reasonable assumption that the teachers behaved in some special (if unconscious) way with the students about whom they had special expectations, it follows that they likely also behaved in some special (and equally unconscious) way with the students whom they found less appealing, less curious, less interesting, and so forth—and that whatever the behavior, it amounted to something less than the encouragement given to the experimental students. In other words, in the face of what appears to have been the very opposite of the major condition for intellectual growth posited by Rosenthal and Jacobson—positive expectations on the part of the teachers—some students achieved IQ scores equal...
Given the basic proposition of Rosenthal and Jacobson's Pygmalion in the Classroom—that expectations alone are enough to sponsor a student's intellectual growth, that if a teacher thinks a student will grow intellectually, the student will—the book's most intriguing findings concern the intellectual gains that seem to have come about for reasons other than teacher expectations. Now, these expectations did have a measurable and significant effect. The students in the study whom the teachers had been told were likely to show an unusual rise in IQ (the experimental students) gained a mean total of 12.22 IQ points, while the students about whom the teachers had been told nothing (the control students) gained only 8.42 points. What Rosenthal and Jacobson call the "expectancy advantage"—the advantage of being expected to do particularly well—thus amounted to 3.80 IQ points. The study covered grades one through six, but the most substantial intellectual gains—statistically speaking, the heart of the study—occurred in grades one and two, a fact that may say something about the kind of expectancy Rosenthal and Jacobson tapped. But this issue to one side, there seems to have been forces other than teacher expectations that induced intellectual growth.

For example, Rosenthal and Jacobson note that there was a positive relationship between the gains of the control students and the gains of the experimental students. "The greater the gain made by the children of whom gain was expected," they write, "the greater the gain made in the same classroom [each grade had three classes] by the children from whom no special gain was expected" (p. 156). In other words, where the experimental students did best, the control students also did best. Rosenthal and Jacobson did not explore the implications of this finding; but on the surface at least, it supports the argument that mixed rather than uniform ability grouping is the more educationally valuable way to arrange a class. Read in this way, in terms of the relationships between control and experimental students, Pygmalion in the Classroom seems to have as much to say about the influence of the many Pygmals who are one's fellow classmates as about the one Pygmalion at the head of the class whom Rosenthal and Jacobson have singled out in their title.

But the gains among the control group have another, more striking feature. Rosenthal and Jacobson asked the teachers to report on their estimate of the behavior and intellectual curiosity of their students and found that, for the students for whom the teachers had no special expectations, "the more intellectually competent these children became, the more negatively they were viewed by their teachers" (p. 179). The greater the IQ gains of these nonspecial, ordinary students who had not been called to the attention of their teachers, the more the teachers regarded them as less affectionate, less happy, less appealing, less adjusted, less curious, and less interesting. (The students did receive one favorable rating, that they were more autonomous.) Rosenthal and Jacobson speculate: "If a child is to show intellectual gains, it may be better for his mental health as seen by his teacher, if his teacher has been expecting him to gain intellectually. It appears that there may be "psychological intellectual growth" (p. 118). Yet for all the hazards, the students did achieve some of the highest IQ scores.

This seems an essential point. Despite what appears to have been (from Rosenthal and Jacobson's point of view) relatively unfavorable conditions for intellectual growth, conditions that were more unfavorable as the level of IQ increase rose, the increase nonetheless took place. Rosenthal and Jacobson were unable to discover how the teachers' positive expectations manifested themselves in classroom behavior. Similarly, there is no way to know how the unfavorable ratings manifested themselves. But if, with Rosenthal and Jacobson, we can make the reasonable assumption that the teachers behaved in some special (if unconscious) way with the students about whom they had special expectations, it follows that they likely also behaved in some special (and equally unconscious) way with the students whom they found less appealing, less curious, and so forth—and that whatever the behavior, it amounted to something less than the encouragement given to the experimental students. In other words, in the face of what appears to have been the very opposite of the major condition for intellectual growth posited by Rosenthal and Jacobson—positive expectations on the part of the teachers—some students achieved IQ scores equal to the highest scores achieved by the experimental students.

How is this finding to be explained? One explanation again points to the value of heterogeneous ability groupings. The impact and influence of the experimental students on the control students who achieved high IQ scores appears to have been strong enough to override the effect on them of the less-than-positive expectations of the teachers. But even if such a process took place, as seems likely, the control students who achieved the high IQ scores still must have responded to the influence of their classmates out of some strength of their own. In the abstract, the example of the experimental students could have served to depress the control students. But it did not. If the former exerted an influence, it served instead to strengthen the resolve of the latter and to spur them on. Much the same can be said about the unconscious and very likely invidious cues emanating from the teachers. Though the teachers apparently were saying "Go, go" to the experimental students and looking askance at the control students achieving new high IQs, the latter did not respond by drawing in on themselves in doubt and uncertainty. They went ahead.

What is it that enables an individual to act in this positive way? There is a common word to describe the source of such behavior, and it seems to me directly to the point here: determination.

In a gross sense, the general argument of Rosenthal and Jacobson, that people are made by the expectations of others, is obviously true. But it is equally true—and ought to be equally obvious, though it is not to most social scientists—that individuals also make themselves. Each person is the bearer of an individual will, an individual imagination, and an individual intelligence—in a word (its obvious inadequacies aside) an individual deter-
mination—and these qualities are as much at the heart of who he is and what he becomes as are the influences upon which he applies the qualities. All of this is as true of children (as most parents intuitively know) as of anyone else. What goes on in the classroom—essentially no different from what goes on in life—is a product not just of the conditions of the classroom (or, in the larger situation, the conditions of life) but also of what people do with these conditions; and what they do with them is a matter of their mind and spirit and individual determination. Children, like all human beings, are both the creations of the world and the agents of their own inherent capacities to create themselves. (Given the popularity of certain views in contemporary social science, it unfortunately is necessary to repeat and emphasize: all children, all human beings, barring only individual and not group exceptions—a crucial distinction. In the matters of the mind and spirit, no group is “deprived” or “disadvantaged,” else as a group it would consist only of serious mental patients—and we may have a good deal to learn about such people too.)

In its attitude toward its subjects, Pygmalion in the Classroom is a humane work, and not, like so many other studies in social science today, a condescending survey of more or less alien beings. Its authors do not exclude themselves from their own considerations, and write about the social and individual processes they are studying as if the processes never applied to them, which thereby would give them the license, taken by many, to deal with their subjects as exotics of one type or another. Rosenthal and Jacobson seem to believe that they and the people they know, and everyone else as well, are all largely the creations of the expectations of others. (In their affectionate dedication, they cite a number of people who, as they put it, “fulfill our expectations,” half-comically, but half-seriously too, implying: “as they cannot help but do.”) But in their disregard of any notion of individual determination, they are open to the same criticisms that should
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This disregard reveals itself not only, as I have tried to show, in Rosenthal and Jacobson’s failure to isolate a finding that, so far as one can tell, runs counter to their thesis (their expectations, if one will), but also, I believe, in the explication of the findings that generally support their thesis. In preliminary remarks to a dozen short biographical sketches of ‘experimental’ children from the first and second grades, Rosenthal and Jacobson note almost incidentally that there were large variations in the intellectual growth shown by these students. From information that accompanies the sketches, we find that the variation ranged from +69 to –6. In other words, despite the expectations of teachers, the IQ of certain of the children in the experimental group actually decreased during the course of the experiment. Rosenthal and Jacobson do not examine this fact. From their sketches, they speculatively conclude only that the children “who benefited most from favorable teacher expectations” had two distinguishing characteristics: “Their parents seemed especially interested in their academic progress, and they were often described as children unusually attractive in physical appearance” (p. 94). But is it unreasonable to suppose that the wide variation in intellectual growth among even those students who, as a group, were the richest beneficiaries of teacher expectations, is another instance of the same factor that enabled certain control students to match the top IQ scores achieved by the experimental students and to do so in the face of something less than encouragement from their teachers: differences in individual determination?